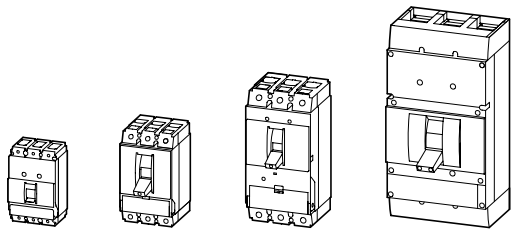
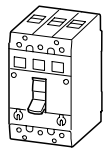




xEnergy

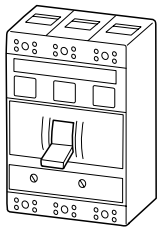
Catalogue: FK4810-1143G
"Type-tested switchgear systems up to 4000 A"

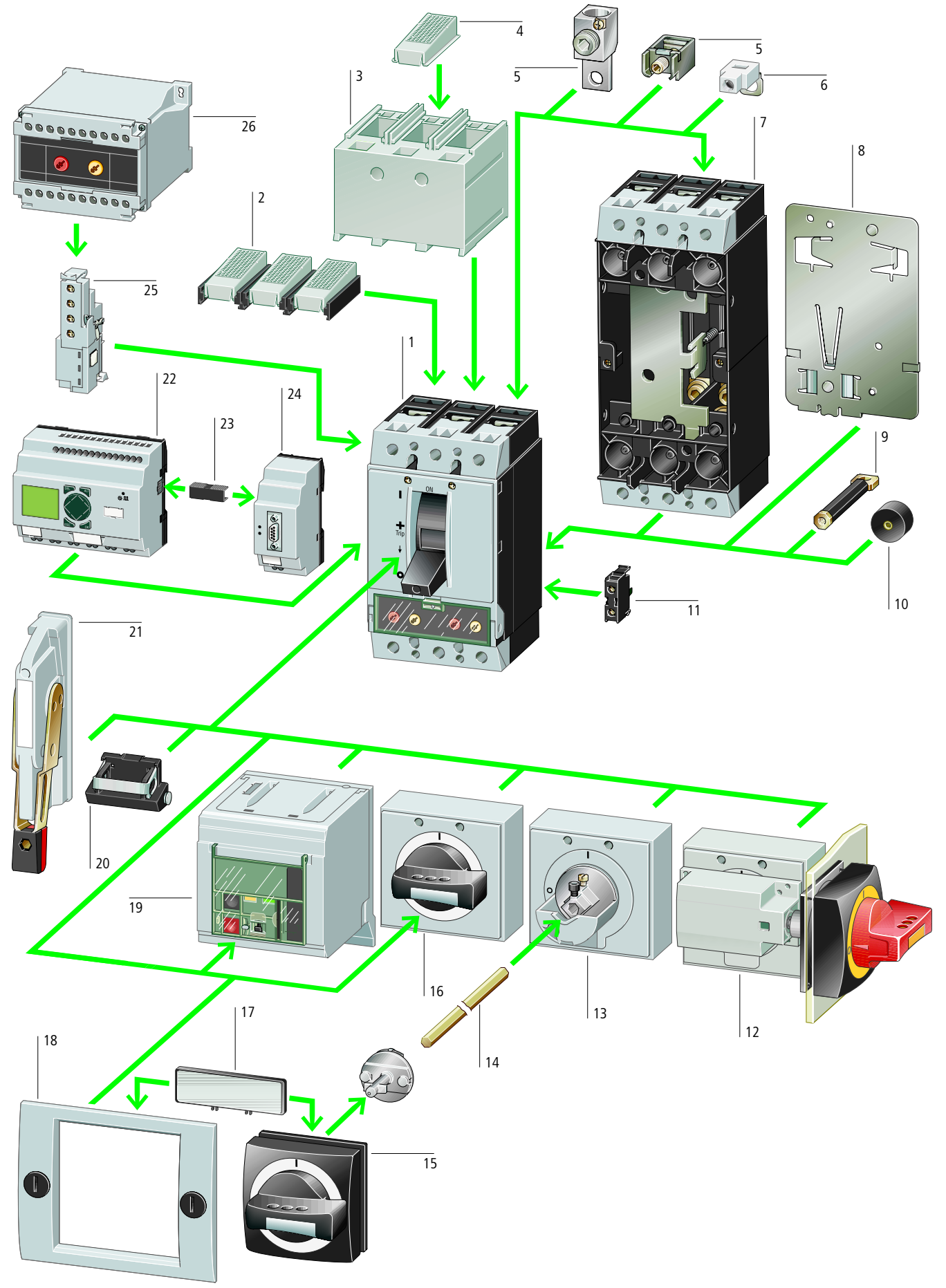
**NZM7**
40 – 250 A





**NZM10**
250 – 630 A

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## Basic Units

**Circuit-breakers** 1
Rated uninterrupted current up to 1600 A
Switching capacity 25, 50, 100, 150 kA at 415 V
Adjustable releases for overload and short-circuit
Adjustable time selectivity
Earth-fault protection
Protection of systems, cables, motors, generators
3 and 4-pole versions, IEC/EN 60947
→ 10/8

**Switch-disconnector:** 1
Rated uninterrupted current up to 1600 A
Remotely tripped switch-disconnector with undervoltage or shunt release
3 and 4-pole versions, IEC/EN 60947
→ 10/26

**Circuit-breakers for North America** 1
Rated uninterrupted current up to 1200 A
Switching capacity 25, 35, 65, 100 kA at 480 V
Adjustable releases for overload and short-circuit
Adjustable time selectivity
Earth-fault protection
Protection of systems, cables, motors, generators
3-pole version, UL489/CSA5, IEC/EN 60947
→ 10/30

**Switch-disconnector for North America** 1
Rated uninterrupted current up to 1200 A
Remotely tripped switch-disconnector with undervoltage or shunt release
3-pole version, UL489/CSA5, IEC/EN 60947
→ 10/44

## Add-on functions

**Standard auxiliary contact** 11
Switching with the main contacts
Used for indication and interlocking tasks

**Trip-indicating auxiliary contact** 11
General indication of tripping with trip due to overload or short-circuit as well as voltage release

**Early-make auxiliary contacts** 25
For interlocking and load shedding circuits, as well as for early make of the undervoltage release in main switch/ Emergency-stop applications
→ 10/46

**Voltage releases** 25
Undervoltage release
• Non-delayed
• OFF-delayed
Shunt release
→ 10/48

**Spacers** 10
→ 10/79

**Delay unit for undervoltage releases** 26
→ 10/58

**Door coupling rotary handle** 13, 15
• Lockable
• With door interlock
→ 10/72

**Main switch rotary handle for side panel mounting** 12
→ 10/76

**Extension shaft** 14
Can be cut to required length.
→ 10/72

**Rotary handle** 16
• Lockable
→ 10/74

**Remote operator** 19
For ON and OFF switching and resetting by means of 2-wire or 3-wire control.
→ 10/82

**Toggle lever interlock device** 20
→ 10/79

**Side operator handle** 21
In preparation

**Data Management Interface (DMI module)** 22
Access to diagnostics and operational data
Recording of current values
Parameterization and control of the circuit-breakers with electronic releases
→ 10/100

**EASY-LINK-DS data plug** 23
→ 4/14

**PROFIBUS-DP interface** 24
→ 4/9

## Mounting accessories

**Control circuit terminal** 6
For two terminals at top or bottom
NZM1 → 10/86
NZM2 → 10/90
NZM3 → 10/94
NZM4 → 10/98

**Tunnel terminals for Al and Cu cable** 5
Standard with control circuit terminal
NZM1 → 10/86
NZM2 → 10/88
NZM3 → 10/92
NZM4 → 10/96

**Box terminals** 5
Standard equipment of frame size 1
Fitted within the switch housing
NZM1 → 10/86
NZM2 → 10/88
NZM3 → 10/92

**Terminal cover** 3
Protection against direct contact where cable lugs, busbars or tunnel terminals are used
NZM1 → 10/86
NZM2 → 10/90
NZM3 → 10/94
NZM4 → 10/98

**Clip plates** 8
NZM1-XC35 → for 35 mm top-hat rail
NZM1-XC75 → for 75 mm top-hat rail
→ 10/79

**Rear connection** 9
NZM1 → 10/86
NZM2 → 10/90
NZM3 → 10/92
NZM4 → 10/98

**Plug-in and withdrawable unit** 7
→ 10/84

**Insulating surround** 18
For use with toggle levers, rotary drives and remote operators protruding from the enclosure
→ 10/79

**External warning plate/designation** 17
→ 10/78

**IP2X protection against contact with a finger** 2
For box terminals
NZM1 → 10/86
NZM2 → 10/90
NZM3 → 10/94

**IP2X protection against contact with a finger** 4
For barrier
NZM1 → 10/86
NZM2 → 10/90
NZM3 → 10/94

Circuit-breakers, switch-disconnectors up to 1600 A

Moeller HPL0211-2004/2005

**Circuit-breakers**
With main switch characteristics to IEC/EN 60204 and isolating characteristics to IEC/EN 60947, VDE 0660

a

Rated uninterrupted current $I_u$ = rated current $I_n$
Adjustable overload release $I_r$
Adjustable short-circuit release $I_i$
Delayed short-circuit release $I_{sd}$

**Thermomagnetic releases**

| | **Protection of systems and cables** | | | | **Motor protection** | | | |
|---|---|---|---|---|---|---|---|---|
| | $I_u$ | $I_u$ | $I_r$ | $I_i$ | $I_u$ | $I_u$ | $I_r$ | $I_i$ |
| | A | A | A | A | A | A | A | A |
| Ambient temperature at 100% $I_u$ min./max. -25 / +50 °C | 20 | 20 | 0.8 – 1 × $I_n$ | 350 | 20 | 20 | 0.8 – 1 × $I_n$ | 350 |
| | 25 | 25 | | | 25 | 25 | | |
| | 32 | 32 | | | 32 | 32 | | 10 – 14 × $I_n$ |
| | 40 | 40 | | 8 – 10 × $I_n$ | 40 | 40 | | 8 – 14 × $I_n$ |
| | 50 | 50 | | 6 – 10 × $I_n$ | 50 | 50 | | |
| | 63 | 63 | | | 63 | 63 | | |
| | 80 | 80 | | | 80 | 80 | | |
| | 100 | 100 | | | **100** | 100 | | NZM1: 8 – 12.5 × $I_n$<br>NZM2: 8 – 14 × $I_n$ |
| | 125 | 125 | | | | 125 | | 8 – 14 × $I_n$ |
| | **160** | 160 | | NZM1: 8 × $I_n$<br>6 – 10 × $I_n$ | | 160 | | |
| | | 200 | | | | **200** | | 8 – 12.5 × $I_n$ |
| | | **250** | | | | | | |

| **Basic switching capacity** | | **NZMB1-A...** | | **NZMB2-A...** | | | | **NZMB1-M...** | | **NZMB2-M...** | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 400/415 V | kA/cos φ | 25 | 0.25 | 25 | 0.25 | | | 25 | 0.25 | 25 | 0.25 | | | |
| 440 V | kA/cos φ | 25 | 0.25 | 25 | 0.25 | | | 25 | 0.25 | 25 | 0.25 | | | |
| 525 V | kA/cos φ | 15 | 0.30 | 15 | 0.30 | | | 15 | 0.30 | 15 | 0.30 | | | |

| **Normal switching capacity** | | **NZMN1-A...** | | **NZMN2-A...** | | | | **NZMN1-M...** | | **NZMN2-M...** | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 400/415 V | kA/cos φ | 50 | 0.25 | 50 | 0.25 | | | 50 | 0.25 | 50 | 0.25 | | | |
| 440 V | kA/cos φ | 35 | 0.25 | 35 | 0.25 | | | 35 | 0.25 | 35 | 0.25 | | | |
| 525 V | kA/cos φ | 20 | 0.30 | 25 | 0.25 | | | 20 | 0.30 | 25 | 0.25 | | | |
| 690 V | kA/cos φ | 10 | 0.50 | 20 | 0.30 | | | 10 | 0.50 | 20 | 0.30 | | | |

| **High switching capacity** | | **NZMH1-A-...** | | **NZMH2-A-...** | | | | | | **NZMH2-M...** | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 400/415 V | kA/cos φ | 100 | 0.20 | 100 | 0.20 | | | | | 100 | 0.20 | | | |
| 440 V | kA/cos φ | 35 | 0.25 | 65 | 0.20 | | | | | 65 | 0.20 | | | |
| 525 V | kA/cos φ | 20 | 0.30 | 40 | 0.25 | | | | | 40 | 0.25 | | | |
| 690 V | kA/cos φ | 10 | 0.50 | 20 | 0.30 | | | | | 20 | 0.30 | | | |

| **Limiter switching capacity** | | | | **NZML2-A...** | | | | | | **NZML2-M...** | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 400/415 V | kA/cos φ | | | 150 | 0.20 | | | | | 150 | 0.20 | | | |
| 440 V | kA/cos φ | | | 130 | 0.20 | | | | | 130 | 0.20 | | | |
| 525 V | kA/cos φ | | | 50 | 0.25 | | | | | 50 | 0.25 | | | |
| 690 V | kA/cos φ | | | 20 | 0.30 | | | | | 20 | 0.30 | | | |

**Notes** Values printed in grey: Available on request
**The stated switching capacity values are**
**Rated ultimate short-circuit breaking capacity values ($I_{cu}$)**

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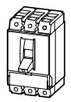
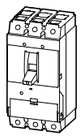
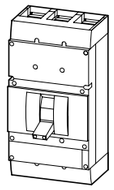






**Electronic releases**

| | **Systems, cable, selectivity and generator protection** | | | | | | **Motor protection** | | |
|---|---|---|---|---|---|---|---|---|---|
| | $I_u$ | $I_u$ | $I_u$ | $I_r$ | $I_{sd}$ | $I_i$ | $I_u$ | $I_r$ | $I_i$ |
| | A | A | A | A | A | A | A | A | A |
| | 100 | 250 | 630 | 0.5 – 1 × $I_n$ | 2 – 10 × $I_r$ | 2 – 12 × $I_n$ | 90 | 0.5 – 1 × $I_n$ | 2 – 14 × $I_r$ |
| | 160 | 400 | 800 | | | | 140 | | |
| | **250** | **630** | 1000 | | | | 220 | | |
| | | | 1250 | | | | 350 | | |
| | | | **1600** | | | | 450 | | |
| | | | | | | | 550 | | |
| | | | | | | | 875 | | |
| | | | | | | | **1400** | | |

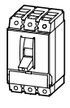
| **NZMN2-...VE** | | **NZMN3-...E** | | **NZMN4-...E** | | | | | | **NZMN2-ME...** | | **NZMN3-ME...** | | **NZMN4-ME...** | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 50 | 0.25 | 50 | 0.25 | 50 | 0.25 | | | | | 50 | 0.25 | 50 | 0.25 | 50 | 0.25 |
| 35 | 0.25 | 35 | 0.25 | 35 | 0.25 | | | | | 35 | 0.25 | 35 | 0.25 | 35 | 0.25 |
| 25 | 0.25 | 25 | 0.25 | 25 | 0.25 | | | | | 25 | 0.25 | 25 | 0.25 | 25 | 0.25 |
| 20 | 0.30 | 20 | 0.30 | 20 | 0.30 | | | | | 20 | 0.30 | 20 | 0.30 | 20 | 0.30 |

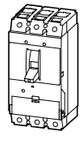
| **NZMH2-...VE** | | **NZMH3-...E** | | **NZMH4-...E** | | | | | | **NZMH2-ME...** | | **NZMH3-ME...** | | **NZMH4-ME...** | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 100 | 0.20 | 100 | 0.20 | 100[1)] | 0.20 | | | | | 100 | 0.20 | 100 | 0.20 | 100[1)] | 0.20 |
| 65 | 0.20 | 65 | 0.20 | 65 | 0.20 | | | | | 65 | 0.20 | 65 | 0.20 | 65 | 0.20 |
| 40 | 0.25 | 40 | 0.25 | 40 | 0.25 | | | | | 40 | 0.25 | 40 | 0.25 | 40 | 0.25 |
| 20 | 0.30 | 20 | 0.30 | 35 | 0.25 | | | | | 20 | 0.30 | 20 | 0.30 | 35 | 0.25 |

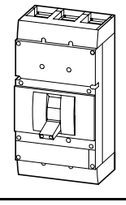
| **NZML2-...VE** | | **NZML3-...E** | | **NZML4-...E** | | | | | | **NZML2-ME...** | | **NZML3-ME...** | | **NZML4-ME...** | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 150 | 0.20 | 150 | 0.20 | 120[1)2)] | 0.20 | | | | | 150 | 0.20 | 150 | 0.20 | 120[1)2)] | 0.20 |
| 130 | 0.20 | 130 | 0.20 | 85 | 0.20 | | | | | 130 | 0.20 | 130 | 0.20 | 85 | 0.20 |
| 50 | 0.25 | 65 | 0.20 | 65 | 0.20 | | | | | 50 | 0.25 | 65 | 0.20 | 65 | 0.20 |
| 20 | 0.30 | 35 | 0.25 | 50 | 0.25 | | | | | 20 | 0.30 | 35 | 0.25 | 50 | 0.25 |

A selection of approved circuit-breakers and switch-disconnectors for world-wide use can be found from page 10/28

**Switch-disconnector:**
With main switch characteristics to IEC/EN 60204 and isolating characteristics to IEC/EN 60947, VDE 0660
**without** overload and short-circuit release







Rated uninterrupted current $I_u$ = rated current $I_n$

| **Type N can be triggered with U/A voltage release** | | 63 – **160** | | 160 – **250** | | 400 – **630** | | 800 – **1600** |
|---|---|---|---|---|---|---|---|---|
| | | **PN1-...** | **N1-...** | **PN2-...** | **N2-...** | **PN3-...** | **N3-...** | **N4-...** |
| Rated short-circuit making capacity $I_{cm}$ | kA | 2.8 | 2.8 | 5.5 | 5.5 | 25 | 25 | 53 |
| Rated short time current $I_{cw}$ (1s current$_{rms}$) | kA | 2 | 2 | 3.5 | 3.5 | 12.5 | 12.5 | 25 |

Circuit-breakers, switch-disconnectors up to 1600 A

Moeller HPL0211-2004/2005

Moeller HPL0211-2004/2005

| Rated current = rated uninterrupted current $I_n = I_u$ A | Setting range Overload releases $I_r$ A | Short-circuit releases $I_i$ A | Basic switching capacity **25 kA** at 415 V 50/60 Hz **Type** Article no. | **Price** See Price List | Normal switching capacity **50 kA** at 415 V 50/60 Hz **Type** Article no. | **Price** See Price List | High switching capacity **100 kA** at 415 V 50/60 Hz **Type** Article no. | **Price** See Price List | Limiter switching capacity **150 kA** at 415 V 50/60 Hz **Type** Article no. | **Price** See Price List | Std. pack | **Notes** |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Protection of systems and cables** | | | | | | | | | | | | |
| 3-pole | | | | | | | | | | | | |
| Terminals standard, terminal screws as accessories | | | | | | | | | | | | |
| 20 | 15 – 20 | 350 | **NZMB1-A20** 280987 | | **NZMN1-A20** 281231 | | **NZMH1-A20** 284376 | | | | 1 off | IEC/EN 61131-2<br>Adjustable overload release $I_r$<br>• 0.8 – 1 × $I_n$ (ex-factory 0.8 × $I_n$)<br>Adjustable short-circuit release $I_i$<br>• 6 – 10 × $I_n$ (ex-factory 6 × $I_n$)<br>– NZM...-A40: 8 – 10 × $I_n$<br>– NZM...1-A160 fixed 8 × $I_n$<br>Fixed short-circuit release $I_i$<br>• 350 A at $I_n$ = 20 – 32 A |
| 25 | 20 – 25 | 350 | **NZMB1-A25** 280988 | | **NZMN1-A25** 281232 | | **NZMH1-A25** 284377 | | | | | |
| 32 | 25 – 32 | 350 | **NZMB1-A32** 280989 | | **NZMN1-A32** 281233 | | **NZMH1-A32** 284378 | | | | | |
| 40 | 32 – 40 | 320 – 400 | **NZMB1-A40** 259075 | | **NZMN1-A40** 259081 | | **NZMH1-A40** 284379 | | | | | |
| 50 | 40 – 50 | 300 – 500 | **NZMB1-A50** 259076 | | **NZMN1-A50** 259082 | | **NZMH1-A50** 284410 | | | | | |
| 63 | 50 – 63 | 380 – 630 | **NZMB1-A63** 259077 | | **NZMN1-A63** 259083 | | **NZMH1-A63** 284411 | | | | | |
| 80 | 63 – 80 | 480 – 800 | **NZMB1-A80** 259078 | | **NZMN1-A80** 259084 | | **NZMH1-A80** 284412 | | | | | |
| 100 | 80 – 100 | 600 – 1000 | **NZMB1-A100** 259079 | | **NZMN1-A100** 259085 | | **NZMH1-A100** 284413 | | | | | |
| 125 | 100 – 125 | 750 – 1250 | **NZMB1-A125** 259080 | | **NZMN1-A125** 259086 | | **NZMH1-A125** 284414 | | | | | |
| 160 | 125 – 160 | 1280 | **NZMB1-A160** 281230 | | **NZMN1-A160** 281234 | | **NZMH1-A160** 284415 | | | | | |
| Terminal screws standard terminal as accessories | | | | | | | | | | | | |
| 20 | 15 – 20 | 350 | | | | | **NZMH2-A20** 281281 | | **NZML2-A20** 281284 | | 1 off | |
| 25 | 20 – 25 | 350 | | | | | **NZMH2-A25** 281282 | | **NZML2-A25** 281285 | | | |
| 32 | 25 – 32 | 350 | | | | | **NZMH2-A32** 281283 | | **NZML2-A32** 281286 | | | |
| 40 | 32 – 40 | 320 – 400 | | | | | **NZMH2-A40** 259095 | | **NZML2-A40** 259104 | | | |
| 50 | 40 – 50 | 300 – 500 | | | | | **NZMH2-A50** 259096 | | **NZML2-A50** 259105 | | | |
| 63 | 50 – 63 | 380 – 630 | | | | | **NZMH2-A63** 259097 | | **NZML2-A63** 259106 | | | |
| 80 | 63 – 80 | 480 – 800 | | | | | **NZMH2-A80** 259098 | | **NZML2-A80** 259107 | | | |
| 100 | 80 – 100 | 600 – 1000 | | | | | **NZMH2-A100** 259099 | | **NZML2-A100** 259108 | | | |
| 125 | 100 – 125 | 750 – 1250 | **NZMB2-A125** 259087 | | **NZMN2-A125** 259091 | | **NZMH2-A125** 259100 | | **NZML2-A125** 259109 | | | |
| 160 | 125 – 160 | 960 – 1600 | **NZMB2-A160** 259088 | | **NZMN2-A160** 259092 | | **NZMH2-A160** 259101 | | **NZML2-A160** 259110 | | | |
| 200 | 160 – 200 | 1200 – 2000 | **NZMB2-A200** 259089 | | **NZMN2-A200** 259093 | | **NZMH2-A200** 259102 | | **NZML2-A200** 259111 | | | |
| 250 | 200 – 250 | 1500 – 2500 | **NZMB2-A250** 259090 | | **NZMN2-A250** 259094 | | **NZMH2-A250** 259103 | | **NZML2-A250** 259112 | | | |

**Notes** Notes for terminals → 10/86

Circuit-breakers, switch-disconnectors up to 1600 A

Moeller HPL0211-2004/2005

| Rated current = rated uninterrupted current $I_n = I_u$ A | Setting range Overload releases $I_r$ A | Short-circuit releases $I_i$ A | Basic switching capacity **25 kA** at 415 V 50/60 Hz **Type** Article no. | **Price** See Price List | Normal switching capacity **50 kA** at 415 V 50/60 Hz **Type** Article no. | **Price** See Price List |
|---|---|---|---|---|---|---|
| **Motor protection** | | | | | | |
| 3-pole | | | | | | |
| Terminals standard<br>Terminal screw as accessories | | | | | | |
| 20 | 16 – 20 | 350 | **NZMB1-M20** 281537 | | **NZMN1-M20** 281550 | |
| 25 | 20 – 25 | 350 | **NZMB1-M25** 281538 | | **NZMN1-M25** 281551 | |
| 32 | 25 – 32 | 320 – 448 | **NZMB1-M32** 281539 | | **NZMN1-M32** 281552 | |
| 40 | 32 – 40 | 320 – 560 | **NZMB1-M40** 265710 | | **NZMN1-M40** 265718 | |
| 50 | 40 – 50 | 400 – 700 | **NZMB1-M50** 265711 | | **NZMN1-M50** 265719 | |
| 63 | 50 – 63 | 504 – 882 | **NZMB1-M63** 265712 | | **NZMN1-M63** 265720 | |
| 80 | 63 – 80 | 640 – 1120 | **NZMB1-M80** 265713 | | **NZMN1-M80** 265721 | |
| 100 | 80 – 100 | 800 – 1250 | **NZMB1-M100** 265714 | | **NZMN1-M100** 265722 | |
| Terminal screws standard<br>terminal as accessories | | | | | | |
| 20 | 16 – 20 | 350 | | | | |
| 25 | 20 – 25 | 350 | | | | |
| 32 | 25 – 32 | 320 – 448 | | | | |
| 40 | 32 – 40 | 320 – 560 | | | | |
| 50 | 40 – 50 | 400 – 700 | | | | |
| 63 | 50 – 63 | 504 – 882 | | | | |
| 80 | 63 – 80 | 640 – 1120 | | | | |
| 100 | 80 – 100 | 800 – 1250 | | | | |
| 125 | 100 – 125 | 1000 – 1750 | **NZMB2-M125** 265715 | | **NZMN2-M125** 265723 | |
| 160 | 125 – 160 | 1280 – 2240 | **NZMB2-M160** 265716 | | **NZMN2-M160** 265724 | |
| 200 | 160 – 200 | 1600 – 2500 | **NZMB2-M200** 265717 | | **NZMN2-M200** 265725 | |

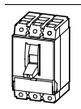
Moeller HPL0211-2004/2005

| High switching capacity **100 kA** at 415 V 50/60 Hz **Type** Article no. | **Price** See Price List | Limiter switching capacity **150 kA** at 415 V 50/60 Hz **Type** Article no. | **Price** See Price List | Std. pack | **Notes** |
|---|---|---|---|---|---|
| | | | | 1 off | IEC/EN 60947-4 and IEC/EN 60947-2<br>Adjustable overload release $I_r$<br>• 0.8 – 1 × $I_n$ (ex-factory 0.8 × $I_n$)<br>– NZM...1-M...: with single-phasing sensitivity, tripping class 10 A<br>Adjustable short-circuit release $I_i$<br>• 8 – 14 × $I_n$ (ex-factory 12 × $I_n$)<br>– NZM...-M32: 10 – 14 × $I_n$ (ex-factory 12 × $I_n$)<br>– NZM...1-M100, NZM...2-M200: 8 – 12.5 × $I_n$ (ex-factory 12 × $I_n$)<br>Fixed short-circuit release $I_i$<br>• 350 A at $I_n$ = 20 – 25 A |
| **NZMH2-M20** 281299 | | **NZML2-M20** 281310 | | 1 off | |
| **NZMH2-M25** 281300 | | **NZML2-M25** 281311 | | | |
| **NZMH2-M32** 281301 | | **NZML2-M32** 281312 | | | |
| **NZMH2-M40** 281302 | | **NZML2-M40** 281313 | | | |
| **NZMH2-M50** 281303 | | **NZML2-M50** 281314 | | | |
| **NZMH2-M63** 281304 | | **NZML2-M63** 281315 | | | |
| **NZMH2-M80** 281305 | | **NZML2-M80** 281316 | | | |
| **NZMH2-M100** 281306 | | **NZML2-M100** 281317 | | | |
| **NZMH2-M125** 281307 | | **NZML2-M125** 281318 | | | |
| **NZMH2-M160** 281308 | | **NZML2-M160** 281319 | | | |
| **NZMH2-M200** 281309 | | **NZML2-M200** 281320 | | | |

**Notes** Notes for terminals → 10/86

Circuit-breakers, switch-disconnectors up to 1600 A

Moeller HPL0211-2004/2005

| Rated current = rated uninterrupted current | Setting range | | Basic switching capacity **25 kA** at 415 V 50/60 Hz | | Normal switching capacity **50 kA** at 415 V 50/60 Hz | | High switching capacity **100 kA** at 415 V 50/60 Hz | | Limiter switching capacity **150 kA** at 415 V 50/60 Hz | | Std. pack | **Notes** |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Overload releases | Short-circuit releases | **Type** Article no. | **Price** See Price List | **Type** Article no. | **Price** See Price List | **Type** Article no. | **Price** See Price List | **Type** Article no. | **Price** See Price List | | |
| $I_n = I_u$ A | $I_r$ A | $I_i$ A | | | | | | | | | | |
| **Short-circuit protection, protection of systems** | | | | | | | | | | | | |
| **Motor protection in conjunction with overload relay**<br>• With short-circuit release<br>• Without overload release | | | | | | | | | | | | |
| 3-pole | | | | | | | | | | | | |
| Terminals standard<br>Terminal screws as accessories | | | | | | | | | | | | |
|  40 | – | 320 – 560 | **NZMB1-S40** 265726 | | **NZMN1-S40** 265731 | | **NZMH1-S40** 284436 | | | | 1 off | IEC/EN 60947-4 and IEC/EN 60947-2<br>Adjustable short-circuit release $I_i$<br>• 8 – 14 × $I_n$ (ex-factory 12 × $I_n$)<br>– NZM...1-S100, NZM...2-S200: 8 – 12.5 × $I_n$ (ex-factory 12 × $I_n$)<br>Without overload release $I_r$ |
| 50 | – | 400 – 700 | **NZMB1-S50** 265727 | | **NZMN1-S50** 265732 | | **NZMH1-S50** 284437 | | | | | |
| 63 | – | 504 – 882 | **NZMB1-S63** 265728 | | **NZMN1-S63** 265733 | | **NZMH1-S63** 284438 | | | | | |
| 80 | – | 640 – 1120 | **NZMB1-S80** 265729 | | **NZMN1-S80** 265734 | | **NZMH1-S80** 284439 | | | | | |
| 100 | – | 800 – 1250 | **NZMB1-S100** 265730 | | **NZMN1-S100** 265735 | | **NZMH1-S100** 284440 | | | | | |
| Standard terminal screws<br>Terminals as accessories | | | | | | | | | | | | |
|  40 | – | 320 – 560 | | | | | **NZMH2-S40** 265742 | | **NZML2-S40** 265750 | | 1 off | **Selection**<br>of circuit-breakers without overload release when combining with ZEV electronic motor-protective relay:<br>The tripping response of the ZEV motor-protective relay is matched by setting of the tripping class (CLASS), to the starting behaviour of the motor to be protected. |
| 50 | – | 400 – 700 | | | | | **NZMH2-S50** 265743 | | **NZML2-S50** 265751 | | | |
| 63 | – | 504 – 882 | | | | | **NZMH2-S63** 265744 | | **NZML2-S63** 265752 | | | |
| 80 | – | 640 – 1120 | | | | | **NZMH2-S80** 265745 | | **NZML2-S80** 265753 | | | |
| 100 | – | 800 – 1400 | | | | | **NZMH2-S100** 265746 | | **NZML2-S100** 265754 | | | |
| 125 | – | 1000 – 1750 | **NZMB2-S125** 265736 | | **NZMN2-S125** 265739 | | **NZMH2-S125** 265747 | | **NZML2-S125** 265755 | | | |
| 160 | – | 1280 – 2240 | **NZMB2-S160** 265737 | | **NZMN2-S160** 265740 | | **NZMH2-S160** 265748 | | **NZML2-S160** 265756 | | | |
| 200 | – | 1600 – 2500 | **NZMB2-S200** 265738 | | **NZMN2-S200** 265741 | | **NZMH2-S200** 265749 | | **NZML2-S200** 265757 | | | |

| $I_n$ in A | | **Maximum permissible tripping class CLASS** |
|---|---|---|
| NZM...1-S... | 40 | 30 |
| | 50 | 30 |
| | 63 | 30 |
| | 80 | 20 |
| | 100 | 15 |
| NZM...2-S... | 40 | 30 |
| | 50 | 30 |
| | 63 | 30 |
| | 80 | 30 |
| | 100 | 30 |
| | 125 | 30 |
| | 160 | 20 |
| | 200 | 10 |

| **Tripping class** | **Tripping time $T_p$ with loading on all poles with 7.2 times the current setting value** |
|---|---|
| 10 A | 2 s < $T_p$ ≦ 10 s |
| 10 | 4 s < $T_p$ ≦ 10 s |
| 20 | 6 s < $T_p$ ≦ 20 s |
| 30 | 9 s < $T_p$ ≦ 30 s |

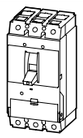
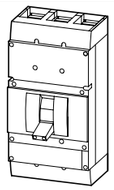
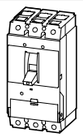
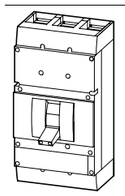
**Motor-starter combination of classification types 1 and 2 can be found in the "Fuseless motor-starter combinations" section.**

**Notes**

Higher currents:
NZM...3/4...ME, → 10/16
Notes for terminals → 10/86

Circuit-breakers, switch-disconnectors up to 1600 A

Moeller HPL0211-2004/2005

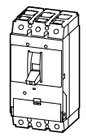
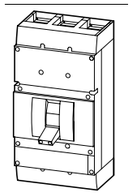
| | Rated current = rated uninterrupted current $I_n = I_u$ A | Setting range Overload releases $I_r$ A | Short-circuit releases Non-delayed $I_i$ A | Short-circuit releases Delayed $I_{sd}$ A | Normal switching capacity **50 kA** at 415 V 50/60 Hz **Type** Article no. | **Price** See Price List | High switching capacity **100 kA** at 415 V 50/60 Hz **Type** Article no. | **Price** See Price List | Normal switching capacity **150 kA**[1] at 415 V 50/60 Hz **Type** Article no. | **Price** See Price List | Std. pack | **Notes** |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Protection of systems and cables** | | | | | | | | | | | | |
| 3-pole | | | | | | | | | | | | |
| Standard terminal screws<br>Terminals as accessories | | | | | | | | | | | | |
|  | 250 | 125 – 250 | 500 – 2750 | – | **NZMN3-AE250** 259113 | | **NZMH3-AE250** 259116 | | **NZML3-AE250** 259119 | | 1 off | IEC/EN 61131-2<br>Adjustable overload release $I_r$<br>• 0.5 – 1 × $I_n$ (ex-factory 0.8 × $I_n$)<br>R.m.s. value measurement and "thermal memory"<br>Adjustable short-circuit release $I_i$<br>• 2 – 12 × $I_n$ (ex-factory 6 × $I_n$)<br>– NZM...3-AE250/400: 2 – 11 × $I_n$ (ex-factory 6 × $I_n$)<br>– NZM...3-AE630: 2 – 8 × $I_n$ (ex-factory 6 × $I_n$)<br><br>[1]With NZML4 the following applies: 120 kA; 100 kA probably until December 2004 |
| | 400 | 200 – 400 | 800 – 4400 | – | **NZMN3-AE400** 259114 | | **NZMH3-AE400** 259117 | | **NZML3-AE400** 259120 | | | |
| | 630 | 315 – 630 | 1260 – 5040 | – | **NZMN3-AE630** 259115 | | **NZMH3-AE630** 259118 | | **NZML3-AE630** 259121 | | | |
|  | 630 | 315 – 630 | 1260 – 7560 | – | **NZMN4-AE630** 265758 | | **NZMH4-AE630** 265763 | | **NZML4-AE630** 283128 | | 1 off | |
| | 800 | 400 – 800 | 1600 – 9600 | – | **NZMN4-AE800** 265759 | | **NZMH4-AE800** 265764 | | **NZML4-AE800** 283129 | | | |
| | 1000 | 500 – 1000 | 2000 – 12000 | – | **NZMN4-AE1000** 265760 | | **NZMH4-AE1000** 265765 | | **NZML4-AE1000** 283210 | | | |
| | 1250 | 630 – 1250 | 2500 – 15000 | – | **NZMN4-AE1250** 265761 | | **NZMH4-AE1250** 265766 | | **NZML4-AE1250** 283211 | | | |
| | 1600 | 800 – 1600 | 3200 – 19200 | – | **NZMN4-AE1600** 265762 | | **NZMH4-AE1600** 265767 | | **NZML4-AE1600** 283212 | | | |
| **Systems protection, cable protection, selectivity, generator protection** | | | | | | | | | | | | |
| 3-pole | | | | | | | | | | | | |
| Standard terminal screws<br>Terminals as accessories | | | | | | | | | | | | |
|  | 100 | 50 – 100 | 1200 | 100 – 1000 | **NZMN2-VE100** 259122 | | **NZMH2-VE100** 259125 | | **NZML2-VE100** 259128 | | 1 off | IEC/EN 61131-2<br>Adjustable overload release $I_r$<br>• 0.5 – 1 × $I_n$ (ex-factory 0.8 × $I_n$)<br>R.m.s. value measurement and "thermal memory"<br>Adjustable time delay setting to overcome current peaks $t_r$<br>• 2 – 20 s with 6 × $I_r$ as well as infinity (without overload release) (ex-factory 10 s)<br>Adjustable delayed short-circuit release $I_{sd}$<br>• 2 – 10 × $I_r$ (ex-factory 6 × $I_r$)<br>– NZM...3-VE630: 1.5 – 7 × $I_r$ (ex-factory 6 × $I_r$)<br>Adjustable delay time $t_{sd}$<br>• Steps: 0, 20, 60, 100, 200, 300, 500, 750, 1000 ms (ex-factory 0 ms)<br>Adjustable non-delayed short-circuit release $I_i$<br>• 2 – 12 × $I_n$ (ex-factory 12 × $I_n$)<br>– NZM2 fixed 12 × $I_n$<br>– NZM...3-VE250/400: 2 – 11 × $I_n$ (ex-factory 6 × $I_n$)<br>– NZM...3-VE630: 2 – 8 × $I_n$ (ex-factory 6 × $I_n$)<br>Switchable $i^2t$ constant function (ex-factory OFF)<br>– NZM2 fixed OFF<br><br>[1]With NZML4 the following applies: 120 kA; 100 kA probably until December 2004 |
| | 160 | 80 – 160 | 1920 | 160 – 1600 | **NZMN2-VE160** 259123 | | **NZMH2-VE160** 259126 | | **NZML2-VE160** 259129 | | | |
| | 250 | 125 – 250 | 3000 | 250 – 2500 | **NZMN2-VE250** 259124 | | **NZMH2-VE250** 259127 | | **NZML2-VE250** 259130 | | | |
|  | 250 | 125 – 250 | 500 – 2750 | 250 – 2500 | **NZMN3-VE250** 259131 | | **NZMH3-VE250** 259134 | | **NZML3-VE250** 259137 | | 1 off | |
| | 400 | 200 – 400 | 800 – 4400 | 400 – 4000 | **NZMN3-VE400** 259132 | | **NZMH3-VE400** 259135 | | **NZML3-VE400** 259138 | | | |
| | 630 | 315 – 630 | 1260 – 5040 | 472 – 4410 | **NZMN3-VE630** 259133 | | **NZMH3-VE630** 259136 | | **NZML3-VE630** 259139 | | | |
|  | 630 | 315 – 630 | 1260 – 7560 | 630 – 6300 | **NZMN4-VE630** 265768 | | **NZMH4-VE630** 265773 | | **NZML4-VE630** 283213 | | 1 off | |
| | 800 | 400 – 800 | 1600 – 9600 | 800 – 8000 | **NZMN4-VE800** 265769 | | **NZMH4-VE800** 265774 | | **NZML4-VE800** 283214 | | | |
| | 1000 | 500 – 1000 | 2000 – 12000 | 1000 – 10000 | **NZMN4-VE1000** 265770 | | **NZMH4-VE1000** 265775 | | **NZML4-VE1000** 283215 | | | |
| | 1250 | 630 – 1250 | 2500 – 15000 | 1250 – 12500 | **NZMN4-VE1250** 265771 | | **NZMH4-VE1250** 265776 | | **NZML4-VE1250** 283216 | | | |
| | 1600 | 800 – 1600 | 3200 – 19200 | 1600 – 16000 | **NZMN4-VE1600** 265772 | | **NZMH4-VE1600** 265777 | | **NZML4-VE1600** 283217 | | | |

**Notes** Notes for terminals → 10/86

Circuit-breakers, switch-disconnectors up to 1600 A

Moeller HPL0211-2004/2005

Moeller HPL0211-2004/2005

| Rated current = rated uninterrupted current $I_n = I_u$ A | Setting range Overload release $I_r$ A | Short-circuit release $I_i$ A | Normal switching capacity **50 kA** at 415 V 50/60 Hz **Type** Article no. | **Price** See Price List | High switching capacity **100 kA** at 415 V 50/60 Hz **Type** Article no. | **Price** See Price List | Limiter switching capacity **150 kA** [1] at 415 V 50/60 Hz **Type** Article no. | **Price** See Price List | Std. pack | **Notes** |
|---|---|---|---|---|---|---|---|---|---|---|
| **Motor protection** | | | | | | | | | | |
| 3-pole | | | | | | | | | | |
| Standard terminal screws<br>Terminals as accessories | | | | | | | | | | |
|  | 90 | 45 – 90 | 90 – 1260 | **NZMN2-ME90**<br>265778 | | **NZMH2-ME90**<br>265786 | | **NZML2-ME90**<br>265794 | | 1 off | IEC/EN 60947-2 and IEC/EN 60947-4<br>Adjustable overload release $I_r$<br>• 0.5 – 1 × $I_n$ (ex-factory 0.8 × $I_n$)<br>R.m.s. value measurement and "thermal memory"<br>Adjustable time delay setting to overcome current peaks $t_r$<br>• 2 – 20 s with 6 × $I_r$ as well as infinity (without overload release) (ex-factory 10 s)<br>Phase-failure sensitivity<br>Adjustable short-circuit release $I_i$<br>• 2 – 14 × $I_r$ (ex-factory 12 × $I_r$)<br><br>[1]With NZML4 the following applies: 120 kA; 100 kA probably until December 2004 |
| | 140 | 70 – 140 | 140 – 1960 | **NZMN2-ME140**<br>265779 | | **NZMH2-ME140**<br>265787 | | **NZML2-ME140**<br>265795 | | | |
| | 220 | 110 – 220 | 220 – 3080 | **NZMN2-ME220**<br>265780 | | **NZMH2-ME220**<br>265788 | | **NZML2-ME220**<br>265796 | | | |
|  | 220 | 110 – 220 | 220 – 3080 | **NZMN3-ME220**<br>265781 | | **NZMH3-ME220**<br>265789 | | **NZML3-ME220**<br>265797 | | 1 off | |
| | 350 | 175 – 350 | 350 – 4900 | **NZMN3-ME350**<br>265782 | | **NZMH3-ME350**<br>265790 | | **NZML3-ME350**<br>265798 | | | |
| | 450 | 225 – 450 | 450 – 6300 | **NZMN3-ME450**<br>284468 | | **NZMH3-ME450**<br>284469 | | **NZML3-ME450**<br>284470 | | | |
|  | 550 | 275 – 550 | 550 – 7700 | **NZMN4-ME550**<br>265783 | | **NZMH4-ME550**<br>265791 | | **NZML4-ME550**<br>283218 | | 1 off | |
| | 875 | 438 – 875 | 875 – 12250 | **NZMN4-ME875**<br>265784 | | **NZMH4-ME875**<br>265792 | | **NZML4-ME875**<br>283219 | | | |
| | 1400 | 700 – 1400 | 1400 – 19600 | **NZMN4-ME1400**<br>265785 | | **NZMH4-ME1400**<br>265793 | | **NZML4-ME1400**<br>283220 | | | |

**Notes** Notes for terminals → 10/86

Circuit-breakers, switch-disconnectors up to 1600 A

Moeller HPL0211-2004/2005

Moeller HPL0211-2004/2005

| Rated current = rated uninterrupted current | Setting range: Overload releases, Main pole | Setting range: Overload releases, Neutral conductor | Short-circuit release | Basic switching capacity **25 kA** at 415 V 50/60 Hz: **Type** Article no. | Basic switching capacity **25 kA**: **Price** See Price List | Normal switching capacity **50 kA** at 415 V 50/60 Hz: **Type** Article no. | Normal switching capacity **50 kA**: **Price** See Price List | High switching capacity **100 kA** at 415 V 50/60 Hz: **Type** Article no. | High switching capacity **100 kA**: **Price** See Price List | Limiter switching capacity **150 kA** at 415 V 50/60 Hz: **Type** Article no. | Limiter switching capacity **150 kA**: **Price** See Price List | Std. pack | **Notes** |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| $I_n = I_u$ A | $I_r$ A | $I_r$ A | $I_i$ A | | | | | | | | | | |
| **Protection of systems and cables** | | | | | | | | | | | | | |
| 4-pole | | | | | | | | | | | | | |
| Terminals standard<br>Terminal screws as accessories | | | | | | | | | | | | | |
| 20 | 15 – 20 | 15 – 20 | 350 | **NZMB1-4-A20**<br>281237 | | **NZMN1-4-A20**<br>281245 | | **NZMH1-4-A20**<br>284416 | | | | 1 off | IEC/EN 61131-2<br>Adjustable overload release $I_r$<br>• 0.8 – 1 × $I_n$ (ex-factory 0.8 × $I_n$)<br>Setting on neutral pole implemented via the main pole setting $I_r$ of the main pole.<br>Adjustable short-circuit release $I_i$<br>• 6 – 10 × $I_n$ (ex-factory 6 × $I_n$)<br>– NZM...1-4-A40: 8 – 10 × $I_n$ (ex-factory 8 × $I_n$)<br>– NZM...1-4-A160: fixed 8 × $I_n$<br>Fixed short-circuit release $I_i$<br>• 350 A at $I_n$ = 20 – 32 A<br><br>NZM..1-4-A...<br>• With 100% overload and short-circuit protection in 4th pole<br>NZM...1-4-A.../0<br>• No overload and short-circuit protection in 4th pole<br>• Not for use in IT electrical power networks |
| 20 | 15 – 20 | – | 350 | **NZMB1-4-A20/0**<br>281238 | | **NZMN1-4-A20/0**<br>281246 | | **NZMH1-4-A20/0**<br>284417 | | | | | |
| 25 | 20 – 25 | 20 – 25 | 350 | **NZMB1-4-A25**<br>281239 | | **NZMN1-4-A25**<br>281247 | | **NZMH1-4-A25**<br>284418 | | | | | |
| 25 | 20 – 25 | – | 350 | **NZMB1-4-A25/0**<br>281240 | | **NZMN1-4-A25/0**<br>281248 | | **NZMH1-4-A25/0**<br>284419 | | | | | |
| 32 | 25 – 32 | 25 – 32 | 350 | **NZMB1-4-A32**<br>281241 | | **NZMN1-4-A32**<br>281249 | | **NZMH1-4-A32**<br>284420 | | | | | |
| 32 | 25 – 32 | – | 350 | **NZMB1-4-A32/0**<br>281242 | | **NZMN1-4-A32/0**<br>281250 | | **NZMH1-4-A32/0**<br>284421 | | | | | |
| 40 | 32 – 40 | 32 – 40 | 320 – 400 | **NZMB1-4-A40**<br>265799 | | **NZMN1-4-A40**<br>265811 | | **NZMH1-4-A40**<br>284422 | | | | | |
| 40 | 32 – 40 | – | 320 – 400 | **NZMB1-4-A40/0**<br>265800 | | **NZMN1-4-A40/0**<br>265812 | | **NZMH1-4-A40/0**<br>284423 | | | | | |
| 50 | 40 – 50 | 40 – 50 | 300 – 500 | **NZMB1-4-A50**<br>265801 | | **NZMN1-4-A50**<br>265813 | | **NZMH1-4-A50**<br>284424 | | | | | |
| 50 | 40 – 50 | – | 300 – 500 | **NZMB1-4-A50/0**<br>265802 | | **NZMN1-4-A50/0**<br>265814 | | **NZMH1-4-A50/0**<br>284425 | | | | | |
| 63 | 50 – 63 | 50 – 63 | 380 – 630 | **NZMB1-4-A63**<br>265803 | | **NZMN1-4-A63**<br>265815 | | **NZMH1-4-A63**<br>284426 | | | | | |
| 63 | 50 – 63 | – | 380 – 630 | **NZMB1-4-A63/0**<br>265804 | | **NZMN1-4-A63/0**<br>265816 | | **NZMH1-4-A63/0**<br>284427 | | | | | |
| 80 | 63 – 80 | 63 – 80 | 480 – 800 | **NZMB1-4-A80**<br>265805 | | **NZMN1-4-A80**<br>265817 | | **NZMH1-4-A80**<br>284428 | | | | | |
| 80 | 63 – 80 | – | 480 – 800 | **NZMB1-4-A80/0**<br>265806 | | **NZMN1-4-A80/0**<br>265818 | | **NZMH1-4-A80/0**<br>284429 | | | | | |
| 100 | 80 – 100 | 80 – 100 | 600 – 1000 | **NZMB1-4-A100**<br>265807 | | **NZMN1-4-A100**<br>265819 | | **NZMH1-4-A100**<br>284430 | | | | | |
| 100 | 80 – 100 | – | 600 – 1000 | **NZMB1-4-A100/0**<br>265808 | | **NZMN1-4-A100/0**<br>265820 | | **NZMH1-4-A100/0**<br>284431 | | | | | |
| 125 | 100 – 125 | 100 – 125 | 750 – 1250 | **NZMB1-4-A125**<br>265809 | | **NZMN1-4-A125**<br>265821 | | **NZMH1-4-A125**<br>284432 | | | | | |
| 125 | 100 – 125 | – | 750 – 1250 | **NZMB1-4-A125/0**<br>265810 | | **NZMN1-4-A125/0**<br>265822 | | **NZMH1-4-A125/0**<br>284433 | | | | | |
| 160 | 125 – 160 | 125 – 160 | 1280 | **NZMB1-4-A160**<br>281243 | | **NZMN1-4-A160**<br>281251 | | **NZMH1-4-A160**<br>284434 | | | | | |
| 160 | 125 – 160 | – | 1280 | **NZMB1-4-A160/0**<br>281244 | | **NZMN1-4-A160/0**<br>281252 | | **NZMH1-4-A160/0**<br>284435 | | | | | |

**Notes** Notes for terminals → 10/86

Circuit-breakers, switch-disconnectors up to 1600 A

Moeller HPL0211-2004/2005

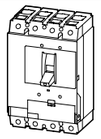
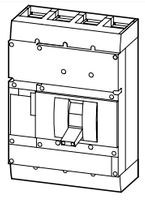
Moeller HPL0211-2004/2005

| Rated current = rated uninterrupted current | Setting range: Overload releases, Main pole | Setting range: Overload releases, Neutral conductor | Short-circuit release | Basic switching capacity **25 kA** at 415 V 50/60 Hz: **Type** Article no. | Basic switching capacity **25 kA** at 415 V 50/60 Hz: **Price** See Price List | Normal switching capacity **50 kA** at 415 V 50/60 Hz: **Type** Article no. | Normal switching capacity **50 kA** at 415 V 50/60 Hz: **Price** See Price List | High switching capacity **100 kA** at 415 V 50/60 Hz: **Type** Article no. | High switching capacity **100 kA** at 415 V 50/60 Hz: **Price** See Price List | Limiter switching capacity **150 kA** at 415 V 50/60 Hz: **Type** Article no. | Limiter switching capacity **150 kA** at 415 V 50/60 Hz: **Price** See Price List | Std. pack | **Notes** |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| $I_n = I_u$ A | $I_r$ A | $I_r$ A | $I_i$ A | | | | | | | | | | |
| **Protection of systems and cables** | | | | | | | | | | | | | |
| 4-pole | | | | | | | | | | | | | |
| Terminal screws standard terminal as accessories | | | | | | | | | | | | | |
| 20 | 15 – 20 | 15 – 20 | 350 | | | | | **NZMH2-4-A20** 281287 | | **NZML2-4-A20** 281293 | | 1 off | IEC/EN 61131-2<br>Adjustable overload release $I_r$<br>• 0.8 – 1 × $I_n$ (ex-factory 0.8 × $I_n$)<br>Setting on neutral pole implemented via the main pole setting $I_r$ of the main pole.<br>Adjustable short-circuit release $I_i$<br>• 6 – 10 × $I_n$ (ex-factory 6 × $I_n$)<br>– NZM...2-4-A40: 8 – 10 × $I_n$ (ex-factory 8 × $I_n$)<br>Fixed short-circuit release $I_i$<br>• 350 A at $I_n$ = 20 – 32 A<br><br>NZM..2-4-A...<br>• With 100% overload and short-circuit protection in 4th pole<br>NZM..2-4-A.../...<br>• With 60% overload and short-circuit protection in 4th pole<br>NZM...2-4-A.../0<br>• No overload and short-circuit protection in 4th pole<br>• Not for use in IT electrical power networks |
| 20 | 15 – 20 | – | 350 | | | | | **NZMH2-4-A20/0** 281288 | | **NZML2-4-A20/0** 281294 | | | |
| 25 | 20 – 25 | 20 – 25 | 350 | | | | | **NZMH2-4-A25** 281289 | | **NZML2-4-A25** 281295 | | | |
| 25 | 20 – 25 | – | 350 | | | | | **NZMH2-4-A25/0** 281290 | | **NZML2-4-A25/0** 281296 | | | |
| 32 | 25 – 32 | 25 – 32 | 350 | | | | | **NZMH2-4-A32** 281291 | | **NZML2-4-A32** 281297 | | | |
| 32 | 25 – 32 | – | 350 | | | | | **NZMH2-4-A32/0** 281292 | | **NZML2-4-A32/0** 281298 | | | |
| 40 | 32 – 40 | 32 – 40 | 320 – 400 | | | | | **NZMH2-4-A40** 265823 | | **NZML2-4-A40** 265835 | | | |
| 40 | 32 – 40 | – | 320 – 400 | | | | | **NZMH2-4-A40/0** 265824 | | **NZML2-4-A40/0** 265836 | | | |
| 50 | 40 – 50 | 40 – 50 | 300 – 500 | | | | | **NZMH2-4-A50** 265825 | | **NZML2-4-A50** 265837 | | | |
| 50 | 40 – 50 | – | 300 – 500 | | | | | **NZMH2-4-A50/0** 265826 | | **NZML2-4-A50/0** 265838 | | | |
| 63 | 50 – 63 | 50 – 63 | 380 – 630 | | | | | **NZMH2-4-A63** 265827 | | **NZML2-4-A63** 265839 | | | |
| 63 | 50 – 63 | – | 380 – 630 | | | | | **NZMH2-4-A63/0** 265828 | | **NZML2-4-A63/0** 265840 | | | |
| 80 | 63 – 80 | 63 – 80 | 480 – 800 | | | | | **NZMH2-4-A80** 265829 | | **NZML2-4-A80** 265841 | | | |
| 80 | 63 – 80 | – | 480 – 800 | | | | | **NZMH2-4-A80/0** 265830 | | **NZML2-4-A80/0** 265842 | | | |
| 100 | 80 – 100 | 80 – 100 | 600 – 1000 | | | | | **NZMH2-4-A100** 265831 | | **NZML2-4-A100** 265843 | | | |
| 100 | 80 – 100 | – | 600 – 1000 | | | | | **NZMH2-4-A100/0** 265832 | | **NZML2-4-A100/0** 265844 | | | |
| 125 | 100 – 125 | 100 – 125 | 750 – 1250 | **NZMB2-4-A125** 265847 | | **NZMN2-4-A125** 265858 | | **NZMH2-4-A125** 265833 | | **NZML2-4-A125** 265845 | | | |
| 125 | 100 – 125 | – | 750 – 1250 | **NZMB2-4-A125/0** 265848 | | **NZMN2-4-A125/0** 265859 | | **NZMH2-4-A125/0** 265834 | | **NZML2-4-A125/0** 265846 | | | |
| 160 | 125 – 160 | 125 – 160 | 960 – 1600 | **NZMB2-4-A160** 265849 | | **NZMN2-4-A160** 265860 | | **NZMH2-4-A160** 265871 | | **NZML2-4-A160** 265882 | | | |
| 160 | 125 – 160 | 80 – 100 | 960 – 1600 | **NZMB2-4-A160/100** 265850 | | **NZMN2-4-A160/100** 265861 | | **NZMH2-4-A160/100** 265872 | | **NZML2-4-A160/100** 265883 | | | |
| 160 | 125 – 160 | – | 960 – 1600 | **NZMB2-4-A160/0** 265851 | | **NZMN2-4-A160/0** 265862 | | **NZMH2-4-A160/0** 265873 | | **NZML2-4-A160/0** 265884 | | | |
| 200 | 160 – 200 | 160 – 200 | 1200 – 2000 | **NZMB2-4-A200** 265852 | | **NZMN2-4-A200** 265863 | | **NZMH2-4-A200** 265874 | | **NZML2-4-A200** 265885 | | | |
| 200 | 160 – 200 | 100 – 125 | 1200 – 2000 | **NZMB2-4-A200/125** 265853 | | **NZMN2-4-A200/125** 265864 | | **NZMH2-4-A200/125** 265875 | | **NZML2-4-A200/125** 265886 | | | |
| 200 | 160 – 200 | – | 1200 – 2000 | **NZMB2-4-A200/0** 265854 | | **NZMN2-4-A200/0** 265865 | | **NZMH2-4-A200/0** 265876 | | **NZML2-4-A200/0** 265887 | | | |
| 250 | 200 – 250 | 200 – 250 | 1500 – 2500 | **NZMB2-4-A250** 265855 | | **NZMN2-4-A250** 265866 | | **NZMH2-4-A250** 265877 | | **NZML2-4-A250** 265888 | | | |
| 250 | 200 – 250 | 125 – 160 | 1500 – 2500 | **NZMB2-4-A250/160** 265856 | | **NZMN2-4-A250/160** 265867 | | **NZMH2-4-A250/160** 265878 | | **NZML2-4-A250/160** 265889 | | | |
| 250 | 200 – 250 | – | 1500 – 2500 | **NZMB2-4-A250/0** 265857 | | **NZMN2-4-A250/0** 265868 | | **NZMH2-4-A250/0** 265879 | | **NZML2-4-A250/0** 265890 | | | |

**Notes** Notes for terminals → 10/86

Circuit-breakers, switch-disconnectors up to 1600 A

Moeller HPL0211-2004/2005

| | Rated current = rated uninterrupted current $I_n = I_u$ A | Setting range Overload releases Main pole $I_r$ A | Neutral conductor $I_r$ A | Short-circuit releases $I_i$ A | Normal switching capacity **50 kA** at 415 V 50/60 Hz **Type** Article no. | **Price** See Price List | High switching capacity **100 kA** at 415 V 50/60 Hz **Type** Article no. | **Price** See Price List | Limiter switching capacity **150 kA** [1] at 415 V 50/60 Hz **Type** Article no. | **Price** See Price List | Std. pack | **Notes** |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Protection of systems and cables** | | | | | | | | | | | | |
| 4-pole | | | | | | | | | | | | |
| Terminal screws standard terminal as accessories | | | | | | | | | | | | |
|  | 400 | 200 – 400 | 200 – 400 | 800 – 4400 | **NZMN3-4-AE400** 265891 | | **NZMH3-4-AE400** 265897 | | **NZML3-4-AE400** 265903 | | 1 off | IEC/EN 61131-2<br>Adjustable overload release $I_r$<br>• 0.5 – 1 × $I_n$ (ex-factory 0.8 × $I_n$)<br>Setting on neutral pole implemented via the main pole setting $I_r$ of the main pole.<br>R.m.s. value measurement and "thermal memory"<br>Adjustable short-circuit release $I_i$<br>• 2 – 12 × $I_n$ (ex-factory 6 × $I_n$)<br>– NZM...3-4-AE400: 2 – 11 × $I_n$ (ex-factory 6 × $I_n$)<br>– NZM...3-4-AE630: 2 – 8 × $I_n$ (ex-factory 6 × $I_n$)<br><br>NZM...-4-AE...<br>• With 100% overload and short-circuit protection in 4th pole<br>NZM...-4-AE.../...<br>• With 60% overload and short-circuit protection in 4th pole<br>NZM...-4-AE.../0<br>• No overload and 100 % short-circuit protection in the 4th pole<br>• Not for use in IT electrical power networks<br><br>[1]With NZML4 the following applies: 120 kA; 100 kA probably until December 2004 |
| | 400 | 200 – 400 | 125 – 250 | 800 – 4400 | **NZMN3-4-AE400/250** 265892 | | **NZMH3-4-AE400/250** 265898 | | **NZML3-4-AE400/250** 265904 | | | |
| | 400 | 200 – 400 | – | 800 – 4400 | **NZMN3-4-AE400/0** 265893 | | **NZMH3-4-AE400/0** 265899 | | **NZML3-4-AE400/0** 265905 | | | |
| | 630 | 315 – 630 | 315 – 630 | 1260 – 5040 | **NZMN3-4-AE630** 265894 | | **NZMH3-4-AE630** 265900 | | **NZML3-4-AE630** 265906 | | | |
| | 630 | 315 – 630 | 200 – 400 | 1260 – 5040 | **NZMN3-4-AE630/400** 265895 | | **NZMH3-4-AE630/400** 265901 | | **NZML3-4-AE630/400** 265907 | | | |
| | 630 | 315 – 630 | – | 1260 – 5040 | **NZMN3-4-AE630/0** 265896 | | **NZMH3-4-AE630/0** 265902 | | **NZML3-4-AE630/0** 265908 | | | |
|  | 800 | 400 – 800 | 400 – 800 | 1600 – 9600 | **NZMN4-4-AE800** 265909 | | **NZMH4-4-AE800** 265921 | | **NZML4-4-AE800** 283221 | | 1 off | |
| | 800 | 400 – 800 | 250 – 500 | 1600 – 9600 | **NZMN4-4-AE800/500** 265910 | | **NZMH4-4-AE800/500** 265922 | | **NZML4-4-AE800/500** 283222 | | | |
| | 800 | 400 – 800 | – | 1600 – 9600 | **NZMN4-4-AE800/0** 265911 | | **NZMH4-4-AE800/0** 265923 | | **NZML4-4-AE800/0** 283223 | | | |
| | 1000 | 500 – 1000 | 500 – 1000 | 2000 – 12000 | **NZMN4-4-AE1000** 265912 | | **NZMH4-4-AE1000** 265924 | | **NZML4-4-AE1000** 283224 | | | |
| | 1000 | 500 – 1000 | 315 – 630 | 2000 – 12000 | **NZMN4-4-AE1000/630** 265913 | | **NZMH4-4-AE1000/630** 265925 | | **NZML4-4-AE1000/630** 283225 | | | |
| | 1000 | 500 – 1000 | – | 2000 – 12000 | **NZMN4-4-AE1000/0** 265914 | | **NZMH4-4-AE1000/0** 265926 | | **NZML4-4-AE1000/0** 283226 | | | |
| | 1250 | 630 – 1250 | 630 – 1250 | 2500 – 15000 | **NZMN4-4-AE1250** 265915 | | **NZMH4-4-AE1250** 265927 | | **NZML4-4-AE1250** 283227 | | | |
| | 1250 | 630 – 1250 | 400 – 800 | 2500 – 15000 | **NZMN4-4-AE1250/800** 265916 | | **NZMH4-4-AE1250/800** 265928 | | **NZML4-4-AE1250/800** 283228 | | | |
| | 1250 | 630 – 1250 | – | 2500 – 15000 | **NZMN4-4-AE1250/0** 265917 | | **NZMH4-4-AE1250/0** 265929 | | **NZML4-4-AE1250/0** 283229 | | | |
| | 1600 | 800 – 1600 | 800 – 1600 | 3200 – 19200 | **NZMN4-4-AE1600** 265918 | | **NZMH4-4-AE1600** 265930 | | **NZML4-4-AE1600** 283230 | | | |
| | 1600 | 800 – 1600 | 500 – 1000 | 3200 – 19200 | **NZMN4-4-AE1600/1000** 265919 | | **NZMH4-4-AE1600/1000** 265931 | | **NZML4-4-AE1600/1000** 283231 | | | |
| | 1600 | 800 – 1600 | – | 3200 – 19200 | **NZMN4-4-AE1600/0** 265920 | | **NZMH4-4-AE1600/0** 265932 | | **NZML4-4-AE1600/0** 283232 | | | |

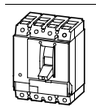
**Notes** Notes for terminals → 10/86

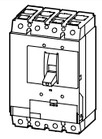
Circuit-breakers, switch-disconnectors up to 1600 A

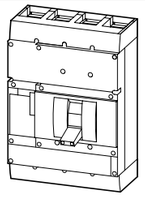
Moeller HPL0211-2004/2005

Moeller HPL0211-2004/2005

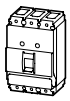
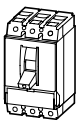
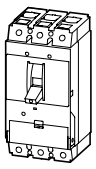
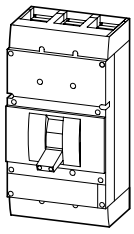
| Rated current = rated uninterrupted current $I_n = I_u$ A | Setting range Overload releases Main pole $I_r$ A | Neutral conductor $I_r$ A | Short-circuit releases Non-delayed $I_i$ A | Delayed $I_{sd}$ A | Normal switching capacity **50 kA** at 415 V 50/60 Hz **Type** Article no. | **Price** See Price List | High switching capacity **100 kA** at 415 V 50/60 Hz **Type** Article no. | **Price** See Price List | Limiter switching capacity **150 kA** [1] at 415 V 50/60 Hz **Type** Article no. | **Price** See Price List | Std. pack | **Notes** |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Systems protection, cable protection, selectivity, generator protection** | | | | | | | | | | | | |
| 4-pole | | | | | | | | | | | | |
| Terminal screws standard terminal as accessories | | | | | | | | | | | | |
| 100 | 50 – 100 | 50 – 100 | 1200 | 100 – 1000 | **NZMN2-4-VE100** 265933 | | **NZMH2-4-VE100** 265941 | | **NZML2-4-VE100** 265949 | | 1 off | IEC/EN 61131-2<br>Adjustable overload release $I_r$<br>• 0.5 – 1 × $I_n$ (ex-factory 0.8 × $I_n$)<br>Setting on neutral pole implemented via the main pole setting $I_r$ of the main pole.<br>R.m.s. value measurement and "thermal memory"<br>Adjustable time delay setting to overcome current peaks $t_r$<br>• 2 – 20 s with 6 × $I_r$ as well as infinity (without overload release) (ex-factory 10 s)<br>Adjustable delayed short-circuit release $I_{sd}$<br>• 2 – 10 × $I_r$ (ex-factory 6 × $I_r$)<br>– NZM...3-4-VE630: 1.5 – 7 × $I_r$ (ex-factory 6 × $I_r$)<br>Adjustable delay time $t_{sd}$<br>• Steps: 0, 20, 60, 100, 200, 300, 500, 750, 1000 ms (ex-factory 0 ms)<br>Adjustable non-delayed short-circuit release $I_i$<br>• 2 – 12 × $I_n$ (ex-factory 12 × $I_n$)<br>– NZM2 fixed 12 × $I_n$<br>– NZM...3-4-VE400: 2 – 11 × $I_n$ (ex-factory 6 × $I_n$)<br>– NZM...3-4-VE630: 2 – 8 × $I_n$ (ex-factory 6 × $I_n$)<br>Switchable i²t constant function (ex-factory OFF)<br>NZM2 fixed OFF<br><br>NZM...-4-VE...<br>• With 100% overload and short-circuit protection in 4th pole<br>NZM...-4-VE.../...<br>• With 60% overload and short-circuit protection in 4th pole<br>NZM...-4-VE.../0<br>• No overload and 100 % short-circuit protection in the 4th pole<br>• Not for use in IT electrical power networks<br><br>[1] With NZML4 the following applies: 120 kA; 100 kA probably until December 2004 |
| 100 | 50 – 100 | – | 1200 | 100 – 1000 | **NZMN2-4-VE100/0** 265934 | | **NZMH2-4-VE100/0** 265942 | | **NZML2-4-VE100/0** 265950 | | | |
| 160 | 80 – 160 | 80 – 160 | 1920 | 160 – 1600 | **NZMN2-4-VE160** 265935 | | **NZMH2-4-VE160** 265943 | | **NZML2-4-VE160** 265951 | | | |
| 160 | 80 – 160 | 50 – 100 | 1920 | 160 – 1600 | **NZMN2-4-VE160/100** 265936 | | **NZMH2-4-VE160/100** 265944 | | **NZML2-4-VE160/100** 265952 | | | |
| 160 | 80 – 160 | – | 1920 | 160 – 1600 | **NZMN2-4-VE160/0** 265937 | | **NZMH2-4-VE160/0** 265945 | | **NZML2-4-VE160/0** 265953 | | | |
| 250 | 125 – 250 | 125 – 250 | 3000 | 250 – 2500 | **NZMN2-4-VE250** 265938 | | **NZMH2-4-VE250** 265946 | | **NZML2-4-VE250** 265954 | | | |
| 250 | 125 – 250 | 80 – 160 | 3000 | 250 – 2500 | **NZMN2-4-VE250/160** 265939 | | **NZMH2-4-VE250/160** 265947 | | **NZML2-4-VE250/160** 265955 | | | |
| 250 | 125 – 250 | – | 3000 | 250 – 2500 | **NZMN2-4-VE250/0** 265940 | | **NZMH2-4-VE250/0** 265948 | | **NZML2-4-VE250/0** 265956 | | | |
| 400 | 200 – 400 | 200 – 400 | 800 – 4400 | 400 – 4000 | **NZMN3-4-VE400** 265957 | | **NZMH3-4-VE400** 265963 | | **NZML3-4-VE400** 265969 | | 1 off | |
| 400 | 200 – 400 | 125 – 250 | 800 – 4400 | 400 – 4000 | **NZMN3-4-VE400/250** 265958 | | **NZMH3-4-VE400/250** 265964 | | **NZML3-4-VE400/250** 265970 | | | |
| 400 | 200 – 400 | – | 800 – 4400 | 400 – 4000 | **NZMN3-4-VE400/0** 265959 | | **NZMH3-4-VE400/0** 265965 | | **NZML3-4-VE400/0** 265971 | | | |
| 630 | 315 – 630 | 315 – 630 | 1260 – 5040 | 472 – 4410 | **NZMN3-4-VE630** 265960 | | **NZMH3-4-VE630** 265966 | | **NZML3-4-VE630** 265972 | | | |
| 630 | 315 – 630 | 200 – 400 | 1260 – 5040 | 472 – 4410 | **NZMN3-4-VE630/400** 265961 | | **NZMH3-4-VE630/400** 265967 | | **NZML3-4-VE630/400** 265973 | | | |
| 630 | 315 – 630 | – | 1260 – 5040 | 472 – 4410 | **NZMN3-4-VE630/0** 265962 | | **NZMH3-4-VE630/0** 265968 | | **NZML3-4-VE630/0** 265974 | | | |
| 800 | 400 – 800 | 400 – 800 | 1600 – 9600 | 800 – 8000 | **NZMN4-4-VE800** 265975 | | **NZMH4-4-VE800** 265987 | | **NZML4-4-VE800** 283233 | | 1 off | |
| 800 | 400 – 800 | 250 – 500 | 1600 – 9600 | 800 – 8000 | **NZMN4-4-VE800/500** 265976 | | **NZMH4-4-VE800/500** 265988 | | **NZML4-4-VE800/500** 283234 | | | |
| 800 | 400 – 800 | – | 1600 – 9600 | 800 – 8000 | **NZMN4-4-VE800/0** 265977 | | **NZMH4-4-VE800/0** 265989 | | **NZML4-4-VE800/0** 283235 | | | |
| 1000 | 500 – 1000 | 500 – 1000 | 2000 – 12000 | 1000 – 10000 | **NZMN4-4-VE1000** 265978 | | **NZMH4-4-VE1000** 265990 | | **NZML4-4-VE1000** 283236 | | | |
| 1000 | 500 – 1000 | 315 – 630 | 2000 – 12000 | 1000 – 10000 | **NZMN4-4-VE1000/630** 265979 | | **NZMH4-4-VE1000/630** 265991 | | **NZML4-4-VE1000/630** 283237 | | | |
| 1000 | 500 – 1000 | – | 2000 – 12000 | 1000 – 10000 | **NZMN4-4-VE1000/0** 265980 | | **NZMH4-4-VE1000/0** 265992 | | **NZML4-4-VE1000/0** 283238 | | | |
| 1250 | 630 – 1250 | 630 – 1250 | 2500 – 15000 | 1250 – 12500 | **NZMN4-4-VE1250** 265981 | | **NZMH4-4-VE1250** 265993 | | **NZML4-4-VE1250** 283239 | | | |
| 1250 | 630 – 1250 | 400 – 800 | 2500 – 15000 | 1250 – 12500 | **NZMN4-4-VE1250/800** 265982 | | **NZMH4-4-VE1250/800** 265994 | | **NZML4-4-VE1250/800** 283240 | | | |
| 1250 | 630 – 1250 | – | 2500 – 15000 | 1250 – 12500 | **NZMN4-4-VE1250/0** 265983 | | **NZMH4-4-VE1250/0** 265995 | | **NZML4-4-VE1250/0** 283241 | | | |
| 1600 | 800 – 1600 | 800 – 1600 | 3200 – 19200 | 1600 – 16000 | **NZMN4-4-VE1600** 265984 | | **NZMH4-4-VE1600** 265996 | | **NZML4-4-VE1600** 283242 | | | |
| 1600 | 800 – 1600 | 500 – 1000 | 3200 – 19200 | 1600 – 16000 | **NZMN4-4-VE1600/1000** 265985 | | **NZMH4-4-VE1600/1000** 265997 | | **NZML4-4-VE1600/1000** 283243 | | | |
| 1600 | 800 – 1600 | – | 3200 – 19200 | 1600 – 16000 | **NZMN4-4-VE1600/0** 265986 | | **NZMH4-4-VE1600/0** 265998 | | **NZML4-4-VE1600/0** 283244 | | | |







**Notes** Notes for terminals → 10/86

| | Rated current = rated uninterrupted current $I_n = I_u$ A | Short-circuit protection max. fuse gL-characteristic A gL | 2 switch positions I , 0 ; cannot be remotely tripped **Type** Article no. | **Price** See Price List | 3 switch positions I , + , 0 ; cannot be tripped remotely with shunt/undervoltage release **Type** Article no. | **Price** See Price List | Std. pack |
|---|---|---|---|---|---|---|---|
| **Switch-disconnectors** | | | | | | | |
| 3-pole | | | | | | | |
| Terminals standard terminal screws as accessories | | | | | | | |
|  | 63 | 125 | **PN1-63** 259140 | | **N1-63** 259143 | | 1 off |
| | 100 | 125 | **PN1-100** 259141 | | **N1-100** 259144 | | |
| | 125 | 125 | **PN1-125** 259142 | | **N1-125** 259145 | | |
| | 160 | 160 | **PN1-160** 281235 | | **N1-160** 281236 | | |
| Terminal screws standard terminals as accessories | | | | | | | |
|  | 160 | 250 | **PN2-160** 266005 | | **N2-160** 266008 | | 1 off |
| | 200 | 250 | **PN2-200** 266006 | | **N2-200** 266009 | | |
| | 250 | 250 | **PN2-250** 266007 | | **N2-250** 266010 | | |
|  | 400 | 630 | **PN3-400** 266017 | | **N3-400** 266019 | | 1 off |
| | 630 | 630 | **PN3-630** 266018 | | **N3-630** 266020 | | |
|  | 800 | 1600 | | | **N4-800** 266025 | | 1 off |
| | 1000 | 1600 | | | **N4-1000** 266026 | | |
| | 1250 | 1600 | | | **N4-1250** 266027 | | |
| | 1600 | 1600 | | | **N4-1600** 266028 | | |

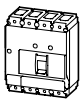
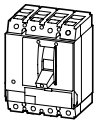
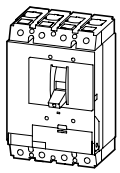
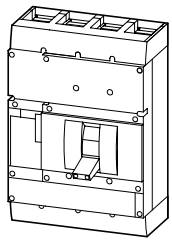
**Notes**

Main switch characteristics including positive drive to IEC/EN 60204 and VDE 0113
Isolating characteristics to IEC/EN 60947-3 and VDE 0660
Protection against accidental contact according to IEC 100

shunt/undervoltage releases and trip-indicating auxiliary contacts can be used in addition with N switch-disconnectors.
N2..., N3... and N4... can also be combined with the NZM...-XR... remote operator.

Notes for terminals → 10/86

Moeller HPL0211-2004/2005

| | Rated current = rated uninterrupted current $I_n = I_u$ A | Short-circuit protection max. fuse gL-characteristic A gL | 2 switch positions I , 0 ; cannot be remotely tripped **Type** Article no. | **Price** See Price List | 3 switch positions I , + , 0 ; can be tripped remotely with shunt/undervoltage release **Type** Article no. | **Price** See Price List | Std. pack |
|---|---|---|---|---|---|---|---|
| **Switch-disconnectors** | | | | | | | |
| 4-pole | | | | | | | |
| Terminals standard terminal screws as accessories | | | | | | | |
|  | 63 | 125 | **PN1-4-63** 265999 | | **N1-4-63** 266002 | | 1 off |
| | 100 | 125 | **PN1-4-100** 266000 | | **N1-4-100** 266003 | | |
| | 125 | 125 | **PN1-4-125** 266001 | | **N1-4-125** 266004 | | |
| | 160 | 160 | **PN1-4-160** 281253 | | **N1-4-160** 281254 | | |
| Terminal screws standard Terminals as accessories | | | | | | | |
|  | 160 | 250 | **PN2-4-160** 266011 | | **N2-4-160** 266014 | | 1 off |
| | 200 | 250 | **PN2-4-200** 266012 | | **N2-4-200** 266015 | | |
| | 250 | 250 | **PN2-4-250** 266013 | | **N2-4-250** 266016 | | |
|  | 400 | 630 | **PN3-4-400** 266021 | | **N3-4-400** 266023 | | 1 off |
| | 630 | 630 | **PN3-4-630** 266022 | | **N3-4-630** 266024 | | |
|  | 800 | 1600 | | | **N4-4-800** 266029 | | 1 off |
| | 1000 | 1600 | | | **N4-4-1000** 266030 | | |
| | 1250 | 1600 | | | **N4-4-1250** 266031 | | |
| | 1600 | 1600 | | | **N4-4-1600** 266032 | | |

**Notes**

Main switch characteristics including positive drive to IEC/EN 60204 and VDE 0113
Isolating characteristics to IEC/EN 60947-3 and VDE 0660
Protection against accidental contact according to IEC 100

shunt/undervoltage releases and trip-indicating auxiliary contacts can be used in addition with N switch-disconnectors.
N2..., N3... and N4... can also be combined with the NZM...-XR... remote operator.

Notes for terminals → 10/86

Circuit-breakers, switch-disconnectors up to 1600 A

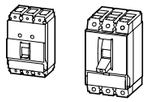
Moeller HPL0211-2004/2005

Moeller HPL0211-2004/2005

## Circuit-breakers

### UL/CSA approved to UL 489, CSA 5 and to IEC/EN 60947

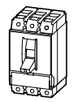
Rated uninterrupted current $I_u$ = rated current $I_n$
Adjustable overload release $I_r$
Adjustable short-circuit release $I_i$
Delayed short-circuit release $I_{sd}$

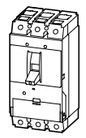


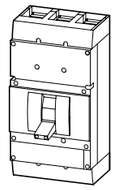
**Thermomagnetic releases**

**Overload releases**

| Fixed | | | Adjustable | | | | Without | |
|---|---|---|---|---|---|---|---|---|
| $I_u$ | | | $I_u$ | | $I_r$ | | $I_u$ | |
| A | | | A | | A | | A | |
| NZM1 | | NZM2 | NZM1 | NZM2 | | | NZM1 | NZM2 |
| 15 – **125** | | 15 – **250** | 20 – **125** | 20 – **250** | 0.8 – 1 × $I_n$ | | 1 – **100** | 1.6 – **200** |
| **Basic switching capacity**[1] | | | **NZMB1-...-NA** | | **NZMB2-...-NA** | | | |
| NEMA Test Procedure | 240 V 60 Hz | sym. rms kA | 35[4] | | 35 | | | |
| | 480 V 60 Hz | sym. rms kA | 25[2] | | 25[2] | | | |
| | 600 V 60 Hz | sym. rms kA | – | | 18[3] | | | |
| IEC/EN 60947 | 400/415 V | kA/cos φ | 25 | 0.25 | 25 | 0.25 | | |
| | 440 V | kA/cos φ | 25 | 0.25 | 25 | 0.25 | | |
| | 525 V | kA/cos φ | 15 | 0.30 | 15 | 0.30 | | |
| **Normal switching capacity**[1] | | | **NZMN1-...-NA** | | **NZMN2-...-NA** | | | |
| NEMA Test Procedure | 240 V 60 Hz | sym. rms kA | 85[5] | | 85 | | | |
| | 480 V 60 Hz | sym. rms kA | 35[2] | | 35[2] | | | |
| | 600 V 60 Hz | sym. rms kA | – | | 25[3] | | | |
| IEC/EN 60947 | 400/415 V | kA/cos φ | 50 | 0.25 | 50 | 0.25 | | |
| | 440 V | kA/cos φ | 35 | 0.25 | 35 | 0.25 | | |
| | 525 V | kA/cos φ | 20 | 0.30 | 25 | 0.25 | | |
| | 690 V | kA/cos φ | 10 | 0.50 | 20 | 0.30 | | |
| **High switching capacity**[1] | | | | | **NZMH2-...-NA** | | | |
| NEMA Test Procedure | 240 V 60 Hz | sym. rms kA | | | 100 | | | |
| | 480 V 60 Hz | sym. rms kA | | | 65[2] | | | |
| | 600 V 60 Hz | sym. rms kA | | | 35[3] | | | |
| IEC/EN 90947 | 400/415 V | kA/cos φ | | | 100 | 0.20 | | |
| | 440 V | kA/cos φ | | | 65 | 0.20 | | |
| | 525 V | kA/cos φ | | | 40 | 0.25 | | |
| | 690 V | kA/cos φ | | | 20 | 0.30 | | |
| **Limiter switching capacity**[1] | | | | | | | | |
| NEMA Test Procedure | 240 V 60 Hz | sym. rms kA | | | | | | |
| | 480 V 60 Hz | sym. rms kA | | | | | | |
| | 600 V 60 Hz | sym. rms kA | | | | | | |
| IEC/EN 90947 | 400/415 V | kA/cos φ | | | | | | |
| | 440 V | kA/cos φ | | | | | | |
| | 525 V | kA/cos φ | | | | | | |
| | 690 V | kA/cos φ | | | | | | |







**Electronic releases**

**Overload releases**

**Short-circuit releases**

| Fixed | Adjustable | | Without | Fixed | Adjustable | | Without | Fixed | Adjustable | | System protection | | Motor protection |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| $I_u$ | $I_u$ | $I_r$ | $I_u$ | $I_u$ | $I_u$ | $I_r$ | $I_u$ | $I_u$ | $I_u$ | $I_r$ | $I_{sd}$ | $I_i$ | $I_i$ |
| A | A | A | A | A | A | A | A | A | A | A | A | A | A |
| 150 – **250** | 100 – **250** | 0.5 – 1 × $I_n$ | 90 – **220** | 250 – **600** | 250 – **600** | 0.5 – 1 × $I_n$ | 220 – **450** | 600 – **1200** | 800 – **1200** | 0.5 – 1 × $I_n$ | 2 – 10 × $I_r$ | 2 – 12 × $I_n$ | 2 – 14 × $I_r$ |
| | | | | | | | | **NZMN2-...E...-NA** | | | | | |
| | | | | | | | | 85 | | | | | |
| | | | | | | | | 35[2] | | | | | |
| | | | | | | | | 25[3] | | | | | |
| | | | | | | | | 50 | 0.25 | | | | |
| | | | | | | | | 35 | 0.25 | | | | |
| | | | | | | | | 25 | 0.25 | | | | |
| | | | | | | | | 20 | 0.30 | | | | |
| | | | | | | | | **NZMH2-...E...-NA** | | | | | |
| | | | | | | | | 100 | | | | | |
| | | | | | | | | 65[2] | | | | | |
| | | | | | | | | 35[3] | | | | | |
| | | | | | | | | 100 | 0.20 | | | | |
| | | | | | | | | 65 | 0.20 | | | | |
| | | | | | | | | 40 | 0.25 | | | | |
| | | | | | | | | 20 | 0.30 | | | | |
| | | | | | | | | | | | | | |
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| | | | | | | | | | | | | | |
| | | | | | | | | **NZML3-...E...-NA** | | | | | |
| | | | | | | | | 150 | | | | | |
| | | | | | | | | 100 | | | | | |
| | | | | | | | | 50 | | | | | |
| | | | | | | | | 150 | 0.20 | | | | |
| | | | | | | | | 130 | 0.20 | | | | |
| | | | | | | | | 65 | 0.20 | | | | |
| | | | | | | | | 35 | 0.25 | | | | |
| | | | | | | | | **NZML4-...E...-NA** | | | | | |
| | | | | | | | | 150 | | | | | |
| | | | | | | | | 100 | | | | | |
| | | | | | | | | 50 | | | | | |
| | | | | | | | | 120[6][7] | 0.20 | | | | |
| | | | | | | | | 85 | 0.20 | | | | |
| | | | | | | | | 65 | 0.20 | | | | |
| | | | | | | | | 50 | 0.25 | | | | |

**Notes**

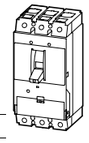
Values printed in grey available on request
[1] The switches conform to the UL/CSA and also to the IEC regulations
IEC switching values contained on the rating label. → Technical data
[2] With NZM...1-...-NA and NZM...2-...-NA the following applies: 480Y/277 V probably until October 2004
[3] With NZM...2-...-NA the following applies: 600V on request
[4] With NZMB1-...-NA the following applies: 25 kA probably until October 2004
[5] With NZMN1-...-NA the following applies: 35 kA probably until October 2004
[6] With NZM(H)L4-... the following applies: 85 kA probably until October 2004
[7] 100 kA from October 2004, 120 kA in preparation

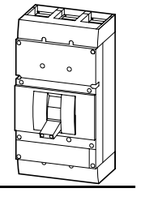
The approved switches are suitable for world-wide use. The UL and CSA certificates can be found at www.ul.com and www.csa.com
UL certificate: File No.: E 31593 (NZM1-4)
CSA certificates: File No. NZM1: 165628-...(NZM1-4)

## Switch-disconnector:

with main switch and isolating characteristics
**without** overload and short-circuit release
Rated uninterrupted current $I_u = I_n$

### UL/CSA approved to UL 489, CSA 5 and to IEC/EN 60947





| 63 | 160 | 400 | 800 |
|---|---|---|---|
| 100 | 200 | | 1000 |
| **125** | **250** | **600** | **1200** |

| | | N1-...-NA | N2-...-NA | N3-...-NA | N4-...-NA |
|---|---|---|---|---|---|
| Rated short-circuit making capacity $I_{cm}$ | kA | 2.8 | 5.5 | 25 | 53 |
| Rated short time current $I_{cw}$ (1s current$_{rms}$) | kA | 2 | 3.5 | 12.5 | 25 |

Circuit-breakers, switch-disconnectors up to 1600 A

Moeller HPL0211-2004/2005

| Rated current = rated uninterrupted current $I_n = I_u$ A | Setting range: Overload releases $I_r$ A | Setting range: Short-circuit releases $I_i$ A | Basic switching capacity 25 kA 480 V[1] 18 kA 600 V[2] Type / Article no. | Price See Price List | Normal switching capacity 35 kA 480 V[1] 25 kA 600 V[2] Type / Article no. | Price See Price List | High switching capacity 65 kA 480 V[1] 35 kA 600 V[2] Type / Article no. | Price See Price List | Std. pack | Notes |
|---|---|---|---|---|---|---|---|---|---|---|
| **Protection of systems and cables** | | | | | | | | | | |
| 3-pole | | | | | | | | | | |
| **Fixed overload release** Terminals standard terminal screws as accessories | | | | | | | | | | |
| 15 | 15 | 350 | **NZMB1-AF15-NA** 281553 | | **NZMN1-AF15-NA** 281564 | | | | 1 off | Switches conform to UL/CSA as well as the IEC regulations. IEC switching performance values are contained on the rating plate. Technical data → page 10/180 UL 489, CSA-C22.2-5.1, IEC/EN 60947-2<br><br>Fixed overload release $I_r$<br>Adjustable short-circuit release $I_i$<br>• approx. 6 – 10 × $I_n$ (ex-factory 6 × $I_n$)<br>– NZM...-AF35/40-NA: approx. 8 – 10 × $I_n$<br>Fixed short-circuit release $I_i$<br>• 350 A at $I_n$ = 15 – 30 A<br><br>[1]With NZM...1-...-NA and NZM...2-...-NA the following applies: 480 Y/277 V AC probably until June 2004<br>[2]probably from June 2004: 600 V<br>Details apply for NZM2<br>[3]With NZMH2-...-NA the following applies: 480 Y/277 V AC probably until June 2004 |
| 20 | 20 | 350 | **NZMB1-AF20-NA** 281554 | | **NZMN1-AF20-NA** 281565 | | | | | |
| 25 | 25 | 350 | **NZMB1-AF25-NA** 281555 | | **NZMN1-AF25-NA** 281566 | | | | | |
| 30 | 30 | 350 | **NZMB1-AF30-NA** 281556 | | **NZMN1-AF30-NA** 281567 | | | | | |
| 35 | 35 | 320 – 400 | **NZMB1-AF35-NA** 272204 | | **NZMN1-AF35-NA** 274220 | | | | | |
| 40 | 40 | 320 – 400 | **NZMB1-AF40-NA** 272205 | | **NZMN1-AF40-NA** 274223 | | | | | |
| 45 | 45 | 300 – 500 | **NZMB1-AF45-NA** 272206 | | **NZMN1-AF45-NA** 274230 | | | | | |
| 50 | 50 | 300 – 500 | **NZMB1-AF50-NA** 272207 | | **NZMN1-AF50-NA** 274231 | | | | | |
| 60 | 60 | 380 – 630 | **NZMB1-AF60-NA** 272208 | | **NZMN1-AF60-NA** 274232 | | | | | |
| 70 | 70 | 480 – 800 | **NZMB1-AF70-NA** 272209 | | **NZMN1-AF70-NA** 274233 | | | | | |
| 80 | 80 | 480 – 800 | **NZMB1-AF80-NA** 272250 | | **NZMN1-AF80-NA** 274234 | | | | | |
| 90 | 90 | 600 – 1000 | **NZMB1-AF90-NA** 272251 | | **NZMN1-AF90-NA** 274235 | | | | | |
| 100 | 100 | 600 – 1000 | **NZMB1-AF100-NA** 272252 | | **NZMN1-AF100-NA** 274236 | | | | | |
| 110 | 110 | 750 – 1250 | **NZMB1-AF110-NA** 281557 | | **NZMN1-AF110-NA** 281568 | | | | | |
| 125 | 125 | 750 – 1250 | **NZMB1-AF125-NA** 281558 | | **NZMN1-AF125-NA** 281569 | | | | | |
| Terminal screws standard terminals as accessories | | | | | | | | | | |
| 15 | 15 | 350 | **NZMB2-AF15-NA** 269142 | | **NZMN2-AF15-NA** 269170 | | **NZMH2-AF15-NA** 269188 | | 1 off | |
| 20 | 20 | 350 | **NZMB2-AF20-NA** 269143 | | **NZMN2-AF20-NA** 269171 | | **NZMH2-AF20-NA** 269189 | | | |
| 25 | 25 | 350 | **NZMB2-AF25-NA** 269144 | | **NZMN2-AF25-NA** 269172 | | **NZMH2-AF25-NA** 269190 | | | |
| 30 | 30 | 350 | **NZMB2-AF30-NA** 269145 | | **NZMN2-AF30-NA** 269173 | | **NZMH2-AF30-NA** 269191 | | | |
| 35 | 35 | 320 – 400 | **NZMB2-AF35-NA** 269146 | | **NZMN2-AF35-NA** 269174 | | **NZMH2-AF35-NA** 269192 | | | |
| 40 | 40 | 320 – 400 | **NZMB2-AF40-NA** 269147 | | **NZMN2-AF40-NA** 269175 | | **NZMH2-AF40-NA** 269193 | | | |
| 45 | 45 | 300 – 500 | **NZMB2-AF45-NA** 269148 | | **NZMN2-AF45-NA** 269176 | | **NZMH2-AF45-NA** 269194 | | | |
| 50 | 50 | 300 – 500 | **NZMB2-AF50-NA** 269149 | | **NZMN2-AF50-NA** 269177 | | **NZMH2-AF50-NA** 269195 | | | |
| 60 | 60 | 380 – 630 | **NZMB2-AF60-NA** 269160 | | **NZMN2-AF60-NA** 269178 | | **NZMH2-AF60-NA** 269196 | | | |
| 70 | 70 | 480 – 800 | **NZMB2-AF70-NA** 269161 | | **NZMN2-AF70-NA** 269179 | | **NZMH2-AF70-NA** 269197 | | | |
| 80 | 80 | 480 – 800 | **NZMB2-AF80-NA** 269162 | | **NZMN2-AF80-NA** 269180 | | **NZMH2-AF80-NA** 269198 | | | |
| 90 | 90 | 600 – 1000 | **NZMB2-AF90-NA** 269163 | | **NZMN2-AF90-NA** 269181 | | **NZMH2-AF90-NA** 269199 | | | |
| 100 | 100 | 600 – 1000 | **NZMB2-AF100-NA** 269164 | | **NZMN2-AF100-NA** 269182 | | **NZMH2-AF100-NA** 269200 | | | |

**Notes** Notes for terminals → 10/86

Circuit-breakers, switch-disconnectors up to 1600 A

Moeller HPL0211-2004/2005

Moeller HPL0211-2004/2005

| Rated current = rated uninterrupted current $I_n = I_u$ A | Setting range: Overload releases $I_r$ A | Setting range: Short-circuit releases $I_i$ A | Basic switching capacity 25 kA 480 V[1] 18 kA 600 V[2]: Type, Article no. | Price, See Price List | Normal switching capacity 35 kA 480 V[1] 25 kA 600 V[2]: Type, Article no. | Price, See Price List | High switching capacity 65 kA 480 V[1] 35 kA 600 V[2]: Type, Article no. | Price, See Price List | Std. pack | Notes |
|---|---|---|---|---|---|---|---|---|---|---|
| **Protection of systems and cables** | | | | | | | | | | |
| 3-pole | | | | | | | | | | |
| **Fixed overload release** Terminal screws standard terminals as accessories | | | | | | | | | | |
| 110 | 110 | 750 – 1250 | **NZMB2-AF110-NA** 269165 | | **NZMN2-AF110-NA** 269183 | | **NZMH2-AF110-NA** 269201 | | 1 off | Switches conform to UL/CSA as well as the IEC regulations. IEC switching performance values are contained on the rating plate. Technical data → page 10/180 UL 489, CSA-C22.2-5.1, IEC/EN 60947-2<br><br>Fixed overload release $I_r$ Adjustable short-circuit release $I_i$ • approx. 6 – 10 × $I_n$ (ex-factory 6 × $I_n$)<br><br>[1]With NZM...2-...-NA the following applies: 480 Y/277 V AC probably until June 2004 [2]probably from June 2004: 600 V Details apply for NZM2 With NZMH2-...-NA the following applies: 480 Y/277 V AC probably until June 2004 |
| 125 | 125 | 750 – 1250 | **NZMB2-AF125-NA** 269166 | | **NZMN2-AF125-NA** 269184 | | **NZMH2-AF125-NA** 269202 | | | |
| 150 | 150 | 960 – 1600 | **NZMB2-AF150-NA** 269167 | | **NZMN2-AF150-NA** 269185 | | **NZMH2-AF150-NA** 269203 | | | |
| 175 | 175 | 1200 – 2000 | **NZMB2-AF175-NA** 269168 | | **NZMN2-AF175-NA** 269186 | | **NZMH2-AF175-NA** 269204 | | | |
| 200 | 200 | 1200 – 2000 | **NZMB2-AF200-NA** 269169 | | **NZMN2-AF200-NA** 269187 | | **NZMH2-AF200-NA** 269205 | | | |
| 225 | 225 | 1500 – 2500 | **NZMB2-AF225-NA** 271089 | | **NZMN2-AF225-NA** 271101 | | **NZMH2-AF225-NA** 271103 | | | |
| 250 | 250 | 1500 – 2500 | **NZMB2-AF250-NA** 271100 | | **NZMN2-AF250-NA** 271102 | | **NZMH2-AF250-NA** 271104 | | | |
| **Adjustable overload release additionally with motor characteristic to UL 508** Terminals standard terminal screws as accessories | | | | | | | | | | |
| 20 | 15 – 20 | 350 | **NZMB1-A20-NA** 281559 | | **NZMN1-A20-NA** 281570 | | | | 1 off | Switches conform to UL/CSA as well as the IEC regulations. IEC switching performance values are contained on the rating plate. Technical data → page 10/180 UL 489, UL 508, CSA-C22.2-5.1, IEC/EN 60947-2 Use in motor control circuits only in conjunction with a suitable contactor.<br><br>Adjustable overload release $I_r$ • 0.8 – 1 × $I_n$ (ex-factory 0.8 × $I_n$) Adjustable short-circuit release $I_i$ • 6 – 10 × $I_n$ (ex-factory 6 × $I_n$) – NZM...-A40-NA: 8 – 10 × $I_n$ Fixed short-circuit release $I_i$ • 350 A at $I_n$ = 20 – 32 A<br><br>[1]With NZM...1-...-NA and NZM...2-...-NA the following applies: 480 Y/277 V AC probably until June 2004 [2]probably from June 2004: 600 V Details apply for NZM2 [3]With NZMH2-...-NA the following applies: 480 Y/277 V AC probably until June 2004 [4]probably until June 2004: $I_r$ = 35 – 40 A For NZM1 the following applies: UL 508 probably from June 2004 |
| 25 | 20 – 25 | 350 | **NZMB1-A25-NA** 281560 | | **NZMN1-A25-NA** 281571 | | | | | |
| 32 | 25 – 32 | 350 | **NZMB1-A32-NA** 281561 | | **NZMN1-A32-NA** 281572 | | | | | |
| 40 | 32 – 40 | 320 – 400 | **NZMB1-A40-NA** 272253 | | **NZMN1-A40-NA** 274237 | | | | | |
| 50 | 40 – 50 | 300 – 500 | **NZMB1-A50-NA** 272254 | | **NZMN1-A50-NA** 274239 | | | | | |
| 63 | 50 – 63 | 380 – 630 | **NZMB1-A63-NA** 272255 | | **NZMN1-A63-NA** 274240 | | | | | |
| 80 | 63 – 80 | 480 – 800 | **NZMB1-A80-NA** 272256 | | **NZMN1-A80-NA** 274241 | | | | | |
| 100 | 80 – 100 | 600 – 1000 | **NZMB1-A100-NA** 272258 | | **NZMN1-A100-NA** 274242 | | | | | |
| 125 | 100 – 125 | 750 – 1250 | **NZMB1-A125-NA** 281562 | | **NZMN1-A125-NA** 281573 | | | | | |
| Terminal screws standard terminals as accessories | | | | | | | | | | |
| 20 | 15 – 20 | 350 | **NZMB2-A20-NA** 269206 | | **NZMN2-A20-NA** 269217 | | **NZMH2-A20-NA** 269228 | | 1 off | |
| 25 | 20 – 25 | 350 | **NZMB2-A25-NA** 269207 | | **NZMN2-A25-NA** 269218 | | **NZMH2-A25-NA** 269229 | | | |
| 32 | 25 – 32 | 350 | **NZMB2-A32-NA** 269208 | | **NZMN2-A32-NA** 269219 | | **NZMH2-A32-NA** 269230 | | | |
| 40 | 32 – 40 | 320 – 400 | **NZMB2-A40-NA** 269209 | | **NZMN2-A40-NA** 269220 | | **NZMH2-A40-NA** 269231 | | | |
| 50 | 40 – 50 | 300 – 500 | **NZMB2-A50-NA** 269210 | | **NZMN2-A50-NA** 269221 | | **NZMH2-A50-NA** 269232 | | | |
| 63 | 50 – 63 | 380 – 630 | **NZMB2-A63-NA** 269211 | | **NZMN2-A63-NA** 269222 | | **NZMH2-A63-NA** 269233 | | | |
| 80 | 63 – 80 | 480 – 800 | **NZMB2-A80-NA** 269212 | | **NZMN2-A80-NA** 269223 | | **NZMH2-A80-NA** 269234 | | | |
| 100 | 80 – 100 | 600 – 1000 | **NZMB2-A100-NA** 269213 | | **NZMN2-A100-NA** 269224 | | **NZMH2-A100-NA** 269235 | | | |
| 125 | 100 – 125 | 750 – 1250 | **NZMB2-A125-NA** 269214 | | **NZMN2-A125-NA** 269225 | | **NZMH2-A125-NA** 269236 | | | |
| 160 | 125 – 160 | 960 – 1600 | **NZMB2-A160-NA** 269215 | | **NZMN2-A160-NA** 269226 | | **NZMH2-A160-NA** 269237 | | | |
| 200 | 160 – 200 | 1200 – 2000 | **NZMB2-A200-NA** 269216 | | **NZMN2-A200-NA** 269227 | | **NZMH2-A200-NA** 269238 | | | |
| 250 | 200 – 250 | 1500 – 2500 | **NZMB2-A250-NA** 271105 | | **NZMN2-A250-NA** 271106 | | **NZMH2-A250-NA** 271107 | | | |

**Notes** Notes for terminals → 10/86

Circuit-breakers, switch-disconnectors up to 1600 A



Moeller HPL0211-2004/2005

| Rated current = rated uninterrupted current $I_n = I_u$ A | Setting range: Overload releases $I_r$ A | Setting range: Short-circuit-release $I_i$ A | Basic switching capacity 480 V[1] Type Article no. | Price See Price List | Normal switching capacity 480 V[1] Type Article no. | Price See Price List | Std. pack |
|---|---|---|---|---|---|---|---|
| **Short-circuit protection** | | | | | | | |
| **Motor protection in conjunction with contactor and overload relay**<br>• With short-circuit release<br>• Without overload release | | | | | | | |
| 3-pole | | | | | | | |
| Terminals standard<br>terminal screws as accessories | | | | | | | |
| 1 | – | 8 – 14 | **NZMB1-S1-CNA** 281563 | | **NZMN1-S1-CNA** 281574 | | 1 off |
| 1.6 | – | 12.8 – 22.4 | **NZMB1-S1,6-CNA** 281255 | | **NZMN1-S1,6-CNA** 281268 | | |
| 2.4 | – | 19.2 – 33.6 | **NZMB1-S2,4-CNA** 281256 | | **NZMN1-S2,4-CNA** 281269 | | |
| 4 | – | 32 – 56 | **NZMB1-S4-CNA** 281257 | | **NZMN1-S4-CNA** 281270 | | |
| 6 | – | 48 – 84 | **NZMB1-S6-CNA** 281258 | | **NZMN1-S6-CNA** 281271 | | |
| 10 | – | 80 – 140 | **NZMB1-S10-CNA** 281259 | | **NZMN1-S10-CNA** 281272 | | |
| 16 | – | 128 – 224 | **NZMB1-S16-CNA** 281260 | | **NZMN1-S16-CNA** 281273 | | |
| 25 | – | 200 – 350 | **NZMB1-S25-CNA** 281261 | | **NZMN1-S25-CNA** 281274 | | |
| 32 | – | 256 – 448 | **NZMB1-S32-CNA** 281262 | | **NZMN1-S32-CNA** 281275 | | |
| 40 | – | 320 – 560 | **NZMB1-S40-CNA** 281263 | | **NZMN1-S40-CNA** 281276 | | |
| 50 | – | 400 – 700 | **NZMB1-S50-CNA** 281264 | | **NZMN1-S50-CNA** 281277 | | |
| 63 | – | 504 – 882 | **NZMB1-S63-CNA** 281265 | | **NZMN1-S63-CNA** 281278 | | |
| 80 | – | 640 – 1120 | **NZMB1-S80-CNA** 281266 | | **NZMN1-S80-CNA** 281279 | | |
| 100 | – | 800 – 1250 | **NZMB1-S100-CNA** 281267 | | **NZMN1-S100-CNA** 281280 | | |

**Notes** Notes for terminals → 10/86

**Notes**

Switches conform to UL/CSA as well as the IEC regulations.
40 IEC switching performance values from 40 A are contained on the rating plate.
Technical data → page 10/180
UL 489, CSA-C22.2-5.1, IEC/EN 60947-2

Adjustable short-circuit release $I_i$
- 8 – 14 × $I_n$ (ex-factory 12 × $I_n$)
  – NZM...1-S100-CNA: 8 – 12.5 × $I_n$ (ex-factory 12 × $I_n$)

Without overload release $I_r$

CNA: The device has components approved to UL, the conditions of approval must be observed during use,
i.e. the device must be combined with a suitable contactor and overload relay.
A switching capacity is stated for the complete motor-starter combination.
The device is approved as a CSA approved single device.

[1]With NZM...1-...-CNA the following applies: 480 Y/277 V AC probably until June 2004

Circuit-breakers, switch-disconnectors up to 1600 A

Moeller HPL0211-2004/2005

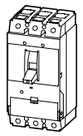
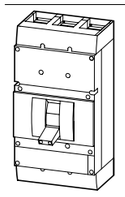
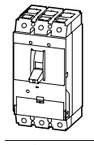
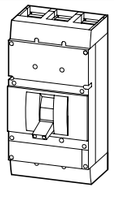
| Rated current = rated uninterrupted current | Setting range: Overload releases | Setting range: Short-circuit-release | Basic switching capacity 480 V[1] 600 V[2] Type / Article no. | Price See Price List | Normal switching capacity 480 V[1] 600 V[2] Type / Article no. | Price See Price List | High switching capacity 480 V[1] 600 V[2] Type / Article no. | Price See Price List | Std. pack | Notes |
|---|---|---|---|---|---|---|---|---|---|---|
| $I_n = I_u$ A | $I_r$ A | $I_i$ A | | | | | | | | |
| **Short-circuit protection** | | | | | | | | | | |
| **Motor protection in conjunction with contactor and overload relay**<br>• With short-circuit release<br>• Without overload release | | | | | | | | | | |
| 3-pole | | | | | | | | | | |
| Terminal screws standard terminals as accessories | | | | | | | | | | |
| 1.6 | – | 12.8 – 22.4 | **NZMB2-S1,6-CNA** 269472 | | **NZMN2-S1,6-CNA** 269478 | | **NZMH2-S1,6-CNA** 269482 | | 1 off | Switches conform to UL/CSA as well as the IEC regulations.<br>40 IEC switching performance values from 40 A are contained on the rating plate.<br>Technical data → page 10/180<br>UL 489, CSA-C22.2-5.1, IEC/EN 60947-2<br><br>Adjustable short-circuit release $I_i$<br>• 8 – 14 × $I_n$ (ex-factory 12 × $I_n$)<br>– NZM...2-S200-CNA, 8 – 12.5 × $I_n$ (ex-factory 12 × $I_n$)<br><br>Without overload release $I_r$<br><br>CNA: The device has components approved to UL, the conditions of approval must be observed during use,<br>i.e. the device must be combined with a suitable contactor and overload relay.<br>A switching capacity is stated for the complete motor-starter combination.<br>The device is approved as a CSA approved single device.<br><br>[1]With NZM...2-...-NA the following applies: 480 Y/277 V AC probably until June 2004<br>[2]Probably from June 2004: 600 V |
| 2.4 | – | 19.2 – 33.6 | **NZMB2-S2,4-CNA** 269473 | | **NZMN2-S2,4-CNA** 269479 | | **NZMH2-S2,4-CNA** 269483 | | | |
| 4 | – | 32 – 56 | **NZMB2-S4-CNA** 269476 | | **NZMN2-S4-CNA** 269480 | | **NZMH2-S4-CNA** 269484 | | | |
| 6 | – | 48 – 84 | **NZMB2-S6-CNA** 269477 | | **NZMN2-S6-CNA** 269481 | | **NZMH2-S6-CNA** 269485 | | | |
| 10 | – | 80 – 140 | **NZMB2-S10-CNA** 269239 | | **NZMN2-S10-CNA** 269251 | | **NZMH2-S10-CNA** 269263 | | | |
| 16 | – | 128 – 224 | **NZMB2-S16-CNA** 269240 | | **NZMN2-S16-CNA** 269252 | | **NZMH2-S16-CNA** 269264 | | | |
| 25 | – | 200 – 350 | **NZMB2-S25-CNA** 269241 | | **NZMN2-S25-CNA** 269253 | | **NZMH2-S25-CNA** 269265 | | | |
| 32 | – | 256 – 448 | **NZMB2-S32-CNA** 269242 | | **NZMN2-S32-CNA** 269254 | | **NZMH2-S32-CNA** 269266 | | | |
| 40 | – | 320 – 560 | **NZMB2-S40-CNA** 269243 | | **NZMN2-S40-CNA** 269255 | | **NZMH2-S40-CNA** 269267 | | | |
| 50 | – | 400 – 700 | **NZMB2-S50-CNA** 269244 | | **NZMN2-S50-CNA** 269256 | | **NZMH2-S50-CNA** 269268 | | | |
| 63 | – | 504 – 882 | **NZMB2-S63-CNA** 269245 | | **NZMN2-S63-CNA** 269257 | | **NZMH2-S63-CNA** 269269 | | | |
| 80 | – | 640 – 1120 | **NZMB2-S80-CNA** 269246 | | **NZMN2-S80-CNA** 269258 | | **NZMH2-S80-CNA** 269270 | | | |
| 100 | – | 800 – 1400 | **NZMB2-S100-CNA** 269247 | | **NZMN2-S100-CNA** 269259 | | **NZMH2-S100-CNA** 269271 | | | |
| 125 | – | 1000 – 1750 | **NZMB2-S125-CNA** 269248 | | **NZMN2-S125-CNA** 269260 | | **NZMH2-S125-CNA** 269272 | | | |
| 160 | – | 1280 – 2240 | **NZMB2-S160-CNA** 269249 | | **NZMN2-S160-CNA** 269261 | | **NZMH2-S160-CNA** 269273 | | | |
| 200 | – | 1600 – 2500 | **NZMB2-S200-CNA** 269250 | | **NZMN2-S200-CNA** 269262 | | **NZMH2-S200-CNA** 269274 | | | |

**Notes** Notes for terminals → 10/86

Circuit-breakers, switch-disconnectors up to 1600 A

Moeller HPL0211-2004/2005

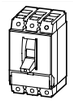
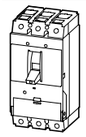
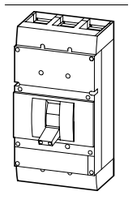
Moeller HPL0211-2004/2005

| | Rated current = rated uninterrupted current | Setting range: Overload releases | Setting range: Short-circuit releases Non-delayed | Normal switching capacity 35 kA 480 V 25 kA 600 V: Type, Article no. | Price, See Price List | High switching capacity 65 kA 480 V 35 kA 600 V: Type, Article no. | Price, See Price List | Limiter switching capacity 100 kA 480 V 50 kA 600 V: Type, Article no. | Price, See Price List | Std. pack | Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | $I_n = I_u$ A | $I_r$ A | $I_i$ A | | | | | | | | |
| **Protection of systems and cables** | | | | | | | | | | | |
| 3-pole | | | | | | | | | | | |
| **Fixed overload release** Terminal screws standard terminals as accessories | | | | | | | | | | | |
|  | 250 | 250 | 500 – 2750 | **NZMN3-AEF250-NA** 269275 | | **NZMH3-AEF250-NA** 269283 | | **NZML3-AEF250-NA** 269291 | | 1 off | Switches conform to UL/CSA as well as the IEC regulations.<br>IEC switching performance values are contained on the rating plate.<br>Technical data → page 10/180<br>UL 489, CSA-C22.2-5.1, IEC/EN 60947-2<br><br>Fixed overload release $I_r$<br>R.m.s. value measurement and "thermal memory"<br>Adjustable short-circuit release $I_i$<br>• 2 – 12 × $I_n$ (ex-factory 6 × $I_n$)<br>– With NZM...3-AEF250...400-NA: 2 – 11 × $I_n$<br>– With NZM...3-AEF450...600-NA: 2 – 8 × $I_n$ |
| | 300 | 300 | 600 – 3300 | **NZMN3-AEF300-NA** 269276 | | **NZMH3-AEF300-NA** 269284 | | **NZML3-AEF300-NA** 269292 | | | |
| | 350 | 350 | 700 – 3850 | **NZMN3-AEF350-NA** 269277 | | **NZMH3-AEF350-NA** 269285 | | **NZML3-AEF350-NA** 269293 | | | |
| | 400 | 400 | 800 – 4400 | **NZMN3-AEF400-NA** 269278 | | **NZMH3-AEF400-NA** 269286 | | **NZML3-AEF400-NA** 269294 | | | |
| | 450 | 450 | 900 – 3600 | **NZMN3-AEF450-NA** 269279 | | **NZMH3-AEF450-NA** 269287 | | **NZML3-AEF450-NA** 269295 | | | |
| | 500 | 500 | 1000 – 4000 | **NZMN3-AEF500-NA** 269280 | | **NZMH3-AEF500-NA** 269288 | | **NZML3-AEF500-NA** 269296 | | | |
| | 550 | 550 | 1100 – 4400 | **NZMN3-AEF550-NA** 269281 | | **NZMH3-AEF550-NA** 269289 | | **NZML3-AEF550-NA** 269297 | | | |
| | 600 | 600 | 1200 – 4800 | **NZMN3-AEF600-NA** 269282 | | **NZMH3-AEF600-NA** 269290 | | **NZML3-AEF600-NA** 269298 | | | |
|  | 600 | 600 | 1200 – 7200 | **NZMN4-AEF600-NA** 271108 | | **NZMH4-AEF600-NA** 271114 | | **NZML4-AEF600-NA** 271092 | | | |
| | 700 | 700 | 1400 – 8400 | **NZMN4-AEF700-NA** 271109 | | **NZMH4-AEF700-NA** 271115 | | **NZML4-AEF700-NA** 271093 | | | |
| | 800 | 800 | 1600 – 9600 | **NZMN4-AEF800-NA** 271110 | | **NZMH4-AEF800-NA** 271116 | | **NZML4-AEF800-NA** 271094 | | | |
| | 900 | 900 | 1800 – 10800 | **NZMN4-AEF900-NA** 271111 | | **NZMH4-AEF900-NA** 271117 | | **NZML4-AEF900-NA** 271095 | | | |
| | 1000 | 1000 | 2000 – 12000 | **NZMN4-AEF1000-NA** 271112 | | **NZMH4-AEF1000-NA** 271118 | | **NZML4-AEF1000-NA** 271096 | | | |
| | 1200 | 1200 | 2400 – 14400 | **NZMN4-AEF1200-NA** 271113 | | **NZMH4-AEF1200-NA** 271119 | | **NZML4-AEF1200-NA** 271097 | | | |
| 3-pole | | | | | | | | | | | |
| **Adjustable overload release additionally with motor characteristic to UL 508** Terminal screws standard terminals as accessories | | | | | | | | | | | |
|  | 250 | 125 – 250 | 500 – 2750 | **NZMN3-AE250-NA** 269299 | | **NZMH3-AE250-NA** 269302 | | **NZML3-AE250-NA** 269305 | | 1 off | Switches conform to UL/CSA as well as the IEC regulations.<br>IEC switching performance values are contained on the rating plate.<br>Technical data → page 10/180<br>UL 489, UL 508, CSA-C22.2-5.1, IEC/EN 60947-2<br>Use in motor control circuits only in conjunction with a suitable contactor.<br>Motor protection characteristic to UL 508 for NZM4 on request.<br><br>Adjustable overload release $I_r$<br>• 0.5 – 1 × $I_n$ (ex-factory 0.8 × $I_n$)<br>R.m.s. value measurement and "thermal memory"<br>Adjustable short-circuit release $I_i$<br>• 2 – 12 × $I_n$ (ex-factory 6 × $I_n$)<br>– With NZM...3-AE250/400-NA: 2 – 11 × $I_n$ (ex-factory 6 × $I_n$)<br>– With NZM...3-AE600-NA: 2 – 8 × $I_n$ (ex-factory 6 × $I_n$) |
| | 400 | 200 – 400 | 800 – 4400 | **NZMN3-AE400-NA** 269300 | | **NZMH3-AE400-NA** 269303 | | **NZML3-AE400-NA** 269306 | | | |
| | 600 | 300 – 600 | 1200 – 4800 | **NZMN3-AE600-NA** 269301 | | **NZMH3-AE600-NA** 269304 | | **NZML3-AE600-NA** 269307 | | | |
|  | 800 | 400 – 800 | 1600 – 9600 | **NZMN4-AE800-NA** 271120 | | **NZMH4-AE800-NA** 271123 | | **NZML4-AE800-NA** 271098 | | | |
| | 1000 | 500 – 1000 | 2000 – 12000 | **NZMN4-AE1000-NA** 271121 | | **NZMH4-AE1000-NA** 271124 | | **NZML4-AE1000-NA** 271099 | | | |
| | 1200 | 600 – 1200 | 2400 – 14400 | **NZMN4-AE1200-NA** 271122 | | **NZMH4-AE1200-NA** 271125 | | **NZML4-AE1200-NA** 271210 | | | |

**Notes** Notes for terminals → 10/86

Circuit-breakers, switch-disconnectors up to 1600 A

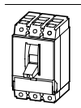
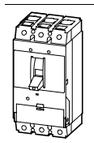
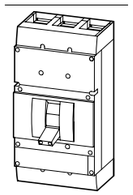
Moeller HPL0211-2004/2005

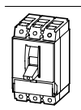
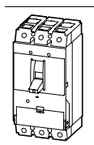
| | Rated current = rated uninterrupted current $I_n = I_u$ A | Setting range Overload releases $I_r$ A | Short-circuit releases Non-delayed $I_i$ I> | Delayed $I_{sd}$ ⊠I> | Normal switching capacity **35 kA 480 V**[1] **25 kA 600 V**[2] **Type** Article no. | **Price** See Price List | High switching capacity **65 kA 480 V**[1] **35 kA 600 V**[2] **Type** Article no. | **Price** See Price List | Limiter switching capacity **100 kA 480 V** **50 kA 600 V** **Type** Article no. | **Price** See Price List | Std. pack | **Notes** |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Systems, cable, transformer and generator protection** | | | | | | | | | | | | |
| 3-pole | | | | | | | | | | | | |
| **Fixed overload release** Terminal screws standard terminals as accessories | | | | | | | | | | | | |
|  | 150 | 150 | 1800 | 300 – 1500 | **NZMN2-VEF150-NA** 271126 | | **NZMH2-VEF150-NA** 271131 | | | | 1 off | Switches conform to UL/CSA as well as the IEC regulations. IEC switching performance values are contained on the rating plate. Technical data → page 10/180 UL 489, CSA-C22.2-5.1, IEC/EN 60947-2<br><br>Fixed overload release $I_r$ R.m.s. value measurement and 'thermal memory' Adjustable time delay setting to overcome current peaks $t_r$<br>• 2 – 20 s with 6 × $I_r$ (ex-factory 10 s) Adjustable delayed short-circuit release $I_{sd}$<br>• 2 – 10 × $I_r$ (ex-factory 6 × $I_r$)<br>– NZM...3-VEF450...600-NA: 1.5 – 7 × $I_r$ (ex-factory 6 x $I_r$) Adjustable delay time $t_{sd}$<br>• Steps 0, 20, 60, 100, 200, 300, 500, 750, 1000 ms (ex-factory 0 ms) Adjustable non-delayed short-circuit release $I_i$<br>• 2 – 12 × $I_n$ (ex-factory 12 × $I_n$)<br>– NZM2 fixed 12 × $I_n$<br>– NZM...3-VEF250...400-NA: 2 – 11 × $I_n$ (ex-factory 11 × $I_n$)<br>– NZM...3-VEF450...600-NA: 2 – 8 × $I_n$ (ex-factory 8 × $I_n$) Switchable $i^2t$ constant function (ex-factory OFF)<br>NZM2 fixed OFF<br><br>[1]With NZM...2-VEF...-NA the following applies: 480 Y/277 V AC probably until June 2004<br>[2]With NZM...2-VEF...-NA the following applies: Probably from June 2004 600 V |
| | 175 | 175 | 2100 | 250 – 1750 | **NZMN2-VEF175-NA** 271127 | | **NZMH2-VEF175-NA** 271132 | | | | | |
| | 200 | 200 | 2400 | 400 – 2000 | **NZMN2-VEF200-NA** 271128 | | **NZMH2-VEF200-NA** 271133 | | | | | |
| | 225 | 225 | 2700 | 450 – 2250 | **NZMN2-VEF225-NA** 271129 | | **NZMH2-VEF225-NA** 271134 | | | | | |
| | 250 | 250 | 3000 | 500 – 2500 | **NZMN2-VEF250-NA** 271130 | | **NZMH2-VEF250-NA** 271135 | | | | | |
|  | 250 | 250 | 500 – 2750 | 500 – 2500 | **NZMN3-VEF250-NA** 269308 | | **NZMH3-VEF250-NA** 269316 | | **NZML3-VEF250-NA** 269324 | | | |
| | 300 | 300 | 600 – 3300 | 600 – 3000 | **NZMN3-VEF300-NA** 269309 | | **NZMH3-VEF300-NA** 269317 | | **NZML3-VEF300-NA** 269325 | | | |
| | 350 | 350 | 700 – 3850 | 700 – 3500 | **NZMN3-VEF350-NA** 269310 | | **NZMH3-VEF350-NA** 269318 | | **NZML3-VEF350-NA** 269326 | | | |
| | 400 | 400 | 800 – 4400 | 800 – 4000 | **NZMN3-VEF400-NA** 269311 | | **NZMH3-VEF400-NA** 269319 | | **NZML3-VEF400-NA** 269327 | | | |
| | 450 | 450 | 900 – 3600 | 675 – 3150 | **NZMN3-VEF450-NA** 269312 | | **NZMH3-VEF450-NA** 269320 | | **NZML3-VEF450-NA** 269328 | | | |
| | 500 | 500 | 1000 – 4000 | 750 – 3500 | **NZMN3-VEF500-NA** 269313 | | **NZMH3-VEF500-NA** 269321 | | **NZML3-VEF500-NA** 269329 | | | |
| | 550 | 550 | 1100 – 4400 | 825 – 3850 | **NZMN3-VEF550-NA** 269314 | | **NZMH3-VEF550-NA** 269322 | | **NZML3-VEF550-NA** 269330 | | | |
| | 600 | 600 | 1200 – 4800 | 900 – 4200 | **NZMN3-VEF600-NA** 269315 | | **NZMH3-VEF600-NA** 269323 | | **NZML3-VEF600-NA** 269331 | | | |
|  | 600 | 600 | 1200 – 7200 | 1200 – 6000 | **NZMN4-VEF600-NA** 271136 | | **NZMH4-VEF600-NA** 271142 | | **NZML4-VEF600-NA** 271222 | | | |
| | 700 | 700 | 1400 – 8400 | 1400 – 7000 | **NZMN4-VEF700-NA** 271137 | | **NZMH4-VEF700-NA** 271143 | | **NZML4-VEF700-NA** 271223 | | | |
| | 800 | 800 | 1600 – 9600 | 1600 – 8000 | **NZMN4-VEF800-NA** 271138 | | **NZMH4-VEF800-NA** 271144 | | **NZML4-VEF800-NA** 271224 | | | |
| | 900 | 900 | 1800 – 10800 | 1800 – 9000 | **NZMN4-VEF900-NA** 271139 | | **NZMH4-VEF900-NA** 271145 | | **NZML4-VEF900-NA** 271225 | | | |
| | 1000 | 1000 | 2000 – 12000 | 2000 – 10000 | **NZMN4-VEF1000-NA** 271140 | | **NZMH4-VEF1000-NA** 271146 | | **NZML4-VEF1000-NA** 271226 | | | |
| | 1200 | 1200 | 2400 – 14400 | 2400 – 12000 | **NZMN4-VEF1200-NA** 271141 | | **NZMH4-VEF1200-NA** 271147 | | **NZML4-VEF1200-NA** 271227 | | | |

**Notes** Notes for terminals → 10/86

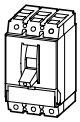
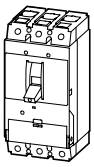
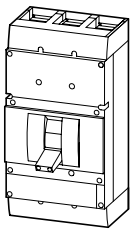
Circuit-breakers, switch-disconnectors up to 1600 A

Moeller HPL0211-2004/2005

| Rated current = rated uninterrupted current $I_n = I_u$ A | Setting range Overload releases $I_r$ A | Short-circuit releases Non-delayed $I_i$ A | Short-circuit releases Delayed $I_{sd}$ A | Normal switching capacity 35 kA 480 V[1] 25 kA 600 V[2] Type Article no. | Price See Price List | High switching capacity 65 kA 480 V[1] 35 kA 600 V[2] Type Article no. | Price See Price List | Limiter switching capacity 100 kA 480 V 50 kA 600 V Type Article no. | Price See Price List | Std. pack | Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Systems, cable, transformer and generator protection** | | | | | | | | | | | |
| 3-pole | | | | | | | | | | | |
| **Adjustable overload release additionally with motor characteristic to UL 508** Terminal screws standard terminals as accessories | | | | | | | | | | | |
|  100 | 50 – 100 | 1200 | 100 – 1000 | **NZMN2-VE100-NA** 271148 | | **NZMH2-VE100-NA** 271151 | | | | 1 off | Switches conform to UL/CSA as well as the IEC regulations. IEC switching performance values are contained on the rating plate. Technical data → page 10/180 UL 489, UL 508, CSA-C22.2-5.1, IEC/EN 60947-2 Motor protection characteristic to UL 508 for NZM4 on request. Use in motor control circuits only in conjunction with a suitable contactor. Adjustable overload release $I_r$ • 0.5 – 1 x $I_n$ R.m.s. value measurement and "thermal memory" Adjustable time delay setting to overcome current peaks $t_r$ • 2 – 20 s with 6 x $I_r$ (ex-factory 10 s) Adjustable delayed short-circuit release $I_{sd}$ • 2 – 10 x $I_r$ (ex-factory 6 x $I_r$) – NZM...3-VE600-NA: 1.5 – 7 x $I_r$ (ex-factory 6 x $I_r$) Adjustable delay time $t_{sd}$ • Steps: 0, 20, 60, 100, 200, 300, 500, 750, 1000 ms (ex-factory 0 ms) Adjustable non-delayed short-circuit release $I_i$ • 2 – 12 x $I_n$ (ex-factory 12 x $I_n$) – NZM2 fixed 12 x $I_n$ – NZM...3-VE250/400-NA: 2 – 11 x $I_n$ (ex-factory 11 x $I_n$) – NZM...3-VE600-NA: 2 – 8 x $I_n$ (ex-factory 8 x $I_n$) Switchable $i^2t$ constant function (ex-factory OFF) – NZM2 fixed OFF [1]With NZM...2-VE...-NA the following applies: 480 Y/277 V AC probably until June 2004 [2]With NZM...-2-VE...-NA the following applies: Probably from June 2004 600 V |
| | 160 | 80 – 160 | 1920 | 160 – 1600 | **NZMN2-VE160-NA** 271149 | | **NZMH2-VE160-NA** 271152 | | | | |
| | 250 | 125 – 250 | 3000 | 250 – 2500 | **NZMN2-VE250-NA** 271150 | | **NZMH2-VE250-NA** 271153 | | | | |
|  | 250 | 125 – 250 | 500 – 2750 | 250 – 2500 | **NZMN3-VE250-NA** 269332 | | **NZMH3-VE250-NA** 269335 | | **NZML3-VE250-NA** 269338 | | |
| | 400 | 200 – 400 | 800 – 4400 | 400 – 4000 | **NZMN3-VE400-NA** 269333 | | **NZMH3-VE400-NA** 269336 | | **NZML3-VE400-NA** 269339 | | |
| | 600 | 300 – 600 | 1200 – 4800 | 450 – 4200 | **NZMN3-VE600-NA** 269334 | | **NZMH3-VE600-NA** 269337 | | **NZML3-VE600-NA** 269340 | | |
|  | 800 | 400 – 800 | 1600 – 9600 | 800 – 8000 | **NZMN4-VE800-NA** 271154 | | **NZMH4-VE800-NA** 271157 | | **NZML4-VE800-NA** 271219 | | |
| | 1000 | 500 – 1000 | 2000 – 12000 | 1000 – 10000 | **NZMN4-VE1000-NA** 271155 | | **NZMH4-VE1000-NA** 271158 | | **NZML4-VE1000-NA** 271220 | | |
| | 1200 | 630 – 1200 | 2400 – 14400 | 1260 – 12000 | **NZMN4-VE1200-NA** 271156 | | **NZMH4-VE1200-NA** 271159 | | **NZML4-VE1200-NA** 271221 | | |

| Rated current = rated uninterrupted current $I_n = I_u$ A | Setting range Overload releases $I_r$ A | Setting range Short-circuit releases $I_i$ A | Normal switching capacity 480 V[1] 600 V[2] Type Article no. | Price See Price List | High switching capacity 480 V[1] 600 V[2] Type Article no. | Price See Price List | Limiter switching capacity 480 V 600 V Type Article no. | Price See Price List | Std. pack | Notes |
|---|---|---|---|---|---|---|---|---|---|---|
| **Short-circuit protection** | | | | | | | | | | |
| **Motor protection in conjunction with contactor and overload relay** • With short-circuit release • Without overload release | | | | | | | | | | |
| 3-pole | | | | | | | | | | |
| Terminal screws standard terminals as accessories | | | | | | | | | | |
|  90 | – | 90 – 1260 | **NZMN2-SE90-CNA** 271160 | | **NZMH2-SE90-CNA** 271163 | | | | 1 off | Switches conform to UL/CSA as well as the IEC regulations. IEC switching performance values are contained on the rating plate. Technical data → page 10/180 UL 489, CSA-C22.2-5.1, IEC/EN 60947-2 and IEC/EN 60947-4 Adjustable short-circuit release $I_i$ • 2 – 14 × $I_r$ (ex-factory 12 × $I_r$) Without overload release $I_r$ CNA: The device has components approved to UL, the conditions of approval must be observed during use. i.e. the device must be combined with a suitable contactor and overload relay. A switching capacity is stated for the complete motor-starter combination. The device is approved as a CSA approved single device. [1]With NZM...2-...-NA the following applies: 480 Y/277 V AC probably until June 2004 [2]With NZM...2-...-NA the following applies: 2004 600V probably from June 2004 |
| | 140 | – | 140 – 1960 | **NZMN2-SE140-CNA** 271161 | | **NZMH2-SE140-CNA** 271164 | | | | |
| | 220 | – | 220 – 3080 | **NZMN2-SE220-CNA** 271162 | | **NZMH2-SE220-CNA** 271165 | | | | |
|  | 220 | – | 220 – 3080 | **NZMN3-SE220-CNA** 269341 | | **NZMH3-SE220-CNA** 269343 | | **NZML3-SE220-CNA** 269345 | | |
| | 350 | – | 350 – 4900 | **NZMN3-SE350-CNA** 269342 | | **NZMH3-SE350-CNA** 269344 | | **NZML3-SE350-CNA** 269346 | | |
| | 450 | – | 450 – 6300 | **NZMN3-SE450-CNA** 284465 | | **NZMH3-SE450-CNA** 284466 | | **NZML3-SE450-CNA** 284467 | | |

**Notes** Notes for terminals → 10/86

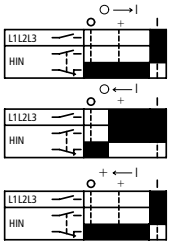
| | Rated current = rated uninterrupted current $I_n = I_u$ A | Short-circuit protection max. fuse A | 3 switch positions I, + , 0 ; can be tripped remotely with shunt/under voltage release **Type** Article no. | **Price** See Price List | Std. pack |
|---|---|---|---|---|---|
| **Switch-disconnector/Molded case switches** | | | | | |
| 3-pole | | | | | |
| Terminals standard terminal screw as accessories | | | | | |
|  | 63 | 125 | **N1-63-NA** 272259 | | 1 off |
| | 100 | 125 | **N1-100-NA** 272260 | | |
| | 125 | 125 | **N1-125-NA** 272261 | | |
| Terminal screws standard terminals as accessories | | | | | |
|  | 160 | 200 | **N2-160-NA** 271166 | | 1 off |
| | 200 | 200 | **N2-200-NA** 271167 | | |
| | 250 | 250 | **N2-250-NA** 271168 | | |
|  | 400 | 630 | **N3-400-NA** 271169 | | |
| | 600 | 630 | **N3-600-NA** 271170 | | |
|  | 800 | 1600 | **N4-800-NA** 271171 | | |
| | 1000 | 1600 | **N4-1000-NA** 271172 | | |
| | 1200 | 1600 | **N4-1200-NA** 271173 | | |

**Notes** Notes for terminals → 10/86

Moeller HPL0211-2004/2005

**Contact sequence of the auxiliary contacts**

Standard auxiliary contact (HIN)



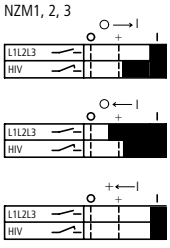

0 → I Make ■ Contact closed
□ Contact open

0 ← I Break

+ ← I Trip

Early-make auxiliary contact (HIV)

NZM1, 2, 3

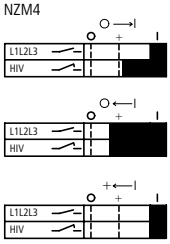



0 → I Make ■ Contact closed
□ Contact open

0 ← I Break

+ ← I Trip

NZM4

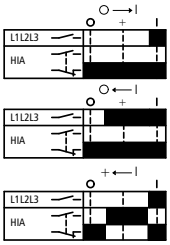



0 → I Make ■ Contact closed
□ Contact open

0 ← I Break

+ ← I Trip

Trip indicating auxiliary contact (HIA)




0 → I Make ■ Contact closed
□ Contact open

0 ← I Break

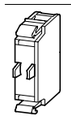
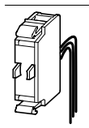
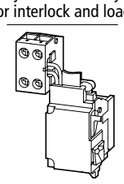
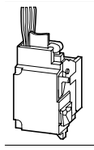
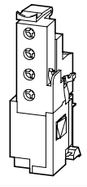
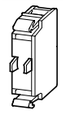
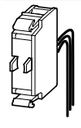
+ ← I Trip

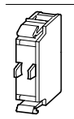
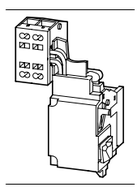
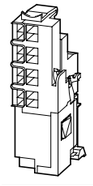
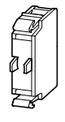
| **Maximum component fitting** | | **NZM1** | **NZM2** | **NZM3** | **NZM4** |
|---|---|---|---|---|---|
| HIN | 1 M or 1 B | 1 | 2 | 3 | 3 |
| HIA | 1 M or 1 B | 1 | 1 | 1 | 2 |
| VHI | 2 M | 1 | 1 | 1 | 1 |

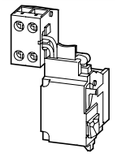
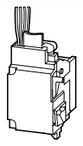
**Notes** If early-make contacts are required in combination with shunt or undervoltage releases, select the combination type in the "Release" section.

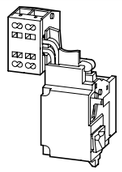
Circuit-breakers, switch-disconnectors up to 1600 A

Moeller HPL0211-2004/2005

| | For use with | Contacts M = make contact, B = break contact ⊖ = positive opening safety function to IEC/EN 60947-5-1 | | Contact sequence | **Type** Article no. for separate order | **Price** See Price List | Std. pack |
|---|---|---|---|---|---|---|---|
| **Auxiliary contacts** | | | | | | | |
| Standard auxiliary contact (HIN)<br>Switching with the main contacts<br>Used for indicating and interlocking tasks | | | | | | | |
|  | – | NZM1(-4), 2(-4), 3(-4), 4(-4)<br>PN1(-4), 2(-4), 3(-4)<br>N1(-4), 2(-4), 3(-4), 4(-4) | 1 M | – |  | **M22-K10**<br>216376 | | 20 off |
| | | | – | 1 B ⊖ |  | **M22-K01**<br>216378 | | 20 off |
|  | With 3 m connection cable instead of screw termination. | NZM1(-4)<br>PN1(-4)<br>N1(-4) | 1 M | 1 B ⊖ |  | **NZM-XHI11L**<br>266098 | | 1 off |
| | | | 2 M | – |  | **NZM-XHI20L**<br>266099 | | |
| | | | – | 2 B ⊖ |  | **NZM-XHI02L**<br>266170 | | |
| Early-make auxiliary contacts<br>For interlock and load-shedding circuits | | | | | | | |
|  | With clamp terminal on the left-hand switch side. | NZM1(-4)<br>PN1(-4)<br>N1(-4) | 2 M | – |  | **NZM1-XHIV**<br>259426 | | 1 off |
|  | With 3 m connection cable instead of screw termination. | NZM1(-4)<br>PN1(-4)<br>N1(-4) | 2 M | – |  | **NZM1-XHIVL**<br>259432 | | |
|  | – | NZM2(-4), 3(-4)<br>PN2(-4), 3(-4)<br>N2(-4), 3(-4) | 2 M | – |  | **NZM2/3-XHIV**<br>259430 | | |
| | | NZM4(-4)<br>N4(-4) | 2 M | – |  | **NZM4-XHIV**<br>266172 | | 1 off |
| Trip indicating auxiliary contact (HIA)<br>General trip indication '+', when tripped by voltage release, overload release or short-circuit release | | | | | | | |
|  | – | NZM1(-4), 2(-4), 3(-4), 4(-4)<br>PN1(-4), 2(-4), 3(-4)<br>N1(-4), 2(-4), 3(-4), 4(-4) | 1 M | – |  | **M22-K10**<br>216376 | | 20 off |
| | | | – | 1 B ⊖ |  | **M22-K01**<br>216378 | | 20 off |
|  | With 3 m connection cable instead of screw termination. | NZM1(-4)<br>PN1(-4)<br>N1(-4) | 1 M | 1 B ⊖ |  | **NZM-XHI11L**<br>266098 | | 1 off |
| | | | 2 M | – |  | **NZM-XHI20L**<br>266099 | | |
| | | | – | 2 B ⊖ |  | **NZM-XHI02L**<br>266170 | | |

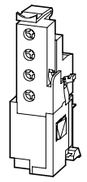
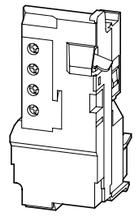
| | **Type** Article no. for separate order | **Price** See Price List | Std. pack | | **Notes** |
|---|---|---|---|---|---|
|  | **M22-CK10**<br>216384 | | 20 off | | The following can be clipped into the switches:<br>• NZM1 – a standard auxiliary contact<br>• NZM2 up to two M22-K... standard auxiliary contacts<br>• NZM3 as well as NZM4 - up to 3 standard auxiliary contacts<br>M22-(C)K...<br>Any combinations of the auxiliary contact types is possible.<br>Marking on switch: HIN |
| | **M22-CK01**<br>216385 | | 20 off | | |
|  | **NZM1-XHIVC**<br>266176 | | 1 off | – | Not in conjunction with<br>NZM...-XU(C)... undervoltage release, NZM...-XA(C)... shunt release<br>or NZM...-XR... remote operator<br>Early action with make or break: approx. 20 ms |
|  | **NZM2/3-XHIVC**<br>266178 | | 1 off | – | |
| | **NZM4-XHIVC**<br>266180 | | 1 off | – | Not in conjunction with<br>NZM...-XU(C)... undervoltage release, NZM...-XA(C)... shunt release<br>or NZM...-XR... remote operator<br>Early action by make: approx. 90 ms |
|  | **M22-CK10**<br>216384 | | 20 off | | The following can be clipped into the switches:<br>• NZM1 - one trip-indicating auxiliary switch<br>• NZM2 - one M22-(C)K... trip-indicating auxiliary switch<br>• NZM3 - one M22-(C)K... trip-indicating auxiliary switch<br>• NZM4 - up to 2 M22-(C)K... trip-indicating auxiliary switches<br>Any combinations of the auxiliary contact types is possible.<br>Marking on switch: HIA |
| | **M22-CK01**<br>216385 | | 20 off | | |

| | | | For use with | Rated control voltage $U_s$ V | **Type** Article no. for separate order |
|---|---|---|---|---|---|
| **Undervoltage release** | | | | | |
| Without auxiliary contact<br>Non-delayed disconnection of NZM circuit-breaker or N switch-disconnector when the control voltage sinks below 35 – 70% $U_S$.<br>For use with Emergency-Stop devices in conjunction with Emergency-Stop button. | | | | | |
|  |  | With clamp terminal on the left-hand switch side. | NZM1(-4), N1(-4) | 24 V 50/60 Hz | **NZM1-XU24AC** 259434 |
| | | | | 48 V 50/60 Hz | **NZM1-XU48AC** 259436 |
| | | | | 60 V 50/60 Hz | **NZM1-XU60AC** 259438 |
| | | | | 110 V – 130 V 50/60 Hz | **NZM1-XU110-130AC** 259440 |
| | | | | 208 V – 240 V 50/60 Hz | **NZM1-XU208-240AC** 259442 |
| | | | | 380 V – 440 V 50/60 Hz | **NZM1-XU380-440AC** 259444 |
| | | | | 480 V – 525 V 50/60 Hz | **NZM1-XU480-525AC** 259446 |
| | | | | 600 V 50/60 Hz | **NZM1-XU600AC** 259448 |
| | | | | 12 V DC | **NZM1-XU12DC** 259450 |
| | | | | 24 V DC | **NZM1-XU24DC** 259452 |
| | | | | 48 V DC | **NZM1-XU48DC** 262631 |
| | | | | 60 V DC | **NZM1-XU60DC** 259454 |
| | | | | 110 – 130 V DC | **NZM1-XU110-130DC** 259458 |
| | | | | 220 – 250 V DC | **NZM1-XU220-250DC** 259460 |
|  |  | With 3 m connection cable instead of screw termination. | NZM1(-4), N1(-4) | 24 V 50/60 Hz | **NZM1-XUL24AC** 259462 |
| | | | | 48 V 50/60 Hz | **NZM1-XUL48AC** 259464 |
| | | | | 60 V 50/60 Hz | **NZM1-XUL60AC** 259466 |
| | | | | 110 V – 130 V 50/60 Hz | **NZM1-XUL110-130AC** 259468 |
| | | | | 208 V – 240 V 50/60 Hz | **NZM1-XUL208-240AC** 259471 |
| | | | | 380 V – 440 V 50/60 Hz | **NZM1-XUL380-440AC** 259473 |
| | | | | 480 V – 525 V 50/60 Hz | **NZM1-XUL480-525AC** 259475 |
| | | | | 600 V 50/60 Hz | **NZM1-XUL600AC** 259477 |
| | | | | 12 V DC | **NZM1-XUL12DC** 259479 |
| | | | | 24 V DC | **NZM1-XUL24DC** 259481 |
| | | | | 48 V DC | **NZM1-XUL48DC** 259483 |
| | | | | 60 V DC | **NZM1-XUL60DC** 259485 |
| | | | | 110 V – 130 V DC | **NZM1-XUL110-130DC** 259487 |
| | | | | 220 V – 250 V DC | **NZM1-XUL220-250DC** 259489 |

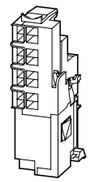
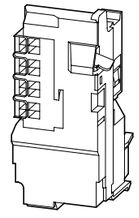
| | | **Type** Article no. for separate order | **Price** See Price List | Std. pack | **Notes** |
|---|---|---|---|---|---|
|  |  | **NZM1-XUC24AC** 266271 | | 1 off | When the undervoltage release is de-energized, accidental contact with the main switches of the switch during attempts to switch on is safely prevented.<br><br>Undervoltage releases cannot be installed simultaneously with NZM...-XHIV... early-make auxiliary contact or NZM...-XA... shunt release. |
| | | **NZM1-XUC48AC** 266272 | | | |
| | | **NZM1-XUC60AC** 266273 | | | |
| | | **NZM1-XUC110-130AC** 266274 | | | |
| | | **NZM1-XUC208-240AC** 266275 | | | |
| | | **NZM1-XUC380-440AC** 266276 | | | |
| | | **NZM1-XUC480-525AC** 266277 | | | |
| | | **NZM1-XUC600AC** 266278 | | | |
| | | **NZM1-XUC12DC** 266285 | | | |
| | | **NZM1-XUC24DC** 266286 | | | |
| | | **NZM1-XUC48DC** 266287 | | | |
| | | **NZM1-XUC60DC** 266288 | | | |
| | | **NZM1-XUC110-130DC** 266289 | | | |
| | | **NZM1-XUC220-250DC** 266290 | | | |
| | | | | 1 off | |

Circuit-breakers, switch-disconnectors up to 1600 A

Moeller HPL0211-2004/2005

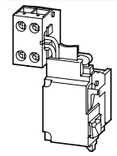
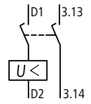
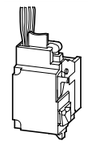
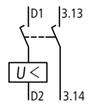
| | | For use with | Rated control voltage $U_s$ V | **Type** Article no. for separate order |
|---|---|---|---|---|
| **Undervoltage release** | | | | |
| Without auxiliary contact<br>Non-delayed disconnection of NZM circuit-breaker or N switch-disconnector when the control voltage sinks below 35 – 70% $U_S$.<br>For use with Emergency-Stop devices in conjunction with Emergency-Stop button. | | | | |
|  |  | NZM2(-4), N2(-4)<br>NZM3(-4), N3(-4) | 24 V 50/60 Hz | **NZM2/3-XU24AC**<br>259491 |
| | | | 48 V 50/60 Hz | **NZM2/3-XU48AC**<br>259493 |
| | | | 60 V 50/60 Hz | **NZM2/3-XU60AC**<br>259495 |
| | | | 110 V – 130 V 50/60 Hz | **NZM2/3-XU110-130AC**<br>259497 |
| | | | 208 V – 240 V 50/60 Hz | **NZM2/3-XU208-240AC**<br>259499 |
| | | | 380 V – 440 V 50/60 Hz | **NZM2/3-XU380-440AC**<br>259501 |
| | | | 480 V – 525 V 50/60 Hz | **NZM2/3-XU480-525AC**<br>259503 |
| | | | 600 V 50/60 Hz | **NZM2/3-XU600AC**<br>259505 |
| | | | 12 V DC | **NZM2/3-XU12DC**<br>259507 |
| | | | 24 V DC | **NZM2/3-XU24DC**<br>259509 |
| | | | 48 V DC | **NZM2/3-XU48DC**<br>259511 |
| | | | 60 V DC | **NZM2/3-XU60DC**<br>259513 |
| | | | 110 V – 130 V DC | **NZM2/3-XU110-130DC**<br>259515 |
| | | | 220 V – 250 V DC | **NZM2/3-XU220-250DC**<br>259517 |
|  |  | NZM4(-4), N4(-4) | 24 V 50/60 Hz | **NZM4-XU24AC**<br>266189 |
| | | | 48 V 50/60 Hz | **NZM4-XU48AC**<br>266190 |
| | | | 60 V 50/60 Hz | **NZM4-XU60AC**<br>266191 |
| | | | 110 – 130 V 50/60 Hz | **NZM4-XU110-130AC**<br>266192 |
| | | | 208 – 240 V 50/60 Hz | **NZM4-XU208-240AC**<br>266193 |
| | | | 380 – 440 V 50/60 Hz | **NZM4-XU380-440AC**<br>266194 |
| | | | 480 – 525 V 50/60 Hz | **NZM4-XU480-525AC**<br>266195 |
| | | | 600 V 50/60 Hz | **NZM4-XU600AC**<br>266196 |
| | | | 12 V DC | **NZM4-XU12DC**<br>266203 |
| | | | 24 V DC | **NZM4-XU24DC**<br>266204 |
| | | | 48 V DC | **NZM4-XU48DC**<br>266205 |
| | | | 60 V DC | **NZM4-XU60DC**<br>266206 |
| | | | 110 – 130 V DC | **NZM4-XU110-130DC**<br>266207 |
| | | | 220 – 250 V DC | **NZM4-XU220-250DC**<br>266208 |

Moeller HPL0211-2004/2005

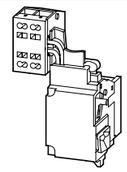
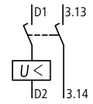
| | | **Type** Article no. for separate order | **Price** See Price List | Std. pack | **Notes** |
|---|---|---|---|---|---|
|  |  | **NZM2/3-XUC24AC**<br>266299 | | 1 off | When the undervoltage release is de-energized, accidental contact with the main switches of the switch during attempts to switch on is safely prevented.<br><br>Undervoltage releases cannot be installed simultaneously with NZM...-XHIV... early-make auxiliary contact or NZM...-XA... shunt release. |
| | | **NZM2/3-XUC48AC**<br>266300 | | | |
| | | **NZM2/3-XUC60AC**<br>266301 | | | |
| | | **NZM2/3-XUC110-130AC**<br>266302 | | | |
| | | **NZM2/3-XUC208-240AC**<br>266303 | | | |
| | | **NZM2/3-XUC380-440AC**<br>266304 | | | |
| | | **NZM2/3-XUC480-525AC**<br>266305 | | | |
| | | **NZM2/3-XUC600AC**<br>266306 | | | |
| | | **NZM2/3-XUC12DC**<br>266313 | | | |
| | | **NZM2/3-XUC24DC**<br>266314 | | | |
| | | **NZM2/3-XUC48DC**<br>266315 | | | |
| | | **NZM2/3-XUC60DC**<br>266316 | | | |
| | | **NZM2/3-XUC110-130DC**<br>266317 | | | |
| | | **NZM2/3-XUC220-250DC**<br>266318 | | | |
|  |  | **NZM4-XUC24AC**<br>266327 | | 1 off | |
| | | **NZM4-XUC48AC**<br>266328 | | | |
| | | **NZM4-XUC60AC**<br>266329 | | | |
| | | **NZM4-XUC110-130AC**<br>266330 | | | |
| | | **NZM4-XUC208-240AC**<br>266331 | | | |
| | | **NZM4-XUC380-440AC**<br>266332 | | | |
| | | **NZM4-XUC480-525AC**<br>266333 | | | |
| | | **NZM4-XUC600AC**<br>266334 | | | |
| | | **NZM4-XUC12DC**<br>266341 | | | |
| | | **NZM4-XUC24DC**<br>266342 | | | |
| | | **NZM4-XUC48DC**<br>266343 | | | |
| | | **NZM4-XUC60DC**<br>266344 | | | |
| | | **NZM4-XUC110-130DC**<br>266345 | | | |
| | | **NZM4-XUC220-250DC**<br>266346 | | | |

Circuit-breakers, switch-disconnectors up to 1600 A

Moeller HPL0211-2004/2005

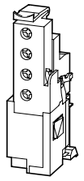
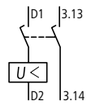
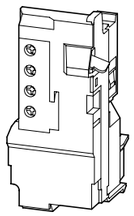
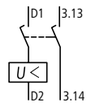
| | | For use with | Rated control voltage $U_s$ V | **Type** Article no. for separate order |
|---|---|---|---|---|
| **Undervoltage release** | | | | |
| With two early-make auxiliary contacts<br>For interlocking and load-shedding circuits, as well as for early-make of the undervoltage release in main-switch applications. | | | | |
|  |  | With clamp terminal on the left-hand switch side. | NZM1(-4), N1(-4) | 24 V 50/60 Hz<br>48 V 50/60 Hz<br>60 V 50/60 Hz<br>110 V – 130 V 50/60 Hz<br>208 V – 240 V 50/60 Hz<br>380 V – 440 V 50/60 Hz<br>480 V – 525 V 50/60 Hz<br>12 V DC<br>24 V DC<br>48 V DC<br>60V DC<br>110 V – 130 V DC<br>220 V – 250 V DC | **NZM1-XUHIV24AC** 259531<br>**NZM1-XUHIV48AC** 259533<br>**NZM1-XUHIV60AC** 259535<br>**NZM1-XUHIV110-130AC** 259537<br>**NZM1-XUHIV208-240AC** 259539<br>**NZM1-XUHIV380-440AC** 259541<br>**NZM1-XUHIV480-525AC** 259543<br>**NZM1-XUHIV12DC** 259545<br>**NZM1-XUHIV24DC** 259547<br>**NZM1-XUHIV48DC** 259549<br>**NZM1-XUHIV60DC** 259551<br>**NZM1-XUHIV110-130DC** 259553<br>**NZM1-XUHIV220-250DC** 259555 |
| |  |  | With 3 m connection cable instead of screw termination. | NZM1(-4), N1(-4) | 24 V 50/60 Hz<br>48 V 50/60 Hz<br>60 V 50/60 Hz<br>110 V – 130 V 50/60 Hz<br>208 V – 240 V 50/60 Hz<br>380 V – 440 V 50/60 Hz<br>480 V – 525 V 50/60 Hz<br>12 V DC<br>24 V DC<br>48 V DC<br>60V DC<br>110 V – 130 V DC<br>220 V – 250 V DC | **NZM1-XUHIVL24AC** 259557<br>**NZM1-XUHIVL48AC** 259559<br>**NZM1-XUHIVL60AC** 259561<br>**NZM1-XUHIVL110-130AC** 259563<br>**NZM1-XUHIVL208-240AC** 259565<br>**NZM1-XUHIVL380-440AC** 259567<br>**NZM1-XUHIVL480-525AC** 259569<br>**NZM1-XUHIVL12DC** 259571<br>**NZM1-XUHIVL24DC** 259573<br>**NZM1-XUHIVL48DC** 259575<br>**NZM1-XUHIVL60DC** 259577<br>**NZM1-XUHIVL110-130DC** 259579<br>**NZM1-XUHIVL220-250DC** 259581 |

Moeller HPL0211-2004/2005

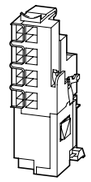
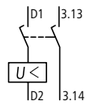
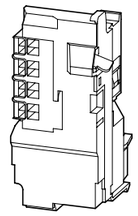
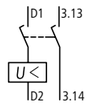
| | | **Type** Article no. when ordered separately | **Price** See Price List | Std. pack | **Notes** |
|---|---|---|---|---|---|
|  |  | **NZM1-XUHIVC24AC** 266355<br>**NZM1-XUHIVC48AC** 266356<br>**NZM1-XUHIVC60AC** 266357<br>**NZM1-XUHIVC110-130AC** 266358<br>**NZM1-XUHIVC208-240AC** 266359<br>**NZM1-XUHIVC380-440AC** 266360<br>**NZM1-XUHIVC480-525AC** 266361<br>**NZM1-XUHIVC12DC** 266369<br>**NZM1-XUHIVC24DC** 266370<br>**NZM1-XUHIVC48DC** 266371<br>**NZM1-XUHIVC60DC** 266372<br>**NZM1-XUHIVC110-130DC** 266373<br>**NZM1-XUHIVC220-250DC** 266374 | | 1 off | When the undervoltage release is de-energized, accidental contact with the main switches of the switch during attempts to switch on is safely prevented.<br>Early make or break with on and off: approx. 20 ms<br>Cannot be used in conjunction with NZM...-XR... remote operator.<br><br>Undervoltage releases cannot be installed simultaneously with NZM...-XHIV... early-make auxiliary contact or NZM...-XA... shunt release. |
| | | | | | |

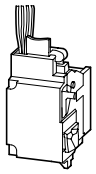
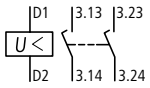
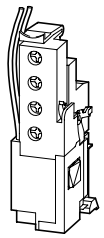
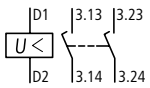
Circuit-breakers, switch-disconnectors up to 1600 A

Moeller HPL0211-2004/2005

| | | For use with | Rated control voltage $U_s$ V | **Type** Article no. for separate order |
|---|---|---|---|---|
| **Undervoltage release** | | | | |
| With two early-make auxiliary contacts<br>For interlocking and load-shedding circuits, as well as for early-make of the undervoltage release in main-switch applications. | | | | |
|  |  | NZM2(-4), N2(-4)<br>NZM3(-4), N3(-4) | 24 V 50/60 Hz | **NZM2/3-XUHIV24AC**<br>259583 |
| | | | 48 V 50/60 Hz | **NZM2/3-XUHIV48AC**<br>259585 |
| | | | 60 V 50/60 Hz | **NZM2/3-XUHIV60AC**<br>259587 |
| | | | 110 V – 130 V 50/60 Hz | **NZM2/3-XUHIV110-130AC**<br>259589 |
| | | | 208 V – 240 V 50/60 Hz | **NZM2/3-XUHIV208-240AC**<br>259591 |
| | | | 380 V – 440 V 50/60 Hz | **NZM2/3-XUHIV380-440AC**<br>259594 |
| | | | 480 V – 525 V 50/60 Hz | **NZM2/3-XUHIV480-525AC**<br>259598 |
| | | | 12 V DC | **NZM2/3-XUHIV12DC**<br>259600 |
| | | | 24 V DC | **NZM2/3-XUHIV24DC**<br>259602 |
| | | | 48 V DC | **NZM2/3-XUHIV48DC**<br>259604 |
| | | | 60V DC | **NZM2/3-XUHIV60DC**<br>259606 |
| | | | 110 – 130 V DC | **NZM2/3-XUHIV110-130DC**<br>259608 |
| | | | 220 V – 250 V DC | **NZM2/3-XUHIV220-250DC**<br>259610 |
|  |  | NZM4(-4), N4(-4) | 24 V 50/60 Hz | **NZM4-XUHIV24AC**<br>266217 |
| | | | 48 V 50/60 Hz | **NZM4-XUHIV48AC**<br>266218 |
| | | | 60 V 50/60 Hz | **NZM4-XUHIV60AC**<br>266219 |
| | | | 110 – 130 V 50/60 Hz | **NZM4-XUHIV110-130AC**<br>266220 |
| | | | 208 – 240 V 50/60 Hz | **NZM4-XUHIV208-240AC**<br>266221 |
| | | | 380 – 440 V 50/60 Hz | **NZM4-XUHIV380-440AC**<br>266222 |
| | | | 480 – 525 V 50/60 Hz | **NZM4-XUHIV480-525AC**<br>266223 |
| | | | 12 V DC | **NZM4-XUHIV12DC**<br>266231 |
| | | | 24 V DC | **NZM4-XUHIV24DC**<br>266232 |
| | | | 48 V DC | **NZM4-XUHIV48DC**<br>266233 |
| | | | 60V DC | **NZM4-XUHIV60DC**<br>266234 |
| | | | 110 – 130 V DC | **NZM4-XUHIV110-130DC**<br>266235 |
| | | | 220 – 250 V DC | **NZM4-XUHIV220-250DC**<br>266236 |

Moeller HPL0211-2004/2005

| | | **Type** Article no. when ordered separately | **Price** See Price List | Std. pack | **Notes** |
|---|---|---|---|---|---|
| | | | | | |
|  |  | **NZM2/3-XUHIVC24AC**<br>266383 | | 1 off | When the undervoltage release is de-energized, accidental contact with the main switches of the switch during attempts to switch on is safely prevented.<br>Early action with make or break: approx. 20 ms<br>Cannot be used in conjunction with NZM...-XR... remote operator.<br><br>Undervoltage releases cannot be installed simultaneously with NZM...-XHIV... early-make auxiliary contact or NZM...-XA... shunt release. |
| | | **NZM2/3-XUHIVC48AC**<br>266384 | | | |
| | | **NZM2/3-XUHIVC60AC**<br>266385 | | | |
| | | **NZM2/3-XUHIVC110-130AC**<br>266386 | | | |
| | | **NZM2/3-XUHIVC208-240AC**<br>266387 | | | |
| | | **NZM2/3-XUHIVC380-440AC**<br>266388 | | | |
| | | **NZM2/3-XUHIVC480-525AC**<br>266389 | | | |
| | | **NZM2/3-XUHIVC12DC**<br>266397 | | | |
| | | **NZM2/3-XUHIVC24DC**<br>266398 | | | |
| | | **NZM2/3-XUHIVC48DC**<br>266399 | | | |
| | | **NZM2/3-XUHIVC60DC**<br>266400 | | | |
| | | **NZM2/3-XUHIVC110-130DC**<br>266401 | | | |
| | | **NZM2/3-XUHIVC220-250DC**<br>266402 | | | |
|  |  | **NZM4-XUHIVC24AC**<br>266411 | | 1 off | When the undervoltage release is de-energized, accidental contact with the main switches of the switch during attempts to switch on is safely prevented.<br>Early action by make: approx. 90 ms<br>Cannot be used in conjunction with NZM...-XR... remote operator.<br><br>Undervoltage releases cannot be installed simultaneously with NZM...-XHIV... early-make auxiliary contact or NZM...-XA... shunt release. |
| | | **NZM4-XUHIVC48AC**<br>266412 | | | |
| | | **NZM4-XUHIVC60AC**<br>266413 | | | |
| | | **NZM4-XUHIVC110-130AC**<br>266414 | | | |
| | | **NZM4-XUHIVC208-240AC**<br>266415 | | | |
| | | **NZM4-XUHIVC380-440AC**<br>266416 | | | |
| | | **NZM4-XUHIVC480-525AC**<br>266417 | | | |
| | | **NZM4-XUHIVC12DC**<br>266425 | | | |
| | | **NZM4-XUHIVC24DC**<br>266426 | | | |
| | | **NZM4-XUHIVC48DC**<br>266427 | | | |
| | | **NZM4-XUHIVC60DC**<br>266428 | | | |
| | | **NZM4-XUHIVC110-130DC**<br>266429 | | | |
| | | **NZM4-XUHIVC220-250DC**<br>266430 | | | |

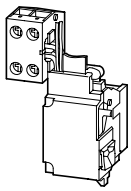
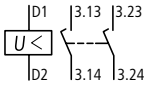
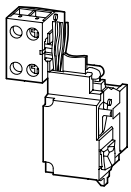
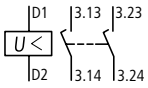
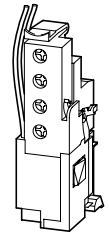
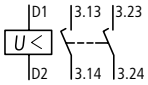
| | For use with | Rated control voltage $U_s$ V | **Type** Article no. when ordered separately | **Price** See Price List | Std. pack |
|---|---|---|---|---|---|
| **Undervoltage release** | | | | | |
| With two separate early-make auxiliary contacts | | | | | |
| With 3 m connection cable instead of screw termination. | | | | | |
|    | NZM1(-4) N1(-4) | 24 V 50/60 Hz | **NZM1-XUHIV20L24AC** 259612 | | 1 off |
| | | 48 V 50/60 Hz | **NZM1-XUHIV20L48AC** 259616 | | |
| | | 60 V 50/60 Hz | **NZM1-XUHIV20L60AC** 259618 | | |
| | | 110 – 130 V 50/60 Hz | **NZM1-XUHIV20L110-130AC** 259620 | | |
| | | 208 – 240 V 50/60 Hz | **NZM1-XUHIV20L208-240AC** 259622 | | |
| | | 380 – 440 V 50/60 Hz | **NZM1-XUHIV20L380-440AC** 259624 | | |
| | | 480 – 525 V 50/60 Hz | **NZM1-XUHIV20L480-525AC** 259626 | | |
| | | 12 V DC | **NZM1-XUHIV20L12DC** 259628 | | |
| | | 24 V DC | **NZM1-XUHIV20L24DC** 259630 | | |
| | | 48 V DC | **NZM1-XUHIV20L48DC** 259632 | | |
| | | 60V DC | **NZM1-XUHIV20L60DC** 259634 | | |
| | | 110 – 130 V DC | **NZM1-XUHIV20L110-130DC** 259636 | | |
| | | 220 – 250 V DC | **NZM1-XUHIV20L220-250DC** 259638 | | |
| Contacts 3.23 and 3.24 with separate 3 m connection cables. | | | | | |
|    | NZM2(-4) N2(-4) NZM3(-4) N3(-4) | 24 V 50/60 Hz | **NZM2/3-XUHIV2024AC** 259640 | | 1 off |
| | | 48 V 50/60 Hz | **NZM2/3-XUHIV2048AC** 259643 | | |
| | | 60 V 50/60 Hz | **NZM2/3-XUHIV2060AC** 259646 | | |
| | | 110 – 130 V 50/60 Hz | **NZM2/3-XUHIV20110-130AC** 259648 | | |
| | | 208 – 240 V 50/60 Hz | **NZM2/3-XUHIV20208-240AC** 259651 | | |
| | | 380 – 440 V 50/60 Hz | **NZM2/3-XUHIV20380-440AC** 259653 | | |
| | | 480 – 525 V 50/60 Hz | **NZM2/3-XUHIV20480-525AC** 259655 | | |
| | | 12 V DC | **NZM2/3-XUHIV2012DC** 259657 | | |
| | | 24 V DC | **NZM2/3-XUHIV2024DC** 259659 | | |
| | | 48 V DC | **NZM2/3-XUHIV2048DC** 259661 | | |
| | | 60V DC | **NZM2/3-XUHIV2060DC** 259663 | | |
| | | 110 – 130 V DC | **NZM2/3-XUHIV20110-130DC** 259665 | | |
| | | 220 – 250 V DC | **NZM2/3-XUHIV20220-250DC** 259667 | | |

**Notes**

When the undervoltage release is de-energized, accidental contact with the main switches of the switch during attempts to switch on is safely prevented.

Early make or break: approx. 20 ms

Cannot be used in conjunction with NZM...-XR... remote operator.
Undervoltage releases cannot be installed simultaneously with NZM...-XHIV... early-make auxiliary contact or NZM...-XA... shunt release.

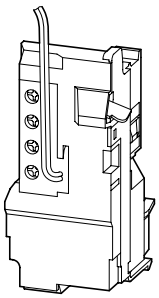
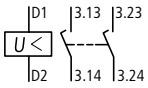
| | For use with | Rated control voltage $U_s$ V | Type Article no. when ordered separately | Price See Price List | Std. pack |
|---|---|---|---|---|---|
| **Undervoltage release** | | | | | |
| With two separate early-make auxiliary contacts | | | | | |
| With 3 m connection cable on the auxiliary contacts, coil connection with screw connector | | | | | |
|    With terminal block on left switch side | NZM4(-4) N4(-4) | 24 V 50/60 Hz | **NZM1-XUHIV20KL24AC** 284388 | | 1 off |
| | | 110 V – 130 V 50/60 Hz | **NZM4-XUHIV20KL110-130AC** 284389 | | |
| | | 208 V – 240 V 50/60 Hz | **NZM4-XUHIV20KL208-240AC** 284400 | | |
| | | 24 V DC | **NZM4-XUHIV20KL24DC** 284387 | | |
| With 3 m connection cable on screw termination Auxiliary contacts as screw connector | | | | | |
|    With terminal block on left switch side | NZM4(-4) N4(-4) | 24 V 50/60 Hz | **NZM4-XUHIV20LK24AC** 284402 | | 1 off |
| | | 110 V – 130 V 50/60 Hz | **NZM4-XUHIV20110-130AC** 284403 | | |
| | | 208 V – 240 V 50/60 Hz | **NZM4-XUHIV20208-240AC** 284404 | | |
| | | 24 V DC | **NZM4-XUHIV2024DC** 284401 | | |
| With 3 m connection cable on screw termination Auxiliary contacts as screw connector | | | | | |
|    | NZM2(-4) N2(-4) NZM3(-4) N3(-4) | 24 V 50/60 Hz | **NZM2/3-XUHIV20LK24AC** 285291 | | 1 off |
| | | 110 – 130 V 50/60 Hz | **NZM2/3-XUHIV20110-130AC** 284407 | | |
| | | 208 – 240 V 50/60 Hz | **NZM2/3-XUHIV20208-240AC** 284408 | | |
| | | 24 V DC | **NZM2/3-XUHIV2024DC** 284405 | | |

**Notes**

When the undervoltage release is de-energized, accidental contact with the main switches of the switch during attempts to switch on is safely prevented.

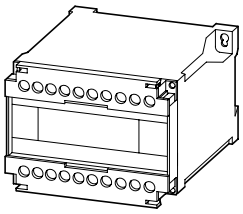
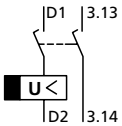
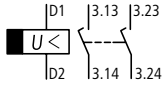
Early make or break: approx. 20 ms

Cannot be used in conjunction with NZM...-XR... remote operator.
Undervoltage releases cannot be installed simultaneously with NZM...-XHIV... early-make auxiliary contact or NZM...-XA... shunt release.

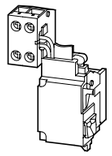
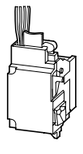
| | For use with | Rated control voltage<br>$U_s$<br>V | **Type**<br>Article no. when ordered separately | **Price**<br>See Price List | Std. pack |
|---|---|---|---|---|---|
| **Undervoltage release** | | | | | |
| With two separate early-make auxiliary contacts | | | | | |
| Contacts 3.23 and 3.24 with separate 3 m connection cables. | | | | | |
|    | NZM4(-4)<br>N4(-4) | 24 V 50/60 Hz | **NZM4-XUHIV2024AC**<br>266244 | | 1 off |
| | | 48 V 50/60 Hz | **NZM4-XUHIV2048AC**<br>266245 | | |
| | | 60 V 50/60 Hz | **NZM4-XUHIV2060AC**<br>266246 | | |
| | | 110 V – 130 V 50/60 Hz | **NZM4-XUHIV20110-130AC**<br>266247 | | |
| | | 208 V – 240 V 50/60 Hz | **NZM4-XUHIV20208-240AC**<br>266248 | | |
| | | 380 V – 440 V 50/60 Hz | **NZM4-XUHIV20380-440AC**<br>266249 | | |
| | | 480 V – 525 V 50/60 Hz | **NZM4-XUHIV20480-525AC**<br>266250 | | |
| | | 12 V DC | **NZM4-XUHIV2012DC**<br>266257 | | |
| | | 24 V DC | **NZM4-XUHIV2024DC**<br>266258 | | |
| | | 48 V DC | **NZM4-XUHIV2048DC**<br>266259 | | |
| | | 60V DC | **NZM4-XUHIV2060DC**<br>266260 | | |
| | | 110 – 130 V DC | **NZM4-XUHIV20110-130DC**<br>266261 | | |
| | | 220 – 250 V DC | **NZM4-XUHIV20220-250DC**<br>266262 | | |

**Notes**

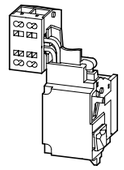
When the undervoltage release is de-energized, accidental contact with the main contacts of the switch during attemptsto switch on is safely prevented.
Early action by make: approx. 90 ms
Cannot be used in conjunction with NZM...-XR... remote operator.
Undervoltage releases cannot be installed simultaneously with NZM...-XHIV... early-make auxiliary contact or NZM...-XA... shunt release.

| | For use with | Type<br>Article no.<br>for separate order | Price<br>See Price List | Std. pack | Notes |
|---|---|---|---|---|---|
| **Undervoltage releases, off-delayed** | | | | | |
| Combination of separate delay unit and special tripping device not UL/CSA approved | | | | | |
| Delay unit<br>Voltage dips of less than the setting between 0.06 – 16 s do not cause disconnection of the NZM circuit-breaker or N switch-disconnector. | | | | | |
|  | NZM1(-4), 2(-4), 3(-4), 4(-4)<br>N1(-4), 2(-4), 3(-4), 4(-4)<br><br>50/60 Hz<br>220 V – 240 V<br>380 V – 440 V<br>480 V – 550 V<br><br>DC/AC<br>24 V | **UVU-NZM**<br>260154 | | 1 off | Delay time can be set from 70 ms – 4 s.<br>With additional external capacitor:<br>• 30,000 µF ≧ 35 V up to 8 s<br>• 90,000 µF ≧ 35 V up to 16 s<br>A special release is required.<br>Cannot be installed simultaneously with NZM...-XHIV... early-make auxiliary contact or NZM...-XA... shunt release.<br>Delay unit for separate installation (Fixing: top-hat rail or screws).<br><br>For other operating voltages use a control transformer. |
| special tripping device<br>For combination with separate delay unit | | | | | |
| Without auxiliary contact | | | | | |
| NZM1 with 3 m separate connection cables instead of screw terminal, NZM2, 3 , 4 with screw terminal | | | | | |
|  | NZM1(-4)<br>N1(-4) | **NZM1-XUVL**<br>271607 | | 1 off | UVU-NZM delay unit is additionally required.<br>Cannot be installed simultaneously with separate NZM...-XHVI early-make auxiliary contact or NZM...-XA... shunt release. |
| | NZM2(-4), N2(-4)<br>NZM3(-4), N3(-4) | **NZM2/3-XUV**<br>259527 | | | |
| | NZM4(-4)<br>N4(-4) | **NZM4-XUV**<br>266588 | | | |
| With two early-make auxiliary contacts | | | | | |
| NZM1 with 3 m separate connection cables instead of screw terminal, NZM2, 3 , 4 with screw terminal | | | | | |
|  | NZM1(-4)<br>N1(-4) | **NZM1-XUVHIVL**<br>271608 | | 1 off | Cannot be used in conjunction with NZM...-XR... remote operator.<br>UVU-NZM delay unit is additionally required.<br>Cannot be installed simultaneously with separate NZM...-XHIV early-make auxiliary contact or NZM...-XA... shunt release.<br>NZM1, 2, 3: early make and break approx. 20 ms.<br>NZM4: early make approx. 90 ms. |
| | NZM2(-4), N2(-4)<br>NZM3(-4), N3(-4) | **NZM2/3-XUVHIV**<br>259684 | | | |
| | NZM4(-4)<br>N4(-4) | **NZM4-XUVHIV**<br>266596 | | | |
| With 2 separately operating early-make auxiliary contacts | | | | | |
| NZM1 with 3 m separate connection cables instead of screw terminal, NZM2, 3, 4 with screw terminal, contact 3.23 and 3.24 with 3 m separate connection cables. | | | | | |
|  | NZM1(-4)<br>N1(-4) | **NZM1-XUVHIV20L**<br>271609 | | 1 off | Cannot be used in conjunction with NZM...-XR... remote operator.<br>UVU-NZM delay unit is additionally required.<br>Cannot be installed simultaneously with separate NZM...-XHIV early-make auxiliary contact or NZM...-XA... shunt release.<br>NZM1, 2, 3: early make and break approx. 20 ms.<br>NZM4: early make approx. 90 ms. |
| | NZM2(-4), N2(-4)<br>NZM3(-4), N3(-4) | **NZM2/3-XUVHIV20**<br>259688 | | | |
| | NZM4(-4)<br>N4(-4) | **NZM4-XUVHIV20**<br>266604 | | | |

Moeller HPL0211-2004/2005

| | | For use with | Rated control voltage $U_s$ V | **Type** Article no. when ordered separately |
|---|---|---|---|---|
| **Shunt release** | | | | |
| Without auxiliary contact<br>Switches are tripped by a voltage pulse or by the application of uninterrupted voltage. | | | | |
|  |  | With clamp terminal on the left-hand switch side. | NZM1(-4)<br>N1(-4) | 12 V AC/DC | **NZM1-XA12AC/DC**<br>259706 |
| | | | | 24 V AC/DC | **NZM1-XA24AC/DC**<br>259708 |
| | | | | 48 V AC/DC | **NZM1-XA48AC/DC**<br>259720 |
| | | | | 60 V AC/DC | **NZM1-XA60AC/DC**<br>259722 |
| | | | | 110 V – 130 V AC/DC | **NZM1-XA110-130AC/DC**<br>259724 |
| | | | | 208 V – 250 V AC/DC | **NZM1-XA208-250AC/DC**<br>259726 |
| | | | | 380 V – 440 V AC/DC | **NZM1-XA380-440AC/DC**<br>259728 |
| | | | | 480 V – 525 V AC/DC | **NZM1-XA480-525AC/DC**<br>259730 |
| | | | | 600 V AC/DC | **NZM1-XA600AC/DC**<br>259732 |
|  |  | With 3 m connection cable instead of screw termination. | NZM1(-4)<br>N1(-4) | 12 V AC/DC | **NZM1-XAL12AC/DC**<br>259734 |
| | | | | 24 V AC/DC | **NZM1-XAL24AC/DC**<br>259736 |
| | | | | 48 V AC/DC | **NZM1-XAL48AC/DC**<br>259738 |
| | | | | 60 V AC/DC | **NZM1-XAL60AC/DC**<br>259740 |
| | | | | 110 V – 130 V AC/DC | **NZM1-XAL110-130AC/DC**<br>259742 |
| | | | | 208 V – 250 V AC/DC | **NZM1-XAL208-250AC/DC**<br>259744 |
| | | | | 380 V – 440 V AC/DC | **NZM1-XAL380-440AC/DC**<br>259746 |
| | | | | 480 V – 525 V AC/DC | **NZM1-XAL480-525AC/DC**<br>259748 |
| | | | | 600 V AC/DC | **NZM1-XAL600AC/DC**<br>259750 |

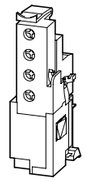
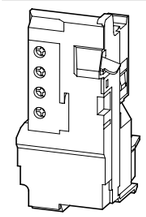
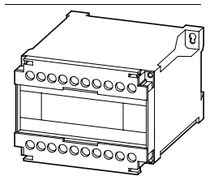
Moeller HPL0211-2004/2005

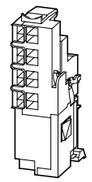
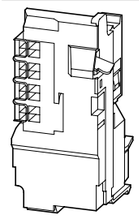
| | | **Type** Article no. when ordered separately | **Price** See Price List | Std. pack | **Notes** |
|---|---|---|---|---|---|
|  |  | **NZM1-XAC12AC/DC**<br>266488 | | 1 off | When the shunt release is energized, accidental contact with the main contacts of the switch during attempts to switch on is safely prevented.<br><br>Shunt release cannot be installed simultaneously with NZM...-XHIV... early-make auxiliary contact or NZM...-XU... undervoltage release. |
| | | **NZM1-XAC24AC/DC**<br>266489 | | | |
| | | **NZM1-XAC48AC/DC**<br>266490 | | | |
| | | **NZM1-XAC60AC/DC**<br>266491 | | | |
| | | **NZM1-XAC110-130AC/DC**<br>266492 | | | |
| | | **NZM1-XAC208-250AC/DC**<br>266493 | | | |
| | | **NZM1-XAC380-440AC/DC**<br>266494 | | | |
| | | **NZM1-XAC480-525AC/DC**<br>266495 | | | |
| | | **NZM1-XAC600AC/DC**<br>266496 | | | |
| | | | | 1 off | |

Circuit-breakers, switch-disconnectors up to 1600 A

Moeller HPL0211-2004/2005

Moeller HPL0211-2004/2005

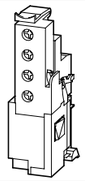
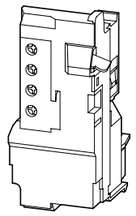
| | | For use with | Rated control voltage $U_s$ V | Type Article no. when ordered separately | Price See Price List | Std. pack |
|---|---|---|---|---|---|---|
| **Shunt release** | | | | | | |
| Without auxiliary contact<br>Switches are tripped by a voltage pulse or by the application of uninterrupted voltage. | | | | | | |
|  |  | NZM2(-4)<br>N2(-4)<br>NZM3(-4)<br>N3(-4) | 12 V AC/DC | **NZM2/3-XA12AC/DC**<br>259752 | | 1 off |
| | | | 24 V AC/DC | **NZM2/3-XA24AC/DC**<br>259754 | | |
| | | | 48 V AC/DC | **NZM2/3-XA48AC/DC**<br>259756 | | |
| | | | 60 V AC/DC | **NZM2/3-XA60AC/DC**<br>259758 | | |
| | | | 110 V – 130 V AC/DC | **NZM2/3-XA110-130AC/DC**<br>259760 | | |
| | | | 208 V – 250 V AC/DC | **NZM2/3-XA208-250AC/DC**<br>259763 | | |
| | | | 380 V – 440 V AC/DC | **NZM2/3-XA380-440AC/DC**<br>259766 | | |
| | | | 480 V – 525 V AC/DC | **NZM2/3-XA480-525AC/DC**<br>259768 | | |
| | | | 600 V AC/DC | **NZM2/3-XA600AC/DC**<br>259770 | | |
|  |  | NZM4(-4)<br>N4(-4) | 12 V AC/DC | **NZM4-XA12AC/DC**<br>266446 | | 1 off |
| | | | 24 V AC/DC | **NZM4-XA24AC/DC**<br>266447 | | |
| | | | 48 V AC/DC | **NZM4-XA48AC/DC**<br>266448 | | |
| | | | 60 V AC/DC | **NZM4-XA60AC/DC**<br>266449 | | |
| | | | 110 V – 130 V AC/DC | **NZM4-XA110-130AC/DC**<br>266450 | | |
| | | | 208 V – 250 V AC/DC | **NZM4-XA208-250AC/DC**<br>266451 | | |
| | | | 380 V – 440 V AC/DC | **NZM4-XA380-440AC/DC**<br>266452 | | |
| | | | 480 V – 525 V AC/DC | **NZM4-XA480-525AC/DC**<br>266453 | | |
| | | | 600 V AC/DC | **NZM4-XA600AC/DC**<br>266454 | | |
| **Capacitor unit 230 V 50/60 Hz** | | | | | | |
| in conjunction with NZM...-XA208-250AC/DC shunt release<br>Enclosure: degree of protection IP20<br>not UL/CSA approved | | | | | | |
|  | | NZM3(-4), N3(-4)<br>NZM4(-4), N4(-4) | – | **NZM-XCM**<br>229413 | | 1 off |

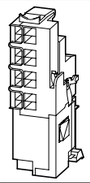
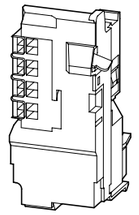
| | | Type Article no. when ordered separately | Price See Price List | Std. pack | Notes |
|---|---|---|---|---|---|
|  |  | **NZM2/3-XAC12AC/DC**<br>266506 | | 1 off | When the shunt release is energized, accidental contact with the main contacts of the switch during attempts to switch on is safely prevented.<br><br>Shunt release cannot be installed simultaneously with NZM...-XHIV... early-make auxiliary contact or NZM...-XU... undervoltage release. |
| | | **NZM2/3-XAC24AC/DC**<br>266507 | | | |
| | | **NZM2/3-XAC48AC/DC**<br>266508 | | | |
| | | **NZM2/3-XAC60AC/DC**<br>266509 | | | |
| | | **NZM2/3-XAC110-130AC/DC**<br>266510 | | | |
| | | **NZM2/3-XAC208-250AC/DC**<br>266511 | | | |
| | | **NZM2/3-XAC380-440AC/DC**<br>266512 | | | |
| | | **NZM2/3-XAC480-525AC/DC**<br>266513 | | | |
| | | **NZM2/3-XAC600AC/DC**<br>266514 | | | |
|  |  | **NZM4-XAC12AC/DC**<br>266524 | | 1 off | |
| | | **NZM4-XAC24AC/DC**<br>266525 | | | |
| | | **NZM4-XAC48AC/DC**<br>266526 | | | |
| | | **NZM4-XAC60AC/DC**<br>266527 | | | |
| | | **NZM4-XAC110-130AC/DC**<br>266528 | | | |
| | | **NZM4-XAC208-250AC/DC**<br>266529 | | | |
| | | **NZM4-XAC380-440AC/DC**<br>266530 | | | |
| | | **NZM4-XAC480-525AC/DC**<br>266531 | | | |
| | | **NZM4-XAC600AC/DC**<br>266532 | | | |
| | | | | | Enables safe use of the circuit-breaker as a mesh network circuit-breaker in a range from 0 – 110 % $U_n$ with constant shut-down time of 40 ms. If the mains voltage is absent, the installed capacitor supplies power for actuating the shunt release for at least 12 hours.<br><br>IP20 enclosure.<br>The configuration of the capacitor unit can be undertaken independently of the circuit-breaker.<br>Connect the NZM-XCM to the power fed side. |

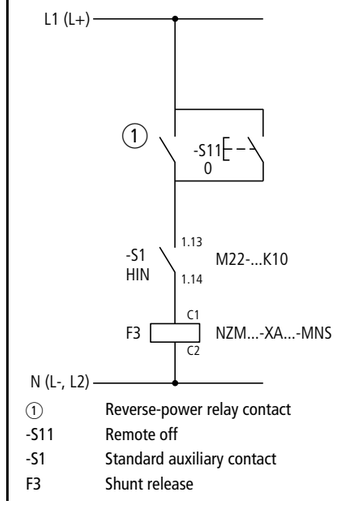
Circuit-breakers, switch-disconnectors up to 1600 A

Moeller HPL0211-2004/2005

Moeller HPL0211-2004/2005

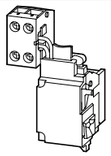
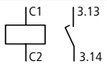
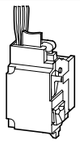
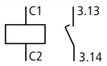
| | | For use with | Rated control voltage $U_s$ V | Type Article no. when ordered separately | Price See Price List | Std. pack |
|---|---|---|---|---|---|---|
| **Shunt release** | | | | | | |
| Without auxiliary contact<br>for circuit-breaker with time-delayed shunt release<br>For intermittent operation<br>Maximum on time = 1 s<br>Operating range 10 – 110 % $U_s$<br>not UL/CSA approved | | | | | | |
|  |  | NZM3(-4), N3(-4) | 230 V AC | **NZM3-XA-230AC-MNS**<br>274097 | | 1 off |
|  |  | NZM4(-4), N4(-4) | 230 V AC | **NZM4-XA-230AC-MNS**<br>274138 | | 1 off |

| | | Type Article no. for separate order | Price See Price List | Std. pack | Notes |
|---|---|---|---|---|---|
|  |  | **NZM3-XAC-230AC-MNS**<br>274137 | | 1 off | Cannot be installed simultaneously with NZM...-XHIV... early-make auxiliary contact or NZM...-XU... undervoltage release.<br><br>Intermittent operation guaranteed by series connection of an M22-(C)K10 make contact.<br>The maximum operating time of the shunt release for mesh network circuit-breaker is 1 s. |
|  |  | **NZM4-XAC-230AC-MNS**<br>274140 | | 1 off | |

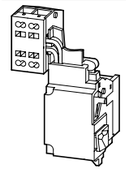
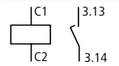



① Reverse-power relay contact
-S11 Remote off
-S1 Standard auxiliary contact
F3 Shunt release

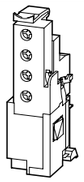
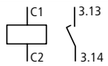
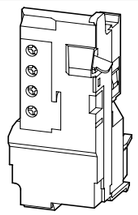
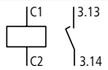
Moeller HPL0211-2004/2005

| | | | For use with | Rated control voltage $U_s$ V | **Type** Article no. when ordered separately |
|---|---|---|---|---|---|
| **Shunt release** | | | | | |
| With early-make auxiliary contact | | | | | |
|  |   | With clamp terminal on the left-hand switch side. | NZM1(-4) N1(-4) | 12 V AC/DC | **NZM1-XAHIV12AC/DC** 259772 |
| | | | | 24 V AC/DC | **NZM1-XAHIV24AC/DC** 259774 |
| | | | | 48 V AC/DC | **NZM1-XAHIV48AC/DC** 259776 |
| | | | | 60 V AC/DC | **NZM1-XAHIV60AC/DC** 259778 |
| | | | | 110 V – 130 V AC/DC | **NZM1-XAHIV110-130AC/DC** 259780 |
| | | | | 208 V – 250 V AC/DC | **NZM1-XAHIV208-250AC/DC** 259782 |
| | | | | 380 V – 440 V AC/DC | **NZM1-XAHIV380-440AC/DC** 259784 |
| | | | | 480 V – 525 V AC/DC | **NZM1-XAHIV480-525AC/DC** 259786 |
|  |   | With 3 m connection cable instead of screw termination. | NZM1(-4) N1(-4) | 12 V AC/DC | **NZM1-XAHIVL12AC/DC** 259790 |
| | | | | 24 V AC/DC | **NZM1-XAHIVL24AC/DC** 259792 |
| | | | | 48 V AC/DC | **NZM1-XAHIVL48AC/DC** 259794 |
| | | | | 60 V AC/DC | **NZM1-XAHIVL60AC/DC** 259796 |
| | | | | 110 V – 130 V AC/DC | **NZM1-XAHIVL110-130AC/DC** 259798 |
| | | | | 208 V – 250 V AC/DC | **NZM1-XAHIVL208-250AC/DC** 259800 |
| | | | | 380 V – 440 V AC/DC | **NZM1-XAHIVL380-440AC/DC** 259802 |
| | | | | 480 V – 525 V AC/DC | **NZM1-XAHIVL480-525AC/DC** 259804 |

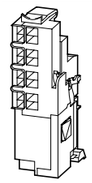
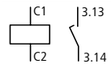
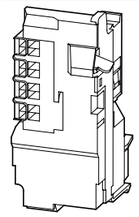
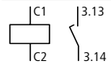
Moeller HPL0211-2004/2005

| | | **Type** Article no. when ordered separately | **Price** See Price List | Std. pack | **Notes** |
|---|---|---|---|---|---|
|  |   | **NZM1-XAHIVC12AC/DC** 266542 | | 1 off | When the shunt release is energized, accidental contact with the main contacts of the switch during attempts to switch on is safely prevented.<br>Early make or break: approx. 20 ms<br>Shunt release cannot be installed simultaneously with NZM...-XHIV.. early-make auxiliary contact or NZM...-XU... undervoltage release. |
| | | **NZM1-XAHIVC24AC/DC** 266543 | | | |
| | | **NZM1-XAHIVC48AC/DC** 266544 | | | |
| | | **NZM1-XAHIVC60AC/DC** 266545 | | | |
| | | **NZM1-XAHIVC110-130AC/DC** 266546 | | | |
| | | **NZM1-XAHIVC208-250AC/DC** 266547 | | | |
| | | **NZM1-XAHIVC380-440AC/DC** 266548 | | | |
| | | **NZM1-XAHIVC480-525AC/DC** 266549 | | | |
| | | | | 1 off | |

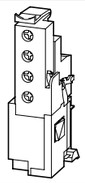
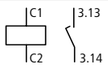
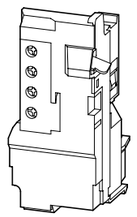
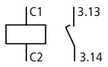
Moeller HPL0211-2004/2005

| | | For use with | Rated control voltage $U_s$ V | Type Article no. when ordered separately |
|---|---|---|---|---|
| **Shunt release** | | | | |
| With early-make auxiliary contact | | | | |
|  |  | NZM2(-4)<br>N2(-4)<br>NZM3(-4)<br>N3(-4) | 12 V AC/DC | **NZM2/3-XAHIV12AC/DC**<br>259808 |
| | | | 24 V AC/DC | **NZM2/3-XAHIV24AC/DC**<br>259810 |
| | | | 48 V AC/DC | **NZM2/3-XAHIV48AC/DC**<br>259812 |
| | | | 60 V AC/DC | **NZM2/3-XAHIV60AC/DC**<br>259814 |
| | | | 110 V – 130 V AC/DC | **NZM2/3-XAHIV110-130AC/DC**<br>259816 |
| | | | 208 V – 250 V AC/DC | **NZM2/3-XAHIV208-250AC/DC**<br>259818 |
| | | | 380 V – 440 V AC/DC | **NZM2/3-XAHIV380-440AC/DC**<br>259820 |
| | | | 480 V – 525 V AC/DC | **NZM2/3-XAHIV480-525AC/DC**<br>259822 |
|  |  | NZM4(-4)<br>N4(-4) | 12 V AC/DC | **NZM4-XAHIV12AC/DC**<br>266470 |
| | | | 24 V AC/DC | **NZM4-XAHIV24AC/DC**<br>266471 |
| | | | 48 V AC/DC | **NZM4-XAHIV48AC/DC**<br>266472 |
| | | | 60 V AC/DC | **NZM4-XAHIV60AC/DC**<br>266473 |
| | | | 110 – 130 V AC/DC | **NZM4-XAHIV110-130AC/DC**<br>266474 |
| | | | 208 – 250 V AC/DC | **NZM4-XAHIV208-250AC/DC**<br>266475 |
| | | | 380 – 440 V AC/DC | **NZM4-XAHIV380-440AC/DC**<br>266476 |
| | | | 480 – 525 V AC/DC | **NZM4-XAHIV480-525AC/DC**<br>266477 |

Moeller HPL0211-2004/2005

| | | Type Article no. when ordered separately | Price See Price List | Std. pack | Notes |
|---|---|---|---|---|---|
|  |  | **NZM2/3-XAHIVC12AC/DC**<br>266560 | | 1 off | When the shunt release is energized, accidental contact with the main contacts of the switch during attempts to switch on is safely prevented.<br>Cannot be used in conjunction with NZM...-XR... remote operator.<br>Shunt release cannot be installed simultaneously with NZM...-XHIV.. early-make auxiliary contact or NZM...-XU... undervoltage release.<br>Early make or break: approx. 20 ms |
| | | **NZM2/3-XAHIVC24AC/DC**<br>266561 | | | |
| | | **NZM2/3-XAHIVC48AC/DC**<br>266562 | | | |
| | | **NZM2/3-XAHIVC60AC/DC**<br>266563 | | | |
| | | **NZM2/3-XAHIVC110-130AC/DC**<br>266564 | | | |
| | | **NZM2/3-XAHIVC208-250AC/DC**<br>266565 | | | |
| | | **NZM2/3-XAHIVC380-440AC/DC**<br>266566 | | | |
| | | **NZM2/3-XAHIVC480-525AC/DC**<br>266567 | | | |
|  |  | **NZM4-XAHIVC12AC/DC**<br>266578 | | 1 off | When the shunt release is energized, accidental contact with the main contacts of the switch during attempts to switch on is safely prevented.<br>Cannot be used in conjunction with NZM...-XR... remote operator.<br>Shunt release cannot be installed simultaneously with NZM...-XHIV.. early-make auxiliary contact or NZM...-XU... undervoltage release.<br>Early make: approx. 90 ms |
| | | **NZM4-XAHIVC24AC/DC**<br>266579 | | | |
| | | **NZM4-XAHIVC48AC/DC**<br>266580 | | | |
| | | **NZM4-XAHIVC60AC/DC**<br>266581 | | | |
| | | **NZM4-XAHIVC110-130AC/DC**<br>266582 | | | |
| | | **NZM4-XAHIVC208-250AC/DC**<br>266583 | | | |
| | | **NZM4-XAHIVC380-440AC/DC**<br>266584 | | | |
| | | **NZM4-XAHIVC480-525AC/DC**<br>266585 | | | |

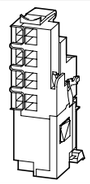
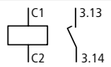
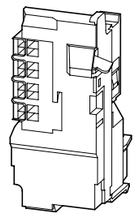
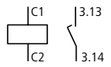
Moeller HPL0211-2004/2005

| | | For use with | Rated control voltage $U_s$ V | Type Article no. when ordered separately | Price See Price List | Std. pack |
|---|---|---|---|---|---|---|
| **Shunt release** | | | | | | |
| With early-make auxiliary contact<br>for circuit-breaker with time-delayed shunt release<br>For intermittent operation<br>Maximum on time = 1 s<br>Operating range 10 – 110 % $U_s$<br>not UL/CSA approved | | | | | | |
|  |  | NZM3(-4), N3(-4) | 230 V AC | **NZM3-XAHIV-230AC-MNS**<br>274141 | | 1 off |
|  |  | NZM4(-4), N4(-4) | 230 V AC | **NZM4-XAHIV-230AC-MNS**<br>274143 | | 1 off |





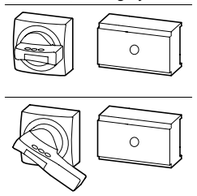
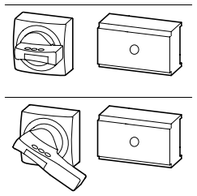
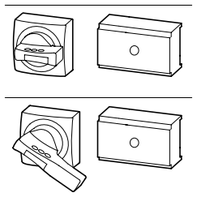
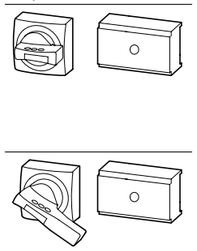
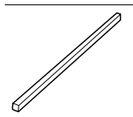
Moeller HPL0211-2004/2005

| | | Type Article no. for separate order | Price See Price List | Std. pack | Notes |
|---|---|---|---|---|---|
|  |  | **NZM3-XAHIVC-230AC-MNS**<br>274142 | | 1 off | Cannot be installed simultaneously with NZM...-XHIV... early-make auxiliary contact or NZM...-XU... undervoltage release.<br><br>Intermittent operation guaranteed by series connection of an M22-(C)K10 (standard auxiliary contact) make contact.<br>The maximum operating time of the shunt release for mesh network circuit-breaker is 1 s.<br>NZM3: early make or break approx. 20 ms.<br>NZM4: early make approx. 90 ms.<br><br>Cannot be used in conjunction with NZM...-XR... remote operator. |
|  |  | **NZM4-XAHIVC-230AC-MNS**<br>274144 | | 1 off | |

Circuit-breakers, switch-disconnectors up to 1600 A

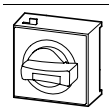
Moeller HPL0211-2004/2005

Moeller HPL0211-2004/2005

| | For use with | | **Type** Article no. for separate order | **Price** See Price | Std. pack | **Notes** |
|---|---|---|---|---|---|---|
| **Door coupling rotary handle** | | | | | | |
| Complete including rotary drive and coupling parts<br>With the NZM...-XT...D... as well as NZM...-XT...D...60 types, an additional extension shaft is required.<br>Degree of protection IP66/NEMA 4X | | | | | | |
| Standard, black/grey | | | | | | |
|  | – | NZM1(-4), PN1(-4), N1(-4) | **NZM1-XTD** 260160 | | 1 off | NZM...-XTD<br>• Cannot be combined with NZM...-XDZ additional handle<br>• External warning plate/ designation label can be clipped on |
| | | NZM2(-4), PN2(-4), N2(-4) | **NZM2-XTD** 260162 | | | |
| | | NZM3(-4), PN3(-4), N3(-4) | **NZM3-XTD** 260164 | | | |
| | | NZM4(-4), N4(-4) | **NZM4-XTD** 266612 | | | |
|  | Lockable in 0 position on handle. Additionally with door interlock. | NZM1(-4), PN1(-4), N1(-4) | **NZM1-XTVD** 260166 | | | Door interlock<br>• **Can not be** defeated in the locked OFF and ON positions<br>• Can be modified such that it can be defeated from the outside using a screwdriver, when it is in the unlocked ON position.<br>• Door can be opened in OFF<br>NZM...-XTVD(V)<br>• Cannot be combined with NZM...-XDZ additional handle<br>• External warning plate/ designation label can be clipped on |
| | | NZM2(-4), PN2(-4), N2(-4) | **NZM2-XTVD** 260168 | | | |
| | | NZM3(-4), PN3(-4), N3(-4) | **NZM3-XTVD** 260170 | | | |
| | | NZM4(-4), N4(-4) | **NZM4-XTVD** 266614 | | | |
|  | Lockable on handle and switch. Can be locked in 0 position, with adequate modification also in I position. Lockable door as additional feature, locking facility on circuit-breaker in 0 position. | NZM1(-4), PN1(-4), N1(-4) | **NZM1-XTVDV** 260172 | | | |
| | | NZM2(-4), PN2(-4), N2(-4) | **NZM2-XTVDV** 260174 | | | |
| | | NZM3(-4), PN3(-4), N3(-4) | **NZM3-XTVDV** 260176 | | | |
| | | NZM4(-4), N4(-4) | **NZM4-XTVDV** 266616 | | | |
| Red-yellow for Emergency-Stop | | | | | | |
|  | Lockable on handle and switch. Lockable in 0 position on handle. Lockable door as additional feature, locking facility on circuit-breaker in 0 position. | NZM1(-4), PN1(-4), N1(-4) | **NZM1-XTVDVR** 260178 | | 1 off | Door interlock<br>• **Can not be** defeated in the locked OFF and ON positions<br>• Can be modified such that it can be defeated from the outside using a screwdriver, when it is in the unlocked ON position.<br>• Door can be opened in OFF<br>NZM...-XTVDVR<br>• Cannot be combined with NZM...-XDZ additional handle<br>• External warning plate/ designation label can be clipped on |
| | | NZM2(-4), PN2(-4), N2(-4) | **NZM2-XTVDVR** 260180 | | | |
| | | NZM3(-4), PN3(-4), N3(-4) | **NZM3-XTVDVR** 260182 | | | |
| | | NZM4(-4), N4(-4) | **NZM4-XTVDVR** 266618 | | | |
| **Extension shaft** | | | | | | |
|  | 400 mm<br>Max. mounting depth | NZM1(-4), PN1(-4), N1(-4) NZM2(-4), PN2(-4), N2(-4) | **NZM1/2-XV4** 261232 | | 1 off | Can be cut to required length |
| | | NZM3(-4), PN3(-4), N3(-4) NZM4(-4), N4(-4) | **NZM3/4-XV4** 261234 | | | |
| | 600 mm<br>Max. mounting depth | NZM1(-4), PN1(-4), N1(-4) NZM2(-4), PN2(-4), N2(-4) | **NZM1/2-XV6** 260191 | | | |
| | | NZM3(-4), PN3(-4), N3(-4) NZM4(-4), N4(-4) | **NZM3/4-XV6** 260193 | | | |

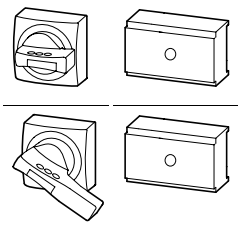
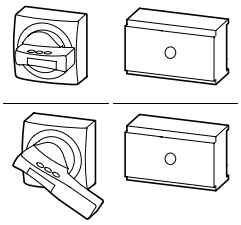
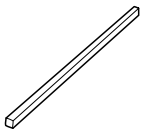
**Notes** Circuit breaker can also be installed in a lying position 90° left/right, with the handle still in the same position.

| **For max. 60 mm shaft length** **Type** Article no. for separate order | **Price** See Price | **Notes** | **Extremely narrow fittings** **Type** Article no. for separate order | **Price** See Price | Std. pack | **Notes** |
|---|---|---|---|---|---|---|
| **NZM1-XTD-60** 271500 | | NZM...-XTD-60<br>• For a maximum shaft length of 60 mm<br>• Without shaft support<br>• Cannot be combined with NZM...-XDZ additional handle<br>• External warning plate/designation label can be clipped on | **NZM1-XTD-0** 279358 | | 1 off | NZM...-XTD-0<br>• For extremely narrow fittings<br>• With special short extension shaft<br>• Cannot be combined with NZM...-XDZ additional handle<br>• External warning plate/designation label can be clipped on |
| **NZM2-XTD-60** 271501 | | | **NZM2-XTD-0** 279359 | | | |
| **NZM3-XTD-60** 271502 | | | **NZM3-XTD-0** 279390 | | | |
| **NZM4-XTD-60** 271503 | | | **NZM4-XTD-0** 279391 | | | |
| **NZM1-XTVD-60** 271504 | | Door interlock<br>• **Can not be** defeated in the locked OFF and ON positions<br>• Can be modified such that it can be defeated from the outside using a screwdriver, when it is in the unlocked ON position.<br>• Door can be opened in OFF<br>NZM...-XTVD(V)-60<br>• For maximum shaft length 60 mm<br>• Without shaft support<br>• Cannot be combined with NZM...-XDZ additional handle<br>• External warning plate/designation label can be clipped on | **NZM1-XTVD-0** 279392 | | | Door interlock<br>• **Can not be** defeated in the locked OFF and ON positions<br>• Can be modified such that it can be defeated from the outside using a screwdriver, when it is in the unlocked ON position.<br>• Door can be opened in OFF<br>NZM...-XTVD(V)-0<br>• For extremely narrow fittings<br>• With special short extension shaft<br>• Cannot be combined with NZM...-XDZ additional handle<br>• External warning plate/designation label can be clipped on |
| **NZM2-XTVD-60** 271505 | | | **NZM2-XTVD-0** 279393 | | | |
| **NZM3-XTVD-60** 271506 | | | **NZM3-XTVD-0** 279394 | | | |
| **NZM4-XTVD-60** 271507 | | | **NZM4-XTVD-0** 279395 | | | |
| **NZM1-XTVDV-60** 271508 | | | **NZM1-XTVDV-0** 279396 | | | |
| **NZM2-XTVDV-60** 271509 | | | **NZM2-XTVDV-0** 279397 | | | |
| **NZM3-XTVDV-60** 271510 | | | **NZM3-XTVDV-0** 279398 | | | |
| **NZM4-XTVDV-60** 271511 | | | **NZM4-XTVDV-0** 279399 | | | |
| **NZM1-XTVDVR-60** 271512 | | Door interlock<br>• **Can not be** defeated in the locked OFF and ON positions<br>• Can be modified such that it can be defeated from the outside using a screwdriver, when it is in the unlocked ON position.<br>• Door can be opened in OFF<br>NZM...-XTVDVR-60<br>• For maximum shaft length 60 mm<br>• Without shaft support<br>• Cannot be combined with NZM...-XDZ additional handle<br>• External warning plate/designation label can be clipped on | **NZM1-XTVDVR-0** 279400 | | 1 off | Door interlock<br>• **Can not be** defeated in the locked OFF and ON positions<br>• Can be modified such that it can be defeated from the outside using a screwdriver, when it is in the unlocked ON position.<br>• Door can be opened in OFF<br>NZM...-XTVDVR-0<br>• For extremely narrow fittings<br>• With special short extension shaft<br>• Cannot be combined with NZM...-XDZ additional handle<br>• External warning plate/designation label can be clipped on |
| **NZM2-XTVDVR-60** 271513 | | | **NZM2-XTVDVR-0** 279401 | | | |
| **NZM3-XTVDVR-60** 271514 | | | **NZM3-XTVDVR-0** 279402 | | | |
| **NZM4-XTVDVR-60** 271515 | | | **NZM4-XTVDVR-0** 279403 | | | |

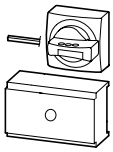
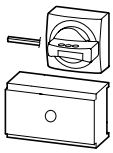
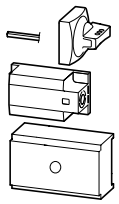
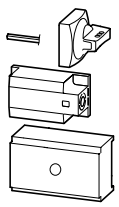
| | | For use with | **Type** Article no. for separate order | **Price** See Price | Std. pack | **Notes** |
|---|---|---|---|---|---|---|
| **Rotary handle on circuit-breaker** | | | | | | |
| Complete with rotary drive | | | | | | |
| Standard, black/grey | | | | | | |
|  | – | NZM1(-4)<br>PN1(-4), N1(-4) | **NZM1-XD**<br>260116 | | 1 off | Can also be combined with insulating surround. |
|  | – | NZM2(-4)<br>PN2(-4), N2(-4) | **NZM2-XD**<br>260121 | | | |
|  | – | NZM3(-4)<br>PN3(-4), N3(-4) | **NZM3-XD**<br>260123 | | | |
| | – | NZM4(-4)<br>N4(-4) | **NZM4-XD**<br>266606 | | | |
|  | Lockable on the 0 position on the switch using up to 3 padlocks. | NZM1(-4)<br>PN1(-4), N1(-4) | **NZM1-XDV**<br>260125 | | 1 off | Can also be combined with insulating surround.<br>MODAN handle position detection by wire release can be retrofitted. |
|  | | NZM2(-4)<br>PN2(-4), N2(-4) | **NZM2-XDV**<br>260127 | | | |
|  | | NZM3(-4)<br>PN3(-4), N3(-4) | **NZM3-XDV**<br>260129 | | | |
| | | NZM4(-4)<br>N4(-4) | **NZM4-XDV**<br>266608 | | | |
| Red-yellow for Emergency-Stop | | | | | | |
|  | Lockable on the 0 position on the switch using up to 3 padlocks. | NZM1(-4)<br>PN1(-4), N1(-4) | **NZM1-XDVR**<br>260135 | | 1 off | Can also be combined with insulating surround.<br>MODAN handle position detection by wire release can be retrofitted. |
|  | | NZM2(-4)<br>PN2(-4), N2(-4) | **NZM2-XDVR**<br>260137 | | | |
|  | | NZM3(-4)<br>PN3(-4), N3(-4) | **NZM3-XDVR**<br>260140 | | | |
| | | NZM4(-4)<br>N4(-4) | **NZM4-XDVR**<br>266610 | | | |
| **Rotary handle on switch with door interlock** | | | | | | |
| Complete with rotary drive and insulating surround | | | | | | |
| Standard, black/grey | | | | | | |
|  | Can be locked in 0 position, with adequate modification also in I position. Alos available with door interlock e.g. for MCC service distribution | NZM1(-4)<br>PN1(-4), N1(-4) | **NZM1-XDTV**<br>260131 | | 1 off | Door interlock<br>• In the ON position, can be defeated from the outside using a 1 mm pin<br>• **Can not be** defeated in the locked OFF and ON positions<br>• Door can be opened in OFF<br>• Can only be switched ON when the door is closed |
|  | | NZM2(-4)<br>PN2(-4), N2(-4) | **NZM2-XDTV**<br>260133 | | | |
| Red-yellow for Emergency-Stop | | | | | | |
|  | Lockable in 0 position on handle. Also available with door interlock e.g. for MCC service distribution | NZM1(-4)<br>PN1(-4), N1(-4) | **NZM1-XDTVR**<br>260142 | | 1 off | |
|  | | NZM2(-4)<br>PN2(-4), N2(-4) | **NZM2-XDTVR**<br>260144 | | | |

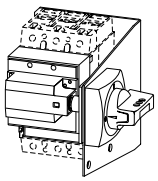
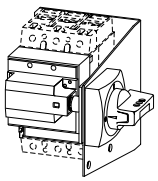
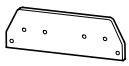
**Notes** Circuit breaker can also be installed in a lying position 90° left/right, with the handle still in the same position.

Moeller HPL0211-2004/2005

| Divergent to normal IEC handles: Door opening only possible with active rotation beyond the 0 position. | | For use with | **Type** Article no. for separate order | **Price** See Price List | Std. pack | |
|---|---|---|---|---|---|---|
| **Door coupling rotary handle** | | | | | | |
| Complete including rotary drive and coupling parts Extension shaft additionally required. Degree of protection IP66/NEMA 4X | | | | | | |
| Standard, black/grey | | | | | | |
|  | Lockable in 0 position on handle. Additionally with door interlock. | NZM1, N1 | **NZM1-XTVD-NA** 271445 | | 1 off | Door interlock<br>• **Can not be** defeated in the locked OFF and ON positions<br>• Can be modified such that it can be defeated from the outside using a screwdriver, when it is in the unlocked ON position.<br>• Door opening only possible with active rotation beyond the 0 position.<br>• Cannot be combined with mechanical interlock<br>• External warning plate/ designation label can be clipped on |
| | | NZM2, N2 | **NZM2-XTVD-NA** 271446 | | | |
| | | NZM3, N3 | **NZM3-XTVD-NA** 271447 | | | |
| | | NZM4, N4 | **NZM4-XTVD-NA** 271448 | | | |
| Red-yellow for Emergency-Stop | | | | | | |
|  | Lockable on handle and switch. Lockable in 0 position on handle. Lockable door as additional feature, locking facility on circuit-breaker in 0 position. | NZM1, N1 | **NZM1-XTVDVR-NA** 271449 | | 1 off | |
| | | NZM2, N2 | **NZM2-XTVDVR-NA** 271450 | | | |
| | | NZM3, N3 | **NZM3-XTVDVR-NA** 271451 | | | |
| | | NZM4, N4 | **NZM4-XTVDVR-NA** 271452 | | | |
| **Rotary handle on switch with door interlock** | | | | | | |
| Complete with rotary drive and insulating surround | | | | | | |
| Standard, black/grey | | | | | | |
|  | Can be locked in 0 position, with adequate modification also in I position. Also available with door interlock e.g. for MCC service distribution | NZM1, N1 | **NZM1-XDTV-NA** 271453 | | 1 off | Door interlock<br>• In the ON position, can be defeated from the outside using a 1 mm pin<br>• **Can not be** defeated in the locked OFF and ON positions<br>• Door opening only possible with active rotation beyond the 0 position.<br>• Can only be switched ON when the door is closed<br>• Cannot be combined with mechanical interlock |
|  | | NZM2, N2 | **NZM2-XDTV-NA** 271454 | | | |
| Red-yellow for Emergency-Stop | | | | | | |
|  | Lockable in 0 position on handle. Also available with door interlock e.g. for MCC service distribution | NZM1, N1 | **NZM1-XDTVR-NA** 271455 | | | |
|  | | NZM2, N2 | **NZM2-XDTVR-NA** 271456 | | | |
| **Extension shaft** | | | | | | |
|  | 400 mm max. mounting depth | NZM1(-4), PN1(-4), N1(-4) NZM2(-4), PN2(-4), N2(-4) | **NZM1/2-XV4** 261232 | | 1 off | Can be cut to required length |
| | | NZM3(-4), PN3(-4), N3(-4) NZM4(-4), N4(-4) | **NZM3/4-XV4** 261234 | | | |
| | 600 mm max. mounting depth | NZM1(-4), PN1(-4), N1(-4) NZM2(-4), PN2(-4), N2(-4) | **NZM1/2-XV6** 260191 | | | |
| | | NZM3(-4), PN3(-4), N3(-4) NZM4(-4), N4(-4) | **NZM3/4-XV6** 260193 | | | |

**Notes** Circuit breaker can also be installed in a lying position 90° left/right, with the handle still in the same position.

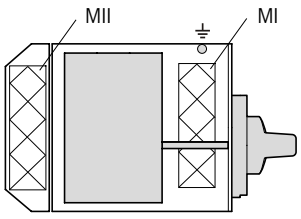
| | | | For use with | Type<br>Article no.<br>for separate order | Price<br>See Price List | Std. pack |
|---|---|---|---|---|---|---|
| **Main switch assembly kit** | | | | | | |
| Equipment supplied:<br>• Rotary door-coupling handle<br>• NZM...-XV4 extension shaft<br>• External warning plate/designation label in German/English<br>• Black and yellow flash<br>For enhanced protection against direct contact on the incomer side, IP2X protection against contact with a finger can be ordered → 10/86<br>Other external warning plates/designation labels can be clipped on. | | | | | | |
| With black door coupling rotary handle | | | | | | |
|  | Lockable in 0 position on handle.<br>Additionally with door interlock. | – | NZM1(-4)<br>PN1(-4), N1(-4) | **NZM1-XHB**<br>266626 | | 1 off |
| | | – | NZM2(-4)<br>PN2(-4), N2(-4) | **NZM2-XHB**<br>266627 | | |
| | | – | NZM3(-4)<br>PN3(-4), N3(-4) | **NZM3-XHB**<br>266628 | | |
| | | – | NZM4(-4)<br>N4(-4) | **NZM4-XHB**<br>271779 | | |
| With red door coupling rotary handle for using switch as Emergency-Stop device according to IEC/EN 602041 | | | | | | |
|  | Lockable in 0 position on handle.<br>Lockable door as additional feature, locking facility on circuit-breaker in 0 position. | – | NZM1(-4)<br>PN1(-4), N1(-4) | **NZM1-XHBR**<br>266632 | | |
| | | – | NZM2(-4)<br>PN2(-4), N2(-4) | **NZM2-XHBR**<br>266633 | | |
| | | – | NZM3(-4)<br>PN3(-4), N3(-4) | **NZM3-XHBR**<br>266634 | | |
| | | – | NZM4(-4)<br>N4(-4) | **NZM4-XHBR**<br>271842 | | |
| **Main switch assembly kit for side wall installation** | | | | | | |
| Actuation of the switch on the control panel side wall<br>Switch mounting on mounting plate<br>Equipment supplied:<br>• Door coupling rotary handle<br>• NZM...-XV4 extension shaft<br>• External warning plate/designation label in German/English<br>• Black and yellow flash<br>For enhanced protection against direct contact on the incomer side, IP2X protection against contact with a finger can be ordered → 10/86<br>Other external warning plates/designation labels can be clipped on. | | | | | | |
| Standard, black/grey | | | | | | |
|  | Can be locked in 0 position, with adequate modification also in I position. | For operation on the left | NZM1(-4)<br>PN1(-4), N1(-4) | **NZM1-XS-L**<br>266641 | | 1 off |
| | | | NZM2(-4)<br>PN2(-4), N2(-4) | **NZM2-XS-L**<br>266642 | | |
| | | | NZM3(-4)<br>PN3(-4), N3(-4) | **NZM3-XS-L**<br>266643 | | |
| | | For operation on the right | NZM1(-4)<br>PN1(-4), N1(-4) | **NZM1-XS-R**<br>266644 | | |
| | | | NZM2(-4)<br>PN2(-4), N2(-4) | **NZM2-XS-R**<br>266645 | | |
| | | | NZM3(-4)<br>PN3(-4), N3(-4) | **NZM3-XS-R**<br>266646 | | |
| Red-yellow for Emergency-Stop | | | | | | |
|  | Lockable in 0 position on handle. | For operation on the left | NZM1(-4)<br>PN1(-4), N1(-4) | **NZM1-XSR-L**<br>266653 | | |
| | | | NZM2(-4)<br>PN2(-4), N2(-4) | **NZM2-XSR-L**<br>266654 | | |
| | | | NZM3(-4)<br>PN3(-4), N3(-4) | **NZM3-XSR-L**<br>266655 | | |
| | | For operation on the right | NZM1(-4)<br>PN1(-4), N1(-4) | **NZM1-XSR-R**<br>266656 | | |
| | | | NZM2(-4)<br>PN2(-4), N2(-4) | **NZM2-XSR-R**<br>266657 | | |
| | | | NZM3(-4)<br>PN3(-4), N3(-4) | **NZM3-XSR-R**<br>266658 | | |

| | | For use with | Type Article no. for separate order | Price See Price List | Std. pack |
|---|---|---|---|---|---|
| **Main switch assembly kit for side panel mounting with mounting bracket** | | | | | |
| For direct mounting of circuit-breaker and handle in the side wall of the control cabinet<br>Equipment supplied:<br>• Door coupling rotary handle<br>• External warning plate/designation label in German/English<br>• Black and yellow flash<br>For enhanced protection against direct contact on the incomer side, IP2X protection against contact with a finger can be ordered<br>→ 10/86<br>Other external warning plates/designation labels can be clipped on. | | | | | |
| Standard, black/grey | | | | | |
|  | Can be locked in 0 position, with adequate modification also in I position. See below for equipment supplied. Narrowest minimum clearance between enclosure side plates of control panel and circuit-breaker is defined by mounting bracket. Extension shaft cannot be used. | For operation on the left | NZM1(-4)<br>PN1(-4), N1(-4) | **NZM1-XSM-L**<br>266663 | 1 off |
| | | | NZM2(-4)<br>PN2(-4), N2(-4) | **NZM2-XSM-L**<br>266664 | |
| | | For operation on the right | NZM1(-4)<br>PN1(-4), N1(-4) | **NZM1-XSM-R**<br>266665 | |
| | | | NZM2(-4)<br>PN2(-4), N2(-4) | **NZM2-XSM-R**<br>266666 | |
| Red-yellow for Emergency-Stop | | | | | |
|  | Lockable in 0 position on handle. See below for equipment supplied. Narrowest minimum clearance between enclosure side plates of control panel and circuit-breaker is defined by mounting bracket. Extension shaft cannot be used. | For operation on the left | NZM1(-4)<br>PN1(-4), N1(-4) | **NZM1-XSRM-L**<br>266671 | |
| | | | NZM2(-4)<br>PN2(-4), N2(-4) | **NZM2-XSRM-L**<br>266672 | |
| | | For operation on the right | NZM1(-4)<br>PN1(-4), N1(-4) | **NZM1-XSRM-R**<br>266673 | |
| | | | NZM2(-4)<br>PN2(-4), N2(-4) | **NZM2-XSRM-R**<br>266674 | |
| **Additional plate** | | | | | |
| For fitting to the mounting bracket when using N conductor or PE conductor terminals K25, K50, K95 or K150. | | | | | |
|  | – | – | NZM1(-4), PN1(-4), N1(-4)<br>NZM2(-4), PN2(-4), N2(-4) | **NZM1/2-XZB**<br>266676 | 1 off |

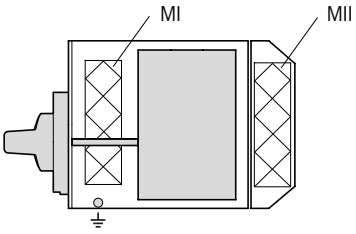
Additional terminal arrangement for side wall operator with mounting bracket
NZM1-XS(R)M-..., NZM2-XS(R)M-...
Additional terminals K25, K50, K95, K150 → 10/104

3-pole

For operation on the right

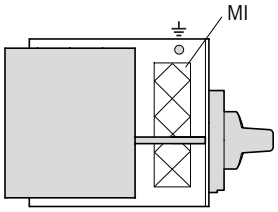



For operation on the left

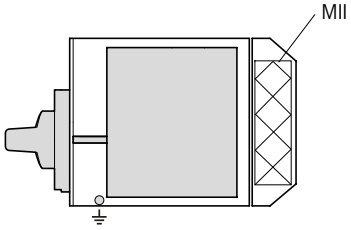



4-pole

For operation on the right

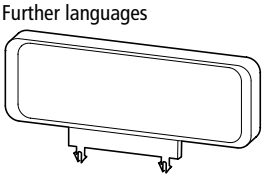



For operation on the left

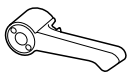
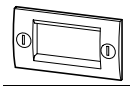
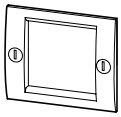
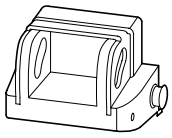
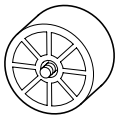
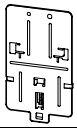
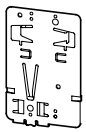


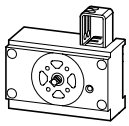
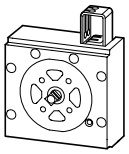
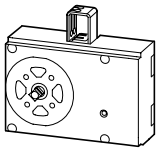
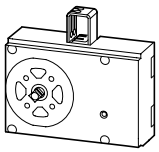
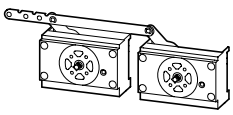
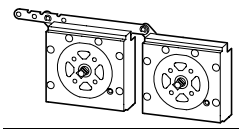
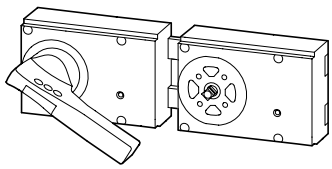

| Mounting areas | | MI | | | | MII | |
|---|---|---|---|---|---|---|---|
| Variation options | | V1 | V2 | V3 | V4 | V1 | V2 |
| Maximum number of additional terminals | K25 | 2 × | – | – | – | – | – |
| | K50 | – | 2 × | – | – | – | – |
| | K95 | – | – | 1 × | – | 1 × | – |
| | K150 | – | – | – | 1 × | – | 1 × |

Example: In mounting area MI, variation option 1 allows the K25 additional terminal to be mounted twice.

| | For use with | Type<br>Article no.<br>for separate order | Price<br>See Price List | Std. pack | Notes |
|---|---|---|---|---|---|
| **External warning plate/designation label** | | | | | |
| "Main switch – open in 0 position" | | | | | |
| German/English | NZM1(-4), PN1(-4), N1(-4)<br>NZM2(-4), PN2(-4), N2(-4)<br>NZM3(-4), PN3(-4), N3(-4)<br>NZM4(-4), N4(-4) | **ZFS61/62-NZM7**<br>272525 | | 10 off | A bilingual external warning plate/designation label in German/English is already included in the main switch assembly kit. |
| German | | **ZFS61-NZM7**<br>051089 | | | |
| English | | **ZFS62-NZM7**<br>065957 | | | |
| French | | **ZFS63-NZM7**<br>065958 | | | |
| Blank<br>(for engraving or printing) | | **ZFS60-NZM7**<br>065896 | | | |
| Further languages<br>  | | **ZFS*-NZM7**<br>999978 | | | External warning plates are available in the<br>64 Bulgarian 73 Romanian<br>65 Danish 74 Russian<br>66 Finnish 75 Swedish<br>67 Dutch 76 Serbo-Croatian<br>68 Italian 77 Spanish<br>69 Greek 78 Czech<br>70 Norwegian 79 Turkish<br>71 Polish 80 Hungarian<br>72 Portuguese 81 Afrikaans<br>To obtain the order number, insert the language code number into the type reference required.<br>**Ordering example**<br>External warning plate in Finnish: ZFS**66**-NZM7 |
| **Lightning symbol** | | | | | |
| Including terminal marking for main switch | | | | | |
| Small<br>  <br>  | NZM1(-4), PN1(-4), N1(-4)<br>NZM2(-4), PN2(-4), N2(-4) | **BPF-NZM7**<br>217294 | | 10 off | Included as standard in main switch assembly kit<br>Use for designation of switch incomer side. |
| Large<br>  <br>  | NZM3(-4), PN3(-4), N3(-4)<br>NZM4(-4), N4(-4) | **BPF-NZM10**<br>231363 | | 10 off | |

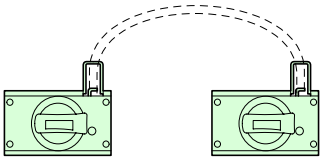
Moeller HPL0211-2004/2005

| | For use with | Type<br>Article no.<br>for separate order | Price<br>See Price List | Std. pack | Notes |
|---|---|---|---|---|---|
| **Additional handle** | | | | | |
| Enables switching when control panel door is open | | | | | |
|  | NZM1(-4), PN1(-4), N1(-4)<br>NZM2(-4), PN2(-4), N2(-4) | **NZM1/2-XDZ**<br>266621 | | 1 off | Push-fits on to the extension shaft.<br>100 mm free extension shaft required.<br>Cannot be combined with NZM...-XT...-60 door coupling rotary handles as well as NZM...-XT...-0. |
|  | NZM3(-4), PN3(-4), N3(-4)<br>NZM4(-4), N4(-4) | **NZM3/4-XDZ**<br>266622 | | 1 off | |
| **Insulating surround** | | | | | |
| For toggle levers, rotary handles with rotary drive and remote operators<br>Degree of protection IP40 | | | | | |
|  | NZM1(-4)<br>PN1(-4), N1(-4) | **NZM1-XBR**<br>260195 | | 1 off | For oblong cut-out on doors and enclosures with material thickness' of 1.5 – 5 mm.<br>External warning plate/designation label can be clipped on |
|  | NZM2(-4)<br>PN2(-4), N2(-4) | **NZM2-XBR**<br>260197 | | | |
| | NZM3(-4)<br>PN3(-4), N3(-4) | **NZM3-XBR**<br>284645 | | | |
| | NZM4(-4)<br>N4(-4) | **NZM4-XBR**<br>284646 | | | |
| **Toggle lever locking device** | | | | | |
| Lockable in OFF position with up to 3 padlocks (hasp thickness: 4 – 8 mm)<br>not UL/CSA approved | | | | | |
|  | NZM1(-4)<br>PN1(-4), N1(-4) | **NZM1-XKAV**<br>260199 | | 1 off | Cannot be combined with insulating surround. |
| | NZM2(-4), PN2(-4), N2(-4)<br>NZM3(-4), PN3(-4), N3(-4) | **NZM2/3-XKAV**<br>260201 | | 1 off | |
| **Spacers** | | | | | |
| Enables fast and attractively priced offsetting of varying frame sizes with/without rotary handle or remote operator to the same front depth | | | | | |
|  | NZM1(-4), PN1(-4), N1(-4)<br>NZM2(-4), PN2(-4), N2(-4) | **NZM1/2-XAB**<br>260203 | | 1 set | Grid depth 17.5 mm, M4 thread<br>One set contains 4 spacers<br>Maximum component fitting<br>NZM1: 4 off per fixing screw,<br>NZM2: 2 off per fixing screw,<br>2 (NZM1) or 4 (NZM2) fixing screws contained per switch |
|  | NZM3(-4)<br>PN3(-4), N3(-4) | **NZM3-XAB**<br>260211 | | 1 set | Grid depth 17.5 mm, M5 thread<br>One set contains 4 spacers<br>Maximum component fitting:<br>NZM3: 1 off per fixing screw<br>4 fixing screws per switch included |
| **Clip plates** | | | | | |
| Enables clip-on of switch onto DIN rails | | | | | |
|  | NZM1(-4)<br>PN1(-4), N1(-4) | **NZM1-XC35**<br>260213 | | 1 off | For top-hat rail 35 mm |
|  | NZM2<br>PN2, N2 | **NZM2-XC75**<br>260215 | | 1 off | For top-hat rail 75 mm<br>Not suitable for circuit-breakers with remote operator. |

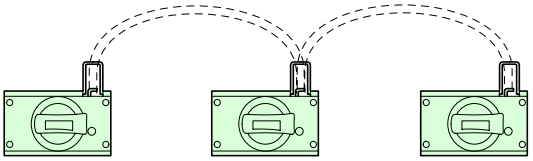
| | | For use with | **Type** Article no. | Std. pack | **Notes** |
|---|---|---|---|---|---|
| **Mechanical interlock** | | | | | |
| For 2 or 3 switches of the same or different type with opposed operation. |  | NZM1(-4)<br>PN1(-4), N1(-4) | **NZM1-XMV**<br>281581 | 1 off | Selection of the required interlocking modules and Bowden cables should be taken from the possible combinations on page 10/75.<br>Rotary handles on switches or door coupling rotary handles are additionally required.<br>Cannot be combined with paralleling mechanisms, side wall operators and remote operator as well as NZM4-XBR insulating surrounds.<br>Cannot be combined with rotary handles and door coupling rotary handles for UL/CSA approved NA switches. |
| |  | NZM2(-4)<br>PN2(-4), N2(-4) | **NZM2-XMV**<br>281582 | | |
| |  | NZM3(-4)<br>PN3(-4), N3(-4) | **NZM3-XMV**<br>281583 | | |
| |  | NZM4(-4)<br>N4(-4) | **NZM4-XMV**<br>281584 | | |
| **Bowden cables** | | | | | |
| For mechanical interlock |  | NZM1(-4), PN1(-4), N1(-4)<br>NZM2(-4), PN2(-4), N2(-4)<br>NZM3(-4), PN3(-4), N3(-4)<br>NZM4(-4), N4(-4) | **NZM-XBZ225**<br>281585 | 1 off | For clearance between device centres<br>s = 90 – 225 mm |
| | | | **NZM-XBZ600**<br>281586 | | For clearance between device centres<br>s = 225 – 600 mm |
| | | | **NZM-XBZ1000**<br>281587 | | For clearance between device centres<br>s = 600 – 1000 mm |
| **Paralleling mechanism** | | | | | |
| Simultaneous actuation of 2 PN switch-disconnectors of the same type mounted side-by-side. |  | PN1(-4) + PN1(-4) | **PN1-XPA**<br>283471 | 1 off | Rotary handles on switches or door coupling rotary handles are additionally required.<br>Combinations as required are also possible.<br>Only in conjunction with **non** lockable rotary handles or door coupling rotary handles.<br>• Rotary handle on switch: NZM...-XD<br>• Door coupling rotary handle: NZM...-XTD<br>With PN3-XPA, a non-lockable extended rotary handle is supplied (due to double torque requirement).<br>Cannot be combined with mechanical interlock, insulating surrounds, side wall operators or remote operators<br>Not suitable for use as a main switch. |
| |  | PN2(-4) + PN2(-4) | **PN2-XPA**<br>283472 | | |
| |  | PN3(-4) + PN3(-4) | **PN3-XPA**<br>283473 | | |

Moeller HPL0211-2004/2005

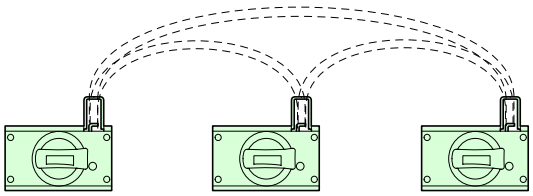
**Interlocking variants and combination options**



| A | B |
|---|---|
| OFF | OFF |
| ON | interlocked |
| interlocked | ON |



| B | A | C |
|---|---|---|
| OFF | OFF | OFF |
| interlocked | ON | interlocked |
| ON | interlocked | OFF |
| ON | interlocked | ON |
| OFF | interlocked | ON |

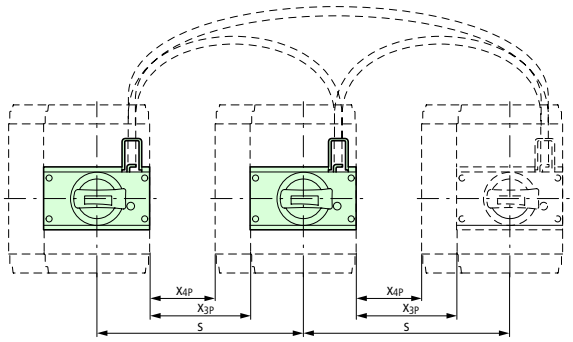


| B | A | C |
|---|---|---|
| OFF | OFF | OFF |
| ON | interlocked | interlocked |
| interlocked | ON | interlocked |
| interlocked | interlocked | ON |

Interlocked: 0 position, cannot be switched on

**Possible combinations:**

| Switch A | Switch B and switch C | | | |
|---|---|---|---|---|
| | NZM1 | NZM2 | NZM3 | NZM4 |
| NZM1 | ● | ● | | |
| NZM2 | ● | ● | | |
| NZM3 | | ● | ● | |
| NZM3 | | ● | ● | |
| NZM3 | | | ● | ● |
| NZM4 | | | ● | ● |




$X_{3p}$ = 3-pole switch clearance
$X_{4p}$ = 4-pole switch clearance

**NZM-XBZ225**

**Max. switch clearance X**

| | | NZM1 | | NZM2 | | NZM3 | | NZM4 | | Distance between switch centres S |
|---|---|---|---|---|---|---|---|---|---|---|
| | | 3-pole | 4-pole | 3-pole | 4-pole | 3-pole | 4-pole | 3-pole | 4-pole | 90 – 225 mm |
| NZM1 | 3/4-pole | 135 | 105 | 120 | 85 | – | – | – | – | |
| NZM2 | 3/4-pole | 134 | 104 | 120 | 85 | 133 | 88 | – | – | |
| NZM3 | 3/4-pole | – | – | 72 | 37 | 85 | 40 | 78 | 15 | |
| NZM4 | 3/4-pole | – | – | – | – | 22 | – | 15 | – | |

**NZM-XBZ600**

**Max. switch clearance X**

| | | NZM1 | | NZM2 | | NZM3 | | NZM4 | | Distance between switch centres S |
|---|---|---|---|---|---|---|---|---|---|---|
| | | 3-pole | 4-pole | 3-pole | 4-pole | 3-pole | 4-pole | 3-pole | 4-pole | 225 – 600 mm |
| NZM1 | 3/4-pole | 510 | 480 | 495 | 460 | – | – | – | – | |
| NZM2 | 3/4-pole | 509 | 479 | 495 | 460 | 508 | 463 | – | – | |
| NZM3 | 3/4-pole | – | – | 447 | 412 | 460 | 415 | 453 | 390 | |
| NZM4 | 3/4-pole | – | – | – | – | 397 | 375 | 390 | 320 | |

**NZM-XBZ1000**

**Max. switch clearance X**

| | | NZM1 | | NZM2 | | NZM3 | | NZM4 | | Distance between switch centres S |
|---|---|---|---|---|---|---|---|---|---|---|
| | | 3-pole | 4-pole | 3-pole | 4-pole | 3-pole | 4-pole | 3-pole | 4-pole | 600 – 1000 mm |
| NZM1 | 3/4-pole | 910 | 880 | 895 | 860 | – | – | – | – | |
| NZM2 | 3/4-pole | 909 | 879 | 895 | 860 | 908 | 863 | – | – | |
| NZM3 | 3/4-pole | – | – | 847 | 812 | 860 | 815 | 853 | 790 | |
| NZM4 | 3/4-pole | – | – | – | – | 797 | 775 | 790 | 720 | |

Circuit-breakers, switch-disconnectors up to 1600 A

Moeller HPL0211-2004/2005

| | For use with | Rated control voltage $U_s$ V | **Type** Article no. when ordered separately | **Price** See Price List | Std. pack |
|---|---|---|---|---|---|
| **Remote operator** | | | | | |
| For remote switching of circuit-breakers and switch-disconnectors.<br>ON and OFF switching and resetting by means of 2-wire or 3-wire control.<br>Can be synchronized, switching time ON 60 ms<br>Local switching by hand possible<br>Lockable in the 0 position of the remote operator with up to 3 padlocks (hasp thickness: 4 – 8 mm) | | | | | |
|  | NZM2(-4)<br>N2(-4) | 48 – 60 V 50/60 Hz | **NZM2-XR48-60AC**<br>259828 | | 1 off |
| | | 110 – 130 V 50/60 Hz | **NZM2-XR110-130AC**<br>259830 | | |
| | | 208 – 240 V 50/60 Hz | **NZM2-XR208-240AC**<br>259832 | | |
| | | 380 – 440 V 50/60 Hz | **NZM2-XR380-440AC**[1)]<br>259834 | | |
| | | 24 – 30 V DC | **NZM2-XR24-30DC**<br>259836 | | |
| | | 48 – 60 V DC | **NZM2-XR48-60DC**<br>259838 | | |
| | | 110 – 130 V DC | **NZM2-XR110-130DC**<br>259840 | | |
| | | 220 – 250 V DC | **NZM2-XR220-250DC**<br>259842 | | |
| | NZM3(-4)<br>N3(-4) | 48 – 60 V 50/60 Hz | **NZM3-XR48-60AC**<br>259846 | | |
| | | 110 – 130 V 50/60 Hz | **NZM3-XR110-130AC**<br>259848 | | |
| | | 208 – 240 V 50/60 Hz | **NZM3-XR208-240AC**<br>259850 | | |
| | | 380 – 440 V 50/60 Hz | **NZM3-XR380-440AC**[1)]<br>259852 | | |
| | | 24 – 30 V DC | **NZM3-XR24-30DC**<br>259854 | | |
| | | 48 – 60 V DC | **NZM3-XR48-60DC**<br>259856 | | |
| | | 110 – 130 V DC | **NZM3-XR110-130DC**<br>259858 | | |
| | | 220 – 250 V DC | **NZM3-XR220-250DC**<br>259860 | | |
| | NZM4(-4)<br>N4(-4) | 48 – 60 V DC | **NZM4-XR48-60AC**<br>266683 | | |
| | | 110 – 130 V 50/60 Hz | **NZM4-XR110-130AC**<br>266684 | | |
| | | 208 – 240 V 50/60 Hz | **NZM4-XR208-240AC**<br>266685 | | |
| | | 380 – 440 V 50/60 Hz | **NZM4-XR380-440AC**[1)]<br>266686 | | |
| | | 24 – 30 V DC | **NZM4-XR24-30DC**<br>266691 | | |
| | | 48 – 60 V DC | **NZM4-XR48-60DC**<br>266692 | | |
| | | 110 – 130 V DC | **NZM4-XR110-130DC**<br>266693 | | |
| | | 220 – 250 V DC | **NZM4-XR220-250DC**<br>266694 | | |
| Shroud for 4th pole<br>Additional shroud for mounting the NZM2-XR... and NZM3-XR... on a 4-pole switch. | | | | | |
| | NZM2-4<br>N2-4 | – | **NZM2-XAVPR**<br>266677 | | 1 off |
| | NZM3-4<br>N3-4 | – | **NZM3-XAVPR**<br>266678 | | 1 off |
| Clamp terminal springloaded clamp<br>Control circuit terminal springloaded terminals | | | | | |
| | NZM...-XR... | – | **NZM-XRC**<br>266696 | | 1 off |

**Notes** [1)] not UL/CSA approved

Moeller HPL0211-2004/2005

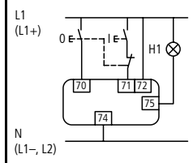
**Notes**

Remote operator are combinable with NZM circuit-breakers and N switch-disconnectors but not with PN switch-disconnectors.

A standard auxiliary contact (HIN) for the switch position detection is supplied.

When installing the NZM2-XR... and NZM3-XR... remote operators on 4-pole switches, an additional 4 pole NZM2-XAVPR or NZM3-XAVPR shroud is necessary.

**3-wire control**



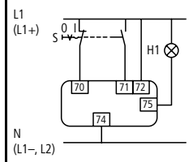

Terminal 70/71:

Please note during engineering:

Full current flows though the contact during make and break!

RMQ series contact elements can be used for the NZM2(3,4)-XR... remote operators.

**2-wire control**



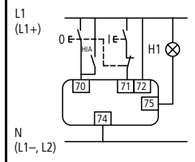

Terminal 75:

Operational readiness signal when the cover is closed, not closed and the remote operator is charged.

AC-15: 400 V; 2 A

DC-13: 220 V; 0.2 A

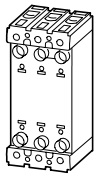
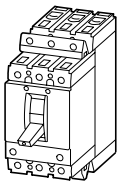
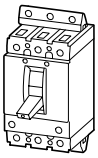
**3-wire control with automatic reset to the OFF position after the switch has tripped**




Switching cycle:

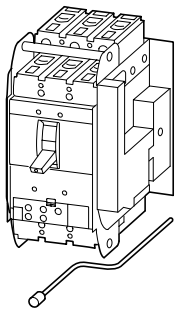
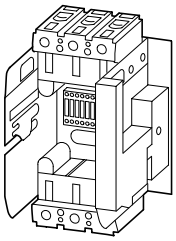
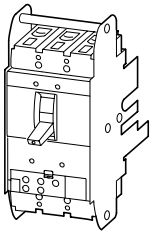

The time interval between OFF and ON is 3 s.

On commands received during the time interval are ignored within the first 3 seconds after switch off.

| | For use with | | **Type suffix** Article no. when ordered with basic unit | | **Type** Article no. for separate order | | Std. pack | **Notes** |
|---|---|---|---|---|---|---|---|---|
| **Plug-in adapter elements**[1] | | | | | | | | |
| For NZM circuit-breakers and N switch-disconnectors | | | | | | | | |
| Complete[1] Only in combination with circuit-breaker | | | | | | | | |
|  | NZM2 N2 | 3-pole | **+NZM2-XSV** 266697 | | | | 1 off | |
| | NZM2-4 N2-4 | 4-pole | **+NZM2-4-XSV** 266698 | | | | 1 off | |
| Socket[1] e.g. for reserved slots Retrofit of circuit-breaker with plug-in module. | | | | | | | | |
|  | NZM2 N2 | 3-pole | | | **NZM2-XSVS** 266699 | | 1 off | |
| | NZM2-4 N2-4 | 4-pole | | | **NZM2-4-XSVS** 266700 | | 1 off | |
| Plug-in module[1] Fits socket base Only in combination with circuit-breaker | | | | | | | | |
|  | NZM2 N2 | 3-pole | **+NZM2-XSVE** 266701 | | | | 1 off | |
| | NZM2-4 N2-4 | 4-pole | **+NZM2-4-XSVE** 266702 | | | | 1 off | |
| Control circuit connector[1] | | | | | | | | |
|  | NZM2(-4) N2(-4) | For auxiliary switch, shunt/overvoltage release | | | **NZM2-XSVHI** 266705 | | 1 off | |
| | NZM2(-4) N2(-4) | For remote operator | | | **NZM2-XSVR** 266706 | | 1 off | |

**Notes** [1] not UL/CSA approved

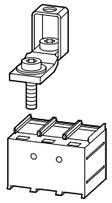
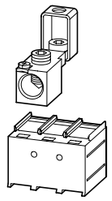
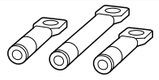
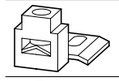
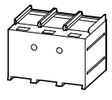
Moeller HPL0211-2004/2005

| For use with | | | **Type suffix** Article no. when ordered with basic unit | **Type** Article no. for separate order | Std. pack | **Notes** |
|---|---|---|---|---|---|---|
| **Withdrawable unit with control circuit plug unit**[1] | | | | | | |
| For NZM circuit-breakers and N switch-disconnectors | | | | | | |
| Complete[1] Only in combination with circuit-breaker | | | | | | |
|  | NZM3 N3 | 3-pole | **+NZM3-XAV** 266707 | | 1 off | $I_{n\ max.}$ at: 20 °C: 605 A (NZM3), 1600 A (NZM4) 40 °C: 550 A (NZM3), 1500 A (NZM4) Mounting position: NZM3: vertical, 90 ° left NZM4: vertical 3 positions Connected, test, disconnected The 3 positions are indicated mechanically. Additionally, auxiliary contacts are use for remote signalling. An optional M22-(C)K01 break contact or M22-(C)K10 make contact per position Also see the RMQ-Titan control circuit device range All connections of auxiliary switches (HIA, HIN, HIV) and voltage releases to the control circuit plug units are already present. Cannot be combined with NZM4/ NZM14 (NZM4-XAS14-...) adapter kit |
| | NZM3-4 N3-4 | 4-pole | **+NZM3-4-XAV** 266708 | | | |
| | NZM4 N4 | 3-pole | **+NZM4-XAV** 266709 | | | |
| | NZM4-4 N4-4 | 4-pole | **+NZM4-4-XAV** 266710 | | | |
| Withdrawable socket[1] e.g. for reserved slots Retrofit of circuit-breaker with withdrawable carrier. | | | | | | |
|  | NZM3 N3 | 3-pole | | **NZM3-XAVS** 266711 | 1 off | |
| | NZM3-4 N3-4 | 4-pole | | **NZM3-4-XAVS** 266712 | | |
| | NZM4 N4 | 3-pole | | **NZM4-XAVS** 266713 | | |
| | NZM4-4 N4-4 | 4-pole | | **NZM4-4-XAVS** 266714 | | |
| Withdrawable carrier[1] Fits socket base Only in combination with circuit-breaker. | | | | | | |
|  | NZM3 N3 | 3-pole | **+NZM3-XAVE** 266715 | | 1 off | |
| | NZM3-4 N3-4 | 4-pole | **+NZM3-4-XAVE** 266716 | | | |
| | NZM4 N4 | 3-pole | **+NZM4-XAVE** 266717 | | | |
| | NZM4-4 N4-4 | 4-pole | **+NZM4-4-XAVE** 266718 | | | |

**Notes** [1] not UL/CSA approved

Circuit-breakers, switch-disconnectors up to 1600 A

Moeller HPL0211-2004/2005

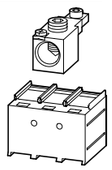
| | For use with | | Terminal capacity | | | Terminal capacity | | Type<br>Article no. when ordered separately | Notes |
|---|---|---|---|---|---|---|---|---|---|
| | | | Type of conductor | Terminal capacity | | Copper strip | Copper busbar width × thickness | | |
| | | | | mm² | AWG/MCM | mm | mm | | |
| **Box terminal** | | | | | | | | | |
| Standard equipment | | | | | | | | | |
|  | NZM1(-4)<br>PN1(-4), N1(-4) | Three- and four-pole | Cu cable | 1 × 2.5 – 70[1)]<br>2 × 2.5 – 25 | 1 × 14 – 00<br>2 × 14 – 4 | 2 × 9 × 0.8<br>9 × 9 × 0.8 | –<br>– | **NZM1-XKC**<br>260015<br>**NZM1-4-XKC**<br>267075 | Standard connection with all NZM1, PN1 and N1 circuit-breakers.<br>Conversion kit for circuit-breaker with screw connection.<br>Use with flexible and highly flexible conductors ferrules, note the max. terminal capacity when using ferrules.<br>Type contains parts for a 3 or 4-pole switch side.<br>Fitted within the switch housing |
| **Screw connection** | | | | | | | | | |
|  | NZM1(-4)<br>PN1(-4), N1(-4) | Three- and four-pole | Copper cable lugs<br>Aluminium cable lug | 1 × 2.5 – 70<br>2 × 2.5 – 25<br>1 × 10 – 35<br>2 × 10 – 35 | 1 × 14 – 00<br>2 × 14 – 4<br>1 × 8 – 2<br>2 × 8 – 2 | –<br>– | min. 12 × 5<br>max. 16 × 5 | **NZM1-XKS**<br>260019<br>**NZM1-4-XKS**<br>266725 | Type contains parts for a terminal located at top or bottom for 3 or 4-pole circuit-breakers.<br>Fitted outside the switch housing<br>NZM1(-4)-XKSA shroud is supplied. |
| **Tunnel terminal** | | | | | | | | | |
|  | NZM1(-4)<br>PN1(-4), N1(-4) | Three- and four-pole | Cu cable<br>Al cable | 1 × 16 – 95<br>1 × 16 – 95 | 1 × 6 – 000<br>1 × 6 – 000 | –<br>– | –<br>– | **NZM1-XKA**<br>266730<br>**NZM1-4-XKA**<br>266731 | Type contains parts for a terminal located at top or bottom for 3 or 4-pole circuit-breakers.<br>Standard with control circuit terminal for copper conductor.<br>Fitted outside the switch housing<br>Use with flexible and highly flexible conductors ferrules.<br>NZM1(-4)-XKSA shroud is supplied. |
| **Connection on rear** | | | | | | | | | |
| not UL/CSA approved | | | | | | | | | |
|  | NZM1(-4)<br>PN1(-4), N1(-4) | Three- and four-pole | Copper cable lugs<br>Aluminium cable lug | 1 × 2.5 – 70<br>2 × 2.5 – 25<br>1 × 10 – 35<br>2 × 10 – 35 | –<br>– | –<br>– | min. 12 × 5<br>max.<br>2 × (16 × 5) | **NZM1-XKR**<br>266734<br>**NZM1-4-XKR**<br>266737 | Type contains parts for a terminal located at top or bottom for 3 or 4-pole circuit-breakers. |
| **Control circuit terminal** | | | | | | | | | |
|  | NZM1(-4)<br>PN1(-4), N1(-4) | Three- and four-pole | Box terminal | 1 × 0.75 – 4.0<br>2 × 0.75 – 2.5 | 1 × 18 – 12<br>2 × 18 – 14 | – | – | **NZM-XSTK**<br>266739 | Type contains parts for two terminal locations located at top or bottom for 3 or 4-pole circuit-breakers.<br>Included as standard with tunnel terminal<br>Degree of protection IP1X<br>NZM-XSTK cannot be combined with NZM1(-4)-XIPK<br>IP2X protection against contact with a finger. |
|  | | | Screw connection | | | – | – | **NZM1-XSTS**<br>260150 | |
| **Cover** | | | | | | | | | |
|  | NZM1<br>PN1, N1 | 3-pole | – | – | – | – | – | **NZM1-XKSA**<br>260021<br>**NZM1-4-XKSA**<br>266741 | Type contains parts for a terminal located at top or bottom for 3 or 4-pole circuit-breakers.<br>Insulation/protection against direct contact where cable lugs, busbars or tunnel terminals are used.<br>Contained in the set with tunnel terminals and screw terminals.<br>Degree of protection IP4X at front, side and rear, on the connection side when using insulated conductor material to IP1X. |
| | NZM1(-4)<br>PN1(-4), N1(-4) | 4-pole | – | – | – | – | – | | |
| **IP2X protection against contact with a finger** | | | | | | | | | |
| For box terminals | | | | | | | | | |
|  | NZM1<br>PN1, N1 | 3-pole | – | – | – | – | – | **NZM1-XIPK**<br>266744<br>**NZM1-4-XIPK**<br>266745 | Type contains parts for a terminal located at top or bottom for 3 or 4-pole circuit-breakers.<br>Enhancement of the protection against direct contact to IP2X.<br>Protection when reaching into the cable connection area with the connection of cables in the box terminal.<br>Cannot be combined with NZM-XSTK control circuit terminal. |
| | NZM1(-4)<br>PN1(-4), N1(-4) | 4-pole | – | – | – | – | – | | |
| For cover as well as NZM1...(C)NA, N1...NA | | | | | | | | | |
|  | NZM1<br>PN1, N1 | 3-pole | – | – | – | – | – | **NZM1-XIPA**<br>266748<br>**NZM1-4-XIPA**<br>266749 | Type contains parts for a terminal located at top or bottom for 3 or 4-pole circuit-breakers.<br>Only in conjunction with NZM1(-4)-XKSA cover.<br>Enhancement of the protection against direct contact to IP2X. |
| | NZM1(-4)<br>PN1(-4), N1(-4) | 4-pole | – | – | – | – | – | | |

**Notes** [1)] Up to 95 mm² can be connected depending on the cable manufacturer

Circuit-breakers, switch-disconnectors up to 1600 A

Moeller HPL0211-2004/2005

Moeller HPL0211-2004/2005

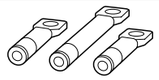
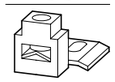
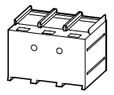
| For use with | | Terminal capacity | | | Terminal capacity | | **Type suffix** Article no. when ordered with basic unit | | **Type** Article no. for separate order | | **Notes** |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Type of conductor | Terminal capacity | | Copper strip | Copper busbar width × thickness | | | | | |
| | | | mm² | AWG/MCM | mm | mm | | | | | |
| **Box terminal** | | | | | | | | | | | |
|  NZM2, PN2, N2 ≦ 160 A | 3-pole | Copper cables Cu cable | 1 × 4 – 185<br>2 × 4 – 70 | 1 × 12 – 350<br>2 × 12 – 00 | min. 2 × 9 × 0.8<br>max. 10 × 16 × 0.8 | | **+NZM2-160-XKCO** 262218 | | **NZM2-160-XKC** 262240 | | Type suffix and type contain parts for a circuit-breaker side at top or bottom for 3 or 4-pole circuit-breakers.<br>Conversion kit for circuit-breaker with screw connection.<br>Fitted within the switch housing<br>O = for fitting at the top<br>U = for fitting at the bottom<br>$U_e$ ≧ 525 V AC:<br>• Use NZM2(-4)-XKSA cover.<br>Use with flexible and highly flexible conductors ferrules, note the max. terminal capacity when using ferrules. |
| | | | | | | | **+NZM2-160-XKCU** 262223 | | | | |
| NZM2, PN2, N2 200 A, 250 A | | | | | | | **+NZM2-250-XKCO** 262242 | | **NZM2-250-XKC** 262244 | | |
| | | | | | | | **+NZM2-250-XKCU** 262243 | | | | |
| NZM2-4, PN2-4, N2-4 ≦ 160 A | 4-pole | | | | | | **+NZM2-4-160-XKCO** 266751 | | **NZM2-4-160-XKC** 266755 | | |
| | | | | | | | **+NZM2-4-160-XKCU** 266753 | | | | |
| NZM2-4, PN2-4, N2-4 200 A, 250 A | | | | | | | **+NZM2-4-250-XKCO** 266752 | | **NZM2-4-250-XKC** 266756 | | |
| | | | | | | | **+NZM2-4-250-XKCU** 266754 | | | | |
| **Screw connection** | | | | | | | | | | | |
| Standard features | | | | | | | | | | | |
|  NZM2(-4) PN2(-4), N2(-4) | Three and four-pole | Copper cable lugs<br>Aluminium cable lug | 1 × 4 – 185<br>2 × 4 – 70<br>1 × 10 – 50<br>2 × 10 – 50 | 1 × 12 – 000<br>2 × 4 – 00<br>1 × 8 – 0<br>2 × 8 – 0 | min. 2 × 16 × 0.8<br>max. 10 × 16 × 0.8<br>max. 6 × 24 × 0.5 | min. 16 × 5<br>max. 20 × 5 | | | **NZM2-XKS** 260030<br>**NZM2-4-XKS** 266750 | | Type contains parts for a terminal located at top or bottom for 3 or 4-pole circuit-breakers.<br>Standard connection with all NZM2, PN2 and N2 circuit-breakers.<br>Conversion kit for circuit-breaker with box terminal.<br>Use special cable lug narrow version, → 10/90<br>Fitted within the switch housing<br>$U_e$ ≧ 525 V AC:<br>• Use NZM2(-4)-XKSA cover.<br>If a busbar is used, insulation (400 mm) and a NZM2(-4)-XKSA cover are required. |
| **Tunnel terminal** | | | | | | | | | | | |
|  NZM2(-4) PN2(-4), N2(-4) | Three and four-pole | Copper cables Cu cable | 1 × 16 – 185 | 1 × 6 – 350 | | | | | **NZM2-XKA** 271457 | | Type contains parts for a terminal located at top or bottom for 3 or 4-pole circuit-breakers.<br>A standard with control circuit terminal for 1 × 0.75 – 2.5 mm² (18 – 14 AWG) or 2 × 0.75 mm² (18 – 16 AWG) copper conductors.<br>Fitted outside the switch housing<br>Use with flexible and highly flexible conductors ferrules.<br>NZM2(-4)-XKSA cover necessary (supplied). |
| | | Al conductors Al cable | 1 × 16 – 185[1)] | 1 × 6 – 350 | | | | | **NZM2-4-XKA** 271458 | | |

**Notes** [1)] Up to 240 mm² can be connected depending on the cable manufacturer

Circuit-breakers, switch-disconnectors up to 1600 A

Moeller HPL0211-2004/2005

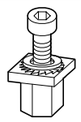
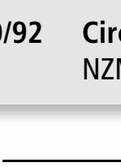
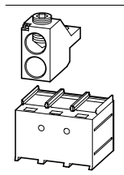
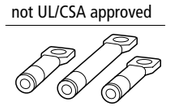
Moeller HPL0211-2004/2005

| | | For use with | | Terminal capacity | | | Terminal capacity | | **Type suffix** Article no. when ordered with basic unit | | **Type** Article no. for separate order | | **Notes** |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Type of conductor | Terminal capacity | | Copper strip | Copper busbar width × thickness | | | | | |
| | | | | | mm² | AWG/MCM | mm | mm | | | | | |
| **Connection on rear** | | | | | | | | | | | | | |
| not UL/CSA approved | | | | | | | | | | | | | |
|  | | NZM2(-4) PN2(-4), N2(-4) | Three and four-pole | Copper cable lugs<br>Aluminium cable lug | 1 × 4 – 185<br>2 × 4 – 70<br>1 × 10 – 50<br>2 × 10 – 50 | –<br>–<br>– | min. 2 × 16 × 0.8<br>max. 6 × 24 × 0.5 | min. 16 × 5<br>max. 20 × 5 | **+NZM2-XKRO** 266763 | | **NZM2-XKR** 266765 | | Type suffix and type contain parts for a circuit-breaker side at top or bottom for 3 or 4-pole circuit-breakers.<br>O = for fitting at the top<br>U = for fitting at the bottom |
| | | | | | | – | | | **+NZM2-XKRU** 266764 | | | | |
| | | | | | | – | | | **+NZM2-4-XKRO** 266766 | | **NZM2-4-XKR** 266768 | | |
| | | | | | | – | | | **+NZM2-4-XKRU** 266767 | | | | |
| **Control circuit terminal** | | | | | | | | | | | | | |
|  | | NZM2(-4) PN2(-4), N2(-4) | 3 and 4-pole | Screw terminal | 1 × 0.75 – 4.0<br>2 × 0.75 – 2.5 | 1 × 18 – 12<br>2 × 18 – 14 | – | – | | | **NZM2-XSTS** 260156 | | Type contains parts for two terminal locations located at top or bottom for 3 or 4-pole circuit-breakers.<br>Included as standard with tunnel terminal<br>Degree of protection IP1X<br>NZM-XSTK cannot be combined with NZM2(-4)-XIPK<br>IP2X protection against contact with a finger. |
|  | | | | Box terminal | | | – | – | | | **NZM-XSTK** 266739 | | |
| **Cover** | | | | | | | | | | | | | |
|  | | NZM2 PN2, N2 | 3-pole | – | – | – | – | – | | | **NZM2-XKSA** 260038 | | Type contains parts for a terminal located at top or bottom for 3 or 4-pole circuit-breakers.<br>Insulation/protection against direct contact where cable lugs, busbars or tunnel terminals are used.<br>Included in set with tunnel terminals<br>Degree of protection IP4X at front, side and rear, on the connection side when using insulated conductor material to IP1X. |
| | | NZM2-4 PN2-4, N2-4 | 4-pole | – | – | – | – | – | | | **NZM2-4-XKSA** 266770 | | |
| **IP2X protection against contact with a finger** | | | | | | | | | | | | | |
| For box terminals | | | | | | | | | | | | | |
|  | | NZM2 PN2, N2 | 3-pole | – | – | – | – | – | | | **NZM2-XIPK** 266773 | | Type contains parts for a terminal located at top or bottom for 3 or 4-pole circuit-breakers.<br>Enhancement of the protection against direct contact to IP2X.<br>Protection when reaching into the cable connection area with the connection of cables in the box terminal.<br>With 2 conductors minimum cross-section 35 mm² or AWG2.<br>Cannot be combined with NZM-XSTK control circuit terminal. |
| | | NZM2-4 PN2-4, N2-4 | 4-pole | – | – | – | – | – | | | **NZM2-4-XIPK** 266774 | | |
| For cover as well as NZM2...(C)NA and N2...NA | | | | | | | | | | | | | |
|  | | NZM2 PN2, N2 | 3-pole | – | – | – | – | – | | | **NZM2-XIPA** 266777 | | Type contains parts for a terminal located at top or bottom for 3 or 4-pole circuit-breakers.<br>Only in conjunction with NZM2(-4)-XKSA cover.<br>Enhancement of the protection against direct contact to IP2X.<br>When mounting NZM2-..-(C)NA or N2...-NA the following applies:<br>With 2 conductors minimum cross-section 35 mm² or AWG2. |
| | | NZM2-4 PN2-4, N2-4 | 4-pole | – | – | – | – | – | | | **NZM2-4-XIPA** 266778 | | |
| **Cable lug** | | | | | | | | | | | | | |
| not UL/CSA approved<br>When using cable lugs **without** NZM2(-4)-XKSA cover, they must be insulated. | | | | | | | | | | | | | |
|  | 95 mm² | NZM2(-4) PN2(-4), N2(-4) | Three- and four-pole | Copper conductors Cu cable | 1 × 95 | – | – | – | | | **KS95-NZM7** 059775 | | The type contains a cable lug for 3 or 4-pole switch.<br>Special cable lug, narrow style |
| | 120 mm² | | | | 1 × 120 | – | – | – | | | **KS120-NZM7** 059776 | | |
| | 150 mm² | | | | 1 × 150 | – | – | – | | | **KS150-NZM7** 059777 | | |
| | 185 mm² | | | | 1 × 185 | – | – | – | | | **NZM2-XKS185** 260032 | | |

Circuit-breakers, switch-disconnectors up to 1600 A

Moeller HPL0211-2004/2005

Moeller HPL0211-2004/2005

| | Rated current[1] | For use with | | Terminal capacity | | | Terminal capacity | | **Type suffix** Article no. when ordered with basic unit | | **Type** Article no. for separate order | | **Notes** |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Type of conductor | Terminal capacity | | Copper strip | Copper busbar width × thickness | | | | | |
| | $I_n$ | | | | | | | mm | | | | | |
| | A | | | | mm² | AWG/MCM | mm | | | | | | |
| **Box terminal** | | | | | | | | | | | | | |
|  | max. 500 | NZM3(-4) PN3(-4), N3(-4) | 3 and 4-pole | Copper cables Cu cable | 1 × 35 – 240<br>2 × 16 – 120 | 1 × 2 – 500<br>2 × 6 – 250 | min. 6 × 16 × 0.8<br>max. 10 × 24 × 1.0 | –<br>–<br>– | **+NZM3-XKCO** 262246<br>**+NZM3-XKCU** 262245 | | **NZM3-XKC** 260042 | | Type suffix and type contain parts for a circuit-breaker side at top or bottom for 3 or 4-pole circuit-breakers.<br>Conversion kit for circuit-breaker with screw connection.<br>Fitted within the switch housing<br>O = for fitting at the top<br>U = for fitting at the bottom<br>$U_e$ ≧ 525 V AC:<br>• Use NZM3(-4)-XKSA cover.<br>Use with flexible and highly flexible conductors ferrules, note the max. terminal capacity when using ferrules. |
| | 630 | | | | | | 10 × 24 × 1.0<br>+ 5 × 24 × 1.0 | – | **+NZM3-4-XKCO** 266781<br>**+NZM3-4-XKCU** 266782 | | **NZM3-4-XKC** 266783 | | |
| **Screw connection** | | | | | | | | | | | | | |
| Standard features | | | | | | | | | | | | | |
|  | 630 | NZM3(-4) PN3(-4), N3(-4) | 3 and 4-pole | Copper cable lugs<br>Aluminium cable lug | 1 × 16 – 240<br>2 × 16 – 240<br>1 × 10 – 120<br>2 × 10 – 120 | 1 × 4 – 350<br>2 × 4 – 350<br>1 × 6 – 250<br>2 × 4 – 250 | 10 × 32 × 1.0 +<br>5 × 32 × 1.0 | 30 × 10 +<br>30 × 5 | | | **NZM3-XKS** 260039<br>**NZM3-4-XKS** 266780 | | Type contains parts for a terminal located at top or bottom for 3 or 4-pole circuit-breakers.<br>Standard connection with all NZM3, PN3 and N3 circuit-breakers.<br>Conversion kit for circuit-breaker with box terminal.<br>Use special cable lug narrow version, → 10/94<br>Fitted within the switch housing<br>If a busbar is used, insulation (400 mm) and a NZM3(-4)-XKSA cover are required.<br>$U_e$ ≧ 525 V AC:<br>• Use NZM3(-4)-XKSA cover. |
| | max. 500 | | | | | | min. 6 × 16 × 0.8<br>max. 10 × 32 × 1.0 | min. 20 × 5<br>max. 30 × 10 | | | | | |
| **Tunnel terminal** | | | | | | | | | | | | | |
|  | max. 350 | NZM3(-4) PN3(-4), N3(-4) | 3 and 4-pole | Copper cables Cu cable Al conductors Al cable | 1 × 16 – 185 | 1 × 6 – 350 | –<br>– | –<br>– | | | **NZM3-XKA1** 271459<br>**NZM3-4-XKA1** 271460 | | Type contains parts for a terminal located at top or bottom for 3 or 4-pole circuit-breakers.<br>A standard with control circuit terminal for 1 × 0.75 – 2.5 mm² (18 – 14 AWG) or 2 × 0.75 – 1.5 mm² (18 – 16 AWG) copper conductors.<br>Fitted outside the switch housing<br>Use with flexible and highly flexible conductors ferrules.<br>• NZM3(-4)-XKSA cover necessary (supplied). |
|  | 630 | NZM3(-4) PN3(-4), N3(-4) | 3 and 4-pole | | 1 × 50 – 240<br>2 × 50 – 240 | 1 × 0 – 500<br>2 × 0 – 500 | –<br>– | –<br>– | | | **NZM3-XKA2** 271461<br>**NZM3-4-XKA2** 271462 | | |
| **Connection on rear** | | | | | | | | | | | | | |
| not UL/CSA approved | | | | | | | | | | | | | |
|  | 630 | NZM3(-4) PN3(-4), N3(-4) | 3 and 4-pole | Copper cable lugs<br>Aluminium cable lug | 1 × 16 – 240<br>2 × 16 – 240<br>1 × 10 – 120<br>2 × 10 – 120 | –<br>– | –<br>– | –<br>– | **+NZM3-XKRO** 266790<br>**+NZM3-XKRU** 266791 | | **NZM3-XKR** 266792 | | Type suffix and type contain parts for a circuit-breaker side at top or bottom for 3 or 4-pole circuit-breakers.<br>O = for fitting at the top<br>U = for fitting at the bottom |
| | 500 | | | | – | – | min. 6 × 16 × 0.8<br>max. 10 × 32 × 1.0 | min. 20 × 5<br>max. 30 × 10 | **+NZM3-4-XKRO** 266793<br>**+NZM3-4-XKRU** 266794 | | **NZM3-4-XKR** 266795 | | |
| | | | | | – | – | – | – | | | | | |

**Notes**

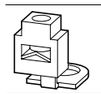
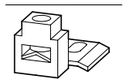
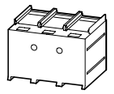
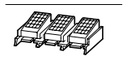
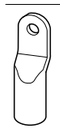
[1] The values have been determined conform to IEC/EN 60947 and generally relate to the max. defined cross-sections and are intended for the purpose of orientation. The engineering standards which apply in each case must be observed.

[2] Up to 240 mm² can be connected depending on the cable manufacturer

Circuit-breakers, switch-disconnectors up to 1600 A

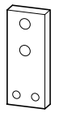
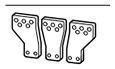
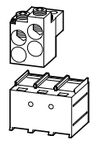
Moeller HPL0211-2004/2005

Moeller HPL0211-2004/2005

| | For use with | | Terminal capacity | | | Terminal capacity | | **Type suffix** Article no. when ordered with basic unit | **Type** Article no. for separate order | **Notes** |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | Type of conductor | Terminal capacity | | Copper strip | Copper busbar width × thickness | | | |
| | | | | mm;² | AWG/MCM | mm | mm | | | |
| **Control circuit terminal** | | | | | | | | | | |
|  | NZM3(-4) PN3(-4), N3(-4) | Three- and four-pole | Screw connection | 1 × 0.75 – 4.0<br>2 × 0.75 – 2.5 | 1 × 18 – 12<br>2 × 18 – 14 | – | – | | **NZM3/4-XSTS** 266797 | Type contains parts for two terminal locations located at top or bottom for 3 or 4-pole circuit-breakers.<br>Included as standard with tunnel terminal<br>Degree of protection IP1X<br>NZM-XSTK cannot be combined with NZM3(-4)-XIPK<br>IP2X protection against contact with a finger. |
|  | | | Box terminal | | | – | – | | **NZM-XSTK** 266739 | |
| **Cover** | | | | | | | | | | |
|  | NZM3 PN3, N3 | 3-pole | – | – | – | – | – | | **NZM3-XKSA** 260045 | Type contains parts for a terminal located at top or bottom for 3 or 4-pole circuit-breakers.<br>Insulation/protection against direct contact where cable lugs, busbars or tunnel terminals are used.<br>Included in set with tunnel terminals<br>Degree of protection IP4X at front, side and rear, on the connection side when using insulated conductor material to IP1X. |
| | NZM3-4 PN3-4, N3-4 | 4-pole | – | – | – | – | – | | **NZM3-4-XKSA** 266801 | |
| **IP2X protection against contact with a finger** | | | | | | | | | | |
| For box terminals | | | | | | | | | | |
|  | NZM3 PN3, N3 | 3-pole | – | – | – | – | – | | **NZM3-XIPK** 266804 | Type contains parts for a terminal located at top or bottom for 3 or 4-pole circuit-breakers.<br>Enhancement of the protection against direct contact to IP2X. Protection when reaching into the cable connection area with the connection of cables in the box terminal.<br>With 2 conductors minimum cross-section 95 mm² AWG 000.<br>Cannot be combined with NZM-XSTK control circuit terminal. |
| | NZM3-4 PN3-4, N3-4 | 4-pole | – | – | – | – | – | | **NZM3-4-XIPK** 266805 | |
| For cover as well as NZM3...(C)NA and N3...NA | | | | | | | | | | |
|  | NZM3 PN3, N3 | 3-pole | – | – | – | – | – | | **NZM3-XIPA** 266808 | Type contains parts for a terminal located at top or bottom for 3 or 4-pole circuit-breakers.<br>Only in conjunction with NZM3(-4)-XKSA cover.<br>Enhancement of the protection against direct contact to IP2X.<br>When mounting NZM3-..-(C)NA or N3...-NA the following applies:<br>With 2 conductors minimum cross-section 95 mm² AWG 000. |
| | NZM3-4 PN3-4, N3-4 | 4-pole | – | – | – | – | – | | **NZM3-4-XIPA** 266809 | |
| **Cable lug** | | | | | | | | | | |
| not UL/CSA approved<br>When using cable lugs **without** NZM3(-4)-XKSA cover, they must be insulated. | | | | | | | | | | |
|  | 185 mm² | NZM3(-4) PN3, N3(-4) NZM4(-4) N4(-4) | Three- and four-pole | Copper conductors Cu cable | 1 × 185 | 1 × 350 | – | – | | **NZM3-XKS185** 260040 | The type contains a cable lug for 3 or 4-pole switch.<br>Special cable lug, narrow style |
| | 240 mm² | | | | 1 × 240 | – | – | – | | **NZM3-XKS240** 260041 | |

Circuit-breakers, switch-disconnectors up to 1600 A

Moeller HPL0211-2004/2005

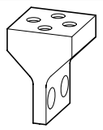
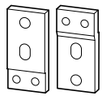
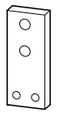
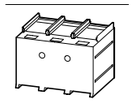
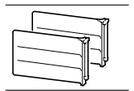
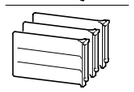
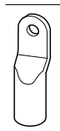
| | Rated current[1] $I_n$ A | | For use with | | Terminal capacity Type of conductor | Terminal capacity mm² | AWG/MCM | Terminal capacity Copper strip mm | Copper busbar Width × thickness mm | Type Article no. for separate order | Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Screw connection** | | | | | | | | | | | |
| Standard features | – | – | NZM4, NZM4(-4) N4, N4(-4) | 3 and 4-pole | Copper cable lugs | 1 × 120 – 185<br>4 × 50 – 185 | 1 × 250 – 350<br>4 × 0 – 350 | (2 ×) 10 × 50 × 1.0 | 25 × 5<br>(2 ×) 50 × 10 | | Double hole fitting for M10 screws with 25 mm clearance.<br>Use special cable lug narrow version. |
| **Module plate** | | | | | | | | | | | |
|  | max. 1250 | Single hole | NZM4 N4 | 3-pole | Copper cable lugs<br>Aluminium cable lug | 1 × 120 – 240<br>2 × 95 – 240<br>1 × 185 – 240<br>2 × 70 – 185 | 1 × 250 – 500<br>2 × 000 – 350<br>1 × 350 – 500<br>2 × 00 – 350 | (2 ×) 10 × 40 × 1.0<br>(2 ×) 10 × 50 × 1.0 | (2 ×) 40 × 10<br>(2 ×) 50 × 10 | **NZM4-XKM1** 266814 | Type contains parts for a terminal located at top or bottom for 3 or 4-pole circuit-breakers.<br>For M10 screws. Can be enlarged for M12 screws.<br>Use special cable lug narrow version.<br>Can be fitted to circuit-breaker with screw termination<br>Insulation through NZM4(-4)-XKSA cover or NZM4(-4)-XKP phase separator necessary |
| | | | NZM4-4 N4-4 | 4-pole | | | | | | **NZM4-4-XKM1** 266815 | |
|  | max. 1400 | Double hole | NZM4 N4 | 3-pole | Copper cable lugs<br>Aluminium cable lug | 2 × 95 – 185<br>4 × 35 – 185<br>4 × 50 | 2 × 000 – 350<br>4 × 2 – 350<br>4 × 0 | | | **NZM4-XKM2** 266820 | |
| | | | NZM4-4 N4-4 | 4-pole | | | | | | **NZM4-4-XKM2** 266821 | |
| | max. 1500 | | | | | | | (2 ×) 10 × 50 × 1.0 | (2 ×) 50 × 10 | | |
|  | max. 1250 | Double hole | NZM4 N4 | 3-pole | Copper cable lugs | 2 × 95 – 300 | 2 × 000 – 500 | (2 ×) 10 × 50 × 1.0 | (2 ×) 50 × 10 | **NZM4-XKM2S-1250** 284471 | Type contains parts for a terminal located at top or bottom for 3 or 4-pole circuit-breakers.<br>Insulation through NZM4(-4)-XKSA cover or NZM4(-4)-XKP phase isolator necessary |
| | | | NZM4-4 N4-4 | 4-pole | | | | | | **NZM4-4-XKM2S-1250** 284472 | |
| | 1600 | Double hole | NZM4 N4 | 3-pole | | | | | | **NZM4-XKM2S-1600** 284473 | |
| | | | NZM4-4 N4-4 | 4-pole | | | | | | **NZM4-4-XKM2S-1600** 284474 | |
| **Connection width extension** | | | | | | | | | | | |
|  | 1600 | | NZM4 N4 | 3-pole | Copper cable lugs | 2 × 240<br>6 × 95 – 240 | 2 × 500<br>4 × 000 – 500 | min. 10 × 50 × 1.0<br>max.<br>(2 ×) 10 × 80 × 1.0 | min.<br>1 × 60 × 10<br>max.<br>3 × 80 × 5 | **NZM4-XKV95** 281591 | Type contains parts for a terminal located at top or bottom for 3 or 4-pole circuit-breakers.<br>Three way holes, e.g. for up to 6 cable lugs per phase.<br>Can be fitted to circuit-breaker with screw termination<br>Phase isolator supplied.<br>Distance between pole centres with NZM4-XKV95: 95 mm<br>Installation conditions for current transformer up to 130 mm width with 80 mm busbar width<br>Distance between pole centres with NZM4-XKV110: 107.5 mm<br>Installation conditions for current transformer up to 135 mm width with 80 mm busbar width<br>Distance between pole centres with NZM4-XKV120: 122 mm<br>Installation conditions for current transformer up to 164 mm width with 80 mm busbar width |
| | | | NZM4-4 N4-4 | 4-pole | | | | | | **NZM4-XKV110** 281593 | |
| | | | | | | | | | | **NZM4-4-XKV95** 281592 | |
| | | | | | | | | | | **NZM4-4-XKV120** 281594 | |
| **Flat cable terminal** | | | | | | | | | | | |
|  | max. 1100 | – | NZM4 N4 | 3-pole | – | – | – | min. 6 × 16 × 0.8<br>max.<br>(2 ×) 10 × 32 × 1.0 | – | **NZM4-XKB** 266829 | Type contains parts for a terminal located at top or bottom for 3 or 4-pole circuit-breakers.<br>Conversion kit for circuit-breaker with screw connection.<br>Insulation through NZM4(-4)-XKSA cover or NZM4(-4)-XKP phase separator necessary<br>When the circuit-breaker is installed on a conductive mounting plate, use of the NZM4(-4)-XKSA cover is obligatory |
| | | – | NZM4(-4) N4(-4) | 4-pole | – | – | – | | – | **NZM4-4-XKB** 266831 | |
| **Tunnel terminal** | | | | | | | | | | | |
|  | max. 1400 | – | NZM4 N4 | 3-pole | Copper conductors<br>Cu cable<br>Al conductors<br>Al cable | 1 × 50 – 240<br>4 × 50 – 240<br>1 × 50 – 240<br>4 × 50 – 240 | 1 × 0 – 500<br>4 × 0 – 500<br>1 × 0 – 500<br>4 × 0 – 500 | – | – | **NZM4-XKA** 266836 | Type contains parts for a terminal located at top or bottom for 3 or 4-pole circuit-breakers.<br>A standard with control circuit terminal for 1 × 0.75 – 2.5 mm² (18 – 14 AWG) or 2 × 0.75 – 1.5 mm² (18 – 16 AWG) Copper conductors.<br>Can be fitted to circuit-breaker with screw termination<br>Use with flexible and highly flexible conductors ferrules.<br>Use of the NZM4(-4)-XKSA cover obligatory (supplied). |
| | | – | NZM4(-4) N4(-4) | 4-pole | | | | – | – | **NZM4-4-XKA** 266837 | |

**Notes**

[1] The values have been determined conform to IEC/EN 60947 and generally relate to the max. defined cross-sections and are intended for the purpose of orientation. The engineering standards which apply in each case must be observed.

Circuit-breakers, switch-disconnectors up to 1600 A

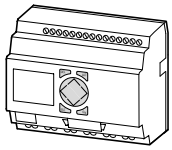
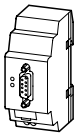
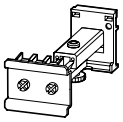
Moeller HPL0211-2004/2005

| | Rated current[1] $I_n$ A | For use with | | Terminal capacity Type of conductor | Terminal capacity mm² | AWG/MCM | Terminal capacity Copper strip mm | Copper busbar Width × thickness mm |
|---|---|---|---|---|---|---|---|---|
| **Connection on rear** | | | | | | | | |
| not UL/CSA approved | | | | | | | | |
|  | 1600 | NZM4<br>N4 | 3-pole | Copper cable lugs<br><br>Aluminium cable lug | 1 × 120 – 185<br>2 × 95 – 185<br>4 × 35 – 185<br>1 × 185<br>2 × 70 – 185<br>4 × 50 – 185 | – | (2 ×) 10 × 50 × 1.0 | (2 ×) 50 × 10 |
| | | NZM4-4<br>N4-4 | 4-pole | | | | | |
| **NZM4/NZM14 adapter kit** | | | | | | | | |
|  | 1250 | NZM4<br>N4 | 3-pole | – | – | – | – | – |
|  | 1600 | | | – | – | – | – | – |
| **Control circuit terminal** | | | | | | | | |
|  | – | NZM4(-4)<br>N4(-4) | 3 and 4-pole | Screw connection | 1 × 0.75 – 4.0<br>2 × 0.75 – 2.5 | 1 × 18 – 12<br>2 × 18 – 14 | – | – |
| **Cover** | | | | | | | | |
|  | – | NZM4<br>N4 | 3-pole | – | – | – | – | – |
| | – | NZM4(-4)<br>N4(-4) | 4-pole | – | – | – | – | – |
| **Phase isolator** | | | | | | | | |
|  | – | – | 3-pole | – | – | – | – | – |
|  | – | – | 4-pole | – | – | – | – | – |
| **Cable lug** | | | | | | | | |
| Not UL/CSA approved | | | | | | | | |
| When cable lugs are used **without** NZM4(-4)-XKSA cover, the must be insulated. | | | | | | | | |
|  | 185 mm² | NZM3(-4)<br>PN3, N3(-4)<br>NZM4(-4)<br>N4(-4) | 3 and 4-pole | Cu cables<br>Cu cable | 1 × 185 | 1 × 350 | – | – |
| | 240 mm² | | | | 1 × 240 | – | – | – |

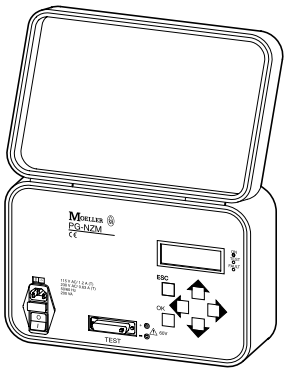
**Notes** [1] The values have been determined conform to IEC/EN 60947 and generally relate to the max. defined cross-sections and are intended for the purpose of orientation. The engineering standards which apply in each case must be observed.

Moeller HPL0211-2004/2005

| **Type** Article no. for separate order | | **Notes** |
|---|---|---|
| **NZM4-XKR** 266842<br>**NZM4-4-XKR** 266843 | | Type contains parts for a terminal located at top or bottom for 3 or 4-pole circuit-breakers.<br>Can also be retrofitted:<br>NZM4...-XKM... module plate or NZM4-...-XKV... connection width extension |
| **NZM4-XAS14-1250** 283291 | | Conversion kit from NZM14 to NZM4. Same connection schematic as NZM14. Type contains parts for both switch sides.<br>3 connection extensions on outlet side<br>3 connection extensions on trip block side<br>1 long shroud for the outlet side<br>Paper drilling template in the assembly instructions (AWA)<br>Cannot be combined with the module plate (NZM4-XKM...), flat cable terminal (NZM4-XKB), connection width extension (NZM4-XKV...), tunnel terminal (NZM4-XKA), connection on rear (NZM4-XKR) and withdrawable unit (NZM4-XAV...). |
| **NZM4-XAS14-1600** 283292 | | Conversion kit from NZM14 to NZM4. Same connection schematic as NZM14. Type contains parts for both switch sides.<br>6 terminal extensions<br>4 spacer bolts 12.5 for device fixing<br>2 insulating plates 0.5 mm thick<br>2 mounting brackets (MW-NZM14 with additional drilled holes)<br>1 long shroud for the outlet side<br>Paper drilling template in the assembly instructions (AWA)<br>Cannot be combined with the module plate (NZM4-XKM...), flat cable terminal (NZM4-XKB), connection width extension (NZM4-XKV...), tunnel terminal (NZM4-XKA), connection on rear (NZM4-XKR) and withdrawable unit (NZM4-XAV...). |
| **NZM3/4-XSTS** 266797 | | Type contains parts for two terminal locations located at top or bottom for 3 or 4-pole circuit-breakers.<br>Included as standard with tunnel terminal<br>Degree of protection IP1X |
| **NZM4-XKSA** 266846<br>**NZM4-4-XKSA** 266847 | | Type contains parts for a terminal located at top or bottom for 3 or 4-pole circuit-breakers.<br>Insulation/protection against direct contact where cable lugs, busbars, flat cable terminals or tunnel terminals are used.<br>Included in set with tunnel terminals<br>Degree of protection IP4X at front, side and rear, on the connection side when using insulated conductor material to IP1X. |
| **NZM4-XKP** 281595<br>**NZM4-4-XKP** 281596 | | Type contains parts for a terminal located at top or bottom for 3 or 4-pole circuit-breakers.<br>Included with the connection width extension.<br>Cannot be combined with the NZM4(-4)-4-XKA tunnel terminal, NZM4-XKR connection on rear.<br>Insulation protection where cable lugs, busbars, module plates or tunnel terminals are used.<br>Included in set with connection width extensions |
| **NZM3-XKS185** 260040<br>**NZM3-XKS240** 260041 | | The type contains a cable lug for 3 or 4-pole switch.<br>Special cable lug, narrow style |

| | Description | Type<br>Article no. | Price<br>See Price List | Std. pack | Notes |
|---|---|---|---|---|---|
| **Diagnostics and parameterization software (at the machine)** | | | | | |
| | PC software for direct connection to all new NZM circuit-breakers with electronic releases (IEC and UL/CSA devices) or for direct connection to the DMI module, including the required cable.<br>Display of the phase currents, status data, warnings and overload warnings.<br>Reading of the diagnostics data (event history) and trip causes stored in the circuit-breaker, even when the circuit-breaker is de-energized.<br>Configuration of the DMI: motor starter, remote operator, assignment of the DMI inputs and outputs and displays. | **NZM-XPC-KIT**<br>265631 | | 1 off | Only for use in combination with circuit-breakers with electronic releases (NZM...2-...E..., NZM...3-...E..., NZM...4-...E...)<br>Download the manual AWB1230-1459 free-of-charge at www.moeller.net.<br>NZM-XPC-Soft Demo at www.moeller.net |
| **Data Management Interface (DMI Modules)** | | | | | |
|  | Query of diagnostics and operational data, display of currents, motor starter function, parameterization and control of the circuit-breaker with electronic release (NZM...2-...E..., NZM...3-...E..., NZM...4-...E...).<br>Comprehensive remote diagnostic options and remote operation via PROFIBUS-DP fieldbus (in combination with NZM-XDMI-DPV1).<br>Inclusive NZM-XDMI-CAB connection cable between NZM and DMI (length: 2 m). | **NZM-XDMI612**<br>260217 | | 1 off | Only suitable for use in conjunction with circuit-breakers having **electronic** releases.<br>Download the manual AWB1230-1441 free-of-charge at www.moeller.net. |
| **Expansion unit, networking**<br>Fieldbus interfacing to PROFIBUS-DPV1 slave | | | | | |
|  | Fieldbus interface: to PROFIBUS-DPV1 slave.<br>Interfacing to the DMI module for transfer of the circuit-breaker state (wiring of the auxiliary switch to the DMI inputs), the phase currents, parameter data, status data and diagnostics data as well as the DMI setting via PROFIBUS-DPV1.<br>Actuation of the remote operator (via DMI outputs wiring) and the motor starter function of the DMI via PROFIBUS-DP.<br>Detection of digital inputs and operation via PROFIBUS-DP.<br>Can be operated with class 1 and class 2 masters. | **NZM-XDMI-DPV1**<br>270333 | | 1 off | Connected to the DMI module and has the same contour appearance.<br>Replaces the DPV0 interface EASY204-DP. |
| **Switched-mode power supply unit**<br>For DMI module | | | | | |
| | • Rated input voltage: 50/60 HZ: 115/230 V AC<br>• Rated output voltage (residual ripple): 24 V DC (± 3 %)<br>• Rated output current: 1.25 A | **EASY400-POW**<br>212319 | | 1 off | – |
| **Telescopic adapter**<br>For DMI module<br>For equalization of the mounting depth when rear mounted in CI-K.. enclosures and cabinets. | | | | | |
|  | With 35 mm top-hat rail IEC/EN 60715, adjustable from 75 – 115 mm. Screw-on and snap fitting. | **M22-TA**<br>226161 | | 1 off | |

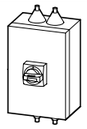
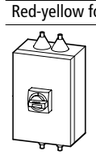
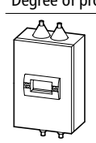
Moeller HPL0211-2004/2005

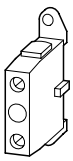
| | Description | Type<br>Article no. | Price<br>See Price List | Std. pack | Notes |
|---|---|---|---|---|---|
| **FDT framework software for field device operation** | | | | | |
| | PC software for integration of software modules (DTM's) according to the FDT standard V1.2 (e.g. NZM-XPC-DTM).<br>• Operation of a temporary or stationary service station for engineering, remote diagnostics, remote operation and remote parameter definition of networked switchgear and field devices.<br>• Engineering of the network topology of networked field devices.<br>• Overview representation of the topology with online status information.<br>• Access to the device specific DTM's for configuration, operation, parameterization and diagnostics of the devices.<br>• Storage of all engineering information in a central database. Download and upload from/to the devices. | **FDT-NAVIGATOR**<br>281623 | | 1 off | The connection of the field devices can be implemented via the Profibus DPV1 master or via gateways (e.g.: USB/Profibus, Ethernet/Profibus). Communication interfacing for the PC and a communication DTM (driver) is necessary for this purpose. Please inquire. |
| **DTM software module to FTD standard** | | | | | |
| | PC software module (Device Type Manager) to FDT/DTM standard V1.2 for integration in the FDT navigator or other FDT capable framework software packages (primary control system, PLC engineering systems).<br>• Remote diagnostics, remote monitoring, remote parameter definition and remote operation of the new NZM2,3,4 circuit-breakers with electronic trip release via Profibus-DPV1.<br>• Display of the circuit-breaker state (on/off/tripped), the phase currents, parameter data, status data and diagnostics data.<br>• Definition of the trip parameters.<br>• Display and setting of the DMI motor starter functions and assignment of the DMI inputs and outputs.<br>• Control of the motor starter functions. | **NZM-XPC-DTM**<br>281624 | | 1 off | For connection of the circuit-breaker to the Profibus-DP fieldbus, the NZM-XDMI-612 accessory device and NZM-XDMI-DPV1 fieldbus interface are required. |
| **Circuit-breaker test kit**<br>Menu driven trip function test of the entire tripping characteristic (via a display) | | | | | |
|  | Simulates test currents for NZM2E, NZM3E, NZM4E circuit-breakers with electronic releases as well as NZM10 and NZM12, incl. connection cable. | **PG-NZM**<br>210525 | | 1 off | Supply voltage can be selected 115/230 V 50/60 Hz |

Circuit-breakers, switch-disconnectors up to 1600 A

Moeller HPL0211-2004/2005

Moeller HPL0211-2004/2005

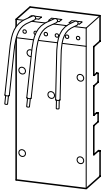
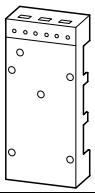
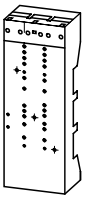
| | | Max. permissible rated uninterrupted current $I_u$ A | For use with | **Type** Article no. for separate order | **Price** See Price List | Std. pack | Enclosure description insulated enclosure | Terminals for 3-pole switches fitted by user: for 4th and 5th conductor (N, PE conductor), with 4-pole switches: for 5th conductor (PE conductor) | **Notes** |
|---|---|---|---|---|---|---|---|---|---|
| **Insulated enclosures** | | | | | | | | | |
| With door coupling rotary handle<br>complete incl. all necessary functional parts<br>Degree of protection IP65<br>not UL/CSA approved | | | | | | | | | |
| Standard, black/grey | | | | | | | | | |
|  | | ≦ 63 A | PN1, N1 | **NZM1-XCIK5-TD** 271516 | | 1 off | CI-K5-160-M | K10/1, K25/1 | Suitable for installation of circuit-breakers and switch-disconnectors<br>Enclosure for separate mounting with top and bottom cable entry.<br>Include fixing straps for wall mounting.<br><br>Cannot be used in combination with NZM...-XR... remote operator..., NZM...-XSV plug-in unit or NZM...-XAV withdrawable unit.<br>Insulated additional terminal for 4th or 5th pole should be ordered separately.<br><br>CI-K5 enclosure with hard metric knock-outs<br>CI23 enclosure with flanges<br>CI43, CI45 and CI48 feature gland plates.<br><br>**Only for switches with box terminals in conjunction with cable.** |
| | | | NZM1, PN1, N1 | **NZM1-XCI23-TD** 271517 | | | CI23-150 | K10/1, K25/1 | |
| | | ≦ 125 A | NZM1(-4), PN1(-4), N1(-4) | **NZM1-XCI43-TD** 271518 | | | CI43-150 | K10/1, K25/1, K50/1, K95/1N/BR | |
| | | ≦ 200 A | NZM2(-4), PN2(-4), N2(-4) | **NZM2-XCI43-TD** 271519 | | | CI43-200 | K10/1, K25/1, K50/1, K95/1N/BR, K150/1/BR, K240/1/BR | |
| | | ≦ 250 A | | **NZM2-XCI45-TD** 279354 | | | CI45-200 | K10/1, K25/1, K50/1, K95/1N/BR, K150/1/BR, K240/1/BR | |
| | | ≦ 400 A | NZM3(-4), PN3(-4), N3(-4) | **NZM3-XCI48-TD** 271520 | | | CI48-250 | K95/1N/BR, K150/1/BR, K240/1/BR, K2X240/1/BR | |
| | Lockable in 0 position on handle. With additional cover interlock. | ≦ 63 A | PN1, N1 | **NZM1-XCIK5-TVD** 271521 | | | CI-K5-160-M | K10/1, K25/1 | |
| | | | NZM1, PN1, N1 | **NZM1-XCI23-TVD** 271522 | | | CI23-150 | K10/1, K25/1 | |
| | | ≦ 125 A | NZM1(-4), PN1(-4), N1(-4) | **NZM1-XCI43-TVD** 271523 | | | CI43-150 | K10/1, K25/1, K50/1, K95/1N/BR | |
| | | ≦ 200 A | NZM2(-4), PN2(-4), N2(-4) | **NZM2-XCI43-TVD** 271524 | | | CI43-200 | K10/1, K25/1, K50/1, K95/1N/BR, K150/1/BR, K240/1/BR | |
| | | ≦ 250 A | | **NZM2-XCI45-TVD** 280418 | | | CI45-200 | K10/1, K25/1, K50/1, K95/1N/BR, K150/1/BR, K240/1/BR | |
| | | ≦ 400 A | NZM3(-4), PN3(-4), N3(-4) | **NZM3-XCI48-TVD** 271525 | | | CI48-250 | K95/1N/BR, K150/1/BR, K240/1/BR, K2X240/1/BR | |
| Red-yellow for Emergency-Stop | | | | | | | | | |
|  | Lockable on handle and switch.<br>Lockable in 0 position on handle.<br>Cover interlock as additional feature, locking facility on circuit-breaker in 0 position. | ≦ 63 A | PN1, N1 | **NZM1-XCIK5-TVDVR** 271526 | | 1 off | CI-K5-160-M | K10/1, K25/1 | |
| | | | NZM1, PN1, N1 | **NZM1-XCI23-TVDVR** 271527 | | | CI23-150 | K10/1, K25/1 | |
| | | ≦ 125 A | NZM1(-4), PN1(-4), N1(-4) | **NZM1-XCI43-TVDVR** 271528 | | | CI43-150 | K10/1, K25/1, K50/1, K95/1N/BR | |
| | | ≦ 200 A | NZM2(-4), PN2(-4), N2(-4) | **NZM2-XCI43-TVDVR** 271529 | | | CI43-200 | K10/1, K25/1, K50/1, K95/1N/BR, K150/1/BR, K240/1/BR | |
| | | ≦ 250 A | | **NZM2-XCI45-TVDVR** 279356 | | | CI45-200 | K10/1, K25/1, K50/1, K95/1N/BR, K150/1/BR, K240/1/BR | |
| | | ≦ 400 A | NZM3(-4), PN3(-4), N3(-4) | **NZM3-XCI48-TVDVR** 271530 | | | CI48-250 | K95/1N/BR, K150/1/BR, K240/1/BR, K2X240/1/BR | |
| With insulating surround<br>For switch with toggle lever<br>Complete incl. all necessary functional parts<br>Degree of protection IP40 | | | | | | | | | |
|  | – | ≦ 63 A | PN1, N1 | **NZM1-XCIK5-BR** 271531 | | 1 off | CI-K5-160-M | K10/1, K25/1 | |
| | | | NZM1, PN1, N1 | **NZM1-XCI23-BR** 271532 | | | CI23-125 | K10/1, K25/1 | |
| | | ≦ 125 A | NZM1(-4), PN1(-4), N1(-4) | **NZM1-XCI43-BR** 271533 | | | CI43-125 | K10/1, K25/1, K50/1, K95/1N/BR | |
| | | ≦ 200 A | NZM2(-4), PN2(-4), N2(-4) | **NZM2-XCI43-BR** 271534 | | | CI43-125 | K10/1, K25/1, K50/1, K95/1N/BR, K150/1/BR, K240/1/BR | |

| | Rated uninterrupted current $I_u$ A | Terminal capacity mm² | **Type** Article no. for separate order | **Price** See Price List | Std. pack |
|---|---|---|---|---|---|
| **Insulated additional terminals** | | | | | |
| For passing through the neutral and protective conductor 1-pole | 32 | flexible, 1 × (1.5 – 6) | **K10/1** 093827 | | 10 off |
| | 63 | flexible, 1 × (6 – 16), stranded, 1 × (16 – 25 ) | **K25/1** 096200 | | |
| | 100 | flexible, 1 × (10 – 35), stranded, 1 × (16 – 50) | **K50/1** 098573 | | |
|  | 160 | stranded, 1 × (16 – 95) | **K95/1N/BR** 012336 | | 1 off |
| | 250 | stranded, 1 × (35 – 150), 2 × (16 – 70) | **K150/1/BR** 014709 | | |
| | 400 | stranded, 1 × (50 – 240), 2 × (25 – 120) | **K240/1/BR** 017082 | | |
| | 630 | stranded, 1 × (240 – 300), 2 × (50 – 240) | **K2X240/1/BR** 019455 | | |

| | For use with | **Type suffix** Article no. when ordered with basic unit | **Price** See Price List | Std. pack | **Notes** |
|---|---|---|---|---|---|
| **Four pole residual current release** | | | | | |
| Pulse-current sensitive<br>For 4-pole circuit-breaker NZM2-4 and switch-disconnector N2-4 up to 250 A<br>Independent of mains and auxiliary voltage,<br>$U_e$ = 0 V – 690 V 50/60 Hz<br>Integrated auxiliary contact (1 M, 1 B) | | | | | |
| Rated fault current $I_{\Delta n}$ = 0.03 A | NZM2-4<br>N2-4 | **+NZM2-4-XFI30**<br>266719 | | 1 off | XFI30 suitable for personnel protection to IEC/EN 60947-2 Annex B and VDE 0664 Part 2 and 3.<br>Core-balance principle with pulse current sensitivity and peak withstand current.<br>Auxiliary switches are reset via the reset switch.<br>Not in combination with plug-in units or insulated enclosure.<br>Functional range of the test button: 280 V – 690 V |
| Rated fault current $I_{\Delta n}$ = 0.1 - 0.3 - 1 - 3 A<br>Delay time $t_v$ = 60 - 150 - 300 - 450 ms | NZM2-4<br>N2-4 | **+NZM2-4-XFI**<br>266720 | | 1 off | |
| Sensitive to AC/DC<br>Internal power supply<br>$U_e$ = 50 – 400 V AC 50/60 Hz<br>Integrated auxiliary contact (1 B)<br>Rated operational voltage: active 50 V – 400 V | | | | | |
| Rated fault current $I_{\Delta n}$ = 0.03 A | NZM2-4<br>N2-4 | **+NZM2-4-XFIA30**<br>274335 | | 1 off | XFIA30 suitable for personnel protection to IEC/EN 60947-2 Annex B and VDE 0664 Part 2 and 3.<br>Core-balance principle with AC/DC current sensitivity and peak withstand current.<br>Auxiliary switches are reset via the reset switch.<br>Not in combination with plug-in units or insulated enclosure.<br>Functional range of the test button: 50 V – 400 V |
| Rated fault current $I_{\Delta n}$ = 0.1 - 0.3 - 1 - 3 A<br>Delay time $t_v$ = 60 - 150 - 300 - 450 ms | NZM2-4<br>N2-4 | **+NZM2-4-XFIA**<br>274336 | | 1 off | |
| **Earth-fault release, 3-pole, 4-pole** | | | | | |
| Not dependent on mains and control voltages<br>$I_g$ = 0.3[1] – 0.4 – 0.5 – 0.6 – 0.7 – 0.8 – 0.9 – 1.0 × $I_u$<br>$t_g$ = 0 – 20 – 60 – 100 – 200 – 300 – 500 – 750 – 1000 ms | | | | | |
| | NZM3 | **+NZM3-XT**<br>260756 | | 1 off | Only suitable for use in conjunction with circuit-breakers having electronic releases.<br>Display of the earth-fault in optional DMI communication module. |
| | NZM3-4 | **+NZM3-4-XT**<br>260757 | | | |
| | NZM4 | **+NZM4-XT**<br>266721 | | | |
| | NZM4-4 | **+NZM4-4-XT**<br>266722 | | | |

[1] Notes

[1] 0.35 probably until October 2004

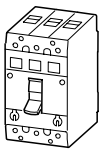
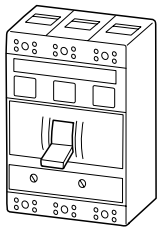
| | Rated current | Conductor connection/ terminal | Adapter width | For surface mounting of (example) | Terminal compartment W × H | Tightening torque | | **Type** Article no. | **Price** See Price List | Std. pack |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | Fixing screws | Connection bolt | | | |
| | $I_e$ | | | | | | | | | |
| | A | | mm | | mm | Nm | Nm | | | |
| **Multifunction component adapter for 60 mm busbar system** | | | | | | | | | | |
| Component adapter for circuit-breaker and switch-disconnector[2)]<br>For mounting on flat copper busbars 20/30 × 5 mm or 20/30 × 10 mm and 800 or 1600 A rigid copper busbars.<br>Mounted by latching onto de-energized busbar<br>Rated operational voltage $U_e$: 690 V AC | | | | | | | | | | |
|  | 100 | Connection cable 35 mm² included | 90 | NZM1<br>PN1, N1 | – | – | – | **AD100/5**<br>272059 | | 1 off |
| | 125 | Connection cable 35 mm² included | 90 | NZM1<br>PN1, N1 | – | – | – | **AD100/10**<br>272150 | | 1 off |
| Component adapter for circuit-breaker and switch-disconnector[1) 2)]<br>For mounting on flat copper busbars 30 × 10, 20 × 10, 20 × 5 mm and 800/1600 A rigid copper busbars.<br>Mounting using clamp and screw fixing.<br>Rated operational voltage $U_e$: 690 V AC<br>Connection cable not included as standard. | | | | | | | | | | |
|  | 200 | Round conductor: 6 – 70 mm²; Copper strip (n × B × H): 6 × 9 × 0.8 | 110 | NZM2<br>PN2, N2 | 13 × 10 | 4 – 6 | 2 – 3 | **SV34381**<br>272058 | | 1 off |
|  | 250 | Round conductor: 50 – 120 mm²; Copper strip (n × B × H): 6 × 9 × 0.8 | 110 | NZM2<br>PN2, N2 | 16 × 12 | 4 – 6 | 8 – 10 | **SV34372**<br>272335 | | 1 off |

**Notes**

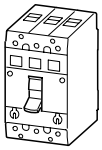
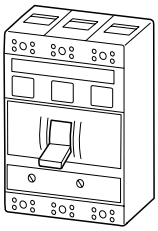
[1)] With component adapters for mounting of NZM1 and NZM2 with rotary drive, a minimum clearance of 18 mm should be observed. The busbar in the intermediate area can be covered with the SV30921/SV35061 shroud section. Connection cable not included as standard.

[2)] not UL/CSA approved

| | Rated current<br>A | For use with | **Type suffix**<br>Article no.<br>when ordered with basic unit | | **Type**<br>Article no.<br>for separate order | | **Notes** |
|---|---|---|---|---|---|---|---|
| **Component adapter from Wöhner for circuit-breaker and switch-disconnector for 60 mm busbar system**<br>For mounting on flat copper busbars 12 – 30 × 5 – 10, double-T and triple-T profile<br>Mounting implemented with clamp and screw fixing<br>Rated operational voltage $U_e$: 690 V | | | | | | | |
| | 125 | NZM1,<br>PN1, N1 | | | | | For switches with standard connection box terminal<br>Connection to system at top by supplied connection cable<br>In conjunction with IP2X protection against contact with a finger, an enhancement of the protection against direct contact on the switch outgoer side is possible<br><br>Wöhner article number: **32570** |
| | 250 | NZM2,<br>PN2, N2 | | | | | Connection to system optional at top or bottom using the connection on rear indicated below<br>(+)NZM...-XKR...<br><br>Wöhner article number: **32140** |
| | 630 | NZM3,<br>PN3, N3 | | | | | Connection to system at top using the connection on rear indicated below<br>(+)NZM...-XKR...<br><br>Wöhner article number: **32170** |
| **Connection on rear for NZM2, NZM3 component adapter from Wöhner** | | | | | | | |
| | | NZM2,<br>PN2, N2 | **+NZM2-XKR4O**<br>281664 | | **NZM2-XKR4**<br>281666 | | Type and type suffix included parts for top and bottom on switch side<br>Required with component adapter and switches with connection on rear, for example see above Wöhner adapter |
| | | | **+NZM2-XKR4U**<br>281665 | | | | |
| | | NZM3,<br>PN3, N3 | **+NZM3-XKR13O**<br>281667 | | **NZM3-XKR13**<br>281668 | | |

| **Circuit-breakers** with main switch and isolating characteristics of 40–1600 A[1)] | | **Normal switching capacity (N)** | | **Medium switching capacity (S)** | | **High switching capacity (H)** | |
|---|---|---|---|---|---|---|---|
| Rated uninterrupted current $I_u$<br>Rated short-circuit breaking capacity $I_{cu}$ | | **400/415 V** | 660/690 V | **400/415 V** | 660/690 V | **400/415 V** | 660/690 V |
| **NZM7**  | NZM7-...<br>**Protection of systems and cables** | | | | | | |
| **$I_u$ = 40–250 A** | **$I_{cu}$ /kA** | **35** | 6 | **65** | 8 | **100** | 10 |
| | NZM7-...G<br>**Generator protection** | | | | | | |
| **$I_u$ = 63–200 A** | **$I_{cu}$ /kA** | **35** | 6 | – | | – | |
| | NZM7-...M<br>**motor protection 15–90 kW** | | | | | | |
| **$I_u$ = 40–200 A** | **$I_{cu}$ /kA** | **35** | 6 | **65** | 8 | **100** | 10 |
| **NZM10**  | NZM10-.../ZM<br>**System, cable and generator protection** | | | | | | |
| **$I_u$ = 250–630 A** | **$I_{cu}$ /kA** | **45** | 20 | **65** | 25 | **100** | 30 |
| | NZM10-.../ZMV<br>**System, cable and generator protection with time selectivity** | | | | | | |
| **$I_u$ = 250–630 A** | **$I_{cu}$ /kA** | **45** | 20 | **65** | 25 | **100** | 30 |
| | NZM10-.../ZMM<br>**motor protection 110–315 kW** | | | | | | |
| **$I_u$ = 250–630 A** | **$I_{cu}$ /kA** | **45** | 20 | **65** | 25 | – | |

Moeller HPL0211-2004/2005

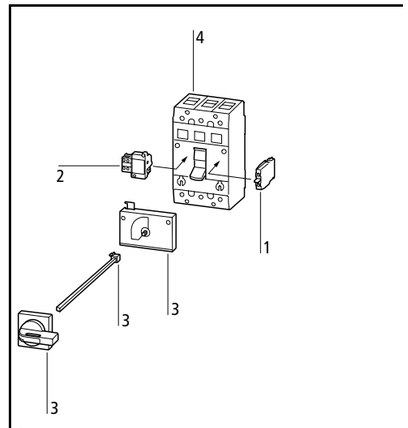
| **Switch-disconnector:**<br>Without overload and short-circuit release<br>with main switch and isolating characteristics<br>from 63–1600 A<br><br>Rated uninterrupted current $I_u$<br>Rated short-time withstand current $I_{cw}$ | | | **P...** | **NZM...**<br><br>Remote tripping by mounting of a voltage release is possible |
|---|---|---|---|---|
| **P7, NZM7** | P7-..., NZM7-... | | | |
|  | $I_u$ = **63–160 A** | $I_{cw}$ /kA | **3** | **3** |
| | $I_u$ = **200–250 A** | $I_{cw}$ /kA | **3.5** | **3.5** |
| **P10, NZM10** | P10-... | | | |
|  | $I_u$ = **400–630 A** | $I_{cw}$ /kA | **10** | – |
| | NZM10-.../B | | | |
| | $I_u$ = **400–630 A** | $I_{cw}$ /kA | – | **8** |

Circuit-breakers, switch-disconnectors up to 1600 A

Moeller HPL0211-2004/2005

Moeller HPL0211-2004/2005

| Rating data | | | | Normal switching capacity 35 kA at 400 V, 50/60 Hz | | Std. pack | Medium switching capacity 65 kA at 400 V, 50/60 Hz | | Std. pack | High switching capacity 100 kA at 400 V, 50/60 Hz | | Std. pack | Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Rated uninterrupted current | Setting range | | | Type<br>Article no. | Price<br>See Price List | | Type<br>Article no. | Price<br>See Price List | | Type<br>Article no. | Price<br>See Price List | | |
| | Overload releases | Short-circuit releases | | | | | | | | | | | |
| | | Non-delayed | | | | | | | | | | | |
| $I_u$<br>A | $I_r$<br>A | $I_{rm}$<br>A | | | | | | | | | | | |
| **Circuit-breaker for system protection, 3-pole** | | | | | | | | | | | | | |
| Adjustable overload release,<br>Adjustable non-delayed short-circuit releases | | | | | | | | | | | | | |
| With clamp-type terminals | 40 | 25 – 40 | 9 – 12 × $I_u$ | **NZM7-40N**<br>048714 | | 1 off | **NZM7-40S**<br>048962 | | 1 off | **NZM7-40H**<br>049016 | | 1 off | |
| | 63 | 40 – 63 | 6 – 12 × $I_u$ | **NZM7-63N**<br>048715 | | | **NZM7-63S**<br>048963 | | | **NZM7-63H**<br>049017 | | | |
| | 80 | 63 – 80 | | **NZM7-80N**<br>048716 | | | **NZM7-80S**<br>049003 | | | **NZM7-80H**<br>049018 | | | |
| | 100 | 80 – 100 | | **NZM7-100N**<br>048717 | | | **NZM7-100S**<br>049004 | | | **NZM7-100H**<br>049019 | | | |
| | 125 | 80 – 125 | | **NZM7-125N**<br>048718 | | | **NZM7-125S**<br>049005 | | | **NZM7-125H**<br>049020 | | | |
| | 160 | 125 – 160 | | **NZM7-160N**<br>048719 | | | **NZM7-160S**<br>049006 | | | **NZM7-160H**<br>049021 | | | |
| | 200 | 160 – 200 | | **NZM7-200N**<br>048720 | | | **NZM7-200S**<br>049007 | | | **NZM7-200H**<br>049022 | | | |
| | 250 | 200 – 250 | 6 – 10 × $I_u$ | **NZM7-250N**<br>048721 | | | **NZM7-250S**<br>049008 | | | **NZM7-250H**<br>049023 | | | |
| With M8 screw terminal and cable lug cover | 40 | 25 – 40 | 9 – 12 × $I_u$ | **NZM7-40N-M8**<br>065805 | | | **NZM7-40S-M8**<br>065827 | | | **NZM7-40H-M8**<br>065849 | | | |
| | 63 | 40 – 63 | | **NZM7-63N-M8**<br>065806 | | | **NZM7-63S-M8**<br>065828 | | | **NZM7-63H-M8**<br>065850 | | | |
| | 80 | 63 – 80 | | **NZM7-80N-M8**<br>065807 | | | **NZM7-80S-M8**<br>065829 | | | **NZM7-80H-M8**<br>065851 | | | |
| | 100 | 80 – 100 | | **NZM7-100N-M8**<br>065808 | | | **NZM7-100S-M8**<br>065830 | | | **NZM7-100H-M8**<br>065852 | | | |
| | 125 | 80 – 125 | | **NZM7-125N-M8**<br>065809 | | | **NZM7-125S-M8**<br>065831 | | | **NZM7-125H-M8**<br>065853 | | | |
| | 160 | 125 – 160 | | **NZM7-160N-M8**<br>065810 | | | **NZM7-160S-M8**<br>065832 | | | **NZM7-160H-M8**<br>065854 | | | |
| | 200 | 160 – 200 | | **NZM7-200N-M8**<br>065811 | | | **NZM7-200S-M8**<br>065833 | | | **NZM7-200H-M8**<br>065855 | | | |
| | 250 | 200 – 250 | 6 – 10 × $I_u$ | **NZM7-250N-M8**<br>065812 | | | **NZM7-250S-M8**<br>065834 | | | **NZM7-250H-M8**<br>065856 | | | |
| **Circuit-breaker for generator protection, 3-pole** | | | | | | | | | | | | | |
| Adjustable overload release,<br>Adjustable non-delayed short-circuit releases | | | | | | | | | | | | | |
| With clamp-type terminals | 63 | 40 – 63 | 2 – 6 × $I_u$ | **NZM7-63N-G**<br>048723 | | 1 off | | | | | | | |
| | 80 | 63 – 80 | | **NZM7-80N-G**<br>048724 | | | | | | | | | |
| | 100 | 80 – 100 | | **NZM7-100N-G**<br>048915 | | | | | | | | | |
| | 125 | 80 – 125 | | **NZM7-125N-G**<br>048916 | | | | | | | | | |
| | 160 | 125 – 160 | | **NZM7-160N-G**<br>048917 | | | | | | | | | |
| | 200 | 160 – 200 | | **NZM7-200N-G**<br>048961 | | | | | | | | | |
| With M8 screw terminal and cable lug cover | 63 | 40 – 63 | 2 – 6 × $I_u$ | **NZM7-63N-G-M8**<br>065814 | | | | | | | | | |
| | 80 | 63 – 80 | | **NZM7-80N-G-M8**<br>065815 | | | | | | | | | |
| | 100 | 80 – 100 | | **NZM7-100N-G-M8**<br>065816 | | | | | | | | | |
| | 125 | 80 – 125 | | **NZM7-125N-G-M8**<br>065817 | | | | | | | | | |
| | 160 | 125 – 160 | | **NZM7-160N-G-M8**<br>065818 | | | | | | | | | |
| | 200 | 160 – 200 | | **NZM7-200N-G-M8**<br>065819 | | | | | | | | | |




**Accessories**

1 Auxiliary contacts
2 Voltage release
3 Operating elements
4 Connection method and combinations of screw- and clamp-type terminals

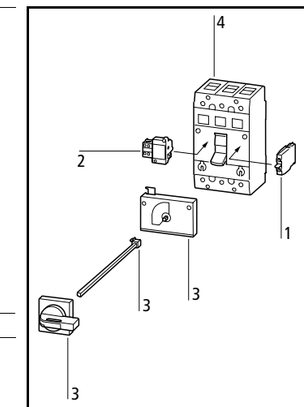
Circuit-breakers, switch-disconnectors up to 1600 A

Moeller HPL0211-2004/2005

Moeller HPL0211-2004/2005

| Motor data | | | | | Normal switching capacity 35 kA at 400 V, 50/60 Hz | | Medium switching capacity 65 kA at 400 V, 50/60 Hz | | High switching capacity 100 kA at 400 V, 50/60 Hz | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Rated power | Rated current | | Setting range | | Type Article no. | Price See Price List | Std. pack | Type Article no. | Price See Price List | Std. pack | Notes |
| AC-3 380 V 400 V 415 V | Rated operational current AC-3 400 V | Rated uninterrupted current | Overload releases | Short-circuit releases Non-delayed | | | | | | | |
| $P$ kW | $I_e$ A | $I_u$ A | $I_r$ A | $I_{rm}$ A | | | | | | | |
| **Circuit-breaker for motor protection with overload release** | | | | | | | | | | | |
| With single-phasing sensitivity[1], Adjustable overload release, Adjustable non-delayed short-circuit releases | | | | | | | | | | | |
| With clamp-type terminals | | | | | | | | | | | |
| 15 18.5 | 29.3 36 | 40 | 25 – 40 | 9 – 14 × $I_u$ | **NZM7-40N-M** 049032 | | 1 off | **NZM7-40S-M** 049041 | | 1 off | **NZM7-40H-M** 049050 | | 1 off | |
| 22 30 | 41 55 | 63 | 40 – 63 | 6 – 14 × $I_u$ | **NZM7-63N-M** 049033 | | | **NZM7-63S-M** 049042 | | | **NZM7-63H-M** 049051 | | | |
| 37 | 68 | 80 | 63 – 80 | | **NZM7-80N-M** 049034 | | | **NZM7-80S-M** 049043 | | | **NZM7-80H-M** 049052 | | | |
| 45 | 81 | 100 | 80 – 100 | | **NZM7-100N-M** 049035 | | | **NZM7-100S-M** 049044 | | | **NZM7-100H-M** 049053 | | | |
| 55 | 99 | 125 | 80 – 125 | | **NZM7-125N-M** 049036 | | | **NZM7-125S-M** 049045 | | | **NZM7-125H-M** 049054 | | | |
| 75 | 139 | 160 | 125 – 160 | | **NZM7-160N-M** 049037 | | | **NZM7-160S-M** 049046 | | | **NZM7-160H-M** 049055 | | | |
| 90 110 | 161 196 | 200 | 160 – 200 | 6 – 12 × $I_u$ | **NZM7-200N-M** 049038 | | | **NZM7-200S-M** 049047 | | | **NZM7-200H-M** 049056 | | | |
| With M8 screw terminal and cable lug cover | | | | | | | | | | | | | | |
| 15 18.5 | 29.3 36 | 40 | 25 – 40 | 9 – 14 × $I_u$ | **NZM7-40N-M-M8** 065820 | | 1 off | **NZM7-40S-M-M8** 065842 | | 1 off | **NZM7-40H-M-M8** 065864 | | 1 off | |
| 22 30 | 41 55 | 63 | 40 – 63 | | **NZM7-63N-M-M8** 065821 | | | **NZM7-63S-M-M8** 065843 | | | **NZM7-63H-M-M8** 065865 | | | |
| 37 | 68 | 80 | 63 – 80 | | **NZM7-80N-M-M8** 065822 | | | **NZM7-80S-M-M8** 065844 | | | **NZM7-80H-M-M8** 065866 | | | |
| 45 | 81 | 100 | 80 – 100 | | **NZM7-100N-M-M8** 065823 | | | **NZM7-100S-M-M8** 065845 | | | **NZM7-100H-M-M8** 065867 | | | |
| 55 | 99 | 125 | 80 – 125 | | **NZM7-125N-M-M8** 065824 | | | **NZM7-125S-M-M8** 065846 | | | **NZM7-125H-M-M8** 065868 | | | |
| 75 | 134 | 160 | 125 – 160 | | **NZM7-160N-M-M8** 065825 | | | **NZM7-160S-M-M8** 065847 | | | **NZM7-160H-M-M8** 065869 | | | |
| 90 110 | 161 196 | 200 | 160 – 200 | 6 – 12 × $I_u$ | **NZM7-200N-M-M8** 065826 | | | **NZM7-200S-M-M8** 065848 | | | **NZM7-200H-M-M8** 065870 | | | |
| **Circuit-breaker for motor protection without overload release** | | | | | | | | | | | | | | |
| For protection against short-circuit | | | | | | | | | | | | | | |
| With clamp-type terminals | | | | | | | | | | | | | | |
| – | – | 40 | – | 9 – 14 × $I_u$ | **NZM7-40N-OBI** 205589 | | 1 off | **NZM7-40S-OBI** 205597 | | 1 off | **NZM7-40H-OBI** 205605 | | 1 off | |
| – | – | 63 | – | 6 – 14 × $I_u$ | **NZM7-63N-OBI** 205590 | | | **NZM7-63S-OBI** 205598 | | | **NZM7-63H-OBI** 205606 | | | |
| – | – | 80 | – | | **NZM7-80N-OBI** 205591 | | | **NZM7-80S-OBI** 205599 | | | **NZM7-80H-OBI** 205607 | | | |
| – | – | 100 | – | | **NZM7-100N-OBI** 205592 | | | **NZM7-100S-OBI** 205600 | | | **NZM7-100H-OBI** 205608 | | | |
| – | – | 125 | – | | **NZM7-125N-OBI** 205593 | | | **NZM7-125S-OBI** 205601 | | | **NZM7-125H-OBI** 205609 | | | |
| – | – | 160 | – | | **NZM7-160N-OBI** 205594 | | | **NZM7-160S-OBI** 205602 | | | **NZM7-160H-OBI** 205610 | | | |
| – | – | 200 | – | 6 – 12 × $I_u$ | **NZM7-200N-OBI** 205595 | | | **NZM7-200S-OBI** 205603 | | | **NZM7-200H-OBI** 205612 | | | |
| – | – | 250 | – | 6 – 10 × $I_u$ | **NZM7-250N-OBI** 205596 | | | **NZM7-250S-OBI** 205604 | | | **NZM7-250H-OBI** 205613 | | | |

**Notes** [1] NZM7-40H-M, NZM7-63H-M without single-phasing sensitivity




**Accessories**

1 Auxiliary contacts
2 Voltage release
3 Operating elements
4 Connection method and combinations of screw- and clamp-type terminals

**Selection**

of circuit-breakers without overload release when combining with ZEV electronic motor-protective relay:
The tripping response of the ZWA motor-protective relay is matched by setting of the tripping class (CLASS), to the starting behaviour of the motor to be protected.
To ensure that the selection of a longer trip release does not lead to a thermal overload of the circuit-breaker, a circuit-breaker with a higher rated operational current $I_e$ must be selected in this case.
The necessary rated operational current $I_e$ should be calculated with the following factors:

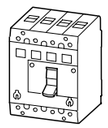
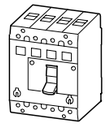
Tripping class set on the ZEV:

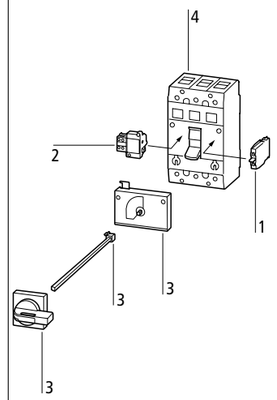
CLASS 5: rated operational current $I_e$ = rated motor current × 1.0
CLASS 10: rated operational current $I_e$ = rated motor current × 1.0
CLASS 15: rated operational current $I_e$ = rated motor current × 1.22
CLASS 20: rated operational current $I_e$ = rated motor current × 1.41
CLASS 25: rated operational current $I_e$ = rated motor current × 1.58
CLASS 30: rated operational current $I_e$ = rated motor current × 1.73

Circuit-breakers, switch-disconnectors up to 1600 A

Moeller HPL0211-2004/2005

Moeller HPL0211-2004/2005

| Rating data: Rated uninterrupted current $I_u$ A | Setting range: Overload releases $I_r$ A | Short-circuit releases: Non-delayed $I_{rm}$ A | Normal switching capacity 35 kA at 400 V, 50/60 Hz: Type / Article no. | Price See Price List | Std. pack | Medium switching capacity 65 kA at 400 V, 50/60 Hz: Type / Article no. | Price See Price List | Std. pack | High switching capacity 100 kA at 400 V, 50/60 Hz: Type / Article no. | Price See Price List | Std. pack | Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Circuit-breaker for system protection, 4-pole** | | | | | | | | | | | | |
| Adjustable overload release, Adjustable non-delayed short-circuit releases | | | | | | | | | | | | |
| With clamp-type terminals | | | | | | | | | | | | |
| With 100 % overload release in the neutral pole | 40 | 25 – 40 | 9 – 12 × $I_u$ | **NZM74-40N** 200341 | | 1 off | **NZM74-40S** 200300 | | 1 off | **NZM74-40H** 200326 | | 1 off |
|  | 63 | 40 – 63 | 6 – 12 × $I_u$ | **NZM74-63N** 200342 | | | **NZM74-63S** 200312 | | | **NZM74-63H** 200327 | | |
| | 80 | 63 – 80 | | **NZM74-80N** 200343 | | | **NZM74-80S** 200313 | | | **NZM74-80H** 200328 | | |
| | 100 | 80 – 100 | | **NZM74-100N** 200344 | | | **NZM74-100S** 200314 | | | **NZM74-100H** 200329 | | |
| | 125 | 80 – 125 | | **NZM74-125N** 200346 | | | **NZM74-125S** 200315 | | | **NZM74-125H** 200331 | | |
| | 160 | 125 – 160 | | **NZM74-160N** 200348 | | | **NZM74-160S** 200316 | | | **NZM74-160H** 200332 | | |
| | 200 | 160 – 200 | | **NZM74-200N** 200350 | | | **NZM74-200S** 200319 | | | **NZM74-200H** 200334 | | |
| | 250 | 200 – 250 | 6 – 10 × $I_u$ | **NZM74-250N** 200352 | | | **NZM74-250S** 200291 | | | **NZM74-250H** 200337 | | |
| With 60 % overload release in the neutral pole | 160 | 125 – 160 | 6 – 12 × $I_u$ | **NZM74-160/100N** 200349 | | | **NZM74-160/100S** 200317 | | | **NZM74-160/100H** 200333 | | |
| | 200 | 160 – 200 | 6 – 12 × $I_u$ | **NZM74-200/120N** 200351 | | | **NZM74-200/120S** 200322 | | | **NZM74-200/120H** 200336 | | |
| | 250 | 200 – 250 | 6 – 10 × $I_u$ | **NZM74-250/160N** 200355 | | | **NZM74-250/160S** 200323 | | | **NZM74-250/160H** 200338 | | |
| With M8 screw terminal and cable lug cover | | | | | | | | | | | | |
| With 100 % overload release in the neutral pole | 40 | 25 – 40 | 9 – 12 × $I_u$ | **NZM74-40N-M8** 200427 | | 1 off | **NZM74-40S-M8** 200445 | | 1 off | **NZM74-40H-M8** 200456 | | 1 off |
|  | 63 | 40 – 63 | 6 – 12 × $I_u$ | **NZM74-63N-M8** 200428 | | | **NZM74-63S-M8** 200446 | | | **NZM74-63H-M8** 200457 | | |
| | 80 | 63 – 80 | | **NZM74-80N-M8** 208688 | | | **NZM74-80S-M8** 200447 | | | **NZM74-80H-M8** 200458 | | |
| | 100 | 80 – 100 | | **NZM74-100N-M8** 200430 | | | **NZM74-100S-M8** 200448 | | | **NZM74-100H-M8** 200459 | | |
| | 125 | 80 – 125 | | **NZM74-125N-M8** 200431 | | | **NZM74-125S-M8** 200449 | | | **NZM74-125H-M8** 200460 | | |
| | 160 | 125 – 160 | | **NZM74-160N-M8** 200432 | | | **NZM74-160S-M8** 200450 | | | **NZM74-160H-M8** 200461 | | |
| | 200 | 160 – 200 | | **NZM74-200N-M8** 200434 | | | **NZM74-200S-M8** 200452 | | | **NZM74-200H-M8** 200463 | | |
| | 250 | 200 – 250 | 6 – 10 × $I_u$ | **NZM74-250N-M8** 200436 | | | **NZM74-250S-M8** 200454 | | | **NZM74-250H-M8** 200465 | | |
| With 60 % overload release in the neutral pole | 160 | 125 – 160 | 6 – 12 × $I_u$ | **NZM74-160/100N-M8** 200433 | | | **NZM74-160/100S-M8** 200451 | | | **NZM74-160/100H-M8** 200462 | | |
| | 200 | 160 – 200 | 6 – 12 × $I_u$ | **NZM74-200/120N-M8** 200435 | | | **NZM74-200/120S-M8** 200453 | | | **NZM74-200/120H-M8** 200464 | | |
| | 250 | 200 – 250 | 6 – 10 × $I_u$ | **NZM74-250/160N-M8** 200437 | | | **NZM74-250/160S-M8** 200455 | | | **NZM74-250/160H-M8** 200466 | | |

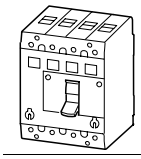



**Accessories**

1 Auxiliary contacts
2 Voltage release
3 Operating elements
4 Connection method and combinations of screw- and clamp-type terminals

| Rating data | | | Normal switching capacity 35 kA at 400 V, 50/60 Hz | | |
|---|---|---|---|---|---|
| Rated uninterrupted current | Setting range | | Type<br>Article no. | Price<br>See Price List | Std. pack |
| | Overload releases | Short-circuit releases | | | |
| | | Non-delayed | | | |
| $I_u$ | $I_r$ | $I_{rm}$ | | | |
| A | A | A | | | |

**Circuit-breaker for generator protection, 4-pole**

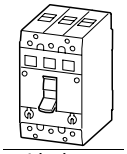
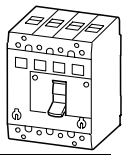


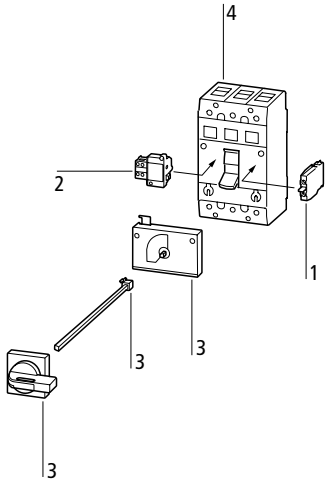
With clamp-type terminals

| | | | | | | |
|---|---|---|---|---|---|---|
| With 100 % overload release in the neutral pole | 63 | 40 – 63 | 2 – 6 × $I_u$ | **NZM74-63N-G**<br>200357 | | 1 off |
| | 80 | 40 – 80 | | **NZM74-80N-G**<br>200360 | | |
| | 100 | 80 – 100 | | **NZM74-100N-G**<br>200362 | | |
| | 125 | 80 – 125 | | **NZM74-125N-G**<br>200363 | | |
| | 160 | 125 – 160 | | **NZM74-160N-G**<br>200364 | | |
| | 200 | 160 – 200 | | **NZM74-200N-G**<br>200368 | | |
| With 60 % overload release in the neutral pole | 160 | 125 – 160 | 2 – 6 × $I_u$ | **NZM74-160/100N-G**<br>200366 | | 1 off |
| | 200 | 160 – 200 | 2 – 6 × $I_u$ | **NZM74-200/120N-G**<br>200370 | | 1 off |

With M8 screw terminal and cable lug cover

| | | | | | | |
|---|---|---|---|---|---|---|
| With 100 % overload release in the neutral pole | 63 | 40 – 63 | 2 – 6 × $I_u$ | **NZM74-63N-G-M8**<br>200438 | | 1 off |
| | 80 | 63 – 80 | | **NZM74-80N-G-M8**<br>200439 | | |
| | 100 | 80 – 100 | | **NZM74-100N-G-M8**<br>200440 | | |
| | 125 | 80 – 125 | | **NZM74-125N-G-M8**<br>200441 | | |
| | 160 | 125 – 160 | | **NZM74-160N-G-M8**<br>200638 | | |
| | 200 | 160 – 200 | | **NZM74-200N-G-M8**<br>200443 | | |
| With 60 % overload release in the neutral pole | 160 | 125 – 160 | 2 – 6 × $I_u$ | **NZM74-160/100N-G-M8**<br>200442 | | 1 off |
| | 200 | 160 – 200 | 2 – 6 × $I_u$ | **NZM74-200/120N-G-M8**<br>200444 | | 1 off |

| | Rating data | | Cannot be tripped remotely | | Can be tripped remotely with voltage release | | | |
|---|---|---|---|---|---|---|---|---|
| | | | **Type** Article no. | **Price** See Price List | **Type** Article no. | **Price** See Price List | Std. pack | **Notes** |
| | Rated uninterrupted current $I_u$ A | Short-circuit protection max. fuse A gG/gL | | | | | | |
| **Switch-disconnectors, 3-pole** | | | | | | | | |
|  | | | | | | | | |
| With clamp-type terminals | 63 | 160 | **P7-63** 049058 | | **NZM7-63** 049064 | | 1 off | Rated uninterrupted current up to 250 A<br>Main switch characteristics according to IEC/EN 60204-1, VDE 0113 Part 1<br>Isolating characteristics according to IEC/EN 60947-3, VDE 0660 Part 107<br>Protection against accidental contact according to IEC 536<br>NZM7 switch-disconnectors can be tripped remotely with undervoltage or shunt releases (U-/A-NZM).<br>RHI trip-indicating auxiliary contacts can be used to indicate the switching status. |
| | 100 | | **P7-100** 049059 | | **NZM7-100** 049065 | | | |
| | 125 | | **P7-125** 049060 | | **NZM7-125** 049066 | | | |
| | 160 | | **P7-160** 049061 | | **NZM7-160** 049067 | | | |
| | 200 | 250 | **P7-200** 049062 | | **NZM7-200** 049068 | | | |
| | 250 | 250 | **P7-250** 049063 | | **NZM7-250** 049069 | | | |
| With M8 screw terminal and cable lug cover | 63 | 160 | **P7-63-M8** 065871 | | **NZM7-63-M8** 065877 | | 1 off | |
| | 100 | | **P7-100-M8** 065872 | | **NZM7-100-M8** 065878 | | | |
| | 125 | | **P7-125-M8** 065873 | | **NZM7-125-M8** 065879 | | | |
| | 160 | | **P7-160-M8** 065874 | | **NZM7-160-M8** 065880 | | | |
| | 200 | 250 | **P7-200-M8** 065875 | | **NZM7-200-M8** 065881 | | | |
| | 250 | 250 | **P7-250-M8** 065876 | | **NZM7-250-M8** 065882 | | | |
| **Switch-disconnectors, 4-pole** | | | | | | | | |
|  | | | | | | | | |
| With clamp-type terminals | 63 | 160 | **P74-63** 200409 | | **NZM74-63** 200371 | | 1 off | |
| | 100 | | **P74-100** 200410 | | **NZM74-100** 200372 | | | |
| | 125 | | **P74-125** 200411 | | **NZM74-125** 200373 | | | |
| | 160 | | **P74-160** 200412 | | **NZM74-160** 200374 | | | |
| | 200 | 250 | **P74-200** 200413 | | **NZM74-200** 200375 | | | |
| | 250 | 250 | **P74-250** 200414 | | **NZM74-250** 200376 | | | |
| With M8 screw terminal and cable lug cover | 63 | 160 | **P74-63-M8** 200416 | | **NZM74-63-M8** 200421 | | 1 off | |
| | 100 | | **P74-100-M8** 200417 | | **NZM74-100-M8** 200422 | | | |
| | 125 | | **P74-125-M8** 200415 | | **NZM74-125-M8** 200423 | | | |
| | 160 | | **P74-160-M8** 200418 | | **NZM74-160-M8** 200424 | | | |
| | 200 | 250 | **P74-200-M8** 200419 | | **NZM74-200-M8** 200425 | | | |
| | 250 | 250 | **P74-250-M8** 200420 | | **NZM74-250-M8** 200426 | | | |




**Accessories**

1 Auxiliary contacts
2 Voltage release
3 Operating elements
4 Connection method and combinations of screw- and clamp-type terminals

Circuit-breakers, switch-disconnectors up to 1600 A

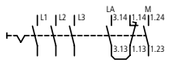
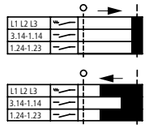
Moeller HPL0211-2004/2005

**For use as Emergency-Stop device**

According to IEC/EN 60204-1, VDE 0113 Part 1
With red-yellow door coupling rotary handle
Lockable in 0 position,
With cover interlock
Degree of protection IP55.

**Type**
Article no.

**Price**
See Price List

| Contact sequence | Contact sequence | Rated uninterrupted current | Motor rating AC-23 | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | 220 V 230 V 240 V | 380 V 400 V 415 V | 500 V | 660 V 690 V | | | |
| | | $I_u$ | $P$ | $P$ | $P$ | $P$ | | | |
| | | A | kW | kW | kW | kW | | | |
| **Safety switches** | | | | | | | | | |
|  |  | 63 | 15 | 30 | 37 | 55 | **P7-63/CI-RT-SI/LAM** 225514 | | |
| | | 100 | 30 | 45 | 55 | 90 | **P7-100/CI-RT-SI/LAM** 225515 | | |
| | | 160 | 45 | 75 | 110 | 132 | **P7-160/CI-RT-SI/LAM** 225516 | | |
| | | 200 | 55 | 90 | 132 | 160 | **P7-200/CI-RT-SI/LAM** 225517 | | |
| | | 250 | 70 | 110 | 160 | 215 | **P7-250/CI-RT-SI/LAM** 225518 | | |

Moeller HPL0211-2004/2005

**Without Emergency-Stop function**

With grey door coupling rotary handle,
Lockable in 0 position,
With cover interlock
Degree of protection IP55.

**Type**
Article no.

**Price**
See Price List

| | | Std. pack | Enclosure description insulated enclosure | Terminals for 5th conductor (neutral pole) for fitting by user | Notes |
|---|---|---|---|---|---|
| **P7-63/CI-SI/LAM** 225519 | | 1 off | CI23-150 + 2 × FL2-3 | K25/1 | Enclosures for separate mounting, with cable entry. Include fixing straps for wall mounting.<br>Only for switches with terminals.<br>Degree of protection IP55.<br>Not in combination with remote operator. |
| **P7-100/CI-SI/LAM** 225520 | | | KST34–150+KS3 | K95/1N/BR | |
| **P7-160/CI-SI/LAM** 225521 | | | KST34–150+KS3 | K95/1N/BR | |
| **P7-200/CI-SI/LAM** 225522 | | | KST34–150+KS3 | K95/1N/BR | |
| **P7-250/CI-SI/LAM** 225523 | | | CI45-200 + 2 × KS4 | K150/1/BR | |

**Notes**

**Engineering notes**
Maintenance, repair and safety switches all have the same electrical function. They are designed to safely isolate electrical installations (loads) from mains power during maintenance and repair work and to ensure that a hazard does not arise which endangers personnel, machinery and production materials.
Safety switches are main switches with an additional enclosure. Installed in the immediate vicinity of the motor or the electrical load they act as switch-disconnectors for that load. Provided the five safety rules defined in VDE 0105 are observed, they should ensure a safe working environment. This is particularly important if there is any danger of the main switch being inadvertently operated.

**Application**
By securing the switch in the OFF position with his own padlock (up to three can be fitted), the fitter/electrician can protect himself against the possibility of any other person switching the machine on.
Maintenance switches are merely additional, enclosed main switches with a padlocking facility.

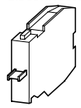
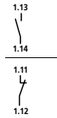
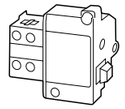
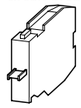
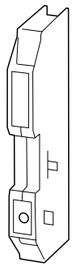
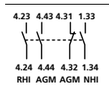
**Features**
Safety switches are housed in insulated enclosures and bear the inscription "Safety switch" on a bright orange label. Labels are available in other languages.
Switches to be used as Emergency-Stop devices have a special red handle with a yellow locking collar in accordance with STOP category 0 as defined by IEC/EN 60204. If the switch is not approved as an Emergency-Stop switch, both parts are grey.
The cover and handle can be interlocked by fitting a padlock.

**Selection**
Switches must be selected according to the following criteria:
- The motor switching capacity, where the switch is fitted in such a way that the operator may use it for operational ON and OFF switching.
- The rating data always applies for 3 poles. When the motor rating is divided between 6 poles, such as for star-delta switching, a 6-pole switch can be used to control 1.73 times the rated power.
- If the switch has a load-shedding contact (LA), you can select the appropriate switch according to the uninterrupted current. The load-shedding contact is an auxiliary contact, which is closed in the ON position and opens early when switching off, so that a contactor located in the circuit takes over the switching capacity and the maintenance/safety switch operates at zero load. When switching on, the load-shedding contact closes later than or at the same time as the main contacts. This is achieved by connecting an early-make auxiliary contact (VHI) and a standard auxiliary contact (NHI) in series.
- If the switch is prevented from switching under load, you can also select it according to the continuous current. With a suitable handle and collar, you can, for example, lock the switch in its ON position. This is not permissible for switches with a red/yellow handle.

**Safety switch with load shedding and annunciation (example)**

Circuit-breakers, switch-disconnectors up to 1600 A

Moeller HPL0211-2004/2005

| | Contact sequence | Type suffix<br>Article no.<br>When ordered with basic unit | **Price**<br>See Price List | Std. pack |
|---|---|---|---|---|
| **NHI standard auxiliary contacts** | | | | |
| Switching with the main contacts, used for indication and interlock functions.<br>Two standard auxiliary contacts can be clipped onto the circuit-breaker/switch-disconnector<br>  |  | **+EK10**<br>051082 | | 1 off |
| |  | **+EK01**<br>051083 | | 1 off |
| **VHI early-make auxiliary contacts** | | | | |
| For interlock and load shedding circuits.<br>  |  | **+VHI-NZM7**<br>051085 | | 1 off |
| **RHI trip-indicating auxiliary contacts** | | | | |
| General trip indication<br>1 RHI trip-indicating auxiliary contact as make or break contact insertable in the circuit-breaker/switch-disconnector.<br>  |  | **+EK10**<br>051082 | | 1 off |
| |  | **+EK01**<br>051083 | | 1 off |
| **NAGM trip-indicating auxiliary contact** | | | | |
| With short-circuit indicator and standard auxiliary contact,<br>Allows a differential fault message:<br><br>RHI: Tripping through voltage release, overload or short-circuit<br>AGM: Tripping through short-circuit<br>NHI: Position of the main contacts<br>  |  | **+NAGM-NZM7**<br>051087 | | 1 off |

Moeller HPL0211-2004/2005

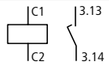
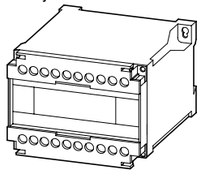
| Type<br>Article no. when ordered separately | **Price**<br>See Price List | Std. pack | **Notes** |
|---|---|---|---|
| **EK10**<br>027039 | | 20 off | – |
| **EK01**<br>031785 | | 20 off | – |
| **VHI-NZM7**<br>051084 | | 1 off | Cannot be used in conjunction with R-NZM7 remote operators. |
| **EK10**<br>027039 | | 20 off | – |
| **EK01**<br>031785 | | 20 off | – |
| | | | Manual reset of the circuit-breaker after a short-circuit trip:<br>After a short-circuit, the red short-circuit indicator must be reset by hand before the circuit-breaker is restarted. |

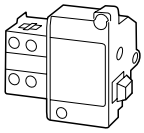
Auxiliary contacts and voltage releases can be combined as follows:
In addition to NHI (2 × EK...) and RHI (1 × EK...) a single optional VHI, A, AVHI, U or U(V)HI can be installed at the same time.

Circuit-breakers, switch-disconnectors up to 1600 A

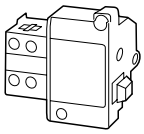
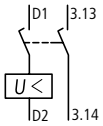
Moeller HPL0211-2004/2005

Moeller HPL0211-2004/2005

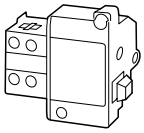
| Contact sequence | | Rated control voltage $U_s$ V | Type suffix Article no. for ordering with basic unit | **Price** See Price List | Std. pack | Type Article no. when ordered separately | **Price** See Price List | Std. pack | **Notes** |
|---|---|---|---|---|---|---|---|---|---|
| **Shunt release** | | | | | | | | | |
| For mounting in the NZM circuit-breaker or switch-disconnector, switches off the circuit-breaker/switch-disconnector instantaneously after voltage pulse | | | | | | | | | |
|  | | | | | | | | | |
| Without early-make auxiliary contacts | | | | | | | | | |
| |   | AC/DC | 12 | **+A-NZM7(12V)** 027640 | | 1 off | **A-NZM7(12V)** 027360 | | 1 off | Suited for uninterrupted operation<br>For mounting in NZM circuit-breaker and switch-disconnector.<br>Universal version 0 – 400 Hz AC/DC. |
| | | AC/DC | 24 | **+A-NZM7(24V)** 027641 | | | **A-NZM7(24V)** 027361 | | | |
| | | AC/DC | 48 | **+A-NZM7(48V)** 027642 | | | **A-NZM7(48V)** 027362 | | | |
| | | AC/DC | 60 | **+A-NZM7(60V)** 027643 | | | **A-NZM7(60V)** 027363 | | | |
| | | AC/DC | 110 – 120 | **+A-NZM7(110-120V)** 027644 | | | **A-NZM7(110-120V)** 027364 | | | |
| | | AC/DC | 125 – 130 | **+A-NZM7(125-130V)** 027304 | | | **A-NZM7(125-130V)** 028831 | | | |
| | | AC/DC | 208 – 215 | **+A-NZM7(208-215V)** 027305 | | | **A-NZM7(208-215V)** 028832 | | | |
| | | AC/DC | 220 – 240 | **+A-NZM7(220-240V)** 026469 | | | **A-NZM7(220-240V)** 026471 | | | |
| | | AC/DC | 380 – 415 | **+A-NZM7(380-415V)** 027306 | | | **A-NZM7(380-415V)** 028833 | | | |
| | | AC/DC | 440 – 480 | **+A-NZM7(440-480V)** 027307 | | | **A-NZM7(440-480V)** 028834 | | | |
| | | AC/DC | 500 | **+A-NZM7(500V)** 027308 | | | **A-NZM7(500V)** 028835 | | | |
| With early-make auxiliary contacts | | | | | | | | | |
| |   | AC/DC | 12 | **+AVHI-NZM7(12V)** 028897 | | 1 off | **AVHI-NZM7(12V)** 028836 | | 1 off | Suited for uninterrupted operation<br>For mounting in NZM circuit-breaker and switch-disconnector.<br>Universal version 0 – 400 Hz AC/DC.<br>Shunt release and auxiliary switch operate independently of each other. The early-make function of the VHI is not effective in conjunction with R-NZM7. |
| | | AC/DC | 24 | **+AVHI-NZM7(24V)** 028898 | | | **AVHI-NZM7(24V)** 028837 | | | |
| | | AC/DC | 48 | **+AVHI-NZM7(48V)** 028899 | | | **AVHI-NZM7(48V)** 028838 | | | |
| | | AC/DC | 60 | **+AVHI-NZM7(60V)** 028900 | | | **AVHI-NZM7(60V)** 028839 | | | |
| | | AC/DC | 110 – 120 | **+AVHI-NZM7(110-120V)** 028901 | | | **AVHI-NZM7(110-120V)** 028840 | | | |
| | | AC/DC | 125 – 130 | **+AVHI-NZM7(125-130V)** 028902 | | | **AVHI-NZM7(125-130V)** 028841 | | | |
| | | AC/DC | 208 – 215 | **+AVHI-NZM7(208-215V)** 028903 | | | **AVHI-NZM7(208-215V)** 028842 | | | |
| | | AC/DC | 220 – 240 | **+AVHI-NZM7(220-240V)** 026470 | | | **AVHI-NZM7(220-240V)** 028843 | | | |
| | | AC/DC | 380 – 415 | **+AVHI-NZM7(380-415V)** 028904 | | | **AVHI-NZM7(380-415V)** 028844 | | | |
| | | AC/DC | 440 – 480 | **+AVHI-NZM7(440-480V)** 028905 | | | **AVHI-NZM7(440-480V)** 028845 | | | |
| | | AC/DC | 500 | **+AVHI-NZM7(500V)** 028906 | | | **AVHI-NZM7(500V)** 028846 | | | |
| Capacitor unit<br>in conjunction with 230 V shunt release | | – | – | | | | **NZM-XCM** 229413 | | 1 off | Enables safe use of the circuit-breaker as a mesh network circuit-breaker in a range from 0 – 110 % $U_n$ with constant shut-down time of 40 ms.<br>If the mains voltage is absent, the installed capacitor supplies power for actuating the shunt release for at least 12 hours.<br>IP20 enclosure. |
|  | | | | | | | | | | |

| Contact sequence | | Rated control voltage $U_s$ V | Type suffix Article no. for ordering with basic unit | Price See Price List | Type Article no. when ordered separately | Price See Price List | Std. pack |
|---|---|---|---|---|---|---|---|
| **Undervoltage release, non-delayed** | | | | | | | |
| For mounting in NZM circuit-breaker or switch-disconnector, trips is the control voltage sinks below 70 – 35% $U_s$, can be used for emergency-stop systems | | | | | | | |
| Without early-make auxiliary contacts | | | | | | | |
|  | | | | | | | |
|   | AC | 24 | **+U-NZM7(24VAC)** 027309 | | **U-NZM7(24VAC)** 028847 | | 1 off |
| | | 48 | **+U-NZM7(48VAC)** 027310 | | **U-NZM7(48VAC)** 028848 | | |
| | | 60 | **+U-NZM7(60VAC)** 027311 | | **U-NZM7(60VAC)** 028849 | | |
| | | 110 – 120 | **+U-NZM7(110-120VAC)** 027312 | | **U-NZM7(110-120VAC)** 028850 | | |
| | | 125 – 130 | **+U-NZM7(125-130VAC)** 027313 | | **U-NZM7(125-130VAC)** 028851 | | |
| | | 208 – 215 | **+U-NZM7(208-215VAC)** 027314 | | **U-NZM7(208-215VAC)** 028852 | | |
| | | 220 – 240 | **+U-NZM7(220-240VAC)** 027315 | | **U-NZM7(220-240VAC)** 027608 | | |
| | | 380 – 415 | **+U-NZM7(380-415VAC)** 027316 | | **U-NZM7(380-415VAC)** 065565 | | |
| | | 440 – 480 | **+U-NZM7(440-480VAC)** 027317 | | **U-NZM7(440-480VAC)** 028854 | | |
| | | 500 | **+U-NZM7(500VAC)** 027318 | | **U-NZM7(500VAC)** 028855 | | |
| | DC | 24 | **+U-NZM7(24VDC)** 027599 | | **U-NZM7(24VDC)** 027607 | | |
| | | 48 | **+U-NZM7(48VDC)** 027342 | | **U-NZM7(48VDC)** 028879 | | |
| | | 60 | **+U-NZM7(60VDC)** 027343 | | **U-NZM7(60VDC)** 028880 | | |
| | | 110 – 120 | **+U-NZM7(110-120VDC)** 027344 | | **U-NZM7(110-120VDC)** 028881 | | |
| | | 125 – 130 | **+U-NZM7(125-130VDC)** 027345 | | **U-NZM7(125-130VDC)** 028882 | | |
| | | 208 – 215 | **+U-NZM7(208-215VDC)** 027346 | | **U-NZM7(208-215VDC)** 028883 | | |
| | | 220 – 240 | **+U-NZM7(220-240VDC)** 027347 | | **U-NZM7(220-240VDC)** 028884 | | |
| | | 380 – 415 | **+U-NZM7(380-415VDC)** 027348 | | **U-NZM7(380-415VDC)** 028885 | | |
| | | 440 – 480 | **+U-NZM7(440-480VDC)** 027349 | | **U-NZM7(440-480VDC)** 028886 | | |
| | | 500 | **+U-NZM7(500VDC)** 027350 | | **U-NZM7(500VDC)** 028887 | | |

Moeller HPL0211-2004/2005

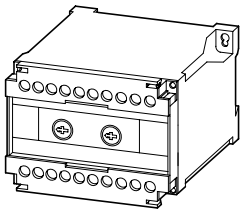
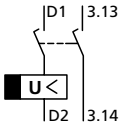
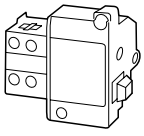
| Contact sequence | | Rated control voltage $U_s$ V | Type suffix Article no. for ordering with basic unit | Price See Price List | Type Article no. when ordered separately | Price See Price List | Std. pack |
|---|---|---|---|---|---|---|---|
| With early-make auxiliary contacts[1] | | | | | | | |
|  | | | | | | | |
|   | AC | 24 | **+UHI-NZM7(24VAC)** 027319 | | **UHI-NZM7(24VAC)** 028856 | | 1 off |
| | | 48 | **+UHI-NZM7(48VAC)** 027320 | | **UHI-NZM7(48VAC)** 028857 | | |
| | | 60 | **+UHI-NZM7(60VAC)** 027321 | | **UHI-NZM7(60VAC)** 028858 | | |
| | | 110 – 120 | **+UHI-NZM7(110-120VAC)** 027322 | | **UHI-NZM7(110-120VAC)** 028859 | | |
| | | 125 – 130 | **+UHI-NZM7(125-130VAC)** 027323 | | **UHI-NZM7(125-130VAC)** 028860 | | |
| | | 208 – 215 | **+UHI-NZM7(208-215VAC)** 027324 | | **UHI-NZM7(208-215VAC)** 028861 | | |
| | | 220 – 240 | **+UHI-NZM7(220-240VAC)** 027602 | | **UHI-NZM7(220-240VAC)** 027610 | | |
| | | 380 – 415 | **+UHI-NZM7(380-415VAC)** 027325 | | **UHI-NZM7(380-415VAC)** 028862 | | |
| | | 440 – 480 | **+UHI-NZM7(440-480VAC)** 027326 | | **UHI-NZM7(440-480VAC)** 028863 | | |
| | | 500 | **+UHI-NZM7(500VAC)** 027327 | | **UHI-NZM7(500VAC)** 028864 | | |
| | DC | 24 | **+UHI-NZM7(24VDC)** 027601 | | **UHI-NZM7(24VDC)** 027609 | | |
| | | 48 | **+UHI-NZM7(48VDC)** 027351 | | **UHI-NZM7(48VDC)** 028888 | | |
| | | 60 | **+UHI-NZM7(60VDC)** 027352 | | **UHI-NZM7(60VDC)** 028889 | | |
| | | 110 – 120 | **+UHI-NZM7(110-120VDC)** 027353 | | **UHI-NZM7(110-120VDC)** 028890 | | |
| | | 125 – 130 | **+UHI-NZM7(125-130VDC)** 027354 | | **UHI-NZM7(125-130VDC)** 028891 | | |
| | | 208 – 215 | **+UHI-NZM7(208-215VDC)** 027355 | | **UHI-NZM7(208-215VDC)** 028892 | | |
| | | 220 – 240 | **+UHI-NZM7(220-240VDC)** 027356 | | **UHI-NZM7(220-240VDC)** 028893 | | |
| | | 380 – 415 | **+UHI-NZM7(380V-415VDC)** 027357 | | **UHI-NZM7(380-415VDC)** 028894 | | |
| | | 440 – 480 | **+UHI-NZM7(440-480VDC)** 027358 | | **UHI-NZM7(440-480VDC)** 028895 | | |
| | | 500 | **+UHI-NZM7(500VDC)** 027359 | | **UHI-NZM7(500VDC)** 028896 | | |

**Notes** [1] Cannot be used in conjunction with R-NZM7 remote operator

| Contact sequence | | Rated control voltage $U_s$ V | Type suffix Article no. for ordering with basic unit | **Price** See Price List | Type Article no. for separate order | **Price** See Price List | Std. pack |
|---|---|---|---|---|---|---|---|
| **Undervoltage release, non-delayed** | | | | | | | |
| For mounting in NZM circuit-breaker or switch-disconnector, trips is the control voltage sinks below 70 – 35% $U_s$, can be used for emergency-stop systems | | | | | | | |
| With early-make auxiliary contacts[1] | | | | | | | |
|  | AC | 24 | **+UHI20-NZM7(24VAC)** 231578 | | **UHI20-NZM7(24VAC)** 231602 | | 1 off |
| | AC | 48 | **+UHI20-NZM7(48VAC)** 231579 | | **UHI20-NZM7(48VAC)** 231603 | | |
| | AC | 60 | **+UHI20-NZM7(60VAC)** 231580 | | **UHI20-NZM7(60VAC)** 231604 | | |
| | AC | 110 – 120 | **+UHI20-NZM7(110-120VAC)** 231581 | | **UHI20-NZM7(110-120VAC)** 231605 | | |
| | AC | 125 – 130 | **+UHI20-NZM7(125-130VAC)** 231583 | | **UHI20-NZM7(125-130VAC)** 231606 | | |
| | AC | 208 – 215 | **+UHI20-NZM7(208-215VAC)** 231584 | | **UHI20-NZM7(208-215VAC)** 231607 | | |
| | AC | 220 – 240 | **+UHI20-NZM7(220-240VAC)** 231586 | | **UHI20-NZM7(220-240VAC)** 231608 | | |
| | AC | 380 – 415 | **+UHI20-NZM7(380-415VAC)** 231587 | | **UHI20-NZM7(380-415VAC)** 231609 | | |
| | AC | 440 – 480 | **+UHI20-NZM7(440-480VAC)** 231588 | | **UHI20-NZM7(440-480VAC)** 231610 | | |
| | AC | 500 | **+UHI20-NZM7(500VAC)** 231589 | | **UHI20-NZM7(500VAC)** 231611 | | |
| | DC | 24 | **+UHI20-NZM7(24VDC)** 231592 | | **UHI20-NZM7(24VDC)** 231612 | | |
| | DC | 48 | **+UHI20-NZM7(48VDC)** 231593 | | **UHI20-NZM7(48VDC)** 231613 | | |
| | DC | 60 | **+UHI20-NZM7(60VDC)** 231594 | | **UHI20-NZM7(60VDC)** 231614 | | |
| | DC | 110 – 120 | **+UHI20-NZM7(110-120VDC)** 231595 | | **UHI20-NZM7(110-120VDC)** 231615 | | |
| | DC | 125 – 130 | **+UHI20-NZM7(125-130VDC)** 231596 | | **UHI20-NZM7(125-130VDC)** 231616 | | |
| | DC | 208 – 215 | **+UHI20-NZM7(208-215VDC)** 231597 | | **UHI20-NZM7(208-215VDC)** 231617 | | |
| | DC | 220 – 240 | **+UHI20-NZM7(220-240VDC)** 231598 | | **UHI20-NZM7(220-240VDC)** 231618 | | |
| | DC | 380 – 415 | **+UHI20-NZM7(380-415VDC)** 231599 | | **UHI20-NZM7(380-415VDC)** 231619 | | |
| | DC | 440 – 480 | **+UHI20-NZM7(440-480VDC)** 231600 | | **UHI20-NZM7(440-480VDC)** 231620 | | |
| | DC | 500 | **+UHI20-NZM7(500VDC)** 231601 | | **UHI20-NZM7(500VDC)** 231621 | | |

**Notes** [1] The early-make function of the VHI is not effective in conjunction with R-NZM7.

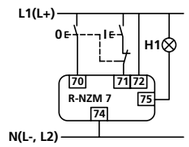
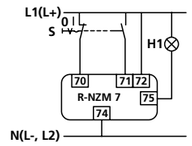
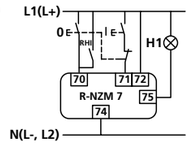
Moeller HPL0211-2004/2005

| | Contact sequence | | Rated control voltage $U_s$ V | Type suffix Article no. for ordering with basic unit | Price See Price List | Type Article no. when ordered separately | Price See Price List | Std. pack | |
|---|---|---|---|---|---|---|---|---|---|
| **Undervoltage releases, off-delayed** | | | | | | | | | |
| Combination of a separate delay unit and undervoltage release in the circuit-breaker, adjustable delay time | | | | | | | | | |
|  | | | | | | | | | |
| Without early-make auxiliary contacts | | | | | | | | | |
| Delay time 0.06 – 16 s |   | AC | 24<br>220 – 240<br>380 – 440<br>480 – 550 | **+UVU-NZM7**<br>215194 | | **UVU-NZM7**<br>215193 | | 1 off | For other control voltages use 50 VA control transformer. Fixing: top-hat rail or screws |
| | | DC | 24 | | | | | | |
| With early-make auxiliary contacts | | | | | | | | | |
| Delay time 0.06 – 16 s |   | AC | 24<br>220 – 240<br>380 – 440<br>480 – 550 | **+UVUHI-NZM7**<br>225327 | | **UVUHI-NZM7**<br>225326 | | 1 off | Combination of a separate delay unit, undervoltage release and early-make auxiliary contact. Undervoltage release and two auxiliary switches operate independently of each other. Cannot be used in conjunction with R-NZM7 remote operators. For other control voltages use 50 VA control transformer. |
| | | DC | 24 | | | | | | |
| **Supplementary release coil** | | | | | | | | | |
| For delayed undervoltage release UVU(HI)-NZM7 | | | | | | | | | |
|  | | | | | | | | | |
| Without early-make auxiliary contacts | – | – | – | | | **UV200-NZM7-OAVE**<br>207565 | | 1 off | Replacement release, if an electrical delay unit of the UVU-NZM is already available. |
| With early-make auxiliary contacts | – | – | – | | | **UVHI200-NZM7-OAVE**<br>207567 | | 1 off | |

Circuit-breakers, switch-disconnectors up to 1600 A

Moeller HPL0211-2004/2005

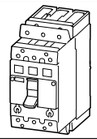
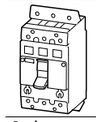
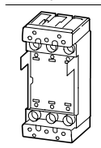
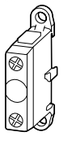
| o | | Rated control voltage $U_s$ V | **Type suffix** Article no. for ordering with basic unit | **Price** See Price List | Std. pack |
|---|---|---|---|---|---|
| **Residual-current circuit-breaker** | | | | | |
| **Pulse-current sensitive**<br>For 4-pole NZM7 circuit-breakers and switch-disconnectors up to 200 A<br>Independent of mains and auxiliary voltage, $U_N$ = 380 – 690 V 50/60 Hz | | | | | |
| Rated fault current $I_{\Delta n}$ = 0.03 A | – | – | **+FIP30-NZM74**<br>200491 | | 1 off |
| Rated fault current $I_{\Delta n}$ = 0.1 - 0.3 - 1.0 - 3 A<br>Delay time $t_d$ = 60 - 150 - 300 - 450 ms | – | – | **+FIPV-NZM74**<br>200490 | | 1 off |
| **Remote operator** | | | | | |
| For remote switching of NZM7 circuit-breakers and NZM/P7 switch-disconnector, switching times:<br>ON 100 ms, OFF 100 ms, local manual switching possible.<br>Suitable for system transfer (can be synchronized) | | | | | |
| – | AC/DC | 110 – 120 | **+R-NZM7(110-120V)**<br>027634 | | 1 off |
| – | AC/DC | 220 – 240 | **+R-NZM7(220-240V)**<br>026473 | | |
| – | AC | 380 – 415 | **+R-NZM7(380-415VAC)**<br>027638 | | |
| – | DC | 24 | **+R-NZM7(24V)**<br>027632 | | |
| – | DC | 48 – 60 | **+R-NZM7(48-60V)**<br>027633 | | |
| **Shroud for 4th pole** | | | | | |
| Additional shroud for surface mounting the R-NZM7 on 4-pole switches, included as standard when ordering the remote operator with switch | – | – | | | |

| **Type** Article no. for ordering with basic unit | **Price** See Price List | Std. pack | **Notes** |
|---|---|---|---|
| | | | Residual-current protective module is fitted directly to circuit-breaker or trippable NZM switch-disconnector.<br>2 auxiliary contacts (1 M, 1 B) for fault current trip indication.<br>The module width is equal to the switch width.<br>Cannot be combined with remote operator.<br>Without remote reset, test function connected between L1 and L3. |
| **R-NZM7(110-120V)**<br>027637 | | 1 off | 3-wire control<br>  |
| **R-NZM7(220-240V)**<br>026474 | | | |
| **R-NZM7(380-415VAC)**<br>027639 | | | |
| **R-NZM7(24V)**<br>027635 | | | 2-wire control<br>  |
| **R-NZM7(48-60V)**<br>027636 | | | |
| **AVP-R-NZM74**<br>200476 | | 1 off | 3-wire control with automatic reset to the OFF position after the switch has tripped.<br>  <br>Not in combination with residual-current protective module. When ordering separately and using with 4-pole devices, a shroud for the fourth pole (AVP-R-NZM74) is required. |

Circuit-breakers, switch-disconnectors up to 1600 A

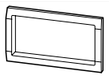
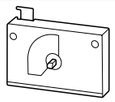
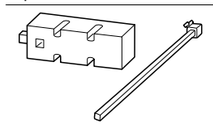
Moeller HPL0211-2004/2005

Moeller HPL0211-2004/2005

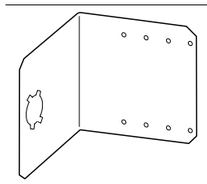
| | For use with | | **Type suffix** Article no. for ordering with basic unit | **Price** See Price List | Std. pack | **Type** Article no. for separate order | **Price** See Price List | Std. pack | Enclosure description insulated enclosure | Terminals for 5th conductor (neutral pole) for fitting by user | | **Notes** |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Switch-disconnectors up to A | Circuit-breakers up to A | | | | | | | | | | |
| **Plug-in adapter elements** | | | | | | | | | | | | |
| For 3-pole NZM7 circuit-breakers and switch-disconnectors up to 200 A | | | | | | | | | | | | |
| Complete plug-in adapter, only available in conjunction with the switch<br>Only available together with switch | | | | | | | | | | | | |
|  With clamp-type terminals | – | – | **+AS3-NZM7** 200484 | | 1 off | | | | – | – | – | Plug-in adapter not suitable for use with P7 switch-disconnector. Order the HS...NZM7 control circuit connector separately. |
| With M8 screw terminals | – | – | **+AS3-NZM7-M8** 207059 | | 1 off | | | | – | – | – | |
| Plug-in module, only available in conjunction with the switch<br>Only available together with switch | | | | | | | | | | | | |
|  – | – | – | **+ASW3-NZM7** 200485 | | 1 off | | | | – | – | – | |
| Socket<br>For 3-pole NZM7 circuit-breakers and switch-disconnectors up to 200 A | | | | | | | | | | | | |
|  With clamp-type terminals | – | – | | | | **ASS-NZM7** 200486 | | 1 off | – | – | – | |
| With M8 screw terminals | – | – | | | | **ASS-NZM7-M8** 207060 | | 1 off | – | – | – | |
| Control circuit connector for plug-in adapter<br>For 3-pole NZM7 circuit-breakers and switch-disconnectors up to 200 A | | | | | | | | | | | | |
|  For VHI/EK auxiliary contact/trip-indicating auxiliary contact<br>For A(VHI)/U(V)(HI) shunt releases/ undervoltage release | – | – | **+HS-NZM7** 200487 | | 1 off | | | | – | – | – | Consists of a plug and socket. The socket is mounted separately in the control panel. |
| For NAGM annunciation unit | – | – | **+HS-NAGM-NZM7** 200488 | | | | | | – | – | – | |
| For R<br>remote operator | – | – | **+HS-R(S)-NZM7** 200489 | | | | | | – | – | – | |
| **Insulated enclosures for switch** | | | | | | | | | | | | |
| For 3- and 4-pole switches<br>With door coupling rotary handle, rotary drive and extension shaft | | | | | | | | | | | | |
| With black door coupling rotary handle | 63 | 63 | **+CI-NZM7-63** 065897 | | 1 off | **CI-NZM7-63** 065898 | | 1 off | CI23-150 + 2 × FL2-3 | K 25/1, cannot be used with NAGM | Only for 3-pole circuit-breaker/ switch-disconnector; for 4-pole switches use CI-...-160. | Enclosures for separate mounting, with cable entry.<br>Include fixing straps for wall mounting.<br>Only for switches with terminals.<br>Degree of protection IP55.<br>Not in combination with remote operator. |
| | 160 | 125 | **+CI-NZM7-160** 065901 | | | **CI-NZM7-160** 065902 | | | KST34–150+KS3 | K 95/1 N/BR | – | |
| | 250 | 250 | **+CI-NZM7-250** 065905 | | | **CI-NZM7-250** 065906 | | | CI45-200 + 2 × KS4 | K150/1N/BR | – | |
| With red-yellow door coupling rotary handle,<br>For use as Emergency-Stop device according to IEC/EN 60204-1 | 63 | 63 | **+CI-RT-NZM7-63** 065899 | | | **CI-RT-NZM7-63** 065900 | | | CI23-150 + 2 × FL2-3 | K 25/1, cannot be used with NAGM | Only for 3-pole circuit-breaker/ switch-disconnector; for 4-pole switches use CI-...-160. | |
| | 160 | 125 | **+CI-RT-NZM7-160** 065903 | | | **CI-RT-NZM7-160** 065904 | | | KST34–150+KS3 | K 95/1 N/BR | – | |
| | 250 | 250 | **+CI-RT-NZM7-250** 065907 | | | **CI-RT-NZM7-250** 065908 | | | CI45-200 + 2 × KS4 | K150/1N/BR | – | |
| **Additional terminal** | | | | | | | | | | | | |
| For passing the neutral conductor through<br>  63 A, flexible, 6 – 16 mm² | 63 | 63 | | | | **K25/1** 096200 | | 10 off | – | – | – | – |
| 100 A, flexible, 10 – 35 mm² | 100 | 100 | | | | **K50/1** 098573 | | 10 off | – | – | – | – |
| – | 160 | 160 | | | | **K95/1N/BR** 012336 | | 1 off | – | – | – | – |
| – | 250 | 250 | | | | **K150/1/BR** 014709 | | 1 off | – | – | – | – |

Moeller HPL0211-2004/2005

Moeller HPL0211-2004/2005

| | | Type suffix<br>Article no. for ordering with basic unit | Price<br>See Price List | Std. pack | Type<br>Article no. when ordered separately | Price<br>See Price List | Std. pack | | Notes |
|---|---|---|---|---|---|---|---|---|---|
| **Insulating surround** | | | | | | | | | |
| For use here the toggle lever protrudes beyond the enclosure, degree of protection IP40 | | | | | | | | | |
|  | – | **+RT-NZM7**<br>051093 | | 1 off | **RT-NZM7**<br>051092 | | 1 off | – | Screw fixed at rear, can be inscribed |
| **Rotary drive** | | | | | | | | | |
| Converts the On and Off switching from a toggle to a rotary movement | | | | | | | | | |
|  | With additional padlocking feature | **+DA-NZM7**<br>051097 | | 1 off | **DA-NZM7**<br>051096 | | 1 off | Lockable in the OFF position with up to three padlocks. Hasp thickness: 4 – 8 mm | – |
| | Without padlocking feature | **+DAOV-NZM7**<br>051328 | | 1 off | **DAOV-NZM7**<br>051327 | | 1 off | – | – |
| **Rotary handle for surface mounting switches** | | | | | | | | | |
| Black, rotary drive required | | | | | | | | | |
|  | – | **+HU-NZM7**<br>051487 | | 1 off | **HU-NZM7**<br>051329 | | 1 off | – | – |
| **Door coupling rotary handle for rear mounting switches** | | | | | | | | | |
| Degree of protection IP55, in vertical mounting position IP65<br>With padlocking feature, rotary drive required | | | | | | | | | |
|  | Black | **+H-NZM7**<br>051712 | | 1 off | **H-NZM7**<br>051711 | | 1 off | Lockable in the OFF or ON position with up to three padlocks. Hasp thickness: 4 – 8 mm | For horizontal installation of the switch, a special cog is required (on request).<br>Handle position maintained when the door or cover are being opened |
| | Red-yellow<br>For use of the switch as an Emergency-Stop device according to IEC/EN 60204-1 | **+RH-NZM7**<br>052141 | | | **RH-NZM7**<br>052089 | | | RH-NZM7 is only lockable in the OFF position with up to three padlocks. Hasp thickness: 4 – 8 mm | |
|  | Black, without padlocking feature | **+HOV-NZM7**<br>051714 | | | **HOV-NZM7**<br>051713 | | | – | |
| **Extension shaft** | | | | | | | | | |
| Can be cut to required length. | | | | | | | | | |
|  | For mounting depth 175 – 400 mm | **+A400-NZM7**<br>052741 | | 1 off | **A400-NZM7**<br>052572 | | 1 off | Up to 400 mm | – |
| | For mounting depth 260 – 600 mm | **+A600-NZM7**<br>052927 | | 1 off | **A600-NZM7**<br>053373 | | 1 off | Up to 600 mm | – |
| **Side-wall operator** | | | | | | | | | |
| For actuation of the switch on the side of the control panel, diverting the rotary movement by 90°, is fitted on top of the DA(OV) rotary drive, extension shaft 280 mm with special adapter is included | | | | | | | | | |
|  | For operation on the left | **+SWA-NZM7-L**<br>054520 | | 1 off | **SWA-NZM7-L**<br>054519 | | 1 off | – | – |
| | For operation on the right | **+SWA-NZM7-R**<br>054522 | | 1 off | **SWA-NZM7-R**<br>054521 | | 1 off | – | – |

Moeller HPL0211-2004/2005

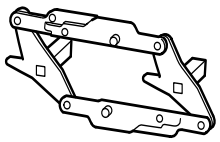
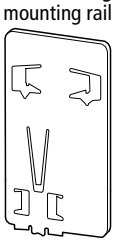
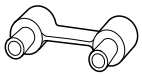
| | | Type suffix<br>Article no. for ordering with basic unit | Price<br>See Price List | Std. pack |
|---|---|---|---|---|
| **Mounting bracket** | | | | |
| For use with switches with side wall operator, enables direct installation in the side wall of the control panel | | | | |
|  | – | **+MSWA-NZM7**<br>054524 | | 1 off |
| **Main switch assembly kit** | | | | |
| | With black door coupling rotary handle | **+V-NZM7-SW**<br>065590 | | 1 off |
| | With red-yellow door coupling rotary handle<br>For use of the switch as an Emergency-Stop device according to IEC/EN 60204-1 | **+V-NZM7**<br>061543 | | 1 off |
| **Main switch assembly kit for side wall installation** | | | | |
| For operation on the left | | | | |
| | With black rotary handle | **+EA-NZM7-L**<br>205049 | | 1 off |
| | Red-yellow; allows switch to be used as Emergency-Stop device according to IEC/EN 60204-1 | **+EA-RT-NZM7-L**<br>205053 | | 1 off |
| For operation on the right | | | | |
| | With black rotary handle | **+EA-NZM7-R**<br>205051 | | 1 off |
| | Red-yellow; allows switch to be used as Emergency-Stop device according to IEC/EN 60204-1 | **+EA-RT-NZM7-R**<br>205055 | | 1 off |
| **External warning plate** | | | | |
| "Main switch – open in 0 position only" | | | | |
| | German | **+ZFS61-NZM7**<br>051088 | | 1 off |
| | English | **+ZFS62-NZM7**<br>065937 | | |
| | French | **+ZFS63-NZM7**<br>065938 | | |
| | Blank (for engraving or printing) | **+ZFS60-NZM7**<br>065895 | | |
| | Further languages | **+ZFS*-NZM7**<br>999979 | | |
| **Lightning symbol** | | | | |
| Including terminal marking for main switch | | | | |
| | – | | | |



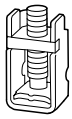
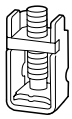
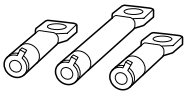


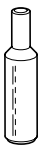
Moeller HPL0211-2004/2005

| Type<br>Article no. when ordered separately | Price<br>See Price List | Std. pack | Notes |
|---|---|---|---|
| **MSWA-NZM7**<br>054523 | | 1 off | – |
| **V-NZM7-SW**<br>065589 | | 1 off | Equipment supplied:<br>• Door coupling rotary handle<br>• DAOV rotary drive<br>• Extension shaft for 400 mm mounting depth<br>• External warning plate<br>• Black lightning symbol |
| **V-NZM7**<br>061453 | | 1 off | |
| **EA-NZM7-L**<br>205050 | | 1 off | Equipment supplied:<br>• Door coupling rotary handle<br>• DAOV rotary drive<br>• Side wall operator with extension shaft<br>• Mounting bracket<br>• External warning plate<br>• Black lightning symbol |
| **EA-RT-NZM7-L**<br>205054 | | 1 off | |
| **EA-NZM7-R**<br>205052 | | 1 off | |
| **EA-RT-NZM7-R**<br>205056 | | 1 off | |
| **ZFS61-NZM7**<br>051089 | | 10 off | External warning plates are available in the following languages:<br>64 Bulgarian 73 Romanian<br>65 Danish 74 Russian<br>66 Finnish 75 Swedish<br>67 Dutch 76 Serbo-Croatian<br>68 Italian 77 Spanish<br>69 Greek 78 Czech<br>70 Norwegian 79 Turkish<br>71 Polish 80 Hungarian<br>72 Portuguese 81 Afrikaans<br>To obtain the order number, insert the language code number into the type reference required.<br>**Ordering example**<br>External warning plate in Finnish:<br>ZFS**66**-NZM7 |
| **ZFS62-NZM7**<br>065957 | | | |
| **ZFS63-NZM7**<br>065958 | | | |
| **ZFS60-NZM7**<br>065896 | | | |
| **ZFS*-NZM7**<br>999978 | | | |
| **BPF-NZM7**<br>217294 | | 10 off | Included as standard in main switch assembly kit |

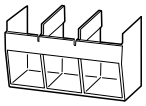
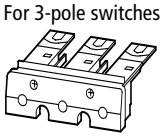
| | Type suffix Article no. for ordering with basic unit | Price See Price List | Type Article no. when ordered separately | Price See Price List | Std. pack | |
|---|---|---|---|---|---|---|
| **Paralleling mechanism**<br>For simultaneous operation of 2 P switch-disconnectors mounted side-by-side using a rotary drive, with extension shaft for 400 mm mounting depth | | | | | | |
|  | | | **K2-P7**<br>054517 | | 1 off | Paralleling mechanism for P switch-disconnectors only.<br>Not suitable for use as a main switch. |
| **Mechanical interlock**<br>For two circuit-breakers or switch-disconnectors of the same mounting depth with rotary drive | | | | | | |
| | | | **KV2-NZM7**<br>200468 | | 1 off | For switches with different depths (≦ 160 A and ≧ 200 A), use ABH-NZM7 spacers. |
| | | | **KV2-NZM74**<br>200469 | | 1 off | |
| **Clip plates**<br>For mounting the switch on a 75 mm EN 60715 mounting rail<br>  | **+C-NZM7**<br>054526 | | **C-NZM7**<br>054525 | | 1 off | Clip plate not suitable for switches with R-NZM7 remote operator.<br>For 3-pole switches only. |
| **Spacers**<br>For matching up the depths of switches of frame size NZM7 up to 160 A to NZM7 switches ≧ 200 A or to switches of the NZM 10 series<br>Equipment supplied: 1 set = 2 off | | | | | | |
|  | **+ABH-NZM7**<br>054528 | | **ABH-NZM7**<br>054527 | | 1 off | Enables switches of different mounting depths to be aligned flush to one another.<br>Required for example, when mounting a mechanical interlock. Depth compensation of 17.5 mm. Do not use in conjunction with RG-NZM7 rear terminals. |

Moeller HPL0211-2004/2005

| | | | Type suffix Article no. for ordering with basic unit | Price See Price | Type Article no. when ordered separately | Price See Price | Std. pack | |
|---|---|---|---|---|---|---|---|---|
| **Termination's** | | | | | | | | |
| For replacement purposes or for fitting a switch with M8 screw terminals<br>Box terminals for copper conductors<br>Supplied with<br>• Supplied as a set: 1 set = 3 or 4 terminals, as appropriate<br>• When ordered separately, supplied singly.<br>Terminal cover removable, conductors can be laid in from the front<br>Use ferrules with flexible cable<br>K120:<br>1 conductor: 2.5 – 120 mm²<br>2 conductors: 2.5 – 35 mm²<br>K150 and K185:<br>Solid/stranded<br>1 conductor: 2.5 – 185 mm²<br>2 conductors: 2.5 – 70 mm²<br>Flexible<br>1 conductor: 2.5 – 150 mm²<br>2 conductors 2.5 – 70 mm² | | | | | | | | |
| For 3-pole switches | | | | | | | | |
|  | Up to 160 A | – | **+K120-NZM7-O**<br>057475 | | **K120-NZM7**<br>054529 | | 3 off | -O = for fitting at the top<br>-U = for fitting at the bottom |
| | | – | **+K120-NZM7-U**<br>055754 | | | | | |
| | 200 A | – | **+K150-NZM7-O**<br>028909 | | **K150-NZM7**<br>028908 | | 3 off | |
| | | – | **+K150-NZM7-U**<br>058772 | | | | | |
| | 250 A | – | **+K185-NZM7-O**<br>215428 | | **K185-NZM7**<br>215427 | | 3 off | |
| | | – | **+K185-NZM7-U**<br>215429 | | | | | |
| For 4-pole switches | | | | | | | | |
|  | Up to 200 A | – | **+K150-NZM74-O**<br>200478 | | | | | -O = for fitting at the top<br>-U = for fitting at the bottom |
| | | – | **+K150-NZM74-U**<br>200479 | | | | | |
| | 250 A | – | **+K185-NZM74-O**<br>219236 | | | | | |
| | | – | **+K185-NZM74-U**<br>219237 | | | | | |
| **Rear terminal bolts** | | | | | | | | |
| For the connection of cable lugs or flat copper strip, with M8 internal thread, when ordered with basic unit supplied as a set, consisting of<br>• 2 short terminal screws<br>• 1 long terminal bolt (3-pole) or 2 long terminal screws (4-pole) | | | | | | | | |
| For 3-pole switches | | | | | | | | |
|  | Up to 160 A | – | **+RG160-NZM7-O**<br>065577 | | **RG160-NZM7**<br>202935 | | 1 off | -O = for fitting at the top<br>-U = for fitting at the bottom |
| | | – | **+RG160-NZM7-U**<br>065576 | | | | | |
| | From 200 A | – | **+RG250-NZM7-O**<br>065579 | | **RG250-NZM7**<br>202936 | | 1 off | |
| | | – | **+RG250-NZM7-U**<br>065578 | | | | | |
| For 4-pole switches | | – | **+RG250-NZM74-O**<br>201318 | | **RG250-NZM74**<br>202937 | | 1 off | |
| | | – | **+RG250-NZM74-U**<br>201319 | | | | | |

| | | | Type suffix Article no. for ordering with basic unit | Price See Price | Type Article no. when ordered separately | Price See Price | Std. pack | |
|---|---|---|---|---|---|---|---|---|
| **Conversion kit** | | | | | | | | |
| For conversion of terminals into bolt connections, for circuit-breakers and switch-disconnectors. Supplied as: 1 set = 3 or 4 terminals + cable lug cover | | | | | | | | |
| For 3-pole switches | Up to 160 A | – | | | **M8-160-NZM7** 211340 | | 1 off | – |
| | From 200 A | – | | | **M8-250-NZM7** 211341 | | | – |
| For 4-pole switches | | – | | | **M8-NZM74** 211342 | | | – |
| **Control circuit terminals** | | | | | | | | |
| Can be clipped subsequently onto the upper and/or lower switch terminals respectively, 1 conductor: 0.75 – 4 mm², 2 conductors: 0.75 – 2.5 mm² flexible, stranded, Use ferrules with flexible cable Supplied with • When ordered with basic unit, supplied as a set: 1 set = 2 terminals • When ordered separately: supplied singly | | | | | | | | |
| For 3-pole switches up to 160 A | | – | **+ST160-NZM7-O** 065581 | | **ST160-NZM7** 037094 | | 1 off | -O = for fitting at the top -U = for fitting at the bottom |
| | | – | **+ST160-NZM7-U** 065580 | | | | | |
| For 3-pole switches from 200 A as well as all 4-pole switches | | – | **+ST250-NZM7-O** 065582 | | **ST250-NZM7** 037096 | | | |
| | | – | **+ST250-NZM7-U** 065583 | | | | | |
| For terminal screws | | – | **+STM8-NZM7-O** 065587 | | **STM8-NZM7** 065588 | | | |
| | | – | **+STM8-NZM7-U** 065586 | | | | | |
| **Cable lugs** | | | | | | | | |
| Slimline version for front terminal screws | | | | | | | | |
| For terminal capacity | | | | | | | | |
|  | | 95 mm² | | | **KS95-NZM7** 059775 | | 3 off | – |
| | | 120 mm² | | | **KS120-NZM7** 059776 | | | – |
| | | 150 mm² | | | **KS150-NZM7** 059777 | | | – |
| **Al/Cu crimp fitting bolt** | | | | | | | | |
| For connection of aluminium conductors with cross-sections of 35 mm² to 150 mm² The terminal bolts are used in conjunction with the standard terminals of the NZM7/P7. | | | | | | | | |
|  | | 35 mm², solid sector conductor: 50 mm² | | | **KB35-NZM7-AL** 217345 | | 3 off | – |
| | | 70 mm², solid sector conductor: 95 mm² | | | **KB70-NZM7-AL** 217346 | | | – |
| | | 95 mm², solid sector conductor: 120 mm² | | | **KB95-NZM7-AL** 217347 | | | – |
| | | 120 mm², solid sector conductor: 150 mm² | | | **KB120-NZM7-AL** 217348 | | | – |
| | | 150 mm², solid sector conductor: 185 mm² | | | **KB150-NZM7-AL** 217349 | | | – |

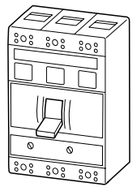
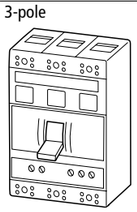
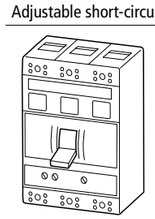
Moeller HPL0211-2004/2005

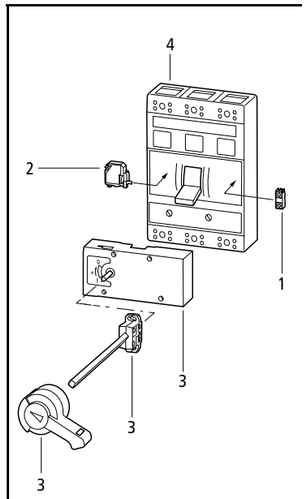
| | | | Type suffix Article no. for ordering with basic unit | Price See Price List | Type Article no. for separate order | Price See Price List | Std. pack | |
|---|---|---|---|---|---|---|---|---|
| **One-piece cable lug cover** | | | | | | | | |
| For protection against direct contact with cable lug, crimp terminals or copper busbars, fingerproof to VDE 0106 part 100 | | | | | | | | |
| For 3-pole switches | | | | | | | | |
|  | Up to 160 A | – | **+KA160-NZM7** 060277 | | **KA160-NZM7** 060276 | | 1 off | – |
| | From 200 A | – | **+KA250-NZM7** 061431 | | **KA250-NZM7** 061371 | | 1 off | – |
| For 4-pole switches | | | | | | | | |
| | | – | **+KA250-NZM74** 200781 | | **KA250-NZM74** 200780 | | 1 off | – |
| **IP2X terminal covers** | | | | | | | | |
| For 3-pole switches | Up to 160 A | – | **+HB160-NZM7** 232293 | | **HB160-NZM7** 232294 | | 1 off | – |
|  | From 200 A | – | **+HB250-NZM7** 232295 | | **HB250-NZM7** 232296 | | | – |
| For 4-pole switches | | – | **+HB250-NZM74** 232297 | | **HB250-NZM74** 232298 | | | – |
| **Sealable terminal shroud** | | | | | | | | |
| One terminal shroud required per connection side | | | | | | | | |
| For 3-pole switches | Up to 160 A | – | **+PA160-NZM7-O** 231296 | | **PA160-NZM7** 231299 | | 1 off | -O = for fitting at the top -U = for fitting at the bottom |
| | | – | **+PA160-NZM7-U** 231298 | | | | | |
| | From 200 A | – | **+PA250-NZM7-O** 231300 | | **PA250-NZM7** 231303 | | | |
| | | – | **+PA250-NZM7-U** 231301 | | | | | |
| For 4-pole switches | | – | **+PA250-NZM74-O** 231305 | | **PA250-NZM74** 231308 | | | |
| | | – | **+PA250-NZM74-U** 231307 | | | | | |

Circuit-breakers, switch-disconnectors up to 1600 A

Moeller HPL0211-2003/2004

Moeller HPL0211-2003/2004

| Rating data | | | | | Normal switching capacity 45 kA at 400 V, 50/60 Hz | | Medium switching capacity 65 kA at 400 V, 50/60 Hz | | High switching capacity 100 kA at 400 V, 50/60 Hz | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Rated uninterrupted current | Motor data | Setting range | | | Type Article no. | Price See Price List | Type Article no. | Price See Price List | Type Article no. | Price See Price List | Std. pack | Notes |
| | Rated power | Overload releases | Short-circuit releases | | | | | | | | | |
| | AC–3 | | Delayed | Non-delayed | | | | | | | | |
| $I_u$ | 400 V | $I_r$ | $I_{rmv}$ | $I_{rm}$ | | | | | | | | |
| A | $P$ | A | A | A | | | | | | | | |
| | kW | | | | | | | | | | | |
| **Circuit-breakers for system and generator protection** | | | | | | | | | | | | |
| Adjustable overload releases, adjustable non-delayed short-circuit release | | | | | | | | | | | | |
| 3-pole | | | | | | | | | | | | |
|  | | | | | | | | | | | | |
| 250 | – | 125 – 250 | – | 2 – 12 × $I_r$ | **NZM10-400N/ZM-250** 047818 | | **NZM10-400S/ZM-250** 047819 | | **NZM10-400H/ZM-250** 047820 | | 1 off | |
| 400 | – | 200 – 400 | – | | **NZM10-400N/ZM-400** 034730 | | **NZM10-400S/ZM-400** 034728 | | **NZM10-400H/ZM-400** 034750 | | | |
| 630 | – | 300 – 630 | – | | **NZM10-630N/ZM-630** 034731 | | **NZM10-630S/ZM-630** 034729 | | **NZM10-630H/ZM-630** 034751 | | | |
| **Circuit-breakers with time selectivity** | | | | | | | | | | | | |
| Adjustable overload release, Time delay setting to overcome current peaks ($t_r$ = 2, 4, 6, 8, 10, 12, 14, 17, 20 s), Overload release can be deactivated ($t_r$ = ∞), Adjustable delayed short-circuit release ($t_v$ = (0, 10, 50, 100, 150, 200, 300, 500, 750, 1000 ms) – 20 %), Adjustable non-delayed short-circuit releases | | | | | | | | | | | | |
| 3-pole | | | | | | | | | | | | |
|  | | | | | | | | | | | | |
| 250 | – | 125 – 250 | 2 – 12 × $I_r$ | 1000 – 6000 | **NZM10-400N/ZMV-250** 047823 | | **NZM10-400S/ZMV-250** 047824 | | **NZM10-400H/ZMV-250** 231994 | | 1 off | |
| 400 | – | 200 – 400 | | 1000 – 9000[1] | **NZM10-400N/ZMV-400** 034738 | | **NZM10-400S/ZMV-400** 034740 | | **NZM10-400H/ZMV-400** 231995 | | | |
| 630 | – | 300 – 630 | | 1000 – 9000[1] | **NZM10-630N/ZMV-630** 034739 | | **NZM10-630S/ZMV-630** 034741 | | **NZM10-630H/ZMV-630** 231996 | | | |
| **Circuit-breaker for motor protection** | | | | | | | | | | | | |
| With phase-failure sensitivity Adjustable overload release, Time delay setting to overcome current peaks ($t_r$ = 2, 4, 6, 8, 10, 12, 14, 17, 20 s), Overload release can be deactivated ($t_r$ = ∞), Adjustable short-circuit releases | | | | | | | | | | | | |
|  | | | | | | | | | | | | |
| 250 | 110 132 | 125 – 250 | – | 2 – 12 × $I_r$ | **NZM10-400N/ZMM-250** 047821 | | **NZM10-400S/ZMM-250** 047822 | | **NZM10-400H/ZMM-250** 256785 | | 1 off | |
| 400 | 160 200 | 200 – 400 | – | | **NZM10-400N/ZMM-400** 034732 | | **NZM10-400S/ZMM-400** 034680 | | **NZM10-400H/ZMM-400** 256786 | | 1 off | |
| 630 | 250 315 | 300 – 630 | – | | **NZM10-630N/ZMM-630** 034733 | | **NZM10-630S/ZMM-630** 034681 | | | | | |




**Accessories**

1 Auxiliary contacts
2 Voltage release
3 Operating elements
4 Connection types

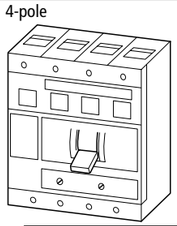
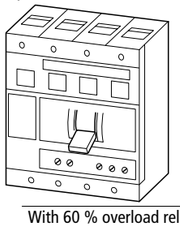
**Notes**

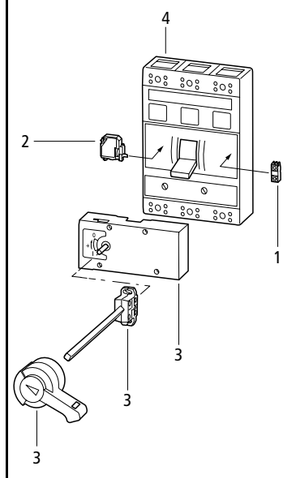
[1] Non-delayed short-circuit release: $I_{rm}$ = 1000 – 7000 A for NZM10-...H/ZMV...

Circuit-breakers, switch-disconnectors up to 1600 A

Moeller HPL0211-2003/2004

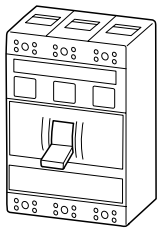
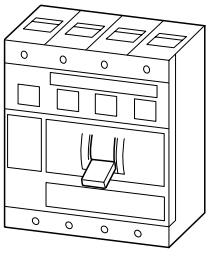
Moeller HPL0211-2003/2004

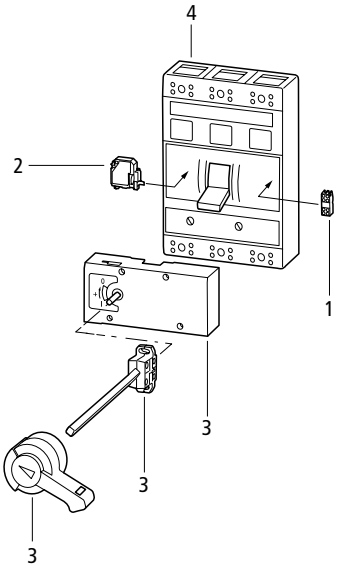
| Rating data | | | | | Normal switching capacity 45 kA at 400 V, 50/60 Hz | | Medium switching capacity 65 kA at 400 V, 50/60 Hz | | High switching capacity 100 kA at 400 V, 50/60 Hz | | Std. pack | Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Rated uninterrupted current | Setting range | | | | Type Article no. | Price See Price List | Type Article no. | Price See Price List | Type Article no. | Price See Price List | | |
| | Overload releases | | Short-circuit releases | | | | | | | | | |
| | Main pole | Neutral conductor | Delayed | Non-delayed | | | | | | | | |
| $I_u$ A | $I_r$ A | $I_r$ A | $I_{rmv}$ A | $I_{rm}$ A | | | | | | | | |
| **Circuit-breakers for system and generator protection** | | | | | | | | | | | | |
| Adjustable overload releases, adjustable non-delayed short-circuit release | | | | | | | | | | | | |
| 4-pole | | | | | | | | | | | | |
|  | | | | | | | | | | | | |
| With 60 % overload release in the neutral pole | | | | | | | | | | | | |
| 250 | 125 – 250 | 80 – 160 | – | 2 – 12 × $I_r$ | **NZM104-400N/ZM-250/160** 047826 | | **NZM104-400S/ZM-250/160** 047828 | | **NZM104-400H/ZM-250/160** 047830 | | 1 off | Setting on neutral pole implemented automatically via the main pole setting $I_r$ of the main pole. |
| 400 | 200 – 400 | 120 – 240 | – | | **NZM104-400N/ZM-400/240** 034734 | | **NZM104-400S/ZM-400/240** 034682 | | **NZM104-400H/ZM-400/240** 034752 | | | |
| 630 | 300 – 630 | 180 – 378 | – | | **NZM104-630N/ZM-630/400** 034736 | | **NZM104-630S/ZM-630/400** 034684 | | **NZM104-630H/ZM-630/400** 034754 | | | |
| Without overload releases in the neutral pole | | | | | | | | | | | | |
| 250 | 125 – 250 | – | – | 2 – 12 × $I_r$ | **NZM104-400N/ZM-250/0** 047825 | | **NZM104-400S/ZM-250/0** 047827 | | **NZM104-400H/ZM-250/0** 047829 | | | |
| 400 | 200 – 400 | – | – | | **NZM104-400N/ZM-400/0** 035132 | | **NZM104-400S/ZM-400/0** 035136 | | **NZM104-400H/ZM-400/0** 035140 | | | |
| 630 | 300 – 630 | – | – | | **NZM104-630N/ZM-630/0** 035134 | | **NZM104-630S/ZM-630/0** 035138 | | **NZM104-630H/ZM-630/0** 035142 | | | |
| **Circuit-breakers with time selectivity** | | | | | | | | | | | | |
| Adjustable overload release, Time delay setting to overcome current peaks ($t_r$ = 2, 4, 6, 8, 10, 12, 14, 17, 20 s), Overload release can be deactivated ($t_r$ = ∞), Adjustable delayed short-circuit release ($t_v$ = (0, 10, 50, 100, 150, 200, 300, 500, 750, 1000 ms) – 20 %), Adjustable non-delayed short-circuit releases | | | | | | | | | | | | |
| 4-pole | | | | | | | | | | | | |
|  | | | | | | | | | | | | |
| With 60 % overload release in the neutral pole | | | | | | | | | | | | |
| 250 | 125 – 250 | 80 – 160 | 2 – 12 × $I_r$ | 1000 – 6000 | **NZM104-400N/ZMV-250/160** 047832 | | **NZM104-400S/ZMV-250/160** 047834 | | | | 1 off | |
| 400 | 200 – 400 | 120 – 240 | | 1000 – 9000 | **NZM104-400N/ZMV-400/240** 034742 | | **NZM104-400S/ZMV-400/240** 034746 | | | | | |
| 630 | 300 – 630 | 180 – 378 | | 1000 – 9000 | **NZM104-630N/ZMV-630/400** 034744 | | **NZM104-630S/ZMV-630/400** 034749 | | | | | |
| Without overload releases in the neutral pole | | | | | | | | | | | | |
| 250 | 125 – 250 | – | 2 – 12 × $I_r$ | 1000 – 6000 | **NZM104-400N/ZMV-250/0** 047831 | | **NZM104-400S/ZMV-250/0** 047833 | | | | | |
| 400 | 200 – 400 | – | | 1000 – 9000 | **NZM104-400N/ZMV-400/0** 035144 | | **NZM104-400S/ZMV-400/0** 035148 | | | | | |
| 630 | 300 – 630 | – | | 1000 – 9000 | **NZM104-630N/ZMV-630/0** 035146 | | **NZM104-630S/ZMV-630/0** 035150 | | | | | |




**Accessories**

| | |
|---|---|
| 1 | Auxiliary contacts |
| 2 | Voltage release |
| 3 | Operating elements |
| 4 | Connection types |

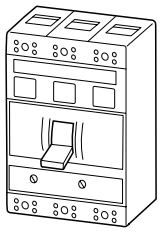
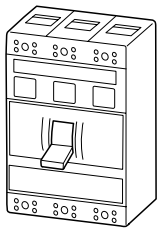
| Rating data | | | Cannot be tripped remotely | | Can be tripped remotely with voltage release | | | Notes |
|---|---|---|---|---|---|---|---|---|
| | | | **Type** Article no. | **Price** See Price List | **Type** Article no. | **Price** See Price List | Std. pack | |
| Rated uninterrupted current | Short-circuit protection | | | | | | | |
| | P10 | NZM | | | | | | |
| $I_u$ | | | | | | | | |
| A | A gG/gL | A gG/gL | | | | | | |
| **P10, NZM10 switch-disconnectors** | | | | | | | | |
| 3-pole | | | | | | | | |
|  | | | | | | | | |
| 400 | 800 | 630 | **P10-400** 034776 | | **NZM10-400N/B** 034771 | | 1 off | Can not be retrofitted as a circuit-breaker. Do not replace existing cover with B-NZM10 blanking block. Main switch characteristics according to IEC/EN 60204-1, VDE 0113 Part 1 Isolating characteristics according to IEC/EN 60947-3 Protection against accidental contact according to IEC 536 NZM10 switch-disconnectors can be tripped remotely with undervoltage or shunt releases (U-/A-NZM). RHI trip-indicating auxiliary contacts can be used to indicate the switching status. |
| 630 | 800 | 630 | **P10-630** 034777 | | **NZM10-630N/B** 034768 | | 1 off | |
| 4-pole | | | | | | | | |
|  | | | | | | | | |
| 400 | 800 | 630 | **P104-400** 034778 | | **NZM104-400N/B** 034769 | | 1 off | |
| 630 | 800 | 630 | **P104-630** 034779 | | **NZM104-630N/B** 034770 | | 1 off | |

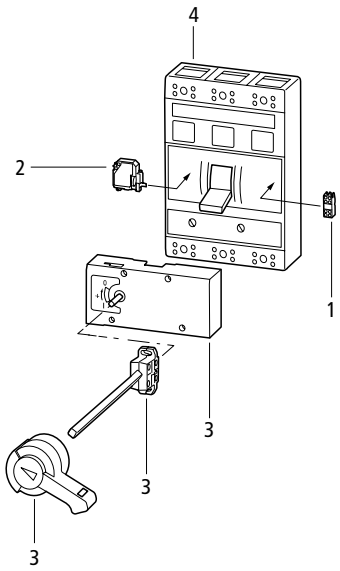



**Accessories**

1 Auxiliary contacts
2 Voltage release
3 Operating elements
4 Connection types

Moeller HPL0211-2004/2005

| | Rated uninterrupted current $I_u$ A | Type Article no. | Price | Std. pack | Notes |
|---|---|---|---|---|---|
| **Circuit-breakers for 1000 V, 50 Hz** | | | | | |
|  | | | | | |
| For system and generator protection | | | | | |
| | 250 | **NZM10-400N-1/ZM-250** 058586 | | 1 off | |
| | 400 | **NZM10-400N-1/ZM-400** 058587 | | | |
| | 630 | **NZM10-630N-1/ZM-630** 058588 | | | |
| For motor protection | | | | | |
| | 250 | **NZM10-400N-1/ZMM-250** 058589 | | | |
| | 400 | **NZM10-400N-1/ZMM-400** 058590 | | | |
| | 630 | **NZM10-630N-1/ZMM-630** 058591 | | | |
| **Switch-disconnectors for 1000 V, 50 Hz** | | | | | |
|  | 400 | **NZM10-400N-1/B** 058603 | | 1 off | |
| | 630 | **NZM10-630N-1/B** 058604 | | 1 off | |




**Accessories**

1 Auxiliary contacts
2 Voltage release
3 Operating elements
4 Connection types

Moeller HPL0211-2004/2005

| Rating data | | | | | |
|---|---|---|---|---|---|
| Rated uninterrupted current | Setting range | | | For basic unit | |
| | Overload releases | Short-circuit releases | | 400 A | 630 A |
| | Main pole | Delayed | Non-delayed | | |
| $I_u$ | $I_r$ | $I_{rmv}$ | $I_{rm}$ | | |
| A | A | A | A | | |
| **Basic Units** | | | | | |
| 3-pole | | | | | |
| 400 | – | – | – | – | – |
| 400 | – | – | – | – | – |
| 400 | – | – | – | – | – |
| 630 | – | – | – | – | – |
| 630 | – | – | – | – | – |
| 630 | – | – | – | – | – |
| **Trip blocks** | | | | | |
| For system protection | | | | | |
| 3-pole | | | | | |
| – | 125 – 250 | – | 2 – 12 × $I_r$ | ● | ● |
| – | 200 – 400 | – | | ● | ● |
| – | 300 – 630 | – | | – | ● |
| For motor protection | | | | | |
| – | 125 – 250 | – | 2 – 12 × $I_r$ | ● | ● |
| – | 200 – 400 | – | | ● | ● |
| – | 300 – 630 | – | | – | ● |
| With time selectivity | | | | | |
| 3-pole | | | | | |
| – | 125 – 250 | 2 – 12 × $I_r$ | 500 – 6000 | ● | ● |
| – | 200 – 400 | | 1000 – 9000 | ● | ● |
| – | 300 – 630 | | 1000 – 9000 | – | ● |
| **Blank block** | | | | | |
| Blank blocks convert basic units to form switch-disconnectors | | | | | |
| 3-pole | | | | | |
| – | – | – | – | ● | ● |

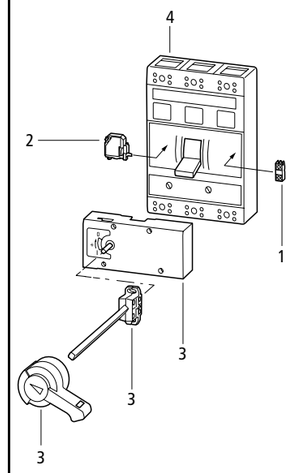




Moeller HPL0211-2004/2005

| Type<br>Article no. | Price<br>See Price List | Std. pack | Notes |
|---|---|---|---|
| **NZM10-400N**<br>034773 | | 1 off | – |
| **NZM10-400S**<br>034764 | | | – |
| **NZM10-400H**<br>034760 | | | – |
| **NZM10-630N**<br>034772 | | | – |
| **NZM10-630S**<br>034765 | | | – |
| **NZM10-630H**<br>034761 | | | – |
| **ZM-250-NZM10**<br>047835 | | 1 off | – |
| **ZM-400-NZM10**<br>034780 | | | – |
| **ZM-630-NZM10**<br>034781 | | | – |
| **ZMM-250-NZM10**<br>047836 | | 1 off | Not for use in combination with NZM10-...H<br>Fixed factory set delay time: 50 ms |
| **ZMM-400-NZM10**<br>034782 | | | |
| **ZMM-630-NZM10**<br>034783 | | | |
| **ZMV-250-NZM10**<br>047837 | | 1 off | Not for use in combination with NZM10-...H |
| **ZMV-400-NZM10**<br>034791 | | | |
| **ZMV-630-NZM10**<br>034792 | | | |
| **B-NZM10**<br>034815 | | 1 off | This switch-disconnector can be preconfigured for later use as circuit-breaker.<br>The blank block must then be replaced by a trip block.<br>Can be combined only with NZM10-...N basic unit. |

Circuit-breakers are made up of one basic unit and one trip block.




**Accessories**

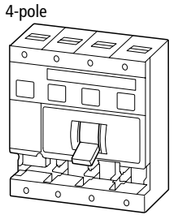
1 Auxiliary contacts
2 Voltage release
3 Operating elements
4 Connection types

Moeller HPL0211-2004/2005

| Rating data | | | | | | |
|---|---|---|---|---|---|---|
| Rated uninterrupted current | Setting range | | | | For basic unit | |
| | Overload releases | | Short-circuit releases | | 400 A | 630 A |
| | Main pole | Neutral | Delayed | Non-delayed | | |
| $I_u$ | $I_r$ | $I_r$ | $I_{rmv}$ | $I_{rm}$ | | |
| A | A | A | A | A | | |

**Basic Units**

4-pole

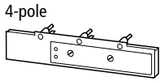


| | | | | | | |
|---|---|---|---|---|---|---|
| 400 | – | – | – | – | – | – |
| 400 | – | – | – | – | – | – |
| 400 | – | – | – | – | – | – |
| 630 | – | – | – | – | – | – |
| 630 | – | – | – | – | – | – |
| 630 | – | – | – | – | – | – |

**Trip blocks**

For system protection

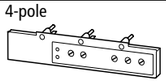
4-pole



| | | | | | | |
|---|---|---|---|---|---|---|
| – | 125 – 250 | 80 – 160 | – | 2 – 12 × $I_r$ | ● | ● |
| – | 125 – 250 | – | – | | ● | ● |
| – | 200 – 400 | 160 – 240 | – | | ● | ● |
| – | 200 – 400 | – | – | | ● | ● |
| – | 300 – 630 | 180 – 378 | – | | – | ● |
| – | 300 – 630 | – | – | | – | ● |

With time selectivity

4-pole

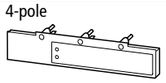


| | | | | | | |
|---|---|---|---|---|---|---|
| – | 125 – 250 | 80 – 160 | 2 – 12 × $I_r$ | 500 – 6000 | ● | ● |
| – | 125 – 250 | – | | 500 – 6000 | ● | ● |
| – | 200 – 400 | 160 – 240 | | 1000 – 9000 | ● | ● |
| – | 200 – 400 | – | | 1000 – 9000 | ● | ● |
| – | 300 – 630 | 180 – 378 | | 1000 – 9000 | – | ● |
| – | 300 – 630 | – | | 1000 – 9000 | – | ● |

**Blank block**

Blank blocks convert basic units to form switch-disconnectors

4-pole



| | | | | | | |
|---|---|---|---|---|---|---|
| – | – | – | – | – | ● | ● |

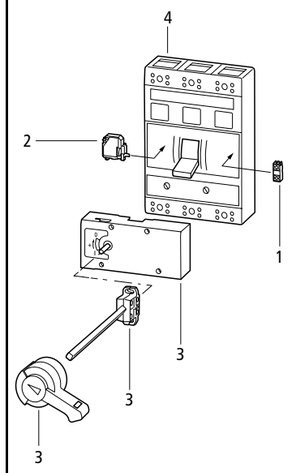


Circuit-breakers, switch-disconnectors up to 1600 A

Moeller HPL0211-2004/2005

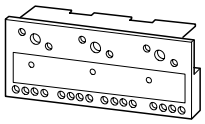
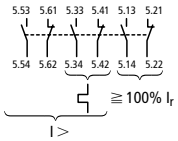
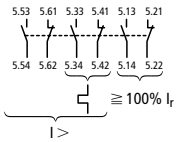
| Type<br>Article no. | Price<br>See Price List | Std. pack | Notes |
|---|---|---|---|
| **NZM104-400N**<br>034774 | | 1 off | – |
| **NZM104-400S**<br>034766 | | | – |
| **NZM104-400H**<br>034762 | | | – |
| **NZM104-630N**<br>034775 | | | – |
| **NZM104-630S**<br>034767 | | | – |
| **NZM104-630H**<br>034763 | | | – |
| **ZM-250/160-NZM104**<br>047839 | | 1 off | – |
| **ZM-250/0-NZM104**<br>047838 | | | – |
| **ZM-400/240-NZM104**<br>034784 | | | – |
| **ZM-400/0-NZM104**<br>035152 | | | – |
| **ZM-630/400-NZM104**<br>093172 | | | – |
| **ZM-630/0-NZM104**<br>035153 | | | – |
| **ZMV-250/160-NZM104**<br>047841 | | 1 off | Not for use in combination with NZM10-...H |
| **ZMV-250/0-NZM104**<br>047840 | | | – |
| **ZMV-400/240-NZM104**<br>034793 | | | – |
| **ZMV-400/0-NZM104**<br>035154 | | | – |
| **ZMV-630/400-NZM104**<br>034795 | | | – |
| **ZMV-630/0-NZM104**<br>035155 | | | – |
| **B-NZM104**<br>034816 | | 1 off | NZM10...N/B switch-disconnector can be preconfigured for later use as a circuit-breaker.<br>The blank block must then be replaced by a trip block. |

Circuit-breakers are made up of one basic unit and one trip block.

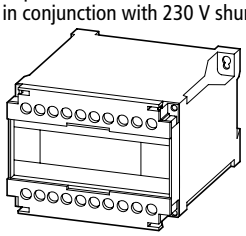



**Accessories**

1 Auxiliary contacts
2 Voltage release
3 Operating elements
4 Connection types

| | Contact sequence | Type suffix<br>Article no. for ordering with basic unit | Price<br>See Price | Type<br>Article no. when ordered separately | Price<br>See Price | Std. pack |
|---|---|---|---|---|---|---|
| **NHI standard auxiliary contacts**<br>Switching with the main contacts, used for indication and interlock functions. | | | | | | |
|  |  | **+NHI-NZM10**<br>034798 | | **NHI-NZM10**<br>034943 | | 1 off |
| **VHI early-make auxiliary contacts**<br>For early-make closing of the undervoltage release<br>For interlock circuits,<br>Can be installed in the NZM circuit-breaker and NZM switch-disconnector.<br>Cannot be used in conjunction with R-NZM10 remote operators. | | | | | | |
|  |  | **+VHI-NZM10**<br>034800 | | **VHI-NZM10**<br>034944 | | 1 off |
| **RHI trip-indicating auxiliary contacts**<br>For general trip-indication, can be fitted in NZM circuit-breakers and switch-disconnectors | | | | | | |
|  |  | **+RHI-NZM10**<br>034797 | | **RHI-NZM10**<br>034945 | | 1 off |
| **Annunciation unit**<br>Differential remote annunciation and local indication of the operating states:<br>• Tripping by overload release<br>• Tripping by short-circuit release<br>• With Reset function for overload and short-circuit signal (only for resetting local annunciation)<br>• Early-warning when the overload release setting (100 %) is exceeded, drops back at 85 %<br>Each unit has 1 make and 1 break contact<br><br>For fitting under NZM10(4) circuit-breaker, supply voltage 24–230 VAC/DC.<br>  | | | | | | |
| 3-pole |  | **+M-NZM10**<br>034801 | | **M-NZM10**<br>034946 | | 1 off |
| 4-pole |  | **+M-NZM104**<br>034802 | | **M-NZM104**<br>034947 | | 1 off |

Moeller HPL0211-2004/2005

| Contact sequence | | Rated control voltage $U_s$ V | Type suffix Article no. for ordering with basic unit | Price See Price List | Type Article no. when ordered separately | Price See Price List | Std. pack |
|---|---|---|---|---|---|---|---|
| **Shunt release** | | | | | | | |
| 100% DF, universal version 0-400 Hz AC/DC, for fitting into NZM circuit-breakers or switch-disconnectors, For immediate disconnection of NZM circuit-breakers and NZM switch-disconnectors after voltage is applied.  | | | | | | | |
|   | AC/DC | 24 | **+A-NZM10(24V)** 036641 | | **A-NZM10(24V)** 036642 | | 1 off |
| | | 48 | **+A-NZM10(48V)** 036643 | | **A-NZM10(48V)** 036644 | | |
| | | 60 | **+A-NZM10(60V)** 036645 | | **A-NZM10(60V)** 036646 | | |
| | | 110 – 120 | **+A-NZM10(110-120V)** 036647 | | **A-NZM10(110-120V)** 036648 | | |
| | | 125 – 130 | **+A-NZM10(125-130V)** 036649 | | **A-NZM10(125-130V)** 036650 | | |
| | | 208 – 215 | **+A-NZM10(208-215V)** 036651 | | **A-NZM10(208-215V)** 036652 | | |
| | | 220 – 240 | **+A-NZM10(220-240V)** 036653 | | **A-NZM10(220-240V)** 036654 | | |
| | | 380 – 415 | **+A-NZM10(380-415V)** 036655 | | **A-NZM10(380-415V)** 036656 | | |
| | | 440 – 480 | **+A-NZM10(440-480V)** 036657 | | **A-NZM10(440-480V)** 036658 | | |
| | | 500 | **+A-NZM10(500V)** 036659 | | **A-NZM10(500V)** 036660 | | |
| | | 600 | **+A-NZM10(600V)** 036661 | | **A-NZM10(600V)** 036662 | | |
| | | 660 – 690 | **+A-NZM10(660-690V)** 036663 | | **A-NZM10(660-690V)** 036664 | | |
| Capacitor unit[1] in conjunction with 230 V shunt release  | | | | | | | |
|   | – | – | | | **NZM-XCM** 229413 | | 1 off |

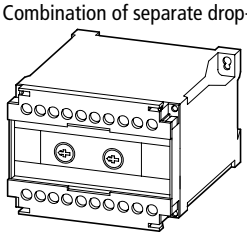
**Notes**

[1] Enables safe use of the circuit-breaker as a mesh network circuit-breaker in a range from 0 – 110 % $U_n$ with constant shut-down time of 40 ms.
If the mains voltage is absent, the installed capacitor supplies power for actuating the shunt release for at least 12 hours.
IP20 enclosure.

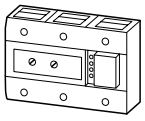
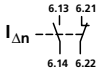
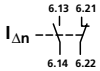
**Undervoltage release, non-delayed**

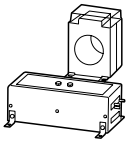
For fitting in NZM circuit-breakers or switch-disconnector NZM, Trips when the control voltage drops below 70–35 % $U_s$, Suitable for Emergency-Stop applications

| Contact sequence | | Rated control voltage $U_s$ V | **Type suffix** Article no. for ordering with basic unit | **Price** See Price List | **Type** Article no. when ordered separately | **Price** See Price List | Std. pack |
|---|---|---|---|---|---|---|---|
|  | AC | 24 | **+U-NZM10(24VAC)** 036665 | | **U-NZM10(24VAC)** 036666 | | 1 off |
| | | 48 | **+U-NZM10(48VAC)** 036667 | | **U-NZM10(48VAC)** 036668 | | |
| | | 60 | **+U-NZM10(60VAC)** 036669 | | **U-NZM10(60VAC)** 036670 | | |
| | | 110 – 120 | **+U-NZM10(110-120VAC)** 036671 | | **U-NZM10(110-120VAC)** 036672 | | |
| | | 125 – 130 | **+U-NZM10(125-130VAC)** 036673 | | **U-NZM10(125-130VAC)** 036674 | | |
| | | 208 – 215 | **+U-NZM10(208-215VAC)** 036675 | | **U-NZM10(208-215VAC)** 036676 | | |
| | | 220 – 240 | **+U-NZM10(220-240VAC)** 036677 | | **U-NZM10(220-240VAC)** 036678 | | |
| | | 380 – 415 | **+U-NZM10(380-415VAC)** 036679 | | **U-NZM10(380-415VAC)** 036680 | | |
| | | 440 – 480 | **+U-NZM10(440-480VAC)** 036681 | | **U-NZM10(440-480VAC)** 036682 | | |
| | | 500 | **+U-NZM10(500VAC)** 036683 | | **U-NZM10(500VAC)** 036684 | | |
| | | 600 | **+U-NZM10(600VAC)** 036686 | | **U-NZM10(600VAC)** 036685 | | |
| | | 660 – 690 | **+U-NZM10(660-690VAC)** 036687 | | **U-NZM10(660-690VAC)** 036688 | | |
| | DC | 24 | **+U-NZM10(24VDC)** 036689 | | **U-NZM10(24VDC)** 036690 | | |
| | | 48 | **+U-NZM10(48VDC)** 036691 | | **U-NZM10(48VDC)** 036692 | | |
| | | 60 | **+U-NZM10(60VDC)** 036693 | | **U-NZM10(60VDC)** 036694 | | |
| | | 110 – 120 | **+U-NZM10(110-120VDC)** 036695 | | **U-NZM10(110-120VDC)** 036696 | | |
| | | 125 – 130 | **+U-NZM10(125-130VDC)** 036697 | | **U-NZM10(125-130VDC)** 036698 | | |
| | | 208 – 215 | **+U-NZM10(208-215VDC)** 036699 | | **U-NZM10(208-215VDC)** 036700 | | |
| | | 220 – 240 | **+U-NZM10(220-240VDC)** 036701 | | **U-NZM10(220-240VDC)** 036702 | | |

| | Contact sequence | | Rated control voltage[1] $U_s$ V | Type suffix Article no. for ordering with basic unit | Price See Price List | Type Article no. when ordered separately | Price See Price List | Std. pack |
|---|---|---|---|---|---|---|---|---|
| **Undervoltage releases, off-delayed** | | | | | | | | |
| Combination of separate drop-out delay unit and built-in undervoltage release. | | | | | | | | |
|  | | | | | | | | |
| Delay time 0.06 – 16 s |   | AC | 24 | **+UVU-NZM10** 215192 | | **UVU-NZM10** 215191 | | 1 off |
| | | | 220 – 240 | | | | | |
| | | | 380 – 440 | | | | | |
| | | | 480 – 550 | | | | | |
| | | DC | 24 | | | | | |
| **Supplementary release coil** | | | | | | | | |
| For UVU-NZM10 delayed undervoltage release, where the drop-out delay unit is already present | | | | | | | | |
|  | | | | | | | | |
| – | – | – | – | | | **UV200-NZM10-OAVE** 232110 | | 1 off |

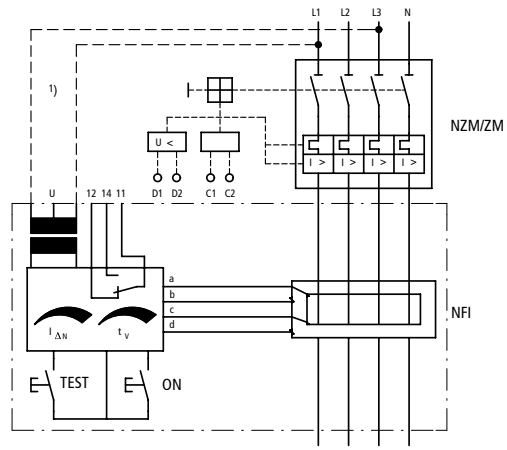
**Notes** [1] For other control voltages use 50 VA control transformer. Fixing: top-hat rail or screws

| | Contact sequence | Rated control voltage $U_s$ V | For NZM circuit-breaker/switch-disconnector | Type suffix Article no. for ordering with basic unit | Price See Price List | Type Article no. when ordered separately | Price See Price List | Std. pack |
|---|---|---|---|---|---|---|---|---|
| **Earth-fault release** | | | | | | | | |
| Not dependent on external voltage, with adjustable rated fault current $I_{\Delta n}$= 80, 100, 130, 160, 200, 240, 280, 320, 360, 400 A, With adjustable delay time $t_v$ = 0, 60, 150, 200, 300, 500, 750, 1000 ms | | | | | | | | |
|  | | | | | | | | |
| Can be fitted to circuit-breaker Tripping by a signal direct to the control unit of the switch | | | | | | | | |
| |   | – | 3-pole | **+TV-NZM10** 095126 | | **TV-NZM10** 034811 | | 1 off |
| | | – | 4-pole | **+TV-NZM104** 095227 | | **TV-NZM104** 034812 | | 1 off |
| For separate mounting Tripping by shunt release or undervoltage release via contacts 6.13 – 6.14 or 6.21 – 6.22 | | | | | | | | |
| |   | – | 3-pole | | | **TV-NZM10/E** 034813 | | 1 off |
| | | – | 4-pole | | | **TV-NZM104/E** 034814 | | 1 off |

| | Contact sequence | Rated control voltage $U_s$ V | For NZM circuit-breaker/switch-disconnector | **Type suffix** Article no. for ordering with basic unit | **Price** See Price List | **Type** Article no. when ordered separately | **Price** See Price List | Std. pack |
|---|---|---|---|---|---|---|---|---|
| **Residual-current relays** | | | | | | | | |
| **AC-sensitive** Rated fault current $I_{\Delta n}$: 1 – 2.5 – 5 – 15 – 25 – 50 A, Delay time $t_v$: 0, 50, 100, 150 ms, Both adjustable in stages | | | | | | | | |
|  | – | 230 400 | 3-pole | | | **NFI10-380** 044963 | | 1 off |
| | – | 415 480 | | | | **NFI10-480** 044964 | | |
| | – | 680 | | | | **NFI10-600** 044965 | | |
| | – | 500 660 | | | | **NFI10-660** 044966 | | |
| | – | 230 400 | 4-pole | | | **NFI104-380** 044967 | | |
| | – | 415 480 | | | | **NFI104-480** 044968 | | |
| | – | 600 | | | | **NFI104-600** 044969 | | |
| | – | 500 660 | | | | **NFI104-660** 044970 | | |

**NFI10... residual-current relays**

Circuit diagram

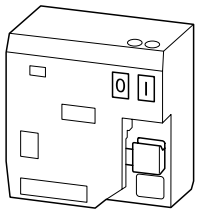
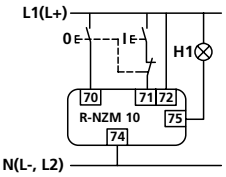
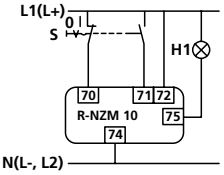
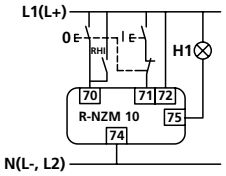
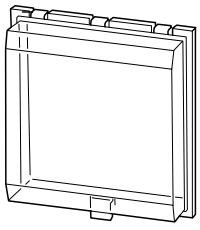
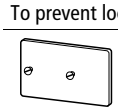


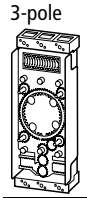

1) Route auxiliary power connections short-circuit proof

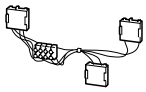
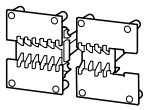
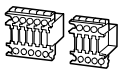
Operation

NFI core-balance transformers are used in conjunction with NZM circuit-breakers and switch-disconnectors. A secured control voltage, taken either directly from the input terminals of the NZM, or from an external source, is required to operate the electronic system of the residual-current relay. The electronic system of the residual-current relay issues the trip signal to the shunt release or undervoltage release of the NZM through a zero-voltage changeover contact. The switch then trips all poles in 0.2 seconds or less. Fault signalling can be implemented via the auxiliary contact on the NZM. The built-in test button provides a simple means of functional testing, while an internal LED indicates readiness for operation. Monitoring is performed according to the operating current principle. In the event of a power failure, the last operational state is retained and is reapplied after voltage recovery.

Moeller HPL0211-2004/2005

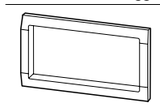
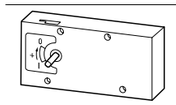
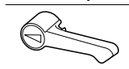
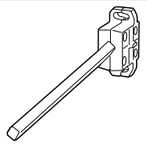
| | Rated control voltage $U_s$ V | Type suffix Article no. for ordering with basic unit | Type Article no. when ordered separately | Price See Price List | Std. pack | Notes |
|---|---|---|---|---|---|---|
| **Remote operator** | | | | | | |
| For circuit-breakers and switch-disconnectors, Switching times: ON 60 ms, OFF 30 ms, Local switching by hand possible Suitable for system transfer (can be synchronized)  | | | | | | 3-wire control must not be simultaneously switched off via remote operator and tripped by shunt release/undervoltage release   3-wire control   2-wire control   3-wire control with automatic reset to the OFF position after the switch has tripped |
| AC | 110 | **+R-NZM10(110-120VAC)** 027622 | **R-NZM10(110-120VAC)** 027619 | | 1 off | |
| AC | 220 | **+R-NZM10(220-240VAC)** 027620 | **R-NZM10(220-240VAC)** 027617 | | | |
| AC | 380 | **+R-NZM10(380-415VAC)** 027621 | **R-NZM10(380-415VAC)** 027618 | | | |
| DC | 24 | **+R-NZM10(24VDC)** 036633 | **R-NZM10(24VDC)** 036634 | | | |
| DC | 48 | **+R-NZM10(48-60VDC)** 027625 | **R-NZM10(48-60VDC)** 027628 | | | |
| DC | 110 | **+R-NZM10(110-130VDC)** 047253 | **R-NZM10(110-130VDC)** 027629 | | | |
| DC | 220 | **+R-NZM10(220-240VDC)** 027627 | **R-NZM10(220-240VDC)** 027630 | | | |
| **Push-buttons** | | | | | | |
| For manual ON-OFF switching of enclosed circuit-breakers with remote operator  | | | | | | |
| For mounting depth 256 – 280 mm | – | | **MD-NZM10** 034823 | | 1 off | Not for use in conjunction with KVR2-NZM10 mechanical interlock |
| Mounting depth 280 – 395 mm for control panel depth 400 mm | – | | **MDV-NZM10** 034824 | | 1 off | |
| **Protective shroud for door cut-out** | | | | | | |
| Transparent protective shroud to increase the degree of protection to IP54  | | | **RTR-NZM10** 034825 | | 1 off | Electrical remote switching and manual tripping (push to trip) are still possible. |
| **Sealable shroud** | | | | | | |
| To prevent local switching by hand.  | – | | **PL-NZM10** 028907 | | 1 off | For use where the motor operator protrudes from the enclosure |

| | **Type suffix** Article no. for ordering with basic unit | **Price** See Price List | Std. pack | **Type** Article no. for separate order | **Price** See Price List | Std. pack | **Notes** |
|---|---|---|---|---|---|---|---|
| **Withdrawable unit, complete**<br>For NZM circuit-breakers and switch-disconnectors; not for P10.<br>3 switch positions:<br>• Connected position<br>• Test position<br>• Disconnected position | | | | | | | |
| 3-pole<br>  | **+AF3-NZM10**<br>034758 | | 1 off | | | | **Rated operational voltage 690 V AC**<br>Touch-proof version of withdrawable carrier and socket base<br>Mounting position: vertical.<br>Terminal bolt at front of socket base.<br>Terminals for retrofitting.<br>Plug-in unit for auxiliary switches, remote operators and undervoltage or shunt releases always available. |
| 4-pole | **+AF4-NZM104**<br>034757 | | 1 off | | | | |
| **Withdrawable carrier**<br>To fit socket base | | | | | | | |
| 3-pole<br>  | **+AFW3-NZM10**<br>034817 | | 1 off | | | | |
| 4-pole | **+AFW4-NZM104**<br>034818 | | 1 off | | | | |
| **Socket base**<br>For accommodation of the switch with withdrawable carrier | | | | | | | |
| 3-pole<br>  | | | | **AFS-NZM10**<br>034759 | | 1 off | |
| 4-pole | | | | **AFS-NZM104**<br>034756 | | 1 off | |

| | **Type suffix** Article no. for ordering with basic unit | **Price** See Price List | **Type** Article no. for separate order | **Price** See Price List | Std. pack | **Notes** |
|---|---|---|---|---|---|---|
| **Auxiliary contacts**<br>For electrical signalling of Operation, Test and Disconnected position | | | | | | |
|  | **+AGHI-NZM10**<br>034799 | | **AGHI-NZM10**<br>034930 | | 1 off | |
| **Control circuit plugs**<br>For annunciation unit (16-pole) | | | | | | |
|  | **+HSW-M-NZM10**<br>034819 | | **HSW-M-NZM10**<br>034931 | | 1 off | Required only in conjunction with M-NZM10(4) annunciation unit. |
| **Control circuit plug socket**<br>For annunciation unit (16-pole) | | | | | | |
|  | **+HSS-M-NZM10**<br>034821 | | **HSS-M-NZM10**<br>034932 | | 1 off | Required only in conjunction with M-NZM10(4) annunciation unit. |
| **Control circuit plug cable**<br>To connect an earth-fault release to the control circuit plug | | | | | | |
| | **+HSWK-TV-NZM10**<br>034820 | | **HSWK-TV-NZM10**<br>034933 | | 1 off | Required only in conjunction with TV-NZM10 (4) earth-fault release. |
| **Control circuit plug socket cable**<br>To connect an earth-fault release to the control circuit plug socket | | | | | | |
| | **+HSSK-TV-NZM10**<br>034822 | | **HSSK-TV-NZM10**<br>034934 | | 1 off | Required only in conjunction with TV-NZM10 (4) earth-fault release. |

Circuit-breakers, switch-disconnectors up to 1600 A

Moeller HPL0211-2004/2005

| | | Rated uninterrupted current $I_u$ A | **Type suffix** Article no. When ordered with basic unit | **Price** See Price List | Std. pack |
|---|---|---|---|---|---|
| **Insulated enclosures for switch** | | | | | |
| For 3- and 4-pole switches | | | | | |
| With black door coupling rotary handle<br>Rotary drive and extension shaft | | | | | |
| | – | 400 | **+CI-NZM10-400**<br>026549 | | 1 off |
| | – | 630 | **+CI-NZM10-630**<br>026550 | | 1 off |
| With red-yellow door coupling rotary handle,<br>For use of the switch as an Emergency-Stop device according to IEC/EN 60204-1 | | | | | |
| | – | 400 | **+CI-RT-NZM10-400**<br>026551 | | 1 off |
| | – | 630 | **+CI-RT-NZM10-630**<br>026552 | | 1 off |
| Additional terminal<br>For passing the neutral conductor through | | | | | |
| | – | 400 | | | |
| | – | 630 | | | |
| **Toggle switch interlock** | | | | | |
| Lockable in OFF position with up to 3 padlocks (hasp thickness: 6 – 8 mm) | | | | | |
|  | – | – | **+SVB-NZM10**<br>034829 | | 1 off |
| **Insulating surround** | | | | | |
| For use here the toggle lever on protrudes beyond the enclosure, degree of protection IP40 | | | | | |
|  | – | – | **+RT-NZM10**<br>094927 | | 1 off |
| **Rotary drive** | | | | | |
| Converts the On and Off switching from a toggle to a rotary movement | | | | | |
|  | – | – | **+D-NZM10**<br>034827 | | 1 off |
| **Rotary handle** | | | | | |
| Black, rotary drive required | | | | | |
|  | – | – | **+H10U-SW**<br>044608 | | 1 off |
| **Extension shaft** | | | | | |
| Can be cut to required length. | | | | | |
|  | For mounting depth 175 – 400 mm | – | **+A-NZM10**<br>051378 | | 1 off |
| | For mounting depth 260 – 600 mm | – | **+A600-NZM10**<br>025373 | | 1 off |

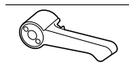
Moeller HPL0211-2004/2005

| **Type** Article no. when ordered separately | **Price** See Price List | Std. pack | Enclosure description insulated enclosure | Terminals for 5th conductor (neutral pole) for fitting by user | **Notes** |
|---|---|---|---|---|---|
| | | | | | |
| | | | | | |
| **CI-NZM10-400**<br>026553 | | 1 off | KST48-200+KS4 | K240/1BR | – |
| **CI-NZM10-630**<br>026554 | | 1 off | KST48-200+KST43.<br>KST43 supplied loose. | K2X240/1BR | – |
| | | | | | |
| **CI-RT-NZM10-400**<br>026555 | | 1 off | KST48-200 + KS 4 | K240/1BR | – |
| **CI-RT-NZM10-630**<br>026556 | | 1 off | KST48-200 + KST43.<br>KST43 supplied loose. | K2X240/1BR | – |
| | | | | | |
| **K240/1/BR**<br>017082 | | 1 off | – | – | – |
| **K2X240/1/BR**<br>019455 | | 1 off | – | – | – |
| | | | | | |
| **SVB-NZM10**<br>034948 | | 1 off | – | – | – |
| | | | | | |
| **RT-NZM10**<br>034828 | | 1 off | – | – | Screw fixed at rear.<br>Facility for inscription. |
| | | | | | |
| **D-NZM10**<br>034949 | | 1 off | – | – | Required for using rotary and door coupling rotary handles.<br>Lockable in the OFF position with up to three padlocks.<br>Hasp thickness: 4 – 8 mm |
| | | | | | |
| **H10U-SW**<br>044607 | | 1 off | – | – | – |
| | | | | | |
| **A-NZM10**<br>051377 | | 1 off | – | – | – |
| **A600-NZM10**<br>047892 | | 1 off | – | – | – |

Circuit-breakers, switch-disconnectors up to 1600 A

Moeller HPL0211-2004/2005

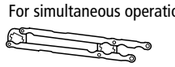
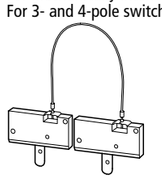
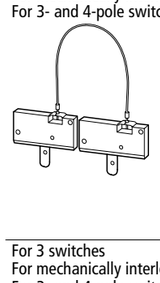
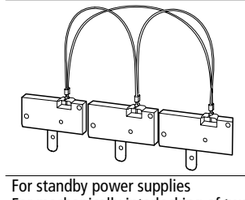
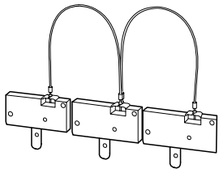
Moeller HPL0211-2004/2005

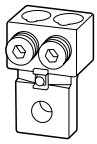
| | | Type suffix Article no. When ordered with basic unit | Price See Price List | Std. pack | Type Article no. when ordered separately | Price See Price List | Std. pack | | Notes |
|---|---|---|---|---|---|---|---|---|---|
| **Door coupling rotary handle for rear mounting switches** | | | | | | | | | |
| Degree of protection IP55<br>With padlocking feature<br>Rotary drive required,<br>Lockable in the OFF and ON position with up to three padlocks<br>  | | | | | | | | | |
| Black | Without handle position locking | **+H10-SW**<br>034952 | | 1 off | **H10-SW**<br>034805 | | 1 off | – | For horizontal installation of the switch, a special cog is required (on request). |
| | With handle position locking | **+H10-F-SW**<br>034955 | | 1 off | **H10-F-SW**<br>034808 | | 1 off | Handle position maintained when the door or cover are being opened | |
| Red-yellow<br>For use of the switch as an Emergency-Stop device according to IEC/EN 60204-1 | Without handle position locking | **+RH10**<br>034954 | | 1 off | **RH10**<br>034807 | | 1 off | – | |
| | With handle position locking | **+RH10-F**<br>034957 | | 1 off | **RH10-F**<br>034809 | | 1 off | Handle position maintained when the door or cover are being opened | |
| **Switch position indication** | | | | | | | | | |
| When the panel door is open<br>Fits onto the shaft of the rotary drive | | | | | | | | | |
| | – | **+SA-NZM10**<br>045051 | | 1 off | **SA-NZM10**<br>045050 | | 1 off | – | – |
| **Add-on rotary handle** | | | | | | | | | |
| Push-fits on to the extension shaft<br>  | For A-NZM10, A400-NZM14 | **+H10UZ**<br>044757 | | 1 off | **H10UZ**<br>044756 | | 1 off | – | – |
| | For A600-NZM–10, A600-NZM14 | **+H12UZ**<br>065794 | | 1 off | **H12UZ**<br>047427 | | 1 off | – | – |
| **Main switch assembly kit** | | | | | | | | | |
| With black door coupling rotary handle | – | **+V-NZM10-SW**<br>054138 | | 1 off | **V-NZM10-SW**<br>054150 | | 1 off | – | Equipment supplied<br>• Door coupling rotary handle, rotary drive<br>• Extension shaft for 400 mm mounting depth<br>• External warning plate<br>• Black lightning symbol |
| With red-yellow door coupling rotary handle,<br>For use of the switch as an Emergency-Stop device according to IEC/EN 60204-1 | – | **+V-NZM10**<br>025372 | | 1 off | **V-NZM10**<br>047893 | | 1 off | – | |
| **External warning plate** | | | | | | | | | |
| "Main switch – open in 0 position only" | | | | | | | | | |
| German | – | **+ZS61-NZM10**<br>045056 | | 1 off | **ZS61-NZM10**<br>045057 | | 1 off | External warning plates are available in the following languages:<br>64 Bulgarian 73 Romanian<br>65 Danish 74 Russian<br>66 Finnish 75 Swedish<br>67 Dutch 76 Serbo-Croatian<br>68 Italian 77 Spanish<br>69 Greek 78 Czech<br>70 Norwegian 79 Turkish<br>71 Polish 80 Hungarian<br>72 Portuguese 81 Afrikaans<br>To obtain the order number, insert the language code number into the type reference required.<br>**Ordering example**<br>External warning plate in Finnish:<br>ZS**66**-NZM10 | |
| English | – | **+ZS62-NZM10**<br>027559 | | 1 off | **ZS62-NZM10**<br>027579 | | 1 off | | |
| French | – | **+ZS63-NZM10**<br>027560 | | 1 off | **ZS63-NZM10**<br>027580 | | 1 off | | |
| Further languages<br>are available under the article no's on the opposite page | – | **+ZS*-NZM10**<br>999976 | | 1 off | **ZS*-NZM10**<br>999977 | | 1 off | | |
| Blank<br>(for engraving or printing) | | **+ZS60-NZM10**<br>045054 | | 1 off | **ZS60-NZM10**<br>045055 | | 1 off | | |
| **Lightning symbol** | | | | | | | | | |
| Including terminal marking for main switch | – | | | | **BPF-NZM10**<br>231363 | | 10 off | Included as standard in main switch assembly kit | – |

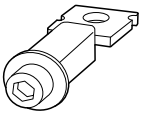
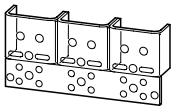
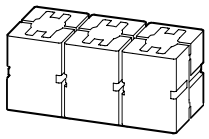
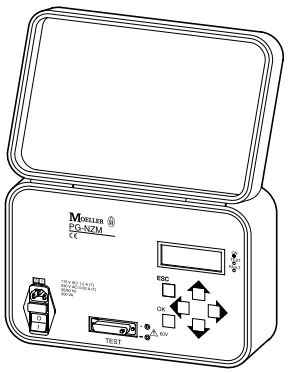
Circuit-breakers, switch-disconnectors up to 1600 A



Moeller HPL0211-2004/2005

| | | Type suffix<br>Article no.<br>When ordered with basic unit | Price<br>See Price List | Std. pack | Type<br>Article no. when ordered separately | Price<br>See Price List | Std. pack | | Notes |
|---|---|---|---|---|---|---|---|---|---|
| **Paralleling mechanism** | | | | | | | | | |
| For simultaneous operation of two P switch-disconnectors mounted side by side, using a rotary drive<br>  | | | | | | | | | |
| | – | | | | **K2-P10**<br>034834 | | 1 off | – | Paralleling mechanism for P switch-disconnectors only.<br>Not suitable for use as a main switch. |
| | – | | | | **K2-P104**<br>034835 | | 1 off | – | |
| **Mechanical interlock** | | | | | | | | | |
| For 2 switches<br>For mechanically interlocking of two switches in the same distribution section against one another,<br>For 3- and 4-pole switches with toggle switch or rotary drive<br>  | | | | | | | | | |
| | For 2 switches | | | | **KV2-NZM10**<br>034831 | | 1 off | For standby power supplies | – |
| For 2 switches with remote operator<br>For mechanically interlocking of two switches in the same distribution section against one another,<br>For 3- and 4-pole switches with toggle switch or rotary drive<br>  | | | | | | | | | |
| | For 2 switches with R-NZM10 remote operator | | | | **KVR2-NZM10**<br>034832 | | 1 off | The remote operator must be electrically interlocked at the same time | – |
| For 3 switches<br>For mechanically interlocking of two switches in the same distribution section against one another,<br>For 3- and 4-pole switches with toggle switch or rotary drive<br>  | | | | | **KV3-NZM10**<br>047891 | | 1 off | – | – |
| For standby power supplies<br>For mechanically interlocking of two mains incoming switches with toggle lever or rotary drive one emergency supply switch,<br>For 3- and 4-pole switches with toggle switch or rotary drive<br>  | – | | | | **KVA3-NZM10**<br>034833 | | 1 off | Possible switch positions:<br>Mains circuit 1 / Emergency power / Mains circuit 2<br>0 / 0 / 0<br>1 / V / 0<br>1 / V / 1<br>0 / V / 1<br>0 / 0 / 0<br>V / 1 / V<br>0 = OFF<br>V = interlocked<br>1 = ON | – |

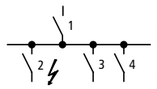
| | For NZM circuit-breaker/ switch-disconnector | Type suffix Article no. for ordering with basic unit | **Price** See Price List | Std. pack | Type Article no. when ordered separately | **Price** See Price List | Std. pack | **Notes** |
|---|---|---|---|---|---|---|---|---|
| **Terminations** | | | | | | | | |
| For copper cross-sections,<br>With control circuit terminal<br>Supplied with<br>• Supplied as a set: 1 set = 3 or 4 terminals, as appropriate<br>• When ordered separately, supplied singly. | | | | | | | | |
| 1 round conductor: 120 – 300 mm²<br>Use with flexible and highly flexible conductors ferrules. | 3-pole | **+K300-NZM10-O**<br>093732 | | 1 off | **K300-NZM10**<br>034937 | | 3 off | -O = for fitting at the top<br>-U = for fitting at the bottom |
|  | 3-pole | **+K300-NZM10-U**<br>093731 | | | | | | |
| | 4-pole | **+K300-NZM104-O**<br>096254 | | | | | | |
| | 4-pole | **+K300-NZM104-U**<br>096231 | | | | | | |
| 1 or 2 round conductors:<br>70 – 120 mm²<br>Use with flexible and highly flexible conductors ferrules. | 3-pole | **+K2X120-NZM10-O**<br>093734 | | | **K2X120-NZM10**<br>034938 | | 3 off | |
|  | 3-pole | **+K2X120-NZM10-U**<br>093733 | | | | | | |
| | 4-pole | **+K2X120-NZM104-O**<br>096308 | | | | | | |
| | 4-pole | **+K2X120-NZM104-U**<br>096281 | | | | | | |
| 1 or 2 round conductors:<br>50 – 240 mm²<br>Use with flexible and highly flexible conductor ferrules.<br>Suitable for aluminium conductors<br>H-NZM10(4) terminal cover is supplied | 3-pole | **+K2X240-NZM10-O**<br>093736 | | | **K2X240-NZM10**<br>034939 | | 3 off | |
|  | 3-pole | **+K2X240-NZM10-U**<br>093735 | | | | | | |
| | 4-pole | **+K2X240-NZM104-O**<br>096357 | | | | | | |
| | 4-pole | **+K2X240-NZM104-U**<br>096341 | | | | | | |
| For laminated flat copper strip<br>10 × 16 × 0.8 mm<br>11 × 21 × 1 mm<br>2 × (11 × 21 × 1 mm) | 3-pole | **+K22X21-NZM10-O**<br>093738 | | | **K22X21-NZM10**<br>034940 | | 3 off | |
|  | 3-pole | **+K22X21-NZM10-U**<br>093737 | | | | | | |
| | 4-pole | **+K22X21-NZM104-O**<br>097319 | | | | | | |
| | 4-pole | **+K22X21-NZM104-U**<br>096556 | | | | | | |

| | For NZM circuit-breaker/ switch-disconnector | **Type suffix** Article no. When ordered with basic unit | **Price** See Price List | Std. pack | **Type** Article no. when ordered separately | **Price** See Price List | Std. pack | **Notes** |
|---|---|---|---|---|---|---|---|---|
| **Rear terminal bolts** | | | | | | | | |
| For connection of cable lugs or flat copper strip, M12 screw terminal<br>Supplied as a set 1 set = 3 or 4 terminal screws<br>  | 3-pole | **+RG-NZM10-O**<br>047901 | | 1 off | **RG-NZM10**<br>034941 | | 1 off | -O = for fitting at the top<br>-U = for fitting at the bottom |
| | 3-pole | **+RG-NZM10-U**<br>047900 | | | | | | |
| | 4-pole | **+RG-NZM104-O**<br>047899 | | | | | | |
| | 4-pole | **+RG-NZM104-U**<br>047898 | | | | | | |
| **Control circuit terminal for screw terminal** | | | | | | | | |
| When ordered with basic unit, supplied as a set: 1 set = 2 terminals<br>When ordered separately, supplied singly | 3 and 4-pole | **+ST-NZM10-O**<br>047017 | | 1 off | **ST-NZM10**<br>047015 | | 1 off | Terminal capacity:<br>(1 – 2) ×<br>(0.75 – 2.5 mm²)<br>-O = for fitting at the top<br>-U = for fitting at the bottom |
| | 3 and 4-pole | **+ST-NZM10-U**<br>047016 | | 1 off | | | | |
| **Additional terminal covers** | | | | | | | | |
| For cable lugs<br>Included as standard with K2X240, Supplied with<br>• Supplied as a set: 1 set = 3 or 4 terminal covers, as appropriate<br>• When ordered separately, supplied singly<br>  | 3-pole | **+H-NZM10-O**<br>025348 | | 1 off | **H-NZM10**<br>047889 | | 3 off | -O = for fitting at the top<br>-U = for fitting at the bottom |
| | 3-pole | **+H-NZM10-U**<br>025347 | | | | | | |
| | 4-pole | **+H-NZM104-O**<br>025350 | | | | | | |
| | 4-pole | **+H-NZM104-U**<br>025349 | | | | | | |
| For clamp-type terminals one-piece,<br>For use with K300, K2X120 and K22X21<br>  | 3-pole | **+HH-NZM10-O**<br>047578 | | 1 off | **HH-NZM10**<br>043254 | | 1 off | -O = for fitting at the top<br>-U = for fitting at the bottom |
| | 3-pole | **+HH-NZM10-U**<br>047479 | | | | | | |
| | 4-pole | **+HH-NZM104-O**<br>047478 | | | **HH-NZM104**<br>047764 | | 1 off | |
| | 4-pole | **+HH-NZM104-U**<br>046464 | | | | | | |
| **IP2X terminal covers** | | | | | | | | |
| Equipment supplied:<br>1 set = 3 or 4 terminal covers<br>  | 3-pole | **+HB-NZM10**<br>254658 | | 1 off | **HB-NZM10**<br>254659 | | 1 off | – |
| | 4-pole | **+HB-NZM104**<br>256149 | | 1 off | **HB-NZM104**<br>256148 | | 1 off | – |
| **Test unit** | | | | | | | | |
| Testing the tripping characteristic with simulated adjustable tripping currents.<br>For NZM10 circuit-breakers.<br>Supply voltage 115/230 V, 50/60 Hz.<br>  | – | | | | **PG-NZM**<br>210525 | | 1 off | – |

Circuit-breakers, switch-disconnectors up to 1600 A

Moeller HPL0211-2004/2005

Moeller HPL0211-2004/2005




Incoming circuit-breaker

Outgoing circuit-breaker

**Selectivity**
between circuit-breakers enables separate shut-down of faulty system sections. Incoming circuit-breaker 1 and outgoing circuit-breaker 2 operate selectively if in the event of a short-circuit at position 2 **only** the outgoing circuit-breaker 2 trips out. System sections 3 and 4 continue to operate.

| | | | Incoming circuit-breaker | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | NZM...1-A... | | | | | | NZM...2-A... | | | | | | | | |
| | [kA] | | 25 (50) | | | | | | 25(50)(100)(150) | | | | | | | | |
| | [A] | | 40 | 50 | 63 | 80 | 100 | 125 | 40 | 50 | 63 | 80 | 100 | 125 | 160 | 200 | 250 |
| **Outgoing circuit-breaker** | | $I_{cu(415V)}$ [kA] | Prospective short-circuit current (kA). Set the overload and short-circuit release of the incoming circuit-breaker to the max. value. | | | | | | | | | | | | | | |
| NZM...1-A... | 40 | 25 ... 50 | – | – | 0.5 | 0.7 | 0.8 | 1.5 | – | – | 0.6 | 0.8 | 1.5 | 1.5 | 1.5 | 2 | 3 |
| | 50 | 25 ... 50 | – | – | – | 0.6 | 0.8 | 1.5 | – | – | – | 0.8 | 1.5 | 1.5 | 1.5 | 2 | 3 |
| | 63 | 25 ... 50 | – | – | – | – | 0.8 | 1.5 | – | – | – | – | 1.5 | 1.5 | 1.5 | 2 | 3 |
| | 80 | 25 ... 50 | – | – | – | – | – | 1.5 | – | – | – | – | – | 1.5 | 1.5 | 2 | 3 |
| | 100 | 25 ... 50 | – | – | – | – | – | – | – | – | – | – | – | – | 1.5 | 2 | 3 |
| | 125 | 25 ... 50 | – | – | – | – | – | – | – | – | – | – | – | – | – | 2 | 3 |
| NZM...2-A... | 40 | 25 ... 150 | – | – | 0.5 | 0.6 | 0.8 | 1 | – | – | 0.5 | 0.6 | 0.8 | 1 | 1.2 | 1.6 | 2 |
| | 50 | 25 ... 150 | – | – | – | 0.6 | 0.8 | 1 | – | – | – | 0.6 | 0.8 | 1 | 1.2 | 1.6 | 2 |
| | 63 | 25 ... 150 | – | – | – | – | 0.8 | 1 | – | – | – | – | 0.8 | 1 | 1.2 | 1.6 | 2 |
| | 80 | 25 ... 150 | – | – | – | – | – | 1 | – | – | – | – | – | 1 | 1.2 | 1.6 | 2 |
| | 100 | 25 ... 150 | – | – | – | – | – | – | – | – | – | – | – | – | 1.2 | 1.6 | 2 |
| | 125 | 25 ... 150 | – | – | – | – | – | – | – | – | – | – | – | – | – | 1.6 | 2 |
| | 160 | 25 ... 150 | – | – | – | – | – | – | – | – | – | – | – | – | – | – | 2 |
| | 200 | 25 ... 150 | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – |
| | 250 | 25 ... 150 | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – |
| NZM...1-M... | 40 | 25 ... 50 | – | – | – | – | 0.8 | 1 | – | – | – | – | 0.8 | 1 | 1.2 | 1.6 | 2 |
| | 50 | 25 ... 50 | – | – | – | – | – | – | – | – | – | – | – | – | 1.2 | 1.6 | 2 |
| | 63 | 25 ... 50 | – | – | – | – | – | – | – | – | – | – | – | – | 1.2 | 1.6 | 2 |
| | 80 | 25 ... 50 | – | – | – | – | – | – | – | – | – | – | – | – | – | 1.6 | 2 |
| | 100 | 25 ... 50 | – | – | – | – | – | – | – | – | – | – | – | – | – | – | 2 |
| NZM...2-M... | 125 | 25 ... 50 | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – |
| | 160 | 25 ... 50 | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – |
| | 200 | 25 ... 50 | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – |
| NZM...2-VE... | 100 | 50 ... 150 | – | – | – | – | – | – | – | – | – | – | – | – | 1.2 | 1.6 | 2 |
| | 160 | 50 ... 150 | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – |
| | 250 | 50 ... 150 | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – |
| NZM...2-ME... | 90 | 50 ... 150 | – | – | – | – | – | – | – | – | – | – | – | – | 1.2 | 1.6 | 2 |
| | 140 | 50 ... 150 | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – |
| | 220 | 50 ... 150 | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – |
| NZM...3-AE... | 250 | 50 ... 150 | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – |
| | 400 | 50 ... 150 | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – |
| | 630 | 50 ... 150 | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – |
| NZM...3-VE... | 250 | 50 ... 150 | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – |
| | 400 | 50 ... 150 | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – |
| | 630 | 50 ... 150 | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – |
| NZM...3-ME... | 220 | 50 ... 150 | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – |
| | 350 | 50 ... 150 | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – |
| NZM...4-AE... | 630 | 50 ... 100 | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – |
| | 800 | 50 ... 100 | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – |
| | 1000 | 50 ... 100 | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – |
| | 1250 | 50 ... 100 | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – |
| | 1600 | 50 ... 100 | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – |
| NZM...4-VE... | 630 | 50 ... 100 | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – |
| | 800 | 50 ... 100 | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – |
| | 1000 | 50 ... 100 | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – |
| | 1250 | 50 ... 100 | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – |
| | 1600 | 50 ... 100 | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – |
| NZM...4-ME... | 550 | 50 ... 100 | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – |
| | 875 | 50 ... 100 | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – |
| | 1400 | 50 ... 100 | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – |

| | | | Incoming circuit-breaker | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | NZM...2-VE... | | | NZM...3-AE... | | | NZM...3-VE... | | | NZM...4-AE... | | | | | NZM...4-VE... | | | | | | | |
| | [kA] | | 50(100)(150) | | | 50(100)(150) | | | 50(100)(150) | | | 50 (100) | | | | | 50 (100) | | | | | | | |
| | [A] | | 100 | 160 | 250 | 250 | 400 | 630 | 250 | 400 | 630 | 630 | 800 | 1000 | 1250 | 1600 | 630 | 800 | 1000 | 1250 | 1600 | | | |
| **Outgoing circuit-breaker** | | $I_{cu(415V)}$ [kA] | Prospective short-circuit current (kA). Set the overload and short-circuit release of the incoming circuit-breaker to the max. value. | | | | | | | | | | | | | | | | | | | | | |
| NZM...1-A... | 40 | 25 ... 50 | 2 | 5 | 7.5 | 7.5 | 20 | 20 | 12.5 | 25 | 25 | T | T | T | T | T | T | T | T | T | T | | | |
| | 50 | 25 ... 50 | 2 | 5 | 7.5 | 7.5 | 20 | 20 | 12.5 | 25 | 25 | T | T | T | T | T | T | T | T | T | T | | | |
| | 63 | 25 ... 50 | 2 | 5 | 6 | 6 | 15 | 15 | 11 | 20 | 20 | T | T | T | T | T | T | T | T | T | T | | | |
| | 80 | 25 ... 50 | – | 5 | 6 | 6 | 15 | 15 | 11 | 20 | 20 | T | T | T | T | T | T | T | T | T | T | | | |
| | 100 | 25 ... 50 | – | 5 | 6 | 6 | 15 | 15 | 11 | 20 | 20 | T | T | T | T | T | T | T | T | T | T | | | |
| | 125 | 25 ... 50 | – | 5 | 6 | 6 | 15 | 15 | 11 | 20 | 20 | T | T | T | T | T | T | T | T | T | T | | | |
| NZM...2-A... | 40 | 25 ... 150 | 1 | 2 | 4 | 6 | 15 | 15 | 11 | 20 | 20 | T | T | T | T | T | T | T | T | T | T | | | |
| | 50 | 25 ... 150 | 1 | 2 | 4 | 6 | 15 | 15 | 11 | 20 | 20 | T | T | T | T | T | T | T | T | T | T | | | |
| | 63 | 25 ... 150 | 1 | 2 | 4 | 6 | 15 | 15 | 11 | 20 | 20 | T | T | T | T | T | T | T | T | T | T | | | |
| | 80 | 25 ... 150 | – | 2 | 4 | 6 | 15 | 15 | 11 | 20 | 20 | T | T | T | T | T | T | T | T | T | T | | | |
| | 100 | 25 ... 150 | – | 2 | 4 | 6 | 15 | 15 | 11 | 20 | 20 | T | T | T | T | T | T | T | T | T | T | | | |
| | 125 | 25 ... 150 | – | – | 4 | 6 | 15 | 15 | 11 | 20 | 20 | T | T | T | T | T | T | T | T | T | T | | | |
| | 160 | 25 ... 150 | – | – | 4 | 5 | 10 | 10 | 10 | 15 | 15 | T | T | T | T | T | T | T | T | T | T | | | |
| | 200 | 25 ... 150 | – | – | – | – | 10 | 10 | – | 15 | 15 | T | T | T | T | T | T | T | T | T | T | | | |
| | 250 | 25 ... 150 | – | – | – | – | 10 | 10 | – | 15 | 15 | T | T | T | T | T | T | T | T | T | T | | | |
| NZM...1-M... | 40 | 25 ... 50 | 1 | 2 | 4 | 6 | 15 | 15 | 11 | 20 | 20 | T | T | T | T | T | T | T | T | T | T | | | |
| | 50 | 25 ... 50 | – | 2 | 4 | 6 | 15 | 15 | 11 | 20 | 20 | T | T | T | T | T | T | T | T | T | T | | | |
| | 63 | 25 ... 50 | – | 2 | 4 | 6 | 15 | 15 | 11 | 20 | 20 | T | T | T | T | T | T | T | T | T | T | | | |
| | 80 | 25 ... 50 | – | 2 | 4 | 6 | 15 | 15 | 11 | 20 | 20 | T | T | T | T | T | T | T | T | T | T | | | |
| | 100 | 25 ... 50 | – | – | 4 | 6 | 15 | 15 | 11 | 20 | 20 | T | T | T | T | T | T | T | T | T | T | | | |
| NZM...2-M... | 125 | 25 ... 50 | – | – | 2 | 6 | 7 | 10 | 7 | 10 | 12 | T | T | T | T | T | T | T | T | T | T | | | |
| | 160 | 25 ... 50 | – | – | – | 6 | 7 | 10 | 7 | 10 | 12 | T | T | T | T | T | T | T | T | T | T | | | |
| | 200 | 25 ... 50 | – | – | – | – | 7 | 10 | – | 10 | 12 | T | T | T | T | T | T | T | T | T | T | | | |
| NZM...2-VE... | 100 | 50 ... 150 | – | 1.2 | 2 | 4 | 7 | 10 | 5 | 8 | 11 | T | T | T | T | T | T | T | T | T | T | | | |
| | 160 | 50 ... 150 | – | – | 2 | 4 | 7 | 10 | 5 | 8 | 11 | T | T | T | T | T | T | T | T | T | T | | | |
| | 250 | 50 ... 150 | – | – | – | 4 | 7 | 10 | 5 | 8 | 11 | T | T | T | T | T | T | T | T | T | T | | | |
| NZM...2-ME... | 90 | 50 ... 150 | – | 1.2 | 2 | 4 | 7 | 10 | 5 | 8 | 11 | T | T | T | T | T | T | T | T | T | T | | | |
| | 140 | 50 ... 150 | – | – | 2 | 4 | 7 | 10 | 5 | 8 | 11 | T | T | T | T | T | T | T | T | T | T | | | |
| | 220 | 50 ... 150 | – | – | – | 4 | 7 | 10 | 5 | 8 | 11 | T | T | T | T | T | T | T | T | T | T | | | |
| NZM...3-AE... | 250 | 50 ... 150 | – | – | – | – | 4 | 4.5 | – | 4.5 | 5 | T/80 | T/80 | T/80 | T/80 | T/80 | T/80 | T/80 | T/80 | T/80 | T/80 | | | |
| | 400 | 50 ... 150 | – | – | – | – | – | 4.5 | – | – | 5 | T/80 | T/80 | T/80 | T/80 | T/80 | T/80 | T/80 | T/80 | T/80 | T/80 | | | |
| | 630 | 50 ... 150 | – | – | – | – | – | – | – | – | – | – | T/80 | T/80 | T/80 | T/80 | – | T/80 | T/80 | T/80 | T/80 | | | |
| NZM...3-VE... | 250 | 50 ... 150 | – | – | – | – | 3.5 | 4 | – | 4.5 | 5 | T/80 | T/80 | T/80 | T/80 | T/80 | T/80 | T/80 | T/80 | T/80 | T/80 | | | |
| | 400 | 50 ... 150 | – | – | – | – | – | 4 | – | – | 5 | T/80 | T/80 | T/80 | T/80 | T/80 | T/80 | T/80 | T/80 | T/80 | T/80 | | | |
| | 630 | 50 ... 150 | – | – | – | – | – | – | – | – | – | – | T/80 | T/80 | T/80 | T/80 | – | T/80 | T/80 | T/80 | T/80 | | | |
| NZM...3-ME... | 220 | 50 ... 150 | – | – | – | – | 3.5 | 4 | – | 4.5 | 5 | T/80 | T/80 | T/80 | T/80 | T/80 | T/80 | T/80 | T/80 | T/80 | T/80 | | | |
| | 350 | 50 ... 150 | – | – | – | – | – | 4 | – | – | 5 | T/80 | T/80 | T/80 | T/80 | T/80 | T/80 | T/80 | T/80 | T/80 | T/80 | | | |
| NZM...4-AE... | 630 | 50 ... 100 | – | – | – | – | – | – | – | – | – | – | 10 | 15 | 20 | 20 | – | 10 | 15 | 20 | 20 | | | |
| | 800 | 50 ... 100 | – | – | – | – | – | – | – | – | – | – | – | – | 20 | 20 | – | – | – | 20 | 20 | | | |
| | 1000 | 50 ... 100 | – | – | – | – | – | – | – | – | – | – | – | – | 20 | 20 | – | – | – | 20 | 20 | | | |
| | 1250 | 50 ... 100 | – | – | – | – | – | – | – | – | – | – | – | – | – | 20 | – | – | – | – | 20 | | | |
| | 1600 | 50 ... 100 | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | | | |
| NZM...4-VE... | 630 | 50 ... 100 | – | – | – | – | – | – | – | – | – | – | 10 | 15 | 20 | 20 | – | 10 | 15 | 20 | 20 | | | |
| | 800 | 50 ... 100 | – | – | – | – | – | – | – | – | – | – | – | – | 20 | 20 | – | – | – | 20 | 20 | | | |
| | 1000 | 50 ... 100 | – | – | – | – | – | – | – | – | – | – | – | – | 20 | 20 | – | – | – | 20 | 20 | | | |
| | 1250 | 50 ... 100 | – | – | – | – | – | – | – | – | – | – | – | – | – | 20 | – | – | – | – | 20 | | | |
| | 1600 | 50 ... 100 | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | | | |
| NZM...4-ME... | 550 | 50 ... 100 | – | – | – | – | – | – | – | – | – | – | – | – | 20 | 20 | – | – | – | 20 | 20 | | | |
| | 875 | 50 ... 100 | – | – | – | – | – | – | – | – | – | – | – | – | – | 20 | – | – | – | – | 20 | | | |
| | 1400 | 50 ... 100 | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | | | |

**Notes** T: total selectivity

**Protection of PVC insulated cables against thermal overload with short-circuits**

In accordance with IEE wiring regulations, cables and conductors must be protected against overloads and short-circuits.
In NZM circuit-breakers, the overload protection is implemented via the adjustable, current-dependant time-delayed overload releases.

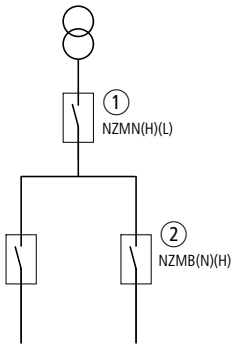
Short-circuit protection is provided by adjustable instantaneous releases, which open the main contacts in less than 25 ms.
The short-circuit total opening time restricts the temperature rise of the cable to a minimum.

The tables indicate the minimum conductor cross-section reliably protected by circuit-breakers during a short-circuit.
(Operating voltage $U_N$ = 415 V)

| | Minimum protected cross-section mm² copper |
|---|---|
| NZM...1(-4)-...20 | 6 |
| NZM...1(-4)-...25 – 160 | 10 |
| NZM...2(-4)-...20 – 250 | 4 |
| NZM...3(-4)-...250 – 630 | 16 |
| NZM...4(-4)-...630 – 1600 | 95 |

**Backup protection**

**between NZMN(H)(L) incoming circuit-breaker and NZMB(N)(H)... outgoing circuit-breaker**



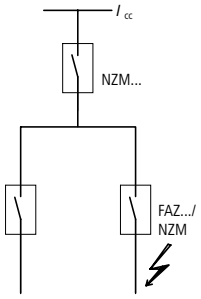

| Outgoing circuit-breaker | | Incoming circuit-breaker | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | NZMN1 | NZMH1 | NZMN2 | NZMH2 | NZML2 | NZMN3 | NZMH3 | NZML3 |
| | $I_{cu}$ | 50 kA | 100 kA | 50 kA | 100 kA | 150 kA | 50 kA | 100 kA | 150 kA |
| NZMB1 | 25 kA | ● | ● | ● | – | – | ● | – | – |
| NZMN1 | 50 kA | – | ● | – | – | – | – | – | – |
| NZMB2 | 25 kA | – | – | ● | ● | – | ● | ● | – |
| NZMN2 | 50 kA | – | – | – | ● | ● | – | ● | ● |
| NZMH2 | 100 kA | – | – | – | – | ● | – | – | ● |
| NZMN3 | 50 kA | – | – | – | – | – | – | ● | ● |
| NZMH3 | 100 kA | – | – | – | – | – | – | – | ● |

Where the prospective fault current at the point of installation of circuit-breakers is very high, it is conventional to use NZMN(H)(L) current-limiting circuit-breakers. An attractively priced alternative is to fit a NZMN(H)(L) current-limiting circuit-breaker at the point in the network upstream of NZMB(N)(H) standard circuit-breakers, if the fault level is too high for NZMB(N)(H) switches.

The **table** indicates which current-limiting circuit-breaker NZMN(H)(L) in combination with NZM(B)(N)(H) are to be used to provide protection at the network locations with high short-circuit capacities.

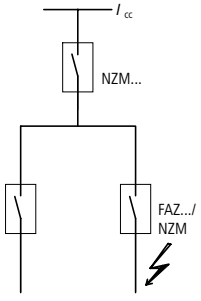
The selectivity limit is determined by the response current of the non-delayed short-circuit release in the upstream incoming circuit-breaker. In many applications this is sufficient.

**between NZM...1-A... incoming circuit-breaker and FAZ-B(C)/PLSM-B(C)... outgoing circuit-breaker**




| Outgoing circuit-breaker | Incoming circuit-breaker | |
|---|---|---|
| | NZMB1-A... | NZMN1-A... |
| FAZ-(2)(3)(4)(N)-B(C)... | | |
| 0.5 – 16 | 25 kA | 30 kA |
| 20 – 40 | 20 kA | 20 kA |
| 50, 63 | 15 kA | 15 kA |
| PLSM-B(C)...(/...) | | |
| 0.5 – 16 | 25 kA | 30 kA |
| 20 – 40 | 20 kA | 20 kA |
| 50, 63 | 15 kA | 15 kA |

**between NZM...2-A... incoming circuit-breaker and FAZ-B(C)/PLSM-B(C)... outgoing circuit-breaker**




| Outgoing circuit-breaker | Incoming circuit-breaker | |
|---|---|---|
| | NZMB2-A... | NZMN(H)(L)2-A... |
| FAZ-(2)(3)(4)(N)-B(C)... | | |
| 0.5 – 10 | 25 kA | 50 kA |
| 13 – 32 | 25 kA | 30 kA |
| 40 – 63 | 20 kA | 20 kA |
| PLSM-B(C)...(/...) | | |
| 0.5 – 10 | 25 kA | 50 kA |
| 13 – 32 | 25 kA | 30 kA |
| 40 – 63 | 20 kA | 20 kA |

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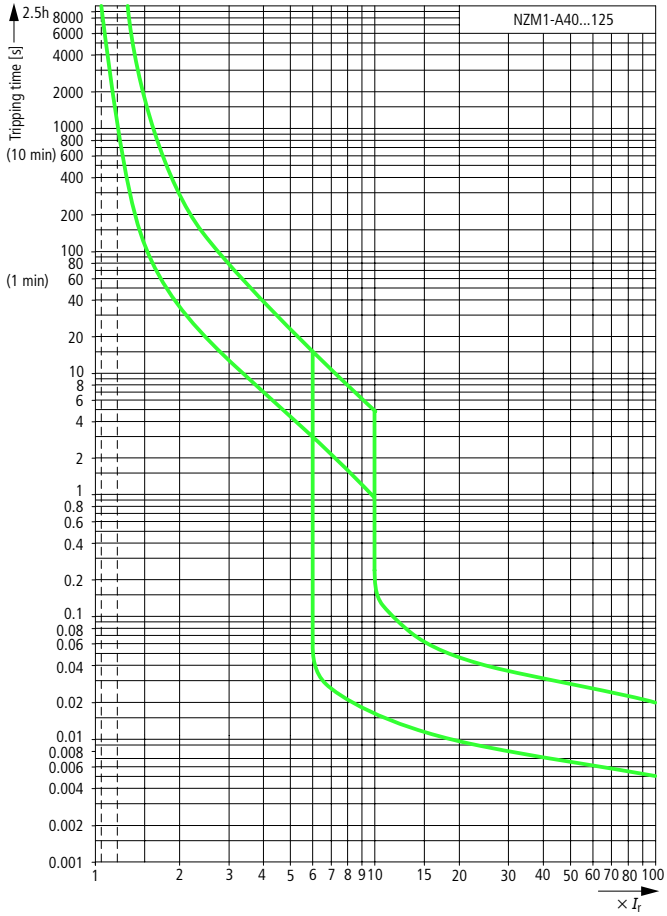
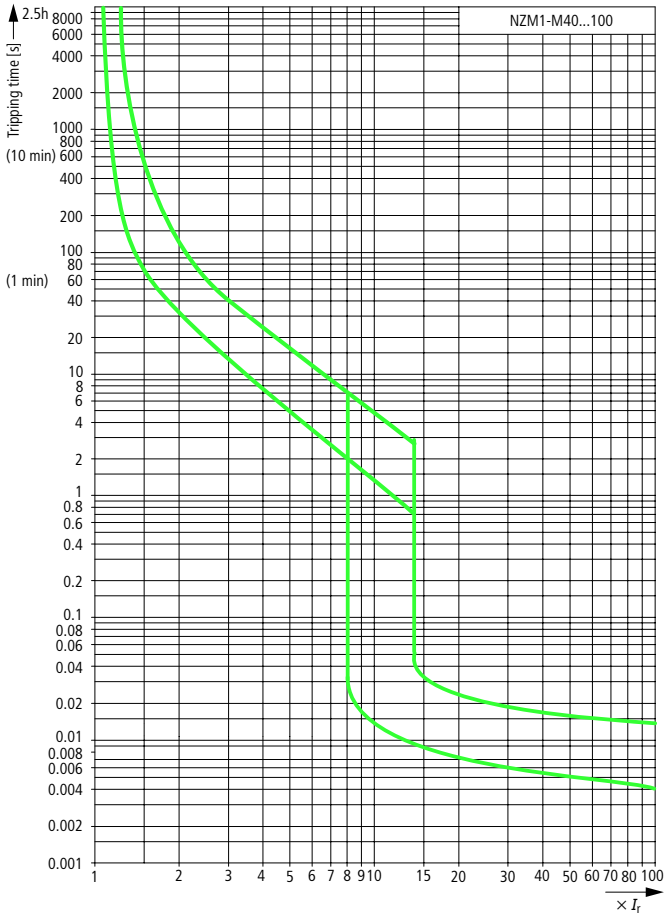
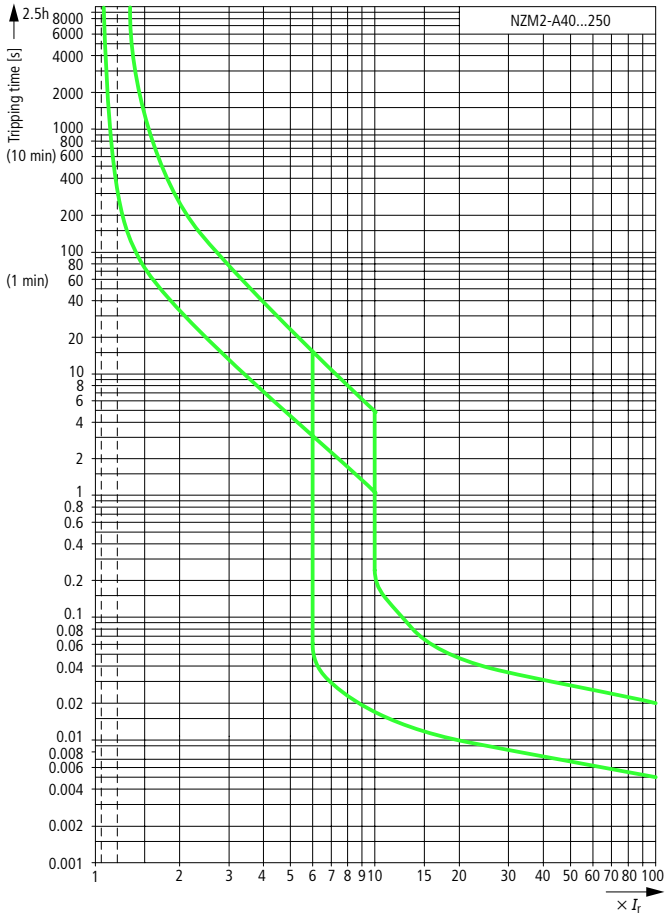
### System and line protection with NZM1



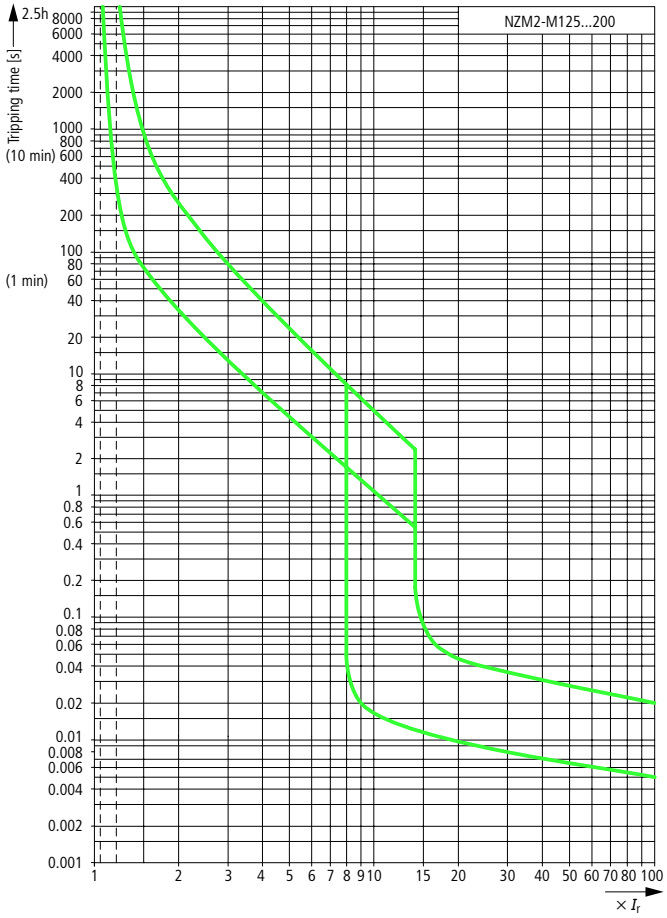

### Motor protection with NZM1



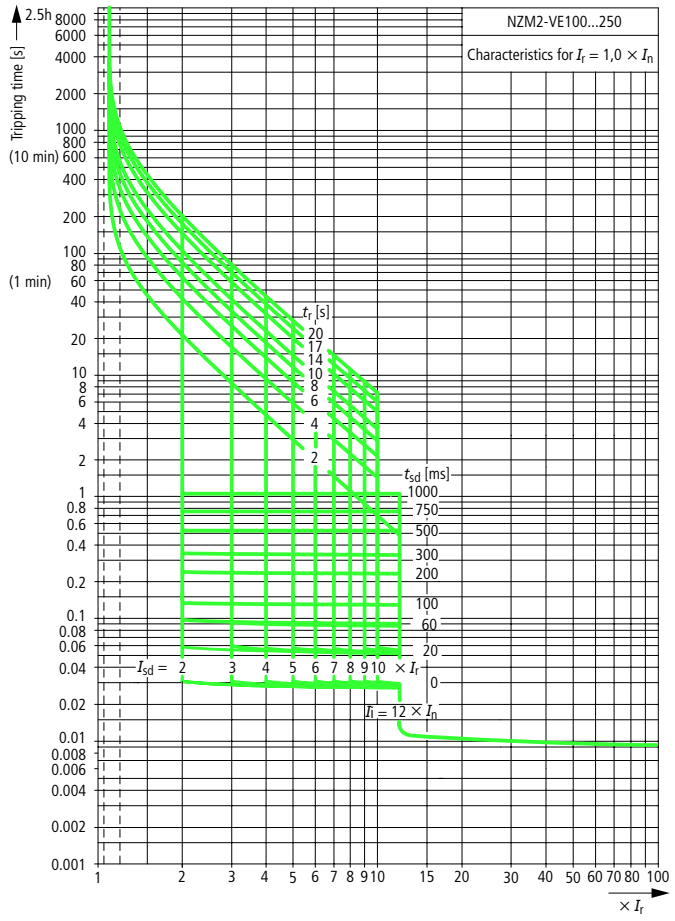

### System and line protection with NZM2



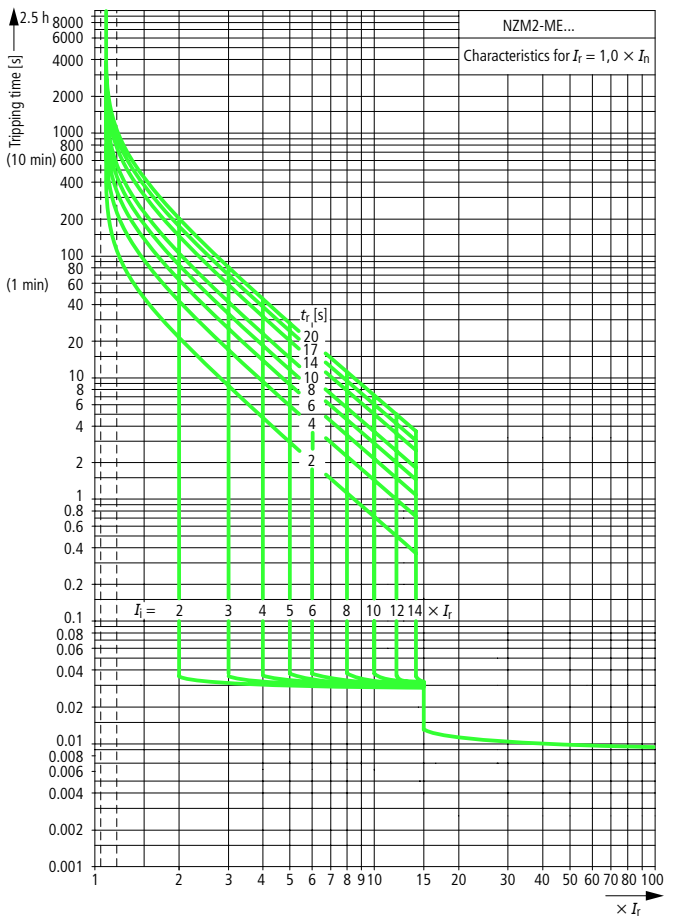

### Motor protection with NZM2



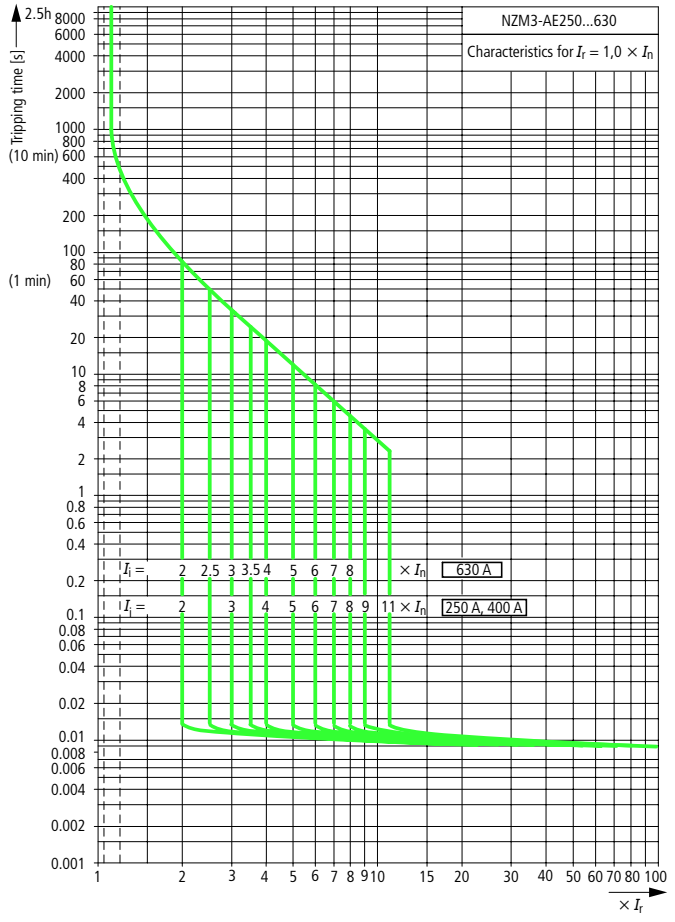
## Systems, cable, selectivity and generator protection with NZM2



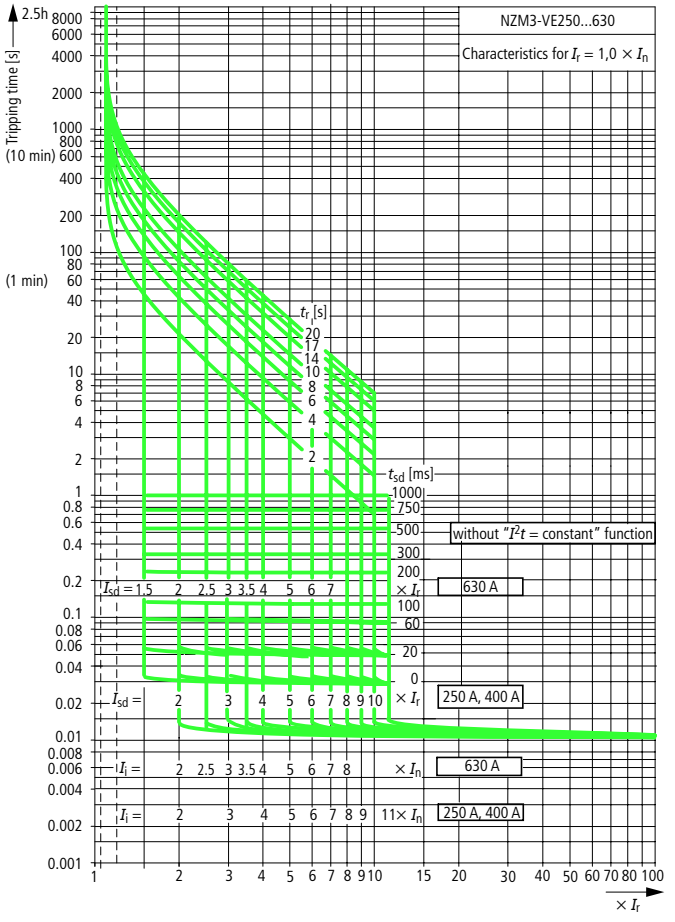

## Motor protection with NZM2




## System and line protection with NZM3




## Systems, cable, selectivity and generator protection with NZM3



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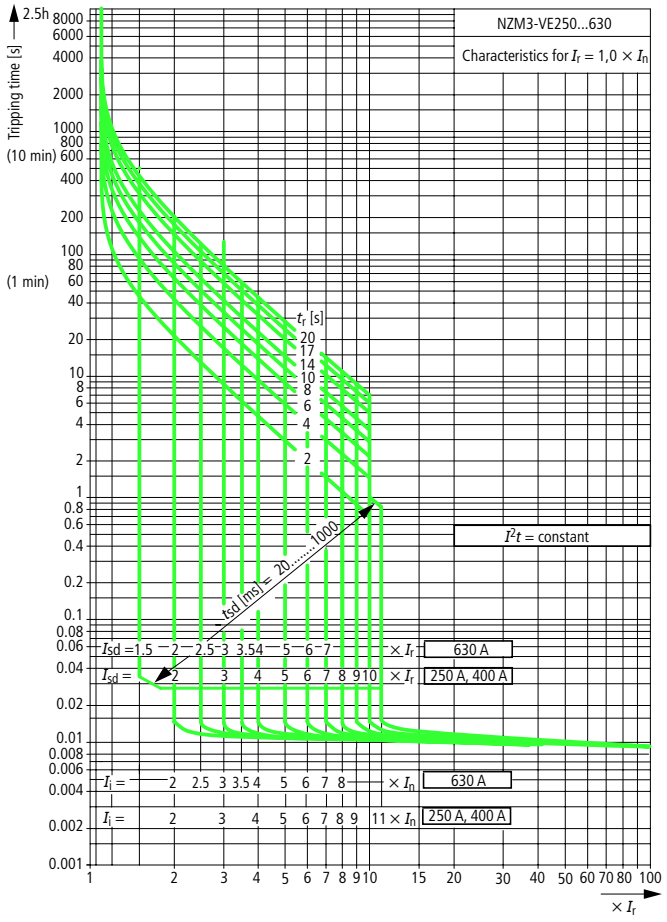
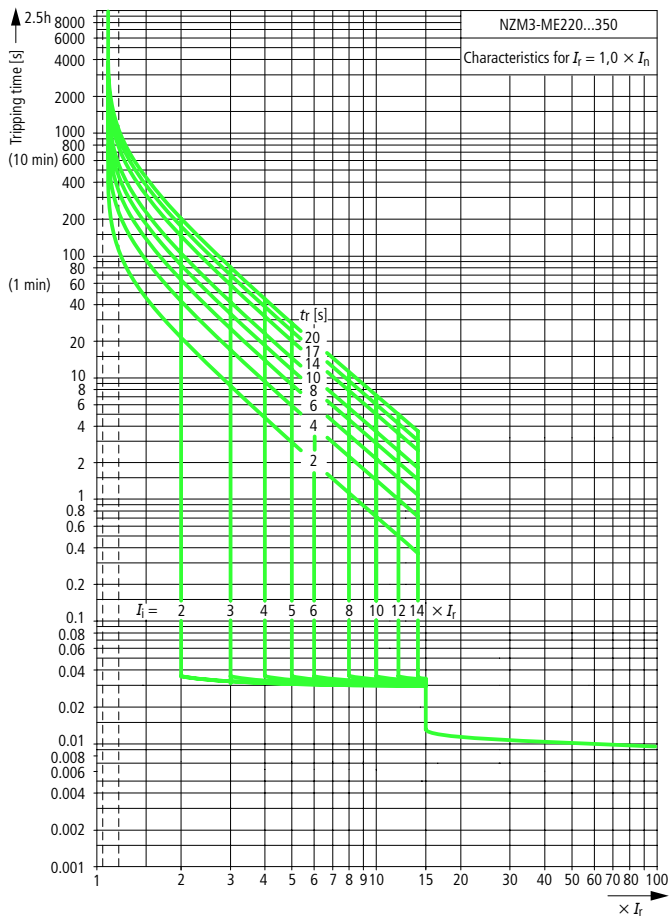
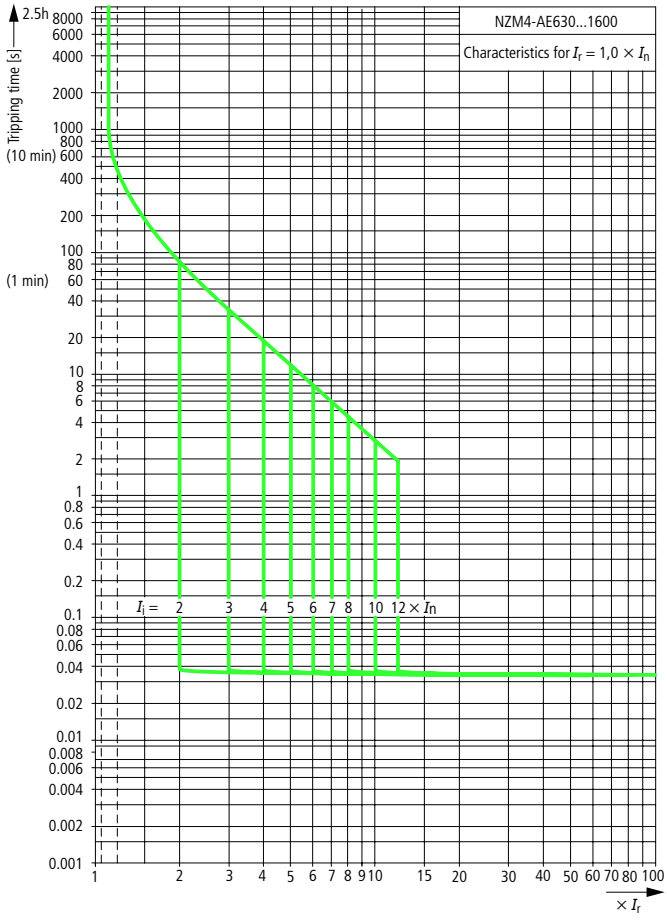
### Systems, cable, selectivity and generator protection with NZM3



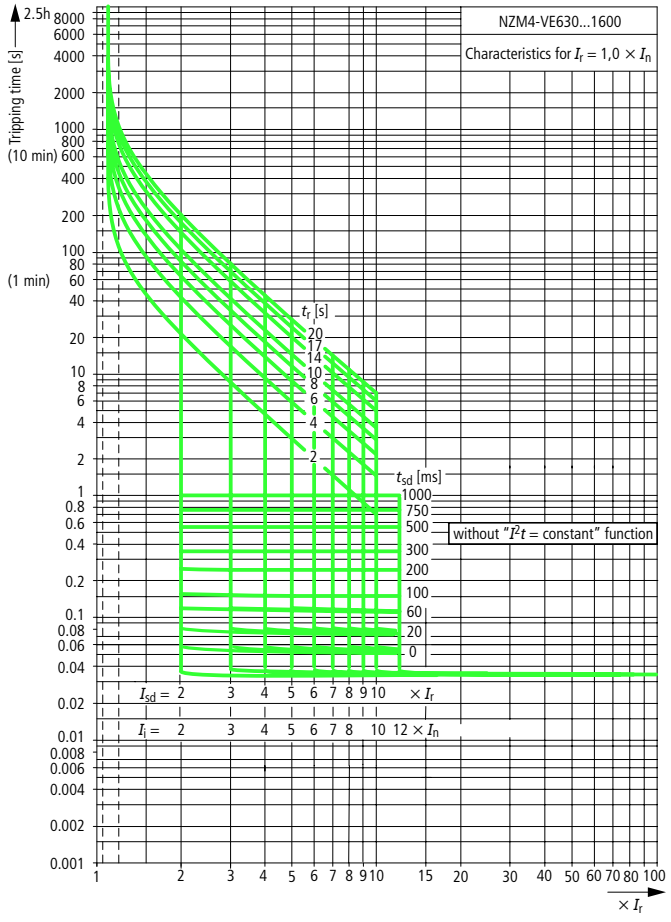

### Motor protection with NZM3



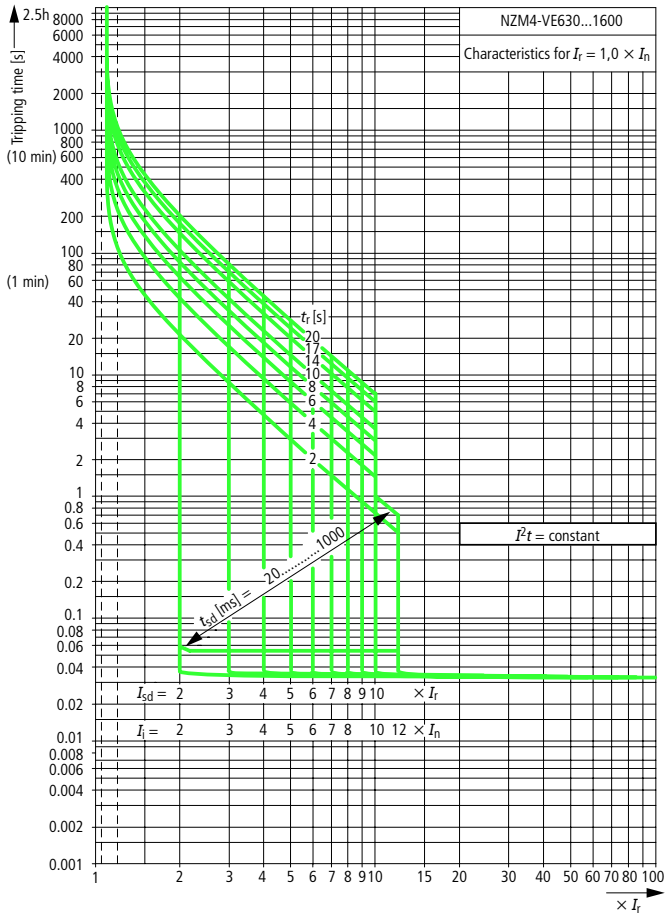

### System and line protection with NZM4



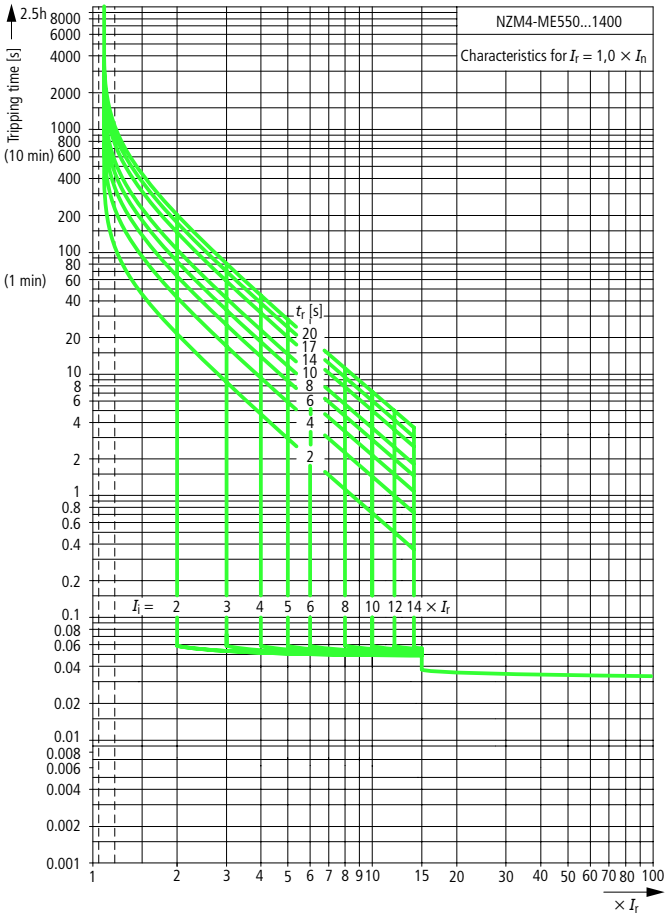

### Systems, cable, selectivity and generator protection with NZM4



**Systems, cable, selectivity and generator protection with NZM4**




**Motor protection with NZM4**



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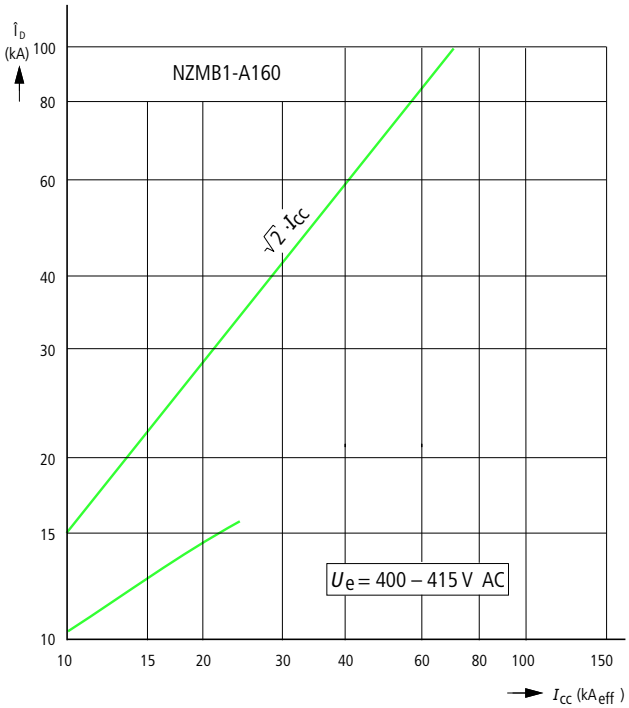
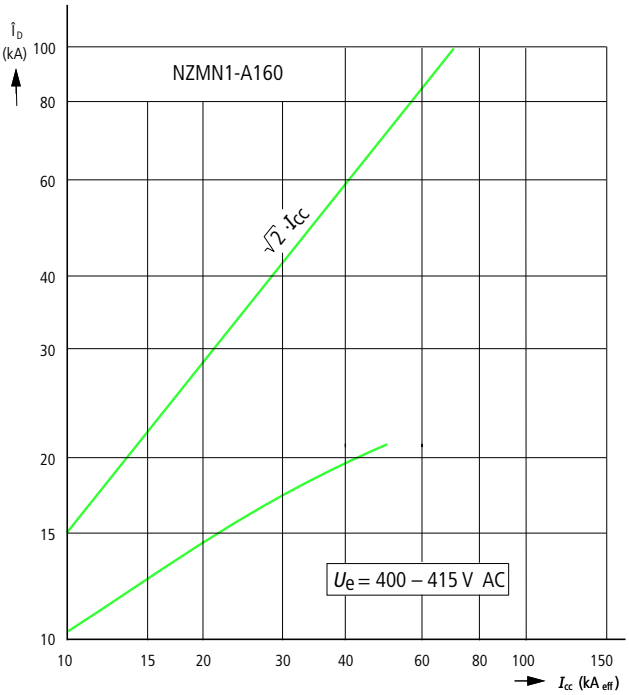
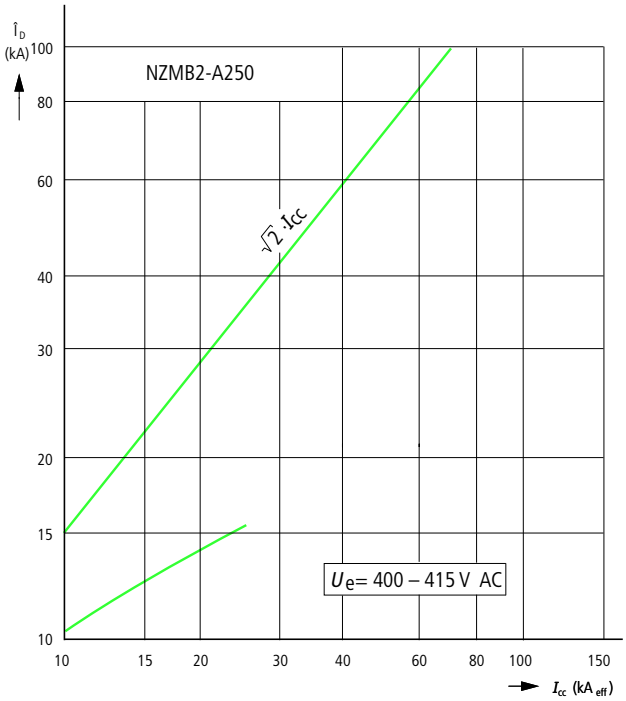
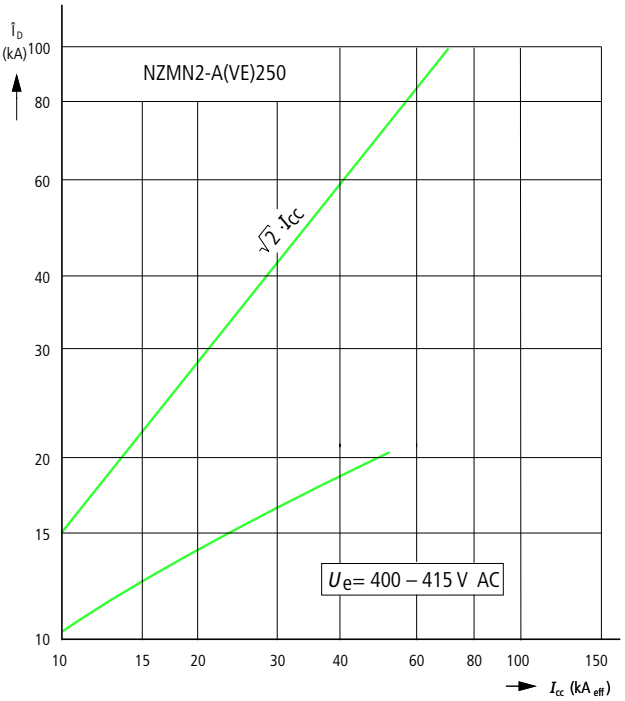
**Let-through current $\hat{i}_D$**

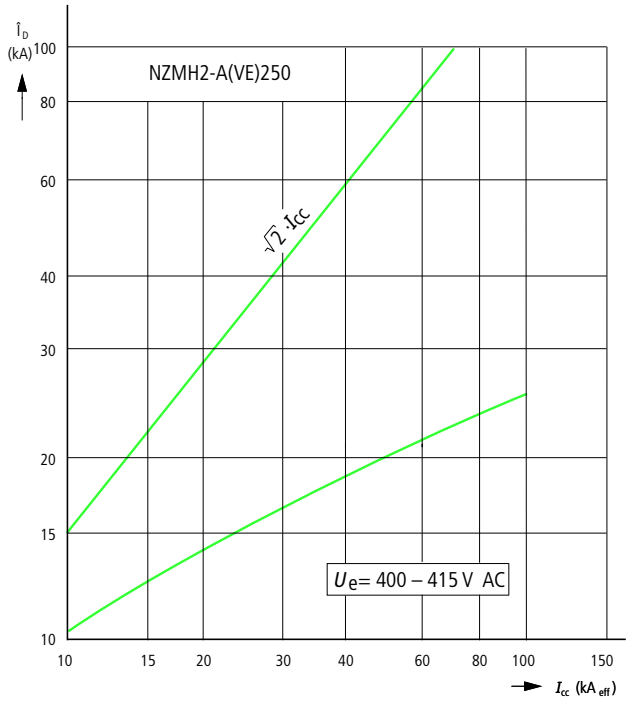


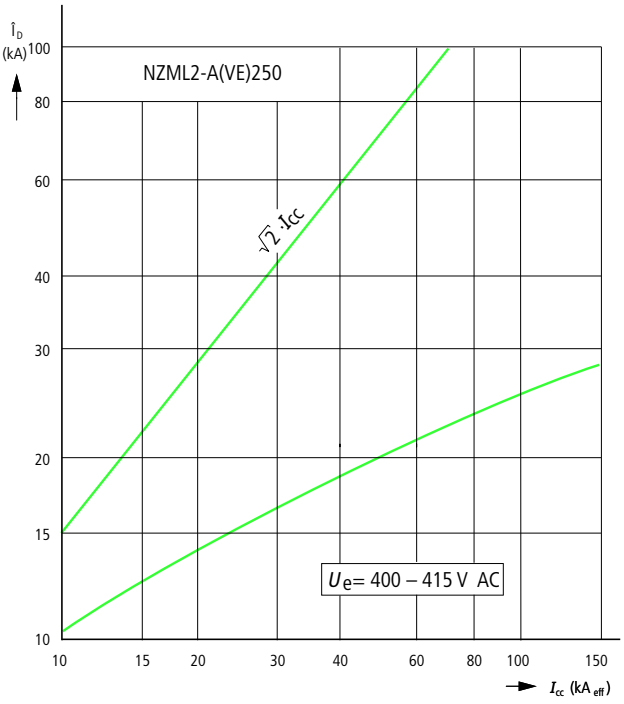



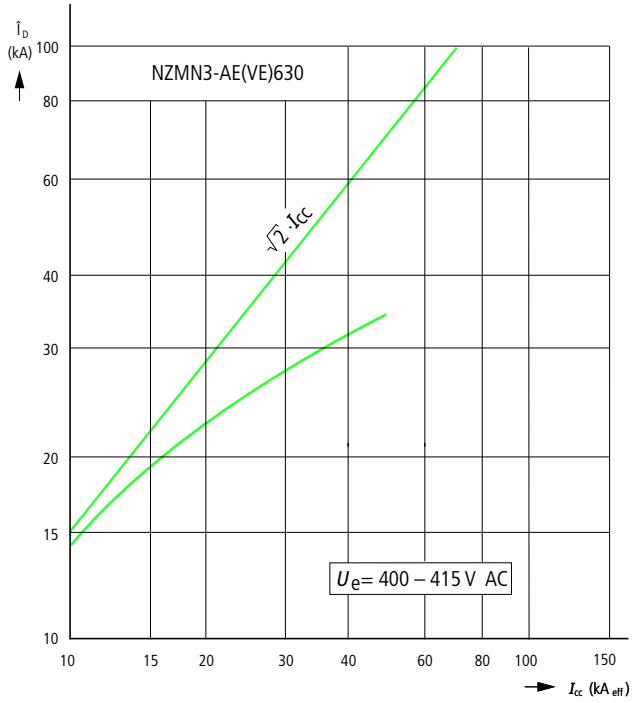



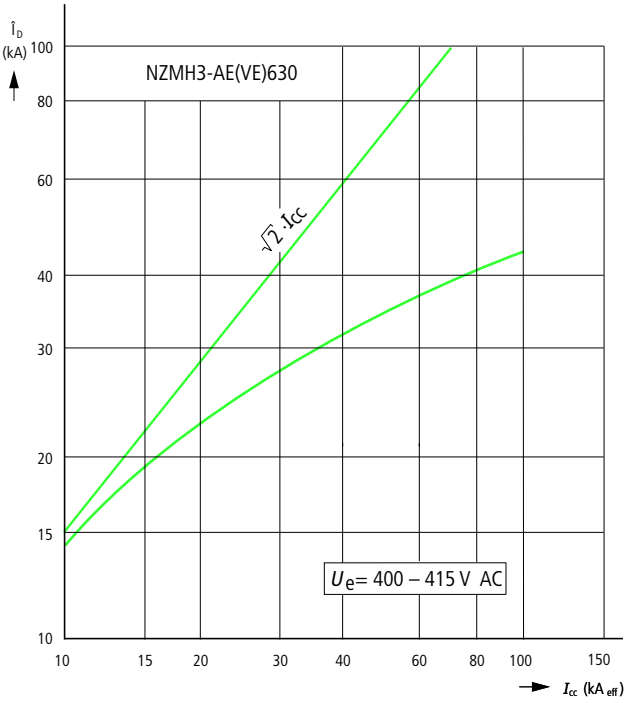



**Let-through current $\hat{i}_D$**



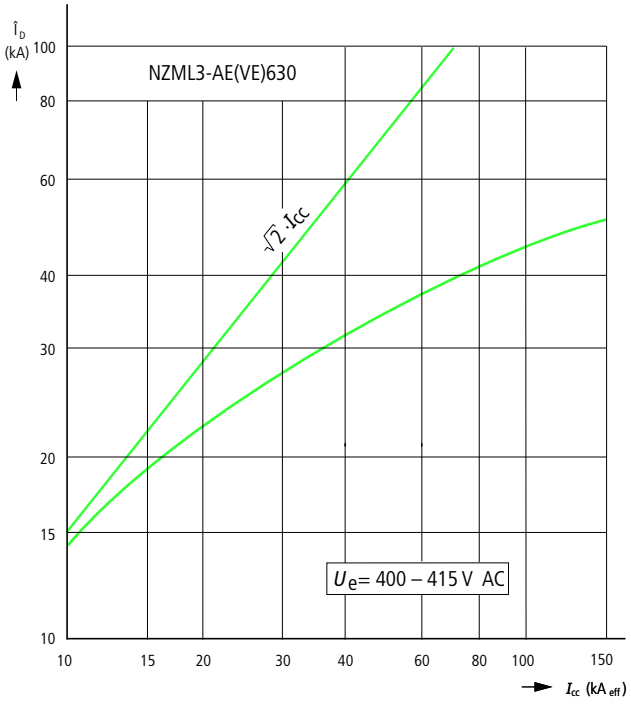



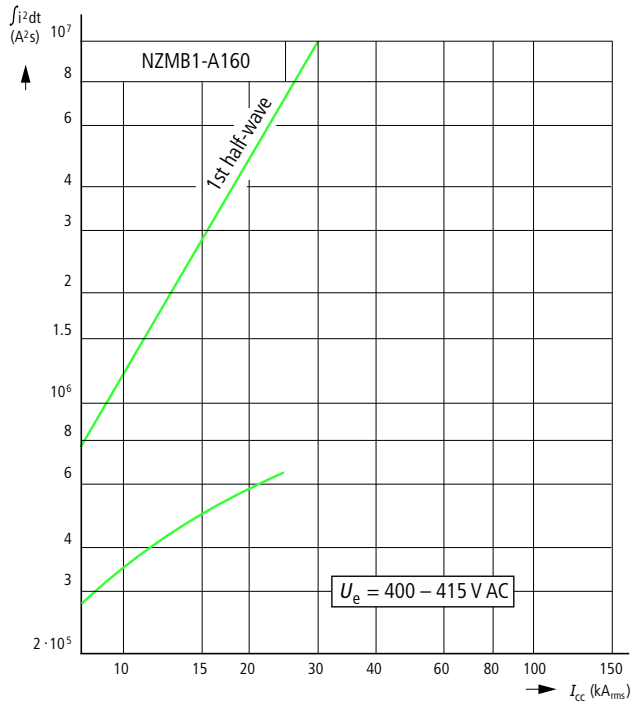



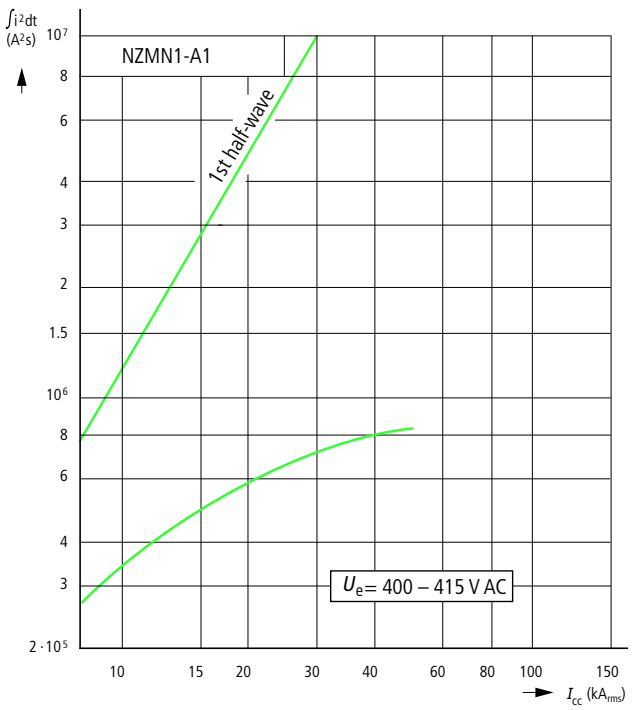
Moeller HPL0211-2004/2005

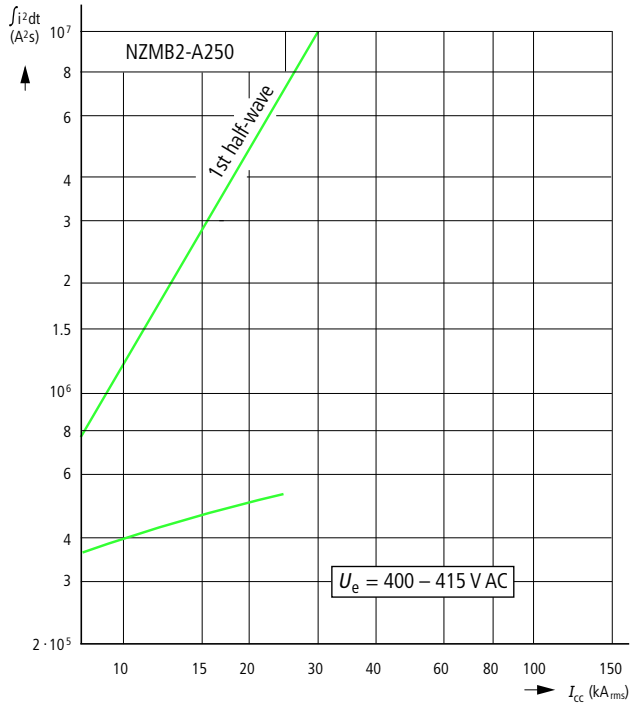
**Let-through current $\hat{i}_D$**

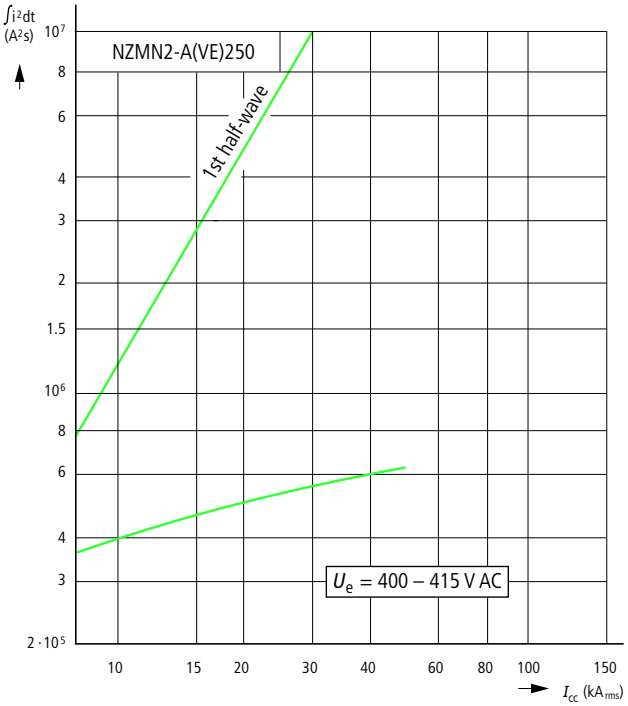


**Let-through energy $I^2t$**



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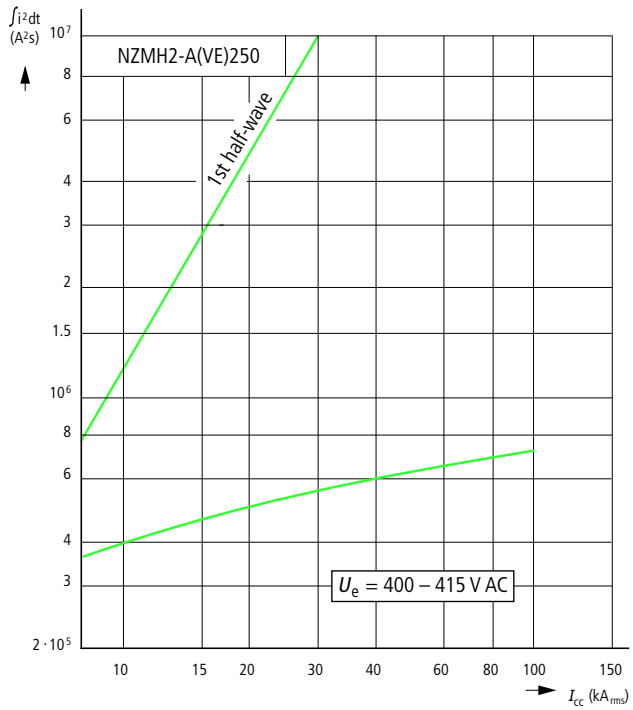
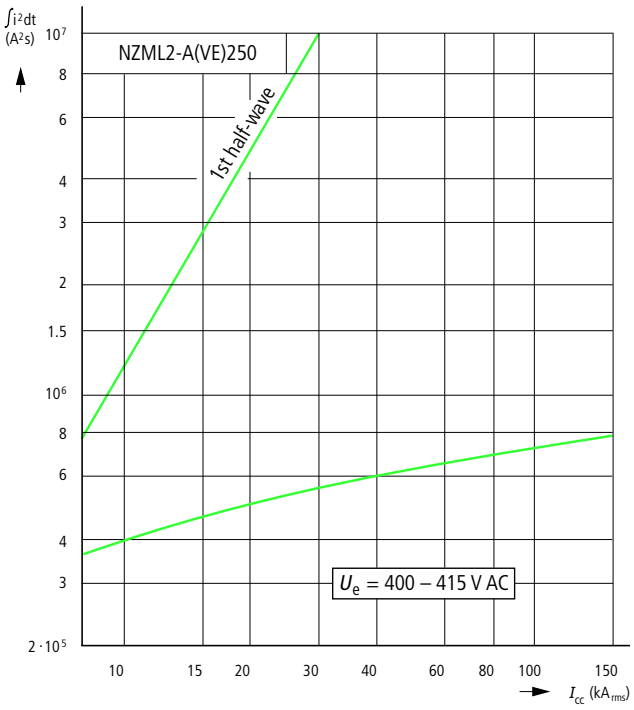
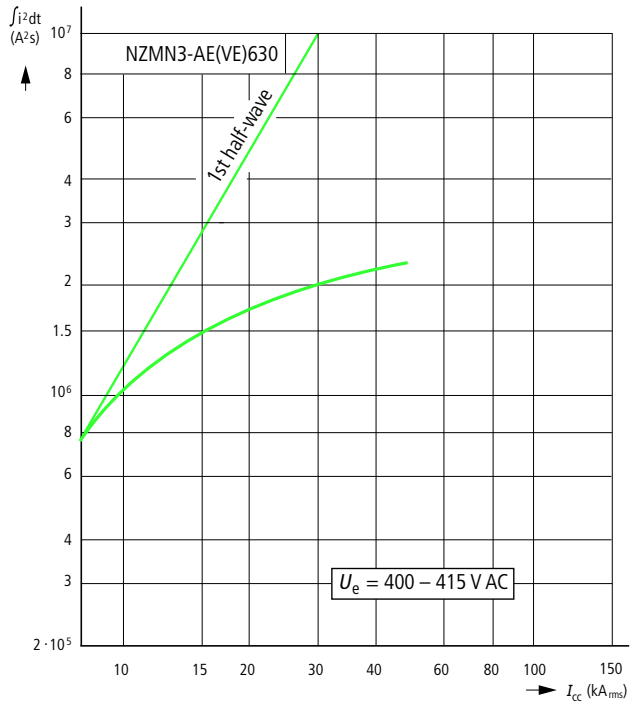
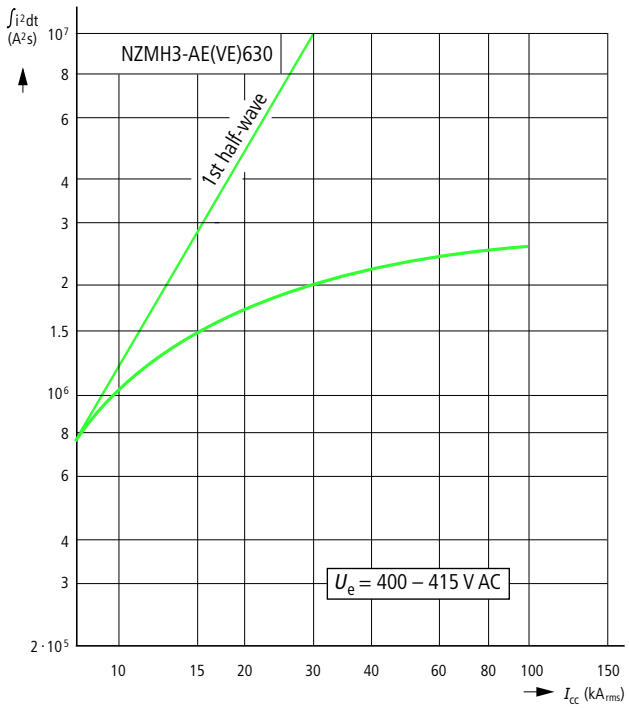
**Let-through energy $I^2t$**

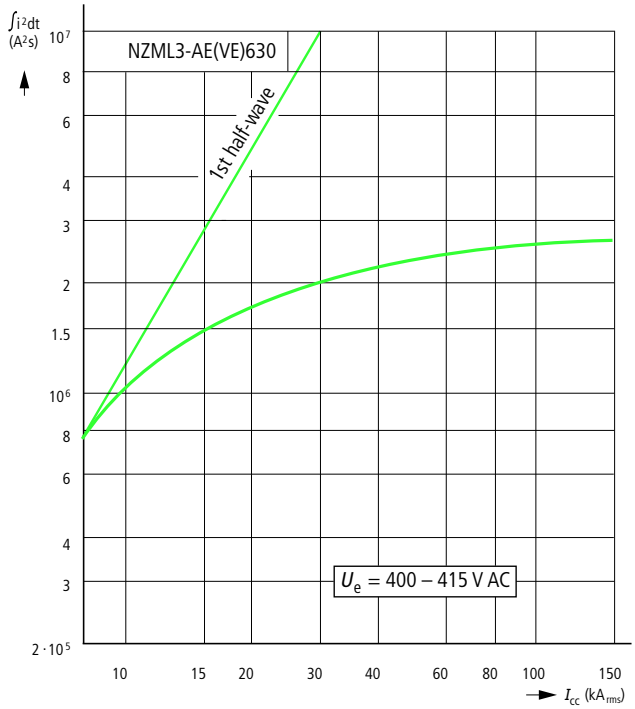


**Let-through energy $I^2t$**



Circuit-breakers, switch-disconnectors up to 1600 A

Moeller HPL0211-2004/2005

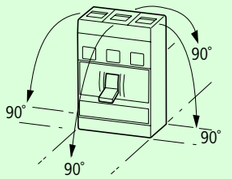
| | | | | | Rated uninterrupted current 160 A max. | | | Rated uninterrupted current 250 A max. | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | NZMB1 | NZMN1 | NZMH1 | NZMB2 | NZMN2 | NZMH2 | NZML2 |
| **Circuit-breakers** | | | | | | | | | | | |
| Rated impulse withstand voltage $U_{imp}$ | Main contacts | | V | | 6000 | 6000 | 6000 | 8000 | 8000 | 8000 | 8000 |
| | Auxiliary contacts | | V | | 6000 | 6000 | 6000 | 6000 | 6000 | 6000 | 6000 |
| Rated operational voltage[10] | | $U_e$ | V AC | | 690 | 690 | 690 | 690 | 690 | 690 | 690 |
| Overvoltage category/pollution degree | | | | | III/3 | III/3 | III/3 | III/3 | III/3 | III/3 | III/3 |
| Rated insulation voltage | | $U_i$ | V | | 800 | 800 | 800 | 1000 | 1000 | 1000 | 1000 |
| **Switching capacity** | | | | | | | | | | | |
| Rated short-circuit making capacity | 240 V | $I_{cm}$ | kA | | 63 | 187 | 220 | 63 | 187 | 220 | 330 |
| | 400/415 V | $I_{cm}$ | kA | | 53 | 110 | 220 | 53 | 110 | 220 | 330 |
| | 440 V | $I_{cm}$ | kA | | 53 | 74 | 74 | 53 | 74 | 143 | 286 |
| | 525 V | $I_{cm}$ | kA | | 30 | 40 | 40 | 30 | 53 | 84 | 105 |
| | 690 V | $I_{cm}$ | kA | | – | 17 | 17 | – | 40 | 40 | 40 |
| Rated short-circuit breaking capacity $I_{cn}$ | | | | | | | | | | | |
| $I_{cu}$ to IEC/EN 60947 test cycle O-t-CO | 240 V AC | $I_{cu}$ | kA | | 30 | 85 | 100 | 30 | 85 | 100 | 150 |
| | 400/415 V AC | $I_{cu}$ | kA | | 25 | 50 | 100 | 25 | 50 | 100 | 150 |
| | 440 V AC | $I_{cu}$ | kA | | 25 | 35 | 35 | 25 | 35 | 65 | 130 |
| | 525 V AC | $I_{cu}$ | kA | | 15 | 20 | 20 | 15 | 25 | 40 | 50 |
| | 690 V AC | $I_{cu}$ | kA | | – | 10 | 10 | – | 20 | 20 | 20 |
| $I_{cs}$ to IEC/EN 60947 test cycle O-t-CO-t-CO | 240 V AC | $I_{cs}$ | kA | | 30 | 85 | 100 | 30 | 85 | 100 | 150 |
| | 400/415 V AC | $I_{cs}$ | kA | | 25 | 50 | 50 | 25 | 50 | 100 | 150 |
| | 440 V AC | $I_{cs}$ | kA | | 25 | 35 | 35 | 25 | 35 | 65 | 130 |
| | 525 V AC | $I_{cs}$ | kA | | 7.5 | 10 | 10 | 15 | 25 | 30 | 38 |
| | 690 V AC | $I_{cs}$ | kA | | – | 7.5 | 7.5 | – | 10 | 10 | 10 |
| Switching capacity of NA circuit-breakers (UL489, CSA 22.2 No. 5.1) | 240 V 60 Hz | $I_u$ | kA | | 35[6] | 85[7] | – | 35 | 85 | 100 | – |
| | 480 V 60 Hz | $I_u$ | kA | | 25[4] | 35[4] | – | 25[4] | 35[4] | 65[4] | – |
| | 600 V 60 Hz | $I_u$ | kA | | – | – | – | 18[5] | 25[5] | 35[5] | – |
| Utilization category | | | | | A | A | A | A | A | A | A |
| Rated making and breaking capacity | | | | | | | | | | | |
| Rated operational current | AC-1 400/415 V | $I_e$ | A | | 160 | 160 | 160 | 250 | 250 | 250 | 250 |
| | AC-1 690 V | $I_e$ | A | | 160 | 160 | 160 | 250 | 250 | 250 | 250 |
| | AC-3 400/415 V | $I_e$ | A | | 160 | 160 | 160 | 250 | 250 | 250 | 250 |
| | AC-3 690 V | $I_e$ | A | | 160 | 160 | 160 | 250 | 250 | 250 | 250 |
| Lifespan, mechanical (of which max. 50 % trip by shunt/undervoltage release) | | Operations | | | 20000 | 20000 | 20000 | 20000 | 20000 | 20000 | 20000 |
| Maximum operating frequency | | | Ops/h | | 120 | 120 | 120 | 120 | 120 | 120 | 120 |
| Lifespan, electrical | AC-1 400/415 V | Operations | | | 10000 | 10000 | 10000 | 10000 | 10000 | 10000 | 10000 |
| | AC-1 690 V | Operations | | | 7500 | 7500 | 7500 | 7500 | 7500 | 7500 | 7500 |
| | AC-3 400/415 V | Operations | | | 7500 | 7500 | 7500 | 6500[8] | 6500[8] | 6500[8] | 6500[8] |
| | AC-3 690 V | Operations | | | 5000 | 5000 | 5000 | 5000[8] | 5000[8] | 5000[8] | 5000[8] |
| Current heat loss per pole at $I_u$ | | | W | | 13 | 13 | 13 | 19 | 19 | 19 | 19 |
| Overload releases | | | | | | | | | | | |
| Temperature compensation for NZM2 to IEC/EN 60947 Residual error in range -25 °C/+70 °C (reference temperature 40 °C) | | | | | | | | | | | |
| Thermomagnetic | | | %/K | | 0.7 | 0.7 | 0.7 | 0.3 | 0.3 | 0.3 | 0.3 |
| Electronic | | | | | – | – | – | – | – | – | – |
| Total opening delay on short-circuit | | | ms | | < 10 | < 10 | < 10 | < 10 | < 10 | < 10 | < 10 |

Moeller HPL0211-2004/2005

| | | | | Rated uninterrupted current 630 A max. | | | Rated uninterrupted current 1600 A max. | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | NZMN3 | NZMH3 | NZML3 | NZMN4 | NZMH4 | NZML4 |
| **Circuit-breakers** | | | | | | | | | |
| Rated impulse withstand voltage $U_{imp}$ | Main contacts | | V | 8000 | 8000 | 8000 | 8000 | 8000 | 8000 |
| | Auxiliary contacts | | V | 6000 | 6000 | 6000 | 6000 | 6000 | 6000 |
| Rated operational voltage[10] | | $U_e$ | V AC | 690 | 690 | 690 | 690[9] | 690[9] | 690[9] |
| Overvoltage category/pollution degree | | | | III/3 | III/3 | III/3 | III/3 | III/3 | III/3 |
| Rated insulation voltage | | $U_i$ | V | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 |
| **Switching capacity** | | | | | | | | | |
| Rated short-circuit making capacity | 240 V | $I_{cm}$ | kA | 187 | 220 | 330 | 110 | 220[3] | 264[3] |
| | 400/415 V | $I_{cm}$ | kA | 110 | 220 | 330 | 110 | 220[3] | 264[3] |
| | 440 V | $I_{cm}$ | kA | 74 | 143 | 286 | 74 | 143 | 187 |
| | 525 V | $I_{cm}$ | kA | 53 | 84 | 143 | 53 | 84 | 143 |
| | 690 V | $I_{cm}$ | kA | 40 | 40 | 74 | 40 | 74 | 105 |
| Rated short-circuit breaking capacity $I_{cn}$ | | | | | | | | | |
| $I_{cu}$ to IEC/EN 60947 test cycle O-t-CO | 240 V AC | $I_{cu}$ | kA | 85 | 100 | 150 | 50 | 100[1] | 120[1] |
| | 400/415 V AC | $I_{cu}$ | kA | 50 | 100 | 150 | 50 | 100[1] | 120[1] |
| | 440 V AC | $I_{cu}$ | kA | 35 | 65 | 130 | 35 | 65 | 85 |
| | 525 V AC | $I_{cu}$ | kA | 25 | 40 | 65 | 25 | 40 | 65 |
| | 690 V AC | $I_{cu}$ | kA | 20 | 20 | 35 | 20 | 35 | 50 |
| $I_{cs}$ to IEC/EN 60947 test cycle O-t-CO-t-CO | 240 V AC | $I_{cs}$ | kA | 85 | 100 | 150 | 37 | 50[2] | 60[2] |
| | 400/415 V AC | $I_{cs}$ | kA | 50 | 100 | 150 | 37 | 50[2] | 60[2] |
| | 440 V AC | $I_{cs}$ | kA | 35 | 65 | 130 | 26 | 49 | 64 |
| | 525 V AC | $I_{cs}$ | kA | 25 | 40 | 65 | 19 | 30 | 49 |
| | 690 V AC | $I_{cs}$ | kA | 20 | 20 | 35 | 15 | 26 | 38 |
| Switching capacity of NA circuit-breakers (UL489, CSA 22.2 No. 5.1) | 240 V 60 Hz | $I_u$ | kA | 85 | 100 | 150 | 85 | 100 | 150 |
| | 480 V 60 Hz | $I_u$ | kA | 35 | 65 | 100 | 35 | 65 | 100 |
| | 600 V 60 Hz | $I_u$ | kA | 25 | 35 | 50 | 25 | 35 | 50 |
| Utilization category | | | | A | A | A | B | B | B |
| Rated making and breaking capacity | | | | | | | | | |
| Rated operational current | AC-1 400/415 V | $I_e$ | A | 630 | 630 | 630 | 1600 | 1600 | 1600 |
| | AC-1 690 V | $I_e$ | A | – | – | – | – | – | – |
| | AC-3 400/415 V | $I_e$ | A | 630 | 630 | 630 | 1600 | 1600 | 1600 |
| | AC-3 690 V | $I_e$ | A | – | – | – | – | – | – |
| Lifespan, mechanical (of which max. 50 % trip by shunt/undervoltage release) | | Operations | | 15000 | 15000 | 15000 | 10000 | 10000 | 10000 |
| Maximum operating frequency | | | Ops/h | 60 | 60 | 60 | 60 | 60 | 60 |
| Lifespan, electrical | AC-1 400/415 V | Operations | | 5000 | 5000 | 5000 | 3000 | 3000 | 3000 |
| | AC-1 690 V | Operations | | 3000 | 3000 | 3000 | 2000 | 2000 | 2000 |
| | AC-3 400/415 V | Operations | | 2000 | 2000 | 2000 | 2000 | 2000 | 2000 |
| | AC-3 690 V | Operations | | 2000 | 2000 | 2000 | 1000 | 1000 | 1000 |
| Current heat loss per pole at $I_u$ | | | W | 40 | 40 | 40 | 97 | 97 | 97 |
| Overload releases | | | | | | | | | |
| Temperature compensation for NZM2 to IEC/EN 60947 Residual error in range -25 °C/+70 °C (reference temperature 40 °C) | | | | | | | | | |
| Thermomagnetic | | | %/K | – | – | – | – | – | – |
| Electronic | | | | – | – | – | – | – | – |
| Total opening delay on short-circuit | | | ms | < 10 | < 10 | < 10 | < 25 ≦ 415 V; < 35 > 415 V | | |

**General**

| | | |
|---|---|---|
| Standards | | IEC/EN 60947<br>NA switch: UL489, CSA22.2 No.5.1 as well as IEC/EN 60947 |
| Protection against direct contact | | Finger and back-of-hand proof to VDE 0106 part 100 |
| Climatic proofing | | Damp heat, constant, to IEC 60068-2-78<br>Damp heat, cyclic, to IEC 60068-2-30 |
| Ambient temperature | °C | -25/+70 |
| Mechanical shock resistance (IEC/EN 60068-2-27) | | |
| Mechanical shock resistance | g | 20 (half-sinusoidal shock 20 ms) |
| Safe isolation to VDE 0106 part 101 and part 101/A1 | | |
| Between auxiliary contacts and main circuit | V AC | 500 |
| Between the auxiliary contacts | V AC | 300 |
| Weights | kg | → page 10/188 |
| Mounting position | | Vertical and 90° in all directions |




With plug-in adapter
NZM2: vertical, 90° right/left

With withdrawable unit
NZM3: vertical, 90° left
NZM4: vertical

**Notes**

1) 85 kA probably until June 2004
2) 43 kA probably until June 2004
3) 187 kA probably until June 2004
4) With NZM...1-...-NA and NZM...-...-NA the following applies: 480Y/277 V probably until June 2004
5) With NZM...2-...-NA the following applies: 600 V probably from June 2004
6) With NZMB1-...-NA the following applies: 25 kA probably until June 2004
7) With NZMN1-...-NA the following applies: 35 kA probably until June 2004
8) 400 V: max. 110 kW; 690 V: max. 160 kW
9) For use in IT power networks up to 525 V
10) DC voltage values on request

| | | | | | PN1/N1 160 A max. | PN2/N2 250 A max. | PN3/N3 630 A max. | N4 1600 A max. |
|---|---|---|---|---|---|---|---|---|
| **Switch-disconnector:** | | | | | | | | |
| Rated impulse withstand voltage | | $U_{imp}$ | | | | | | |
| Main contacts | | | | V | 6000 | 8000 | 8000 | 8000 |
| Auxiliary contacts | | | | V | 6000 | 6000 | 6000 | 6000 |
| Rated operational voltage | | $U_e$ | | V AC | 690 | 690 | 690 | 690 |
| Rated uninterrupted current max. | | $U_{imp}$ | | | | | | |
| IEC/EN 60947 | | $I_u$ | | A | 160 | 250 | 630 | 1600 |
| UL 489, CSA 22.2 No. 5.1 | | $I_u$ | | A | 125 | 250 | 600 | 1200 |
| Overvoltage category/pollution degree | | | | | III/3 | III/3 | III/3 | III/3 |
| **Switching capacity** | | | | | | | | |
| Rated short-circuit making capacity | | $I_{cm}$ | | kA | 2.8 | 5.5 | 25 | 53 |
| Rated short-circuit making capacity | t = 0.3 s | $I_{cw}$ | | kA | 2 | 3.5 | 12 | 25 |
| | t = 1 s | $I_{cw}$ | | kA | 2 | 3.5 | 12 | 25 |
| Rated conditional short-circuit current with back-up fuse | | | | A gG/gL | 125 PN1(N1) – 160: 160 | 250 | 630 | 2 × 800 |
| | 400/415 V | | | kA | 100 | 100 | 100 | 100 |
| | 690 V | | | kA | 100 | 30 | 50 | 80 |
| Rated making and breaking capacity | | | | | | | | |
| Rated operational current AC-22/23A | 415 V | $I_e$ | | A | 160 | 250 | 630 | 1600 |
| | 690 V | $I_e$ | | A | 160 | 250 | 630 | 1600 |
| Lifespan, mechanical | | Operations | | | 20000 | 20000 | 15000 | 10000 |
| Maximum operating frequency | | | | Ops/h | 120 | 120 | 60 | 60 |
| Lifespan, electrical | AC-1 400/415 V | Operations | | | 10000 | 10000 | 5000 | 3000 |
| | AC-1 690 V | Operations | | | 7500 | 7500 | 3000 | 2000 |
| | AC-3 400/415 V | Operations | | | 7500 | 7500 | 3000 | 2000 |
| | AC-3 690 V | Operations | | | 5000 | 5000 | 2000 | 1000 |
| Current heat loss per pole at $I_u$ | | | | W | 8 | 16 | 40 | 97 |

| | | | NZM1, PN1, N1 | | NZM2, PN2, N2 250 A | | | NZM3, PN3, N3 630 A | | NZM4, N4 1600 A | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | 125 A | 160 A | without XSV | with XSV TM | with XSV E | without XAV | with XAV | without XAV | with XAV |
| **Permissible loading with varying ambient temperatures** | | | | | | | | | | | |
| Open | 20 °C | % | 100 | 100 | 100 | 100 | 100 | 100 | 96 | 100 | 100 |
| | 30 °C | % | 100 | 100 | 100 | 97 | 100 | 100 | 92 | 100 | 98 |
| | 40 °C | % | 100 | 100 | 100 | 92 | 100 | 100 | 87 | 100 | 93 |
| | 50 °C | % | 100 | 95 | 100 | 87 | 94 | 100 | 83 | 100 | 89 |
| | 60 °C | % | 86 | 90 | 90 | 81 | 88 | 90 | 78 | 87 | 85 |
| | 65 °C | % | 83 | 85 | 85 | 78 | 84 | 85 | 75 | 85 | 83 |
| | 70 °C | % | 79 | 80 | 80 | 75 | 81 | 80 | 73 | 82 | 80 |

**Notes** XSV = plug-in unit, XAV = withdrawable unit
TM = thermomagnetic, E = electronic

| Plug-in units | | NZM...2-A(M)(S)...250 + NZM2-XSV N2-...250 + NZM2-XSV | NZM...2-VE...250 + NZM2-XSV | NZM...2-ME...220 + NZM2-XSV | NZM...2-4-A...250 + NZM2-4-XSV N2-4-...250 + NZM2-4-XSV | NZM...2-4-VE...250 + NZM2-4-XSV |
|---|---|---|---|---|---|---|
| Effective power loss | | | | | | |
| 40 A | W | 14 | – | – | 14 | – |
| 50 A | W | 19 | – | – | 19 | – |
| 63 A | W | 22 | – | – | 22 | – |
| 80 A | W | 24 | – | – | 24 | – |
| 90 A | W | - | – | 10 | – | – |
| 125 A | W | 34 | – | – | 34 | 31 |
| 140 A | W | – | – | 24 | – | – |
| 160 A | W | 48 | 31 | – | 48 | 31 |
| 200 A | W | 60 | 40 | – | 60 | 40 |
| 220 A | W | – | – | 59 | – | – |
| 230 A | W | 64 | – | – | 64 | – |
| 250 A | W | – | 76 | – | – | 76 |

Moeller HPL0211-2004/2005

| Withdrawable units | | NZM...3-AE(VE)...630 + NZM3-XAV N3-...630 + NZM3-XAV | NZM...3-ME...350 + NZM3-XAV | NZM...3-4-AE(VE)...630 + NZM3-4-XAV N3-4-...630 + NZM3-4-XAV | NZM...4-AE(VE)...1600 + NZM4-XAV N4-...1600 + NZM4-XAV | NZM...4-ME...1400 + NZM4-XAV | NZM...4-4-AE(VE)...1600 + NZM4-4-XAV N4-4-...1600 + NZM4-4-XAV |
|---|---|---|---|---|---|---|---|
| Effective power loss | | | | | | | |
| 220 A | W | – | 25 | – | – | – | – |
| 250 A | W | 32 | – | 32 | – | – | – |
| 350 A | W | – | 63 | – | – | – | – |
| 400 A | W | 82 | – | 82 | – | – | – |
| 450 A | W | – | 104 | – | – | – | – |
| 550 A | W | 155 | – | 155 | – | 42 | – |
| 630 A | W | – | – | – | 55 | – | 55 |
| 800 A | W | – | – | – | 90 | – | 90 |
| 875 A | W | – | – | – | – | 107 | – |
| 1000 A | W | – | – | – | 140 | – | 140 |
| 1250 A | W | – | – | – | 220 | – | 220 |
| 1400 A | W | – | – | – | – | 272 | – |
| 1500 A | W | – | – | – | 312 | – | 312 |
| 1600 A | W | – | – | – | – | – | – |

| | | | | | NZM2-XR... | NZM3-XR... | NZM4-XR... |
|---|---|---|---|---|---|---|---|
| **Remote operator** | | | | | | | |
| Rated control voltage | | | $U_s$ | | | | |
| | AC | | | V AC | 48 – 440 | 48 – 440 | 48 – 440 |
| | DC | | | V DC | 24 – 250 | 24 – 250 | 24 – 250 |
| Operating range | AC | | | × $U_s$ | 0.85 – 1.1 | 0.85 – 1.1 | 0.85 – 1.1 |
| | DC | | | × $U_s$ | 0.85 – 1.1 | 0.85 – 1.1 | 0.85 – 1.1 |
| Rated power | | | | | | | |
| | AC | 48 V – 60 V AC | | VA | 350 | 350 | 350 |
| | | 110 V – 130 V AC | | VA | 350 | 350 | 350 |
| | | 208 V – 240 V AC | | VA | 350 | 350 | 350 |
| | | 380 V – 440 V AC | | VA | 350 | 350 | 350 |
| | DC | 24 V – 30 V DC | | W | 250 | 250 | 250 |
| | | 48 V – 60 V DC | | W | 250 | 250 | 250 |
| | | 110 V – 130 V DC | | W | 250 | 250 | 250 |
| | | 220 V – 250 V DC | | W | 250 | 250 | 250 |
| Total make time | | | | ms | 60 | 80 | 100 |
| Total opening delay | | | | ms | 300 | 1000 | 3000 |
| Minimum signal duration | | | | | | | |
| | with switch on | | | ms | 30 | 30 | 30 |
| | with switch off | | | ms | 150 | 250 | 500 |
| Lifespan, mechanical | | | Operations | | 20000 | 15000 | 10000 |
| Maximum operating frequency | | | Operations/h | | 120 | 60 | 20 |
| Terminal capacity | | | | | | | |
| Solid or flexible conductor with ferrule | | | | mm² | 0.75 – 2.5 | 0.75 – 2.5 | 0.75 – 2.5 |
| | | | | AWG | 18 – 14 | 18 – 14 | 18 – 14 |

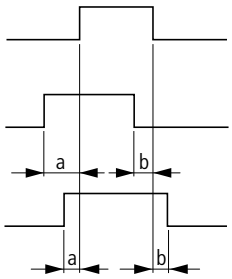
| | | | NZM-XCM |
|---|---|---|---|
| **Capacitor unit for shunt release** | | | |
| Rated operational voltage | $U_e$ | V AC | 230 |
| Rated operational current | $I_e$ | mA | < 10 |
| Inrush current (peak value) | $I_e$ | A | 3 |
| Terminal capacity | | | |
| Solid or flexible conductor with ferrule | | mm² | 1 × (0.5 – 2.5)<br>2 × (0.5 – 1.5) |
| | | AWG | 1 × (20 – 14)<br>2 × (20 – 16) |

HPL0211-2004/2005

| | | | At AC = 50/60 Hz | | M22-K... | XHIV | XHI |
|---|---|---|---|---|---|---|---|
| **Auxiliary contacts** | | | | | | | |
| Rated operational voltage | | | $U_e$ | V AC | 500 | 500 | 500 |
| Rated operational voltage | | | $U_e$ | V DC | 220 | 220 | 220 |
| Conventional thermal current | | | $I_{th} = I_e$ | A | 4 | 4 | 4 |
| Rated operational current | AC-15 | 115 V | $I_e$ | A | 4 | 4 | 4 |
| | | 230 V | $I_e$ | A | 4 | 4 | 4 |
| | | 400 V | $I_e$ | A | 2 | 2 | 2 |
| | | 500 V | $I_e$ | A | 1 | 1 | 1 |
| | DC-13 | 24 V | $I_e$ | A | 3 | 3 | 3 |
| | | 42 V | $I_e$ | A | 1.7 | 1.5 | – |
| | | 60 V | $I_e$ | A | 1.2 | 0.8 | 1.2 |
| | | 110 V | $I_e$ | A | 0.8 | 0.5 | 0.5 |
| | | 220 V | $I_e$ | A | 0.3 | 0.2 | 0.2 |
| Short-circuit protection | | | | | | | |
| Max. fuse | | | | A gG/gL | 10 | 10 | 10 |
| Max. miniature circuit-breaker | | | | A | PKZM0-10/FAZ-B6 | FAZ-B6 | FAZ-B6 |
| Early make times compared to main contacts during with make and break (switching times with manual operation) | | | | ms | – | NZM1, PN1, N1: approx. 20<br>NZM2, PN2, N2: approx. 20<br>NZM3, PN3, N3: approx. 20<br>NZM4, N4: approx. 90[1)] | – |
| Terminal capacity | Solid or flexible conductor with ferrule | | | $mm^2$ | 1 × (0.75 – 2.5)<br>2 × (0.75 – 1.5) | 1 × (0.75 – 2.5)<br>2 × (0.75 – 1.5) | 1 × (0.75 – 2.5)<br>2 × (0.75 – 1.5) |
| | | | | AWG | 1 × (18 – 14)<br>2 × (18 – 16) | 1 × (18 – 14)<br>2 × (18 – 16) | 1 × (18 – 14)<br>2 × (18 – 16) |
| UL/CSA | Rated operational current | | $I_e$ | A | 10 A – 600 V AC<br>1 A – 250 V DC | 2.5 A – 240 V AC<br>1.0 A – 250 V DC | 2.5 A – 240 V AC<br>1.0 A – 250 V DC |
| Heavy Pilot Duty | | | | | A600/P300<br>via 300 V AC same polarity | C300/R300 | C300/R300 |

**Notes** [1)] With NZM4/N4 the HIV does **not** feature early break.

**Time differences ON-OFF**




| | Time difference a (ms) | | | | | | Time difference b (ms) | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Manual operation | | | Motor operators | | | Manual operation | | | Motor operators | | |
| | HIV | HIN | | HIV | HIN | | HIV | HIN | | HIV | HIN | |
| | | K10 | K01 | | K10 | K01 | | K10 | K01 | | K10 | K01 |
| NZM1 | 20[1)] | 0 | 2.5 | – | – | – | 20[1)] | 0 | 2.5 | – | – | – |
| NZM2 | 20[1)] | 3.5 | 6.5 | Not permissible | 2.5 | 4.5 | 20[1)] | 3 | 4.5 | Not permissible | 3 | 4 |
| NZM3 | 20[1)] | 4 | 8 | Not permissible | 2 | 4 | 20[1)] | 3.5 | 8 | Not permissible | 3 | 6.5 |
| NZM4 | 90[1)] | 7 | 11 | Not permissible | on request | on request | 0[1)] | 12 | 15 | Not permissible | on request | on request |

**Notes** [1)] Minimum value, as it is dependent on the switching speed

HPL0211-2004/2005

| | | | | NZM1(2/3)-XU... | NZM4-XU... |
|---|---|---|---|---|---|
| **Undervoltage release** | | | | | |
| Rated control voltage | | | | | |
| AC | | $U_s$ | V AC | 24 – 600 | 24 – 600 |
| DC | | $U_s$ | V DC | 12 – 250 | 12 – 250 |
| Operating range | | | | | |
| Drop-out voltage | | | × $U_s$ | 0.35 – 0.7 | 0.35 – 0.7 |
| Pick-up voltage | | | × $U_s$ | 0.85 – 1.1 | 0.85 – 1.1 |
| Power consumption | | | | | |
| AC | Sealing AC | | VA | 1.5 | 3.6 |
| DC | Sealing DC | | W | 0.8 | 2.5 |
| Maximum opening delay (response time until opening of the main contacts) | | | ms | 19 | 23 |
| Minimum command time | | | ms | 10 – 15 | 10 – 15 |
| Terminal capacity | | | | | |
| Solid or flexible conductor with ferrule | | | $mm^2$ | 1 × (0.75 – 2.5)<br>2 × (0.75 – 1.5) | 1 × (0.75 – 2.5)<br>2 × (0.75 – 1.5) |
| | | | AWG | 1 × (20 – 14)<br>2 × (18 – 16) | 1 × (20 – 14)<br>2 × (18 – 16) |

| | | | | UVU-NZM |
|---|---|---|---|---|
| **Undervoltage releases, off-delayed** | | | | |
| Rated operational voltage | | | | |
| AC | | $U_e$ | V AC | 24, 220 – 550 |
| DC | | $U_e$ | V DC | 24 |
| Inrush current (peak value) | | $I_e$ | mA | < 500 |
| Power consumption | | | VA | 50 |
| Delay time | | $t_{sd}$ | ms | 70 – 4000 |
| With additional external capacitor 90.000 µF ≧ 35 V | | | s | max. 16 |
| With additional external capacitor 30.000 µF ≧ 35 V | | | s | max. 8 |
| Terminal capacity | | | | |
| Solid or flexible conductor with ferrule | | | $mm^2$ | 1 × (0.5 – 2.5)<br>2 × (0.5 – 1.5) |
| | | | AWG | 1 × (20 – 14)<br>2 × (20 – 16) |

| | | | | NZM1(2/3)-XA... | NZM3-XA...-MNS | NZM4-XA... | NZM4-XA...-MNS |
|---|---|---|---|---|---|---|---|
| **Shunt release** | | | | | | | |
| Rated control voltage | | | | | | | |
| AC | | $U_s$ | V AC | 12 – 600 | 230 | 12 – 600 | 230 |
| DC | | $U_s$ | V DC | 12 – 600 | – | 12 – 600 | – |
| Operating range | | | | | | | |
| AC | | | × $U_s$ | 0.7 – 1.1 | 0.1 – 1.1 | 0.7 – 1.1 | 0.1 – 1.1 |
| DC | | | × $U_s$ | 0.7 – 1.1 | – | 0.7 – 1.1 | – |
| Power consumption | | | | | | | |
| Sealing AC/DC | | | VA/W | 2.5 | – | 2.5 | – |
| Maximum current consumption at 110% $U_s$ (230 V 50 | | | A | – | 0.5 | – | 1 |
| Maximum opening delay (response time until opening of the main contacts) | | | ms | 20 | 20 | 22 | 22 |
| Maximum duty factor | | | | ∞ | 1000 ms | ∞ | 1000 ms |
| Minimum command time | | | ms | 10 – 15 | 10 – 15 | 10 – 15 | 10 – 15 |
| Terminal capacity | | | | | | | |
| Solid or flexible conductor with ferrule | | | $mm^2$ | 1 × (0.75 – 2.5)<br>2 × (0.75 – 1.5) | 1 × (0.75 – 2.5)<br>2 × (0.75 – 1.5) | 1 × (0.75 – 2.5)<br>2 × (0.75 – 1.5) | 1 × (0.75 – 2.5)<br>2 × (0.75 – 1.5) |
| | | | AWG | 1 × (18 – 14)<br>2 × (18 – 16) | 1 × (18 – 14)<br>2 × (18 – 16) | 1 × (18 – 14)<br>2 × (18 – 16) | 1 × (18 – 14)<br>2 × (18 – 16) |

Circuit-breakers, switch-disconnectors up to 1600 A

Moeller HPL0211-2004/2005

| | | | | | NZM1, PN1, N1 160 A | $I_n$ [1] A | NZM2, PN2, N2 250 A | $I_n$ [1] A | NZM3, PN3, N3 630 A | $I_n$ [1] A |
|---|---|---|---|---|---|---|---|---|---|---|
| **Terminal capacity for IEC approved switches** | | | | | | | | | | |
| Standard equipment | | | | | Box terminal | | Screw terminal | | Screw terminal | |
| Accessories | | | | | Screw connection Tunnel terminal Connection on rear | | Box terminal Tunnel terminal Connection on rear | | Box terminal Tunnel terminal Connection on rear | |
| Cu conductors, Cu cable | | | | | | | | | | |
| Box terminal | Solid | | | mm² | 1 × (2.5 – 16)<br>2 × (2.5 – 16) | 160 | 1 × (2.5 – 16)<br>2 × (4 – 16) | 250 | 2 × 16 | 500 |
| | Stranded | | | mm² | 1 × (25 – 70)[3]<br>2 × 25 | | 1 × (25 – 185)<br>2 × (25 – 70) | | 1 × (35 – 240)<br>2 × (25 – 120) | |
| Tunnel terminal | Solid | 1-hole | | mm² | 1 × 16 | 160 | 1 × 16 | 250 | – | – |
| | Stranded | | | mm² | 1 × (25 – 95) | | 1 × (25 – 185) | | 1 × (25 – 185) | 350 |
| | | Double hole | | mm² | – | – | – | – | 1 × (50 – 240)<br>2 × (50 – 240) | 630 |
| | | 4-hole | | mm² | – | – | – | – | – | – |
| Screw connection and connection on rear | | | | | | | | | | |
| Directly on switch | Solid | | | mm² | 1 × (2.5 – 16)<br>2 × (2.5 – 16) | 160 | 1 × (4 – 16)<br>2 × (4 – 16) | 250 | 1 × 16<br>2 × 16 | 630<br>2 × 185 |
| | Stranded | | | mm² | 1 × (25 – 70)<br>2 × 25 | | 1 × (25 – 185)<br>2 × (25 – 70) | | 1 × (25 – 240)<br>2 × (25 – 240) | |
| Module plate | 1-hole | | min. | mm² | – | – | – | – | – | – |
| | | | max. | mm² | – | – | – | – | – | – |
| | 2-hole | | min. | mm² | – | – | – | – | – | – |
| | | | max. | mm² | – | – | – | – | – | – |
| Connection width extension | | | | mm² | – | – | – | – | – | – |
| Al conductors, Al cable | | | | | | | | | | |
| Tunnel terminal | Solid | 1-hole | | mm² | 1 × 16 | 160 | 1 × 16 | 250 | 1 × 16 | 350 |
| | Stranded | | | mm² | 1 × (25 – 95) | | 1 × (25 – 185)[2] | | 1 × (25 – 185)[2] | |
| | | Double hole | | mm² | – | – | – | – | 1 × (50 – 240)<br>2 × (50 – 240) | 630 |
| | | 4-hole | | mm² | – | – | – | – | – | – |
| Screw connection and connection on rear | | | | | | | | | | |
| Directly on switch | Solid | | | mm² | 1 × (10 – 16)<br>2 × (10 – 16) | 160 | 1 × (10 – 16)<br>2 × (10 – 16) | 250 | 1 × (10 – 16)<br>2 × (10 – 16) | 400 |
| | Stranded | | | mm² | 1 × (25 – 35)<br>2 × (25 – 35) | | 1 × (25 – 50)<br>2 × (25 – 50) | | 1 × (25 – 120)<br>2 × (25 – 120) | |
| Module plate | 1-hole | | min. | mm² | – | – | – | – | – | |
| | | | max. | mm² | – | – | – | – | – | |
| | 2-hole | | | mm² | – | – | – | – | – | |
| Connection width extension | | | | mm² | – | – | – | – | – | |
| Cu strip (number of segments × width × segment thickness) | | | | | | | | | | |
| Box terminal | | | min. | mm² | 2 × 9 × 0.8 | 160 | 2 × 9 × 0.8 | 250 | 6 × 16 × 0.8 | 630 |
| | | | max. | mm² | 9 × 9 × 0.8 | | 10 × 16 × 0.8 | | 10 × 24 × 1.0<br>+ 5 × 24 × 1.0 | |
| Single flat cable terminal | | | min. | mm | – | – | – | – | – | |
| | | | max. | mm | – | – | – | – | – | |
| Module plate | 1-hole | | | mm² | – | – | – | – | – | |
| Screw connection and connection on rear | | | | | | | | | | |
| Cu strip, perforated | | | min. | mm | – | – | 2 × 16 × 0.8 | 250 | 6 × 16 × 0.8 | 630 |
| Cu strip, perforated | | | max. | mm | – | – | 10 × 16 × 0.8 | | 10 × 32 × 1.0<br>+ 5 × 32 × 1.0 | |
| Copper busbar (width × thickness) | | | | | | | | | | |
| Screw connection | | | | | M6 | – | M8 | – | M10 | |
| Directly on switch | | | min. | mm² | 1 × (12 × 5) | 160 | 1 × (16 × 5) | 250 | 1 × (20 × 5) | 630 |
| | | | max. | mm² | 1 × (16 × 5) | | 1 × (20 × 5) | | 1 × (30 × 10)<br>+ 1 × (30 × 5) | |
| Module plate | 1-hole | | min. | mm² | – | – | – | – | – | |
| | 1-hole | | max. | mm² | – | – | – | – | – | |
| | 2-hole | | | mm² | – | – | – | – | – | |
| Connection width extension | | | min. | mm² | – | – | – | – | – | |
| | | | max. | mm² | – | – | – | – | – | |
| Control cable | | | | mm² | 1 × (0.75 – 4.0)<br>2 × (0.75 – 2.5) | | 1 × (0.75 – 4.0)<br>2 × (0.75 – 2.5) | | 1 × (0.75 – 4.0)<br>2 × (0.75 – 2.5) | |

Moeller HPL0211-2004/2005

| | | | NZM4, N4 1600 A | $I_n$ [1] A |
|---|---|---|---|---|
| **Terminal capacity for IEC approved switches** | | | | |
| Screw terminal | | | | |
| Tunnel terminal Connection on rear Strip terminal | | | | |
| | | | | |
| | | | – | – |
| | | | – | – |
| | | | – | – |
| | | | – | – |
| | | | – | – |
| | | | – | – |
| | | | 4 × (50 – 240) | 1400 |
| | | | | |
| | | | – | – |
| | | | – | – |
| | | | 1 × (120 – 185)<br>4 × (95 – 185) | 1250 |
| | | | 1 × (120 – 240) | 1000 |
| | | | 2 × (95 – 240) | |
| | | | 2 × (95 – 185) | 1250 |
| | | | 4 × (35 – 185) | |
| | | | 2 × 240<br>6 × (95 – 240) | 1600<br>4 × 240 |
| | | | | |
| | | | – | – |
| | | | – | – |
| | | | – | – |
| | | | 4 × (50 – 240) | 1400 |
| | | | | |
| | | | – | – |
| | | | – | – |
| | | | 1 × (185 – 240) | on request |
| | | | 2 × (70 – 185) | on request |
| | | | 4 × 50 | |
| | | | 2 × 240<br>6 × (70 – 240) | on request |
| | | | | |
| | | | – | – |
| | | | – | – |
| | | | 6 × 16 × 0.8 | 1100 |
| | | | (2 ×) 10 × 32 × 1.0 | |
| | | | (2 ×) 10 × 50 × 1.0 | 1250<br>(2 ×) 10 × 40 × 1.0 |
| | | | | |
| | | | (2 ×) 10 × 50 × 1.0 | 1600 |
| | | | (2 ×) 10 × 50 × 1.0 | |
| | | | | |
| | | | M10 | |
| | | | 1 × (25 × 5) | 1600 |
| | | | 2 × (50 × 10) | |
| | | | 1 × (25 × 5) | 1250<br>2 × (40 × 10) |
| | | | 2 × (50 × 10) | |
| | | | 2 × (50 × 10) | 1400 |
| | | | 1 × (60 × 10) | 1600<br>2 × (50 × 10) |
| | | | 3 × (80 × 5) | |
| | | | 1 × (0.75 – 4.0)<br>2 × (0.75 – 2.5) | |

| | | | | | NZM...1...NA, N1...NA | NZM...2...NA, N2...NA | NZM...3...NA, N3...NA | NZM...4...NA, N4...NA |
|---|---|---|---|---|---|---|---|---|
| **Terminal capacity for UL/CSA approved NA switches** | | | | | | | | |
| | | | | | Box terminal | Screw terminal | Screw terminal | Screw terminal |
| | | | | | Screw connection Tunnel terminal | Box terminal Tunnel terminal | Box terminal Tunnel terminal | Tunnel terminal Strip terminal |
| | | | | | | | | |
| | | | | | | | | |
| | | | | AWG | 1 × (14 – 6)<br>2 × (14 – 6) | 1 × (12 – 6)<br>2 × (12 – 6) | 2 × 6 | – |
| | | | | AWG/MCM | 1 × (4 – 0)<br>2 × 4 | 1 × (4 – 350)<br>2 × (4 – 00) | 1 × (2 – 500)<br>2 × (4 – 250) | – |
| | | | | AWG | 1 × 6 | 1 × 6 | 1 × 6 | – |
| | | | | AWG/MCM | 1 × (4 – 000) | 1 × (4 – 350) | 1 × (4 – 350) | – |
| | | | | AWG/MCM | – | – | 1 × (0 – 500)<br>2 × (0 – 500) | – |
| | | | | AWG/MCM | – | – | – | 4 × (0 – 500) |
| | | | | | | | | |
| | | | | AWG | 1 × (14 – 6)<br>2 × (14 – 6) | 1 × (12 – 6) | | – |
| | | | | AWG/MCM | 1 × (4 – 00)<br>2 × 4 | 1 × (4 – 000)<br>2 × (4 – 00) | 1 × (4 – 350)<br>2 × (4 – 350) | 1 × (250 – 350)<br>2 × (000 – 350) |
| | | | | MCM | – | – | – | 1 × (250 – 500) |
| | | | | AWG/MCM | – | – | – | 2 × (000 – 350) |
| | | | | AWG/MCM | – | – | – | 2 × (000 – 350) |
| | | | | AWG/MCM | – | – | – | 4 × (2 – 250) |
| | | | | AWG/MCM | – | – | – | 2 × 500<br>6 × (0 – 500) |
| | | | | | | | | |
| | | | | AWG | 1 × (1 – 6) | 1 × (1 – 6) | 1 × (1 – 6) | – |
| | | | | AWG/MCM | 1 × (4 – 000) | 1 × (4 – 350) | 1 × (4 – 350) | – |
| | | | | AWG | 1 × (8 – 6)<br>2 × (8 – 6) | 1 × (8 – 6)<br>2 × (8 – 6) | 1 × 6) | – |
| | | | | AWG/MCM | 1 × (4 – 2)<br>2 × (4 – 2) | 1 × (4 – 0)<br>2 × (4 – 0) | 1 × (4 – 250)<br>2 × (4 – 250) | – |
| | | | | MCM | – | – | – | 1 × (350 – 500) |
| | | | | AWG/MCM | – | – | – | 2 × (00 – 350) |
| | | | | AWG | – | – | – | 4 × 0 |
| | | | | AWG/MCM | – | – | – | 2 × 500<br>4 × (00 – 500) |
| | | | | | | | | |
| | | | | mm² | 2 × 9 × 0.8 | 2 × 9 × 0.8 | 6 × 16 × 0.8 | – |
| | | | | mm² | 9 × 9 × 0.8 | 10 × 16 × 0.8 | 10 × 24 × 1.0<br>+ 5 × 24 × 1.0 | – |
| | | | | mm | – | – | – | 6 × 16 × 0.8 |
| | | | | mm | – | – | – | (2 ×) 10 × 32 × 1.0 |
| | | | | mm² | – | – | – | (2 ×) 10 × 50 × 1.0 |
| | | | | | | | | |
| | | | | mm | – | 2 × 16 × 0.8 | 6 × 16 × 0.8 | 10 × 50 × 1.0 |
| | | | | mm | – | 10 × 16 × 0.8 | 10 × 32 × 1.0 | (2 ×) 10 × 50 × 1.0 |
| | | | | | | | | |
| | | | | | M6 | M8 | M10 | M10 |
| | | | | mm² | 1 × (12 × 5) | 1 × (16 × 5) | 1 × (20 × 5) | 1 × (25 × 5) |
| | | | | mm² | 1 × (16 × 5) | 1 × (20 × 5) | 1 × (30 × 10) | 2 × (50 × 10) |
| | | | | mm² | – | – | – | 1 × (25 × 5) |
| | | | | mm² | – | – | – | 2 × (50 × 10) |
| | | | | mm² | – | – | – | 2 × (50 × 10) |
| | | | | mm² | – | – | – | 1 × (60 × 10) |
| | | | | mm² | – | – | – | 3 × (80 × 5) |
| | | | | AWG | 1 × (18 – 12)<br>2 × (18 – 14) | 1 × (18 – 12)<br>2 × (18 – 14) | 1 × (18 – 12)<br>2 × (18 – 14) | 1 × (18 – 12)<br>2 × (18 – 14) |

**Notes**

[1] The rated current $I_n$ have been determined conform to IEC/EN 60947 and generally relate to the max. defined cross-sections and are intended for the purpose of orientation. The engineering standards which apply in each case must be observed

[2] Up to 240 mm² can be connected depending on the cable manufacturer

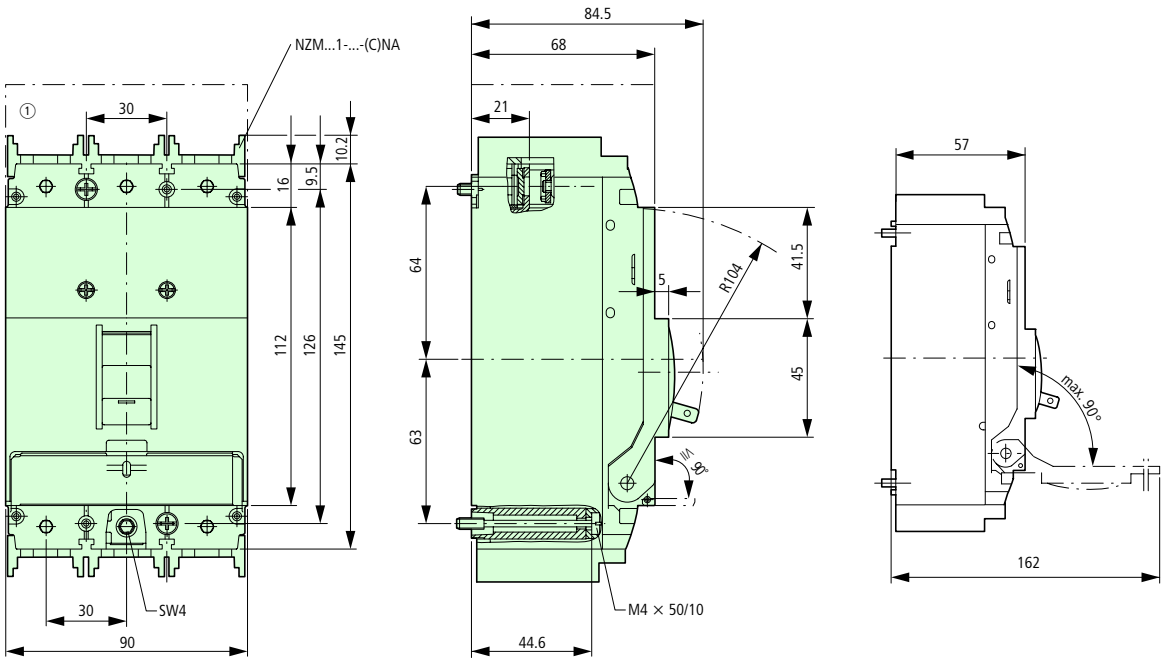
[3] Up to 95 mm² can be connected depending on the cable manufacturer

| | | | |
|---|---|---|---|
| **General** | | | |
| Dimensions (W × H × D) | | mm | 107.5 × 90 × 53 |
| Modular spacing (space units) | | | 6 space units wide |
| Weight | | kg | 0.3 |
| Mounting | | | Mounting rail according to IEC/EN 60715, 35 mm |
| **Climatic environmental conditions** | | | |
| Operating ambient temperature | | °C | 0 to +55 |
| Mounting position | | | horizontal / vertical |
| Condensation | | | Prevent condensation by means of suitable measures |
| LCD display (clearly legible) | | °C | 0 to +55 |
| Storage/transport | | °C | -40 to +70 |
| Relative humidity, non-condensing (IEC/EN 60068-2-30) | | % | 5 – 95 |
| Atmospheric pressure (operation) | | hPa | 795 – 1080 |
| Corrosion resistance | | | |
| IEC/EN 60947-2-42 | 4 days $SO_2$ | $cm^3/m^3$ | 10 |
| IEC/EN 60068-2-43 | 4 days $H_2S$ | $cm^3/m^3$ | 1 |
| **Ambient conditions, mechanical** | | | |
| Pollution degree | | | 2 |
| Degree of protection (IEC/EN 60529) | | | IP20 |
| Vibrations (IEC/EN 60068-2-6) | | | |
| Constant amplitude 0.15 mm | | Hz | 10 – 57 |
| Constant acceleration, 2 g | | Hz | 57 – 150 |
| Mechanical shock resistance (IEC/EN 60068-2-27) semi-sinusoidal 15 g/11 ms | | Impacts | 18 |
| Drop to IEC/EN 60068-2-31 | Drop height | mm | 50 |
| Free fall, packaged (IEC/EN 60068-2-32) | | m | 1 |
| **Power supply** | | | |
| Rated operational voltage | $U_e$ | V DC | 24 |
| Admissible range | | V DC | 20.4 – 28.8 |
| Residual ripple | | % | ≦5 |
| Input current at 24 V DC | | mA | 210 |
| Voltage dips (IEC/EN 61131-2) | | ms | 10 |
| Heat dissipation at 24 V DC | | W | 5 |

| Type | Weight kg |
|---|---|
| **Circuit-breakers** | |
| NZM...1-... | 1.046 |
| NZM...1-4-... | 1.325 |
| NZM...2-... | 2.345 |
| NZM...2-4-... | 3.5 |
| NZM...3-... | 6.34 |
| NZM...3-4-... | 8.4 |
| NZM...4-... | 21 |
| NZM...4-4-... | 27 |
| **Plug-in adapter elements** | |
| +NZM2-XSV | 4.7 |
| +NZM2-4-XSV | 5.9 |
| **Withdrawable unit** | |
| +NZM3-XAV | 21 |
| +NZM3-4-XAV | 27 |
| +NZM4-XAV | 52 |
| +NZM4-4-XAV | 65 |

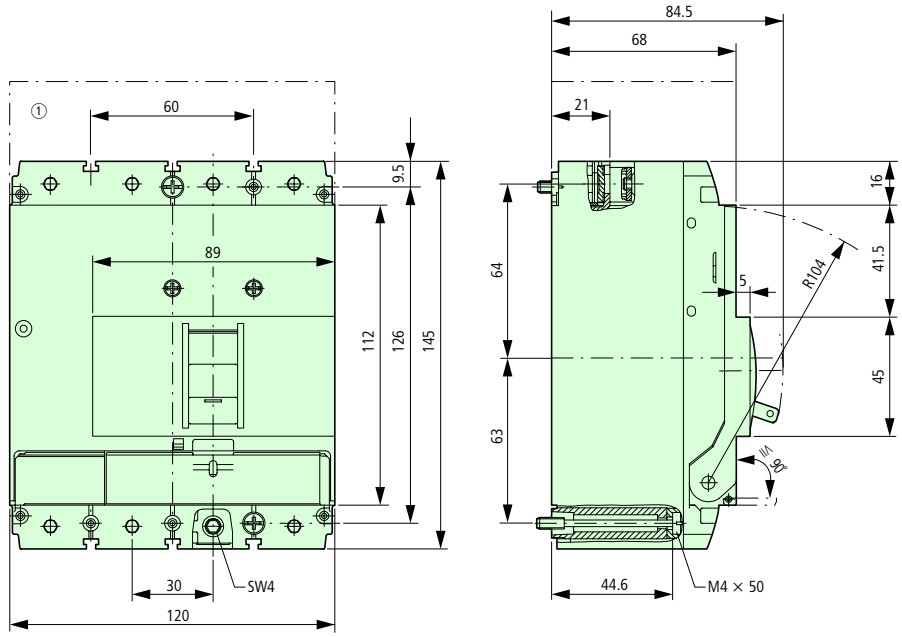
| Type | Weight kg |
|---|---|
| **Switch-disconnector:** | |
| PN1-..., N1-... | 0.926 |
| PN1-4-..., N1-4-... | 1.325 |
| PN2-..., N2-... | 2.15 |
| PN2-4-..., N2-4-... | 2.65 |
| PN3-..., N3-... | 5.7 |
| PN3-4-..., N3-4-... | 7.1 |
| N4-... | 17 |
| N4-4-... | 22 |

**Circuit-breaker, switch-disconnector, 3-pole**
NZMB1, NZMN1, NZMH1, PN1, N1




① Clearance from conductive parts ≧ 60 mm

**Circuit-breaker, switch-disconnector, 4-pole**
NZMB1-4, NZMN1-4, NZMH1-4, PN1-4, N1-4




① Clearance from conductive parts ≧ 60 mm

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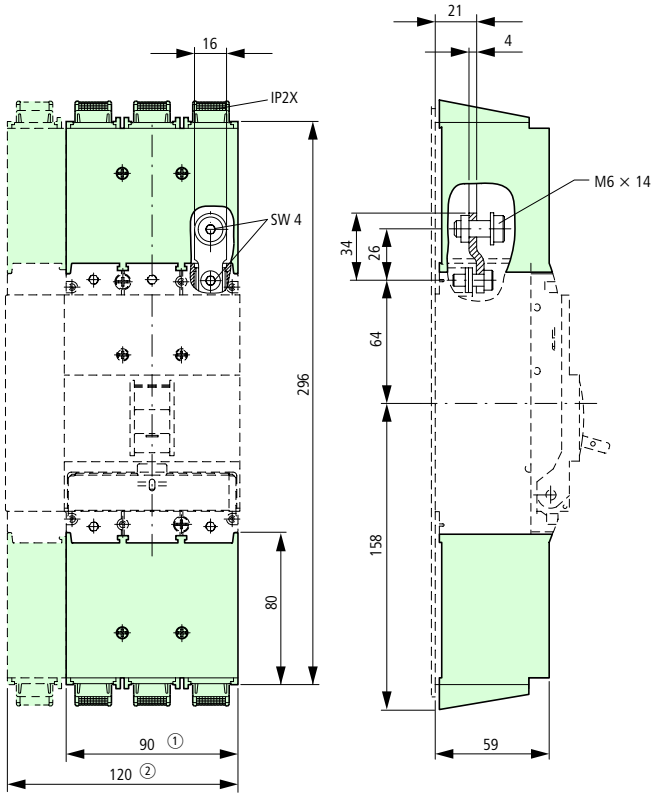
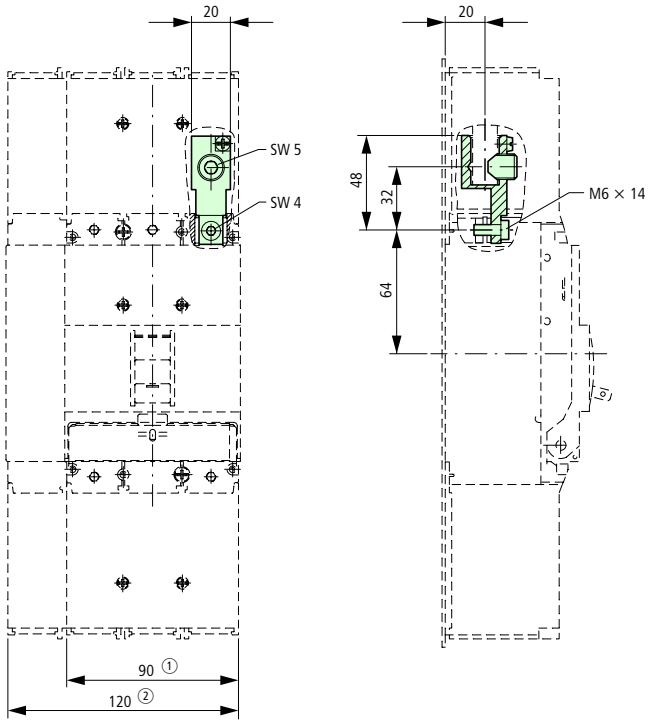
**Cover for screw terminals**
NZM1(-4)-XKSA
**Screw connection**
NZM1(-4)-XKS
**IP2X protection against contact with a finger**
NZM1(-4)-XIPA




① 3-pole
② 4-pole

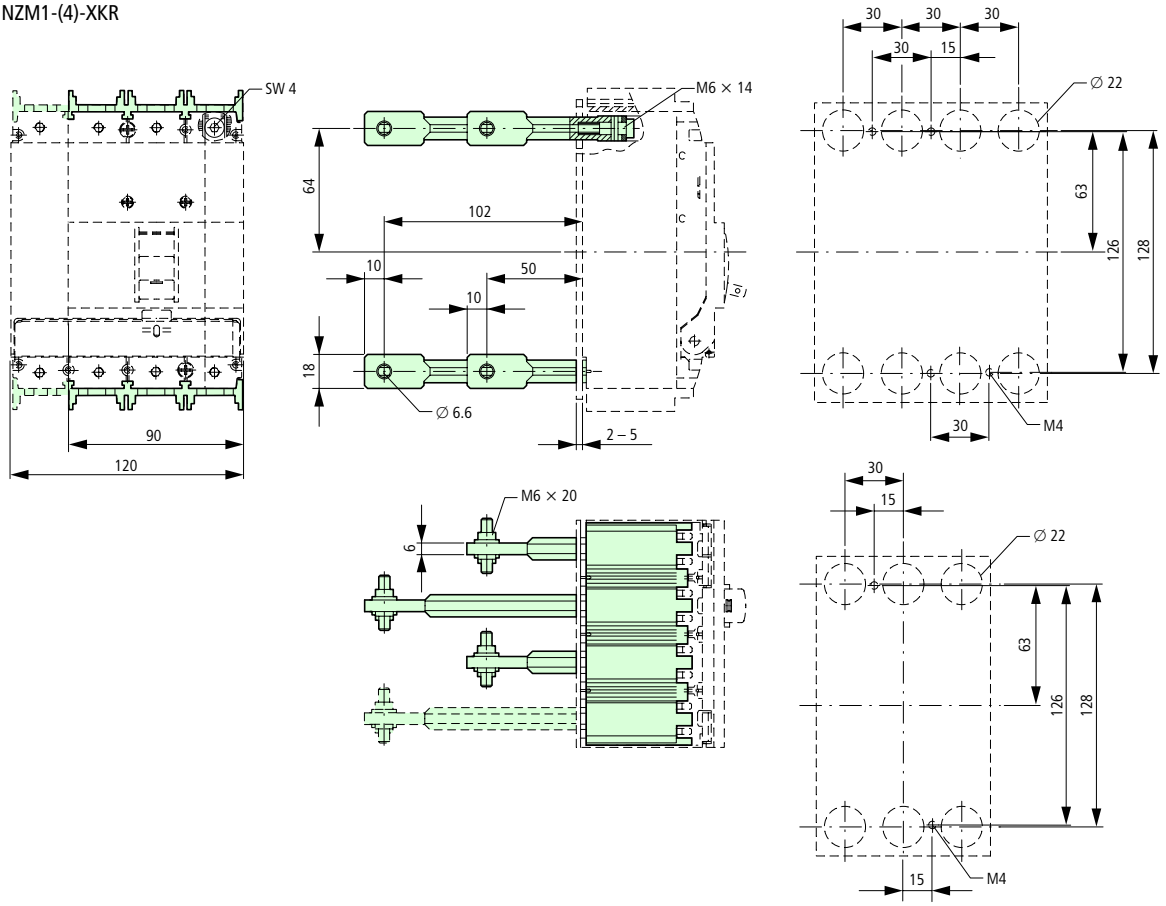
**NZM1 tunnel terminal**
NZM1(-4)-XKA




① 3-pole
② 4-pole

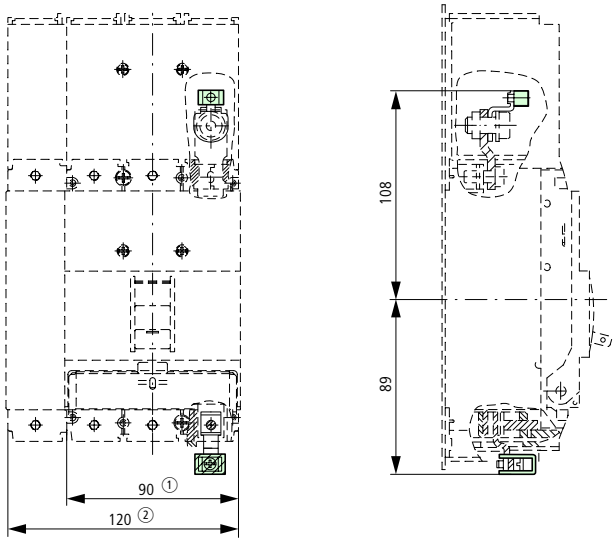
**Connection on rear**

NZM1-(4)-XKR




**Control circuit terminal**

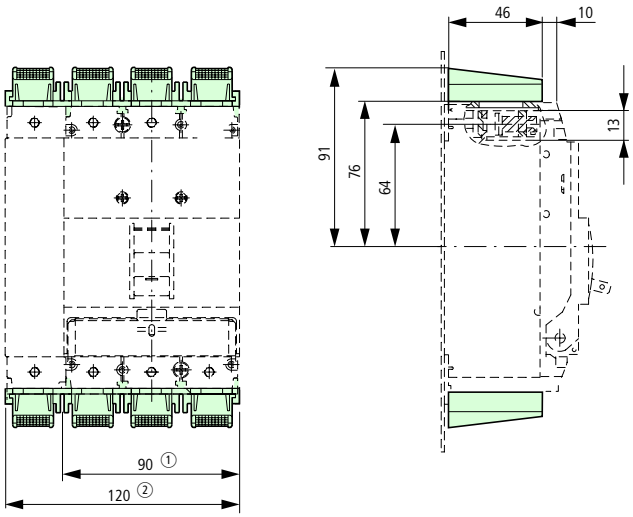
NZM-XSTK, NZM1-XSTS




① 3-pole
② 4-pole

**IP2X protection against contact with a finger**

NZM1(-4)-XIPK



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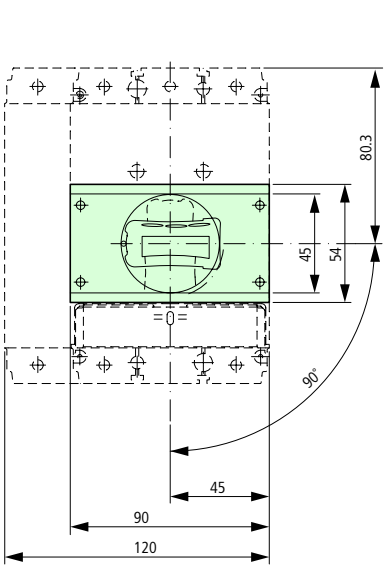
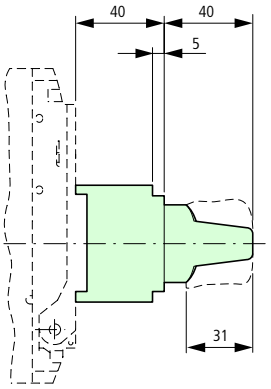
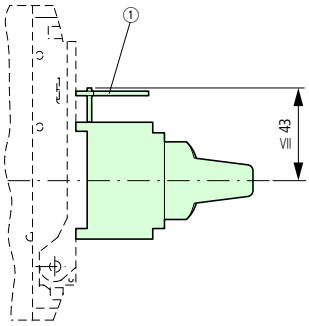
**Rotary drive, rotary handle for circuit-breaker**

NZM1-XD

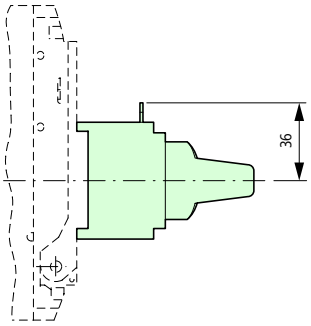


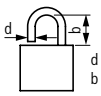




NZM1-XDV(R)




NZM1-XDTV

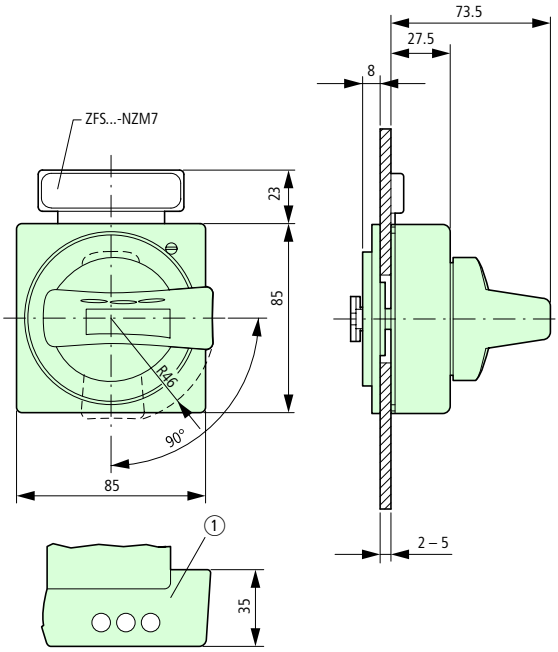


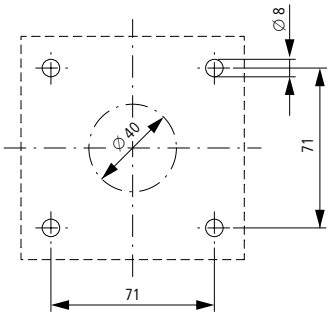



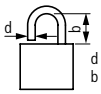

① Up to 3 padlocks

**Door coupling rotary handle**

NZM1-XT(V)D(V)(R)



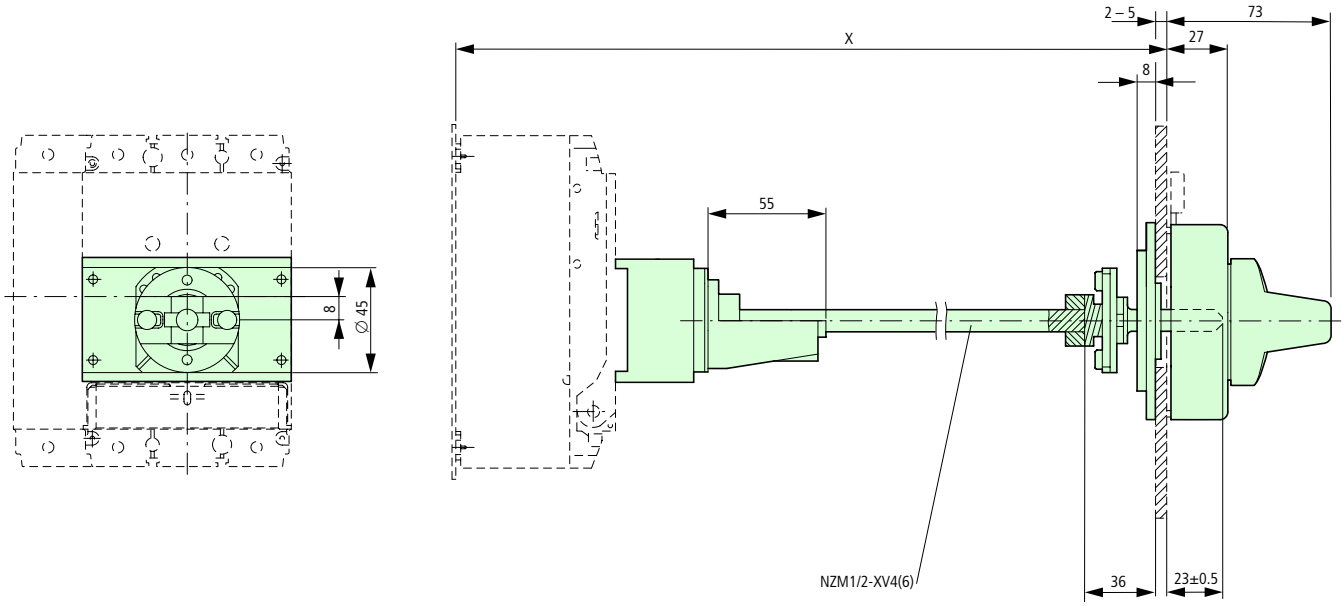




② Up to 3 padlocks

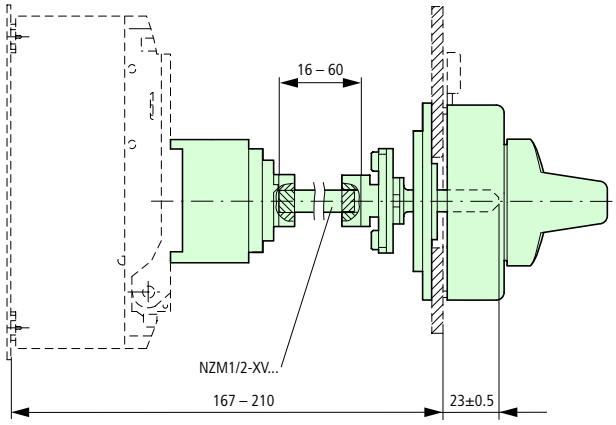
**Door coupling rotary handle with extension shaft**

NZM1-XT(V)D(V)(R)
NZM1/2-XV4(6)

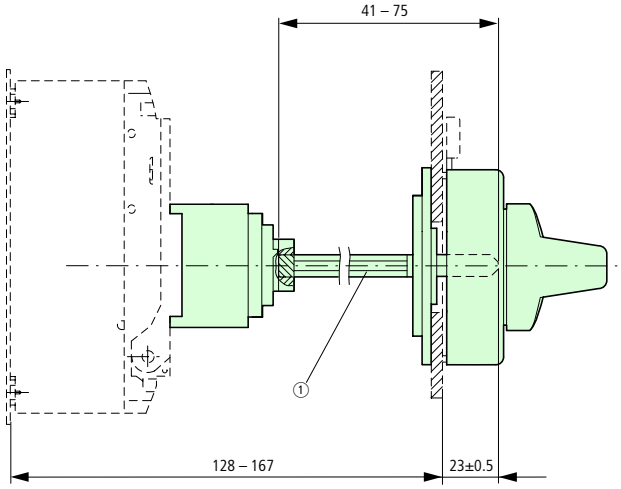



| | x |
|---|---|
| NZM1/2-XV4 | 210 – 400 |
| NZM1/2-XV6 | 400 – 600 |

NZM1-XT(V)D(V)(R)-60

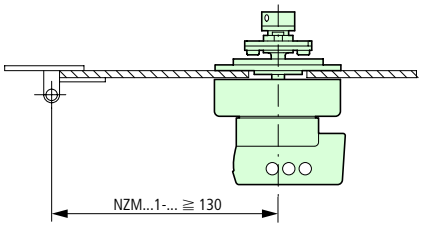



NZM1-XT(V)D(V)(R)-0




① Special tip

**Minimum door coupling rotary handle clearance from door pivot point**



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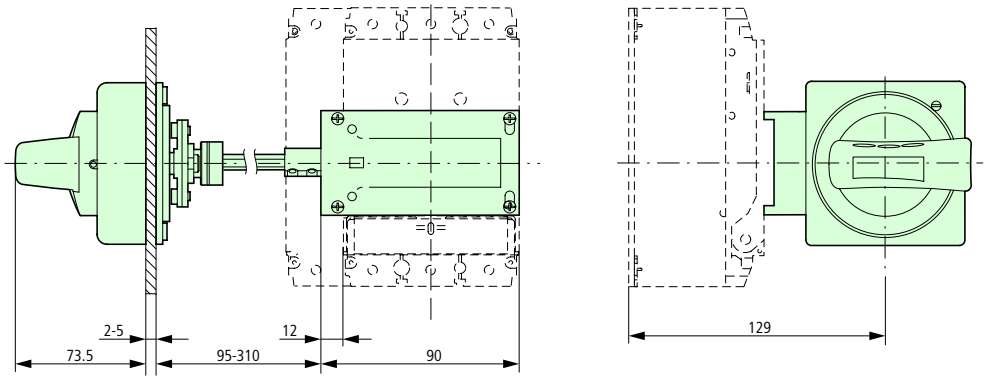
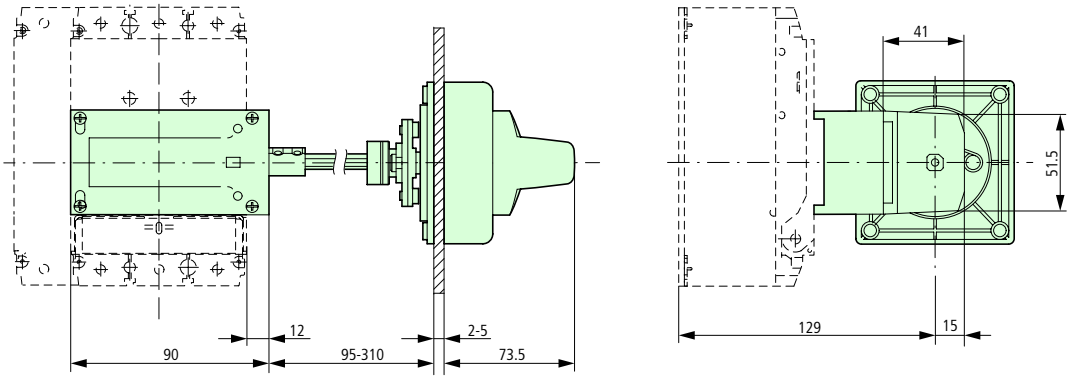
**Main switch assembly kit for side wall installation**

NZM1-XS(R)-L

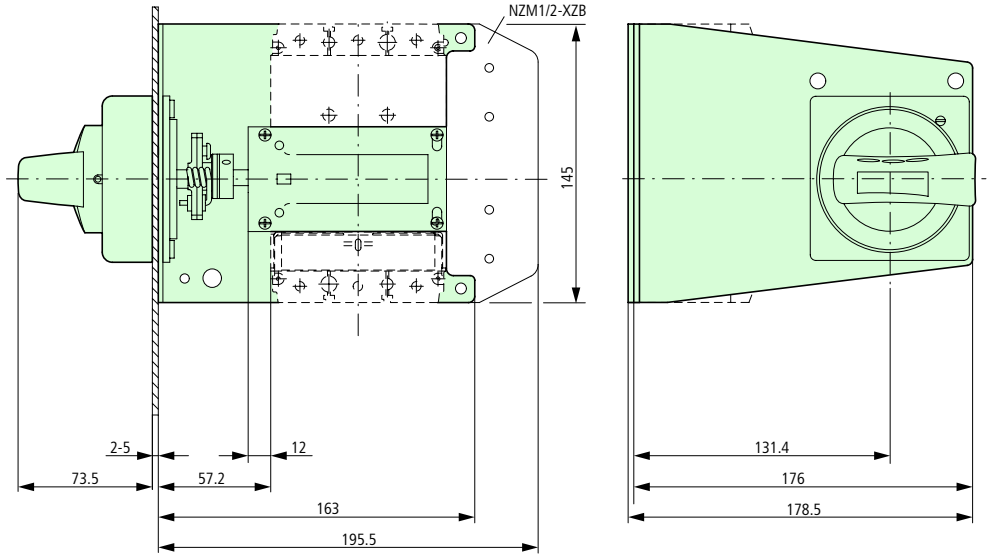



NZM1-XS(R)-R

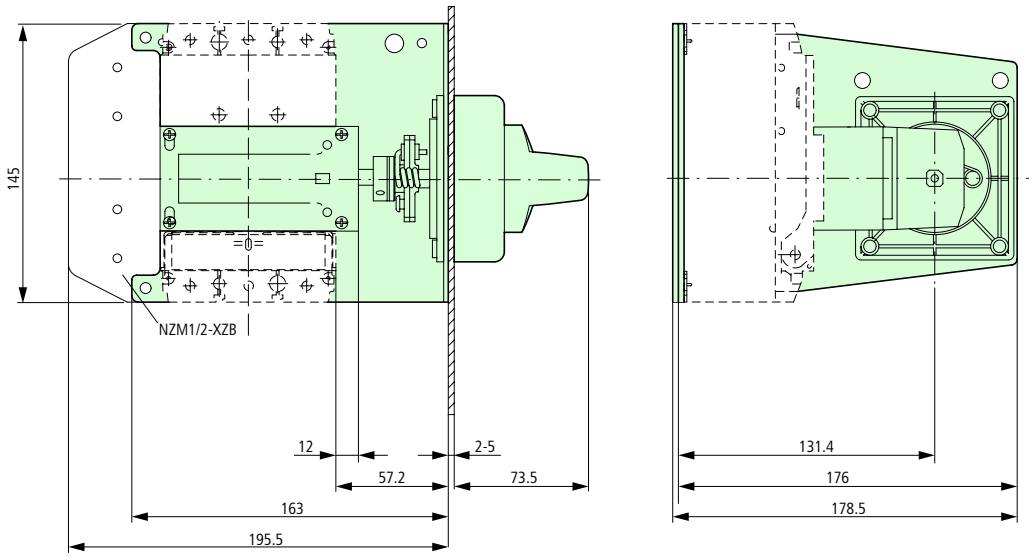


**Main switch assembly kit for side panel mounting with mounting bracket**

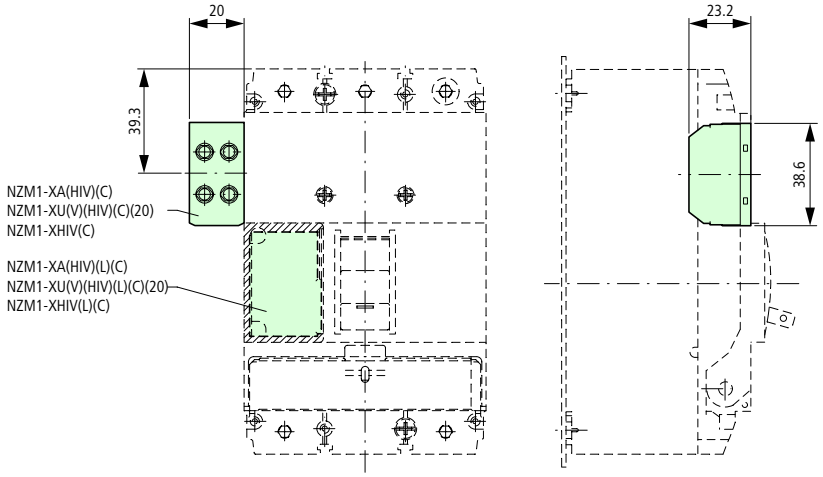
NZM1-XS(R)M-L




NZM1-XS(R)M-R




**Undervoltage release, shunt release, early-make auxiliary contact**



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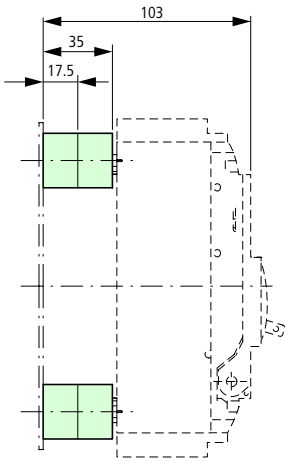
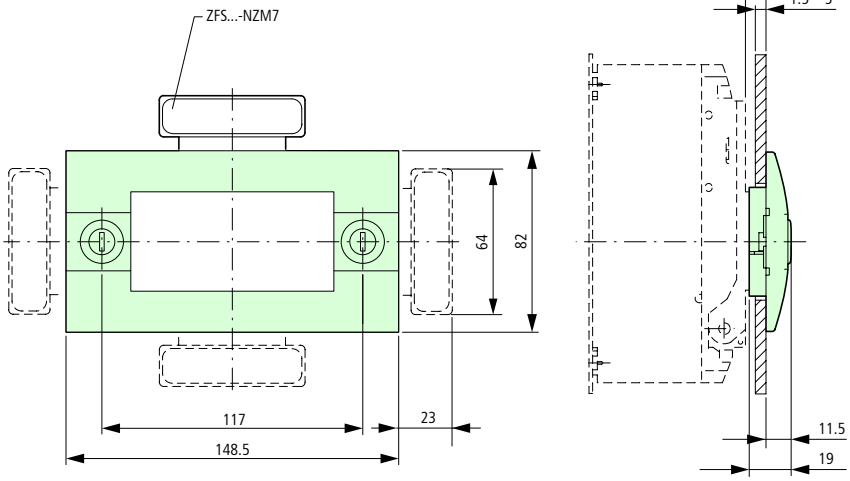
**Spacers**

NZM1/2-XAB

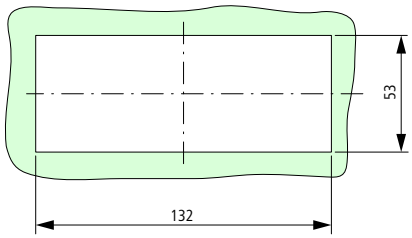



**Insulating**

NZM1-XBR

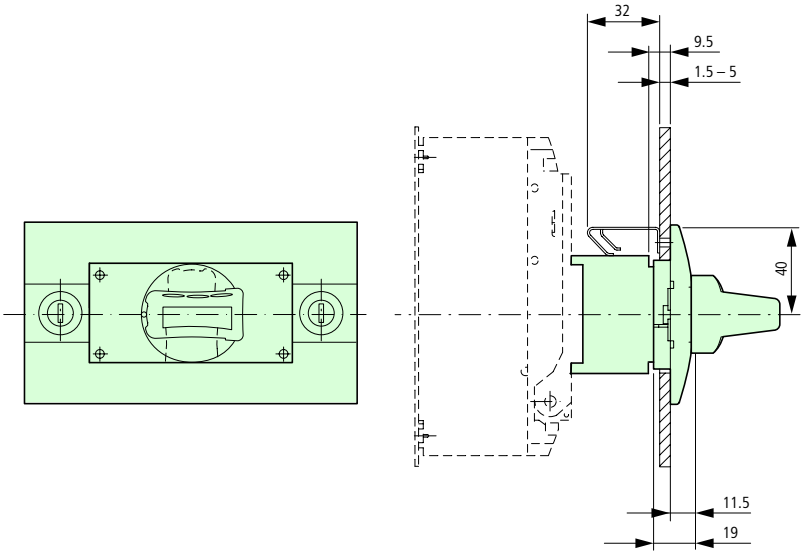



Mounting aperture

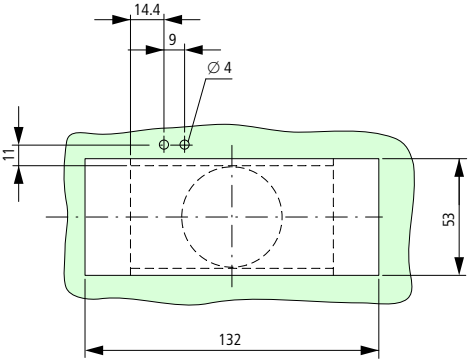



**Rotary handle on switch with door interlock**

NZM1-XDTV(R)

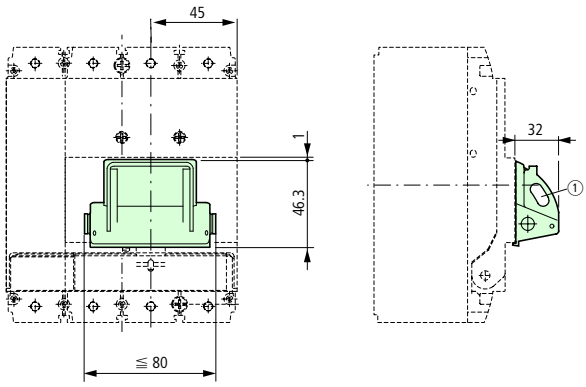


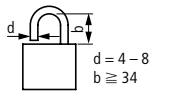

Mounting aperture



**Toggle lever interlock device**

NZM1-XKAV

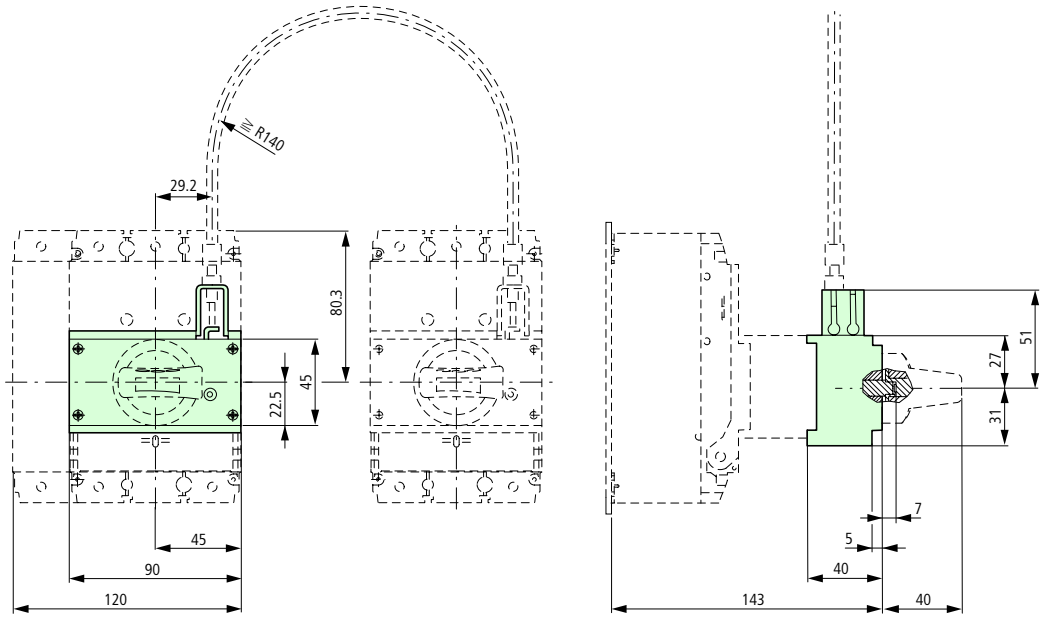


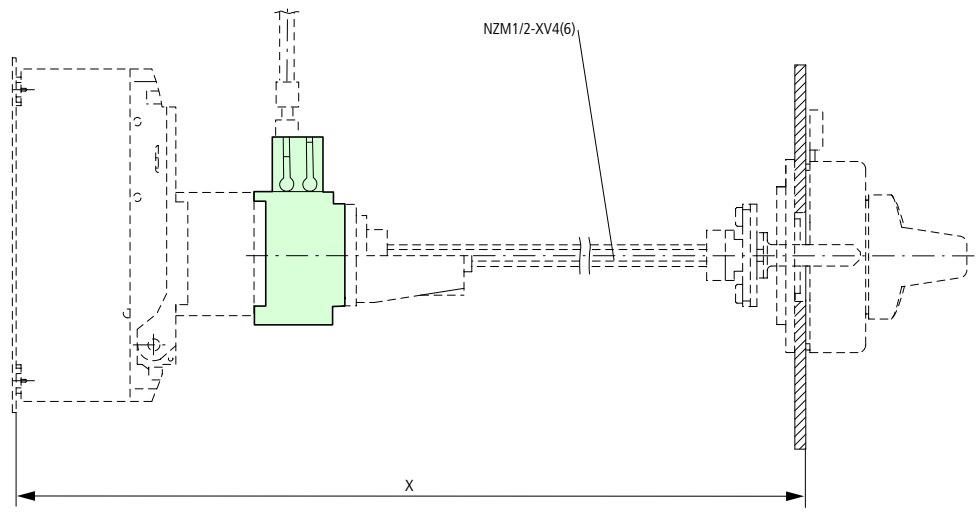

① Up to 3 padlocks

**Mechanical interlock**

NZM1-XMV with NZM1-XD




NZM1-XMV with NZM1-XT(V)D(V)(R)




| | x |
|---|---|
| NZM1/2-XV4 | 245 – 400 |
| NZM1/2-XV6 | 400 – 600 |

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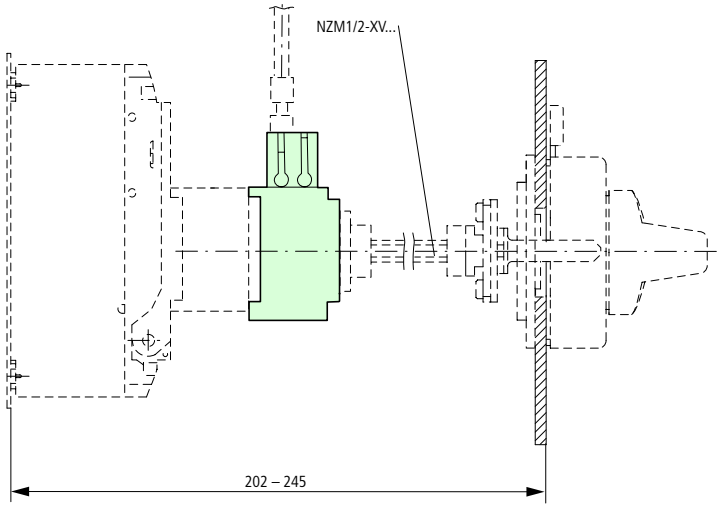
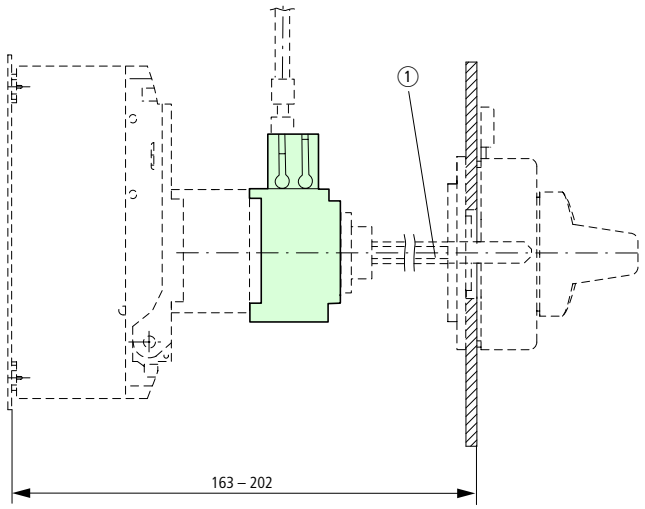
NZM1-XMV with NZM1-XT(V)D(V)(R)-60



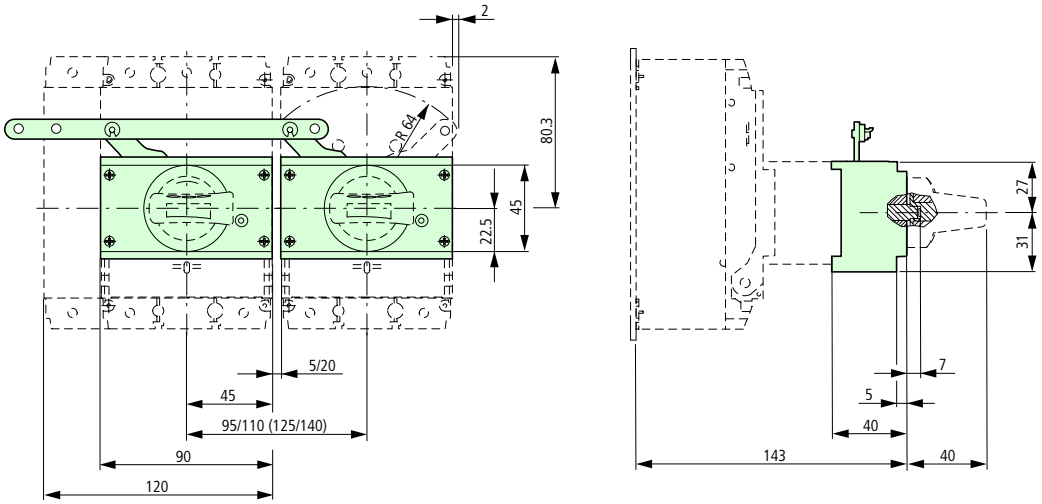

NZM-XMV with NZM1-XT(V)D(V)(R)-0

① Special tip

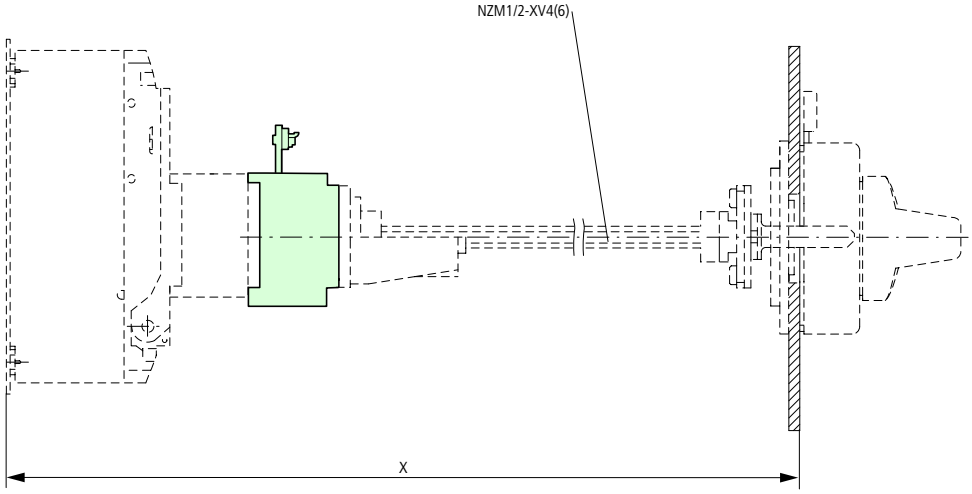


**Paralleling mechanism**

PN1-XPA with NZM1-XD




PN1-XPA with NZM1-XTD




| | x |
|---|---|
| NZM1/2-XV4 | 245 – 400 |
| NZM1/2-XV6 | 400 – 600 |

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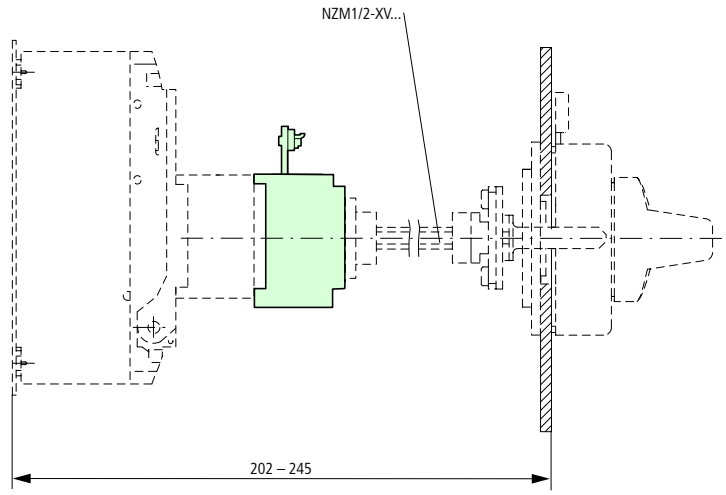
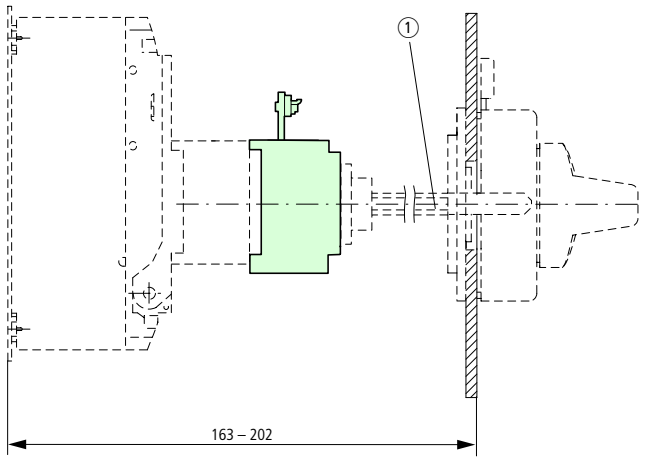
PN1-XPA with NZM1-XTD-60



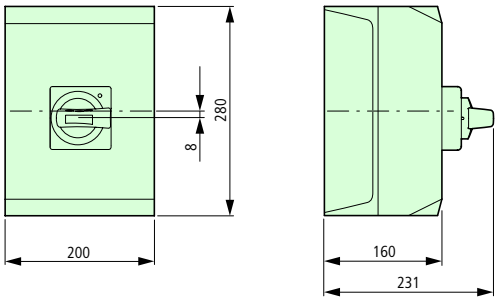

PN1-XPA with NZM1-XTD-0



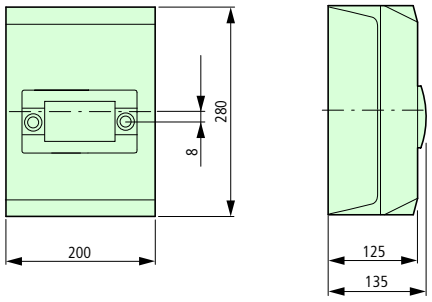

① Special tip

**Insulated enclosures**

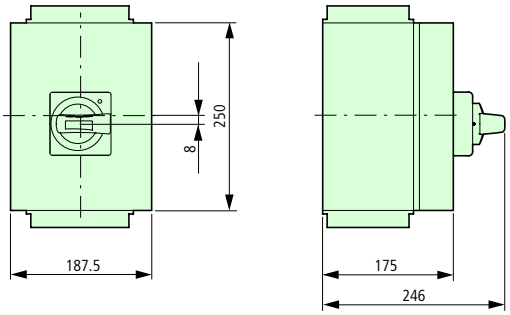
NZM1-XCIK5-T...



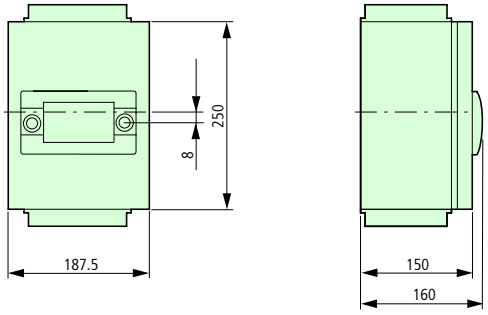

NZM1-XCIK5-BR



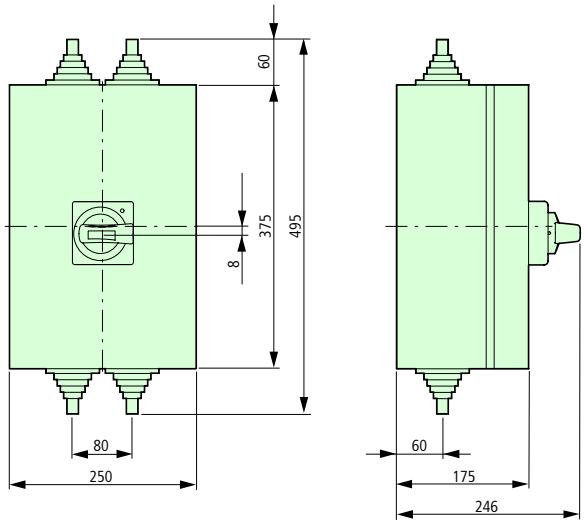

NZM1-XCI23-T...



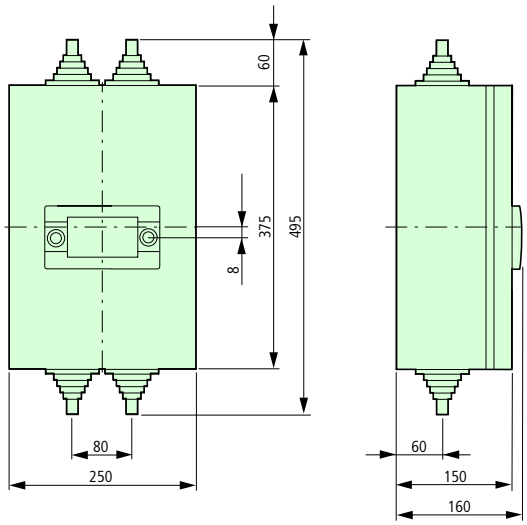

NZM1-XCI23-BR




NZM1-XCI43-T...




NZM1-XCI43-BR



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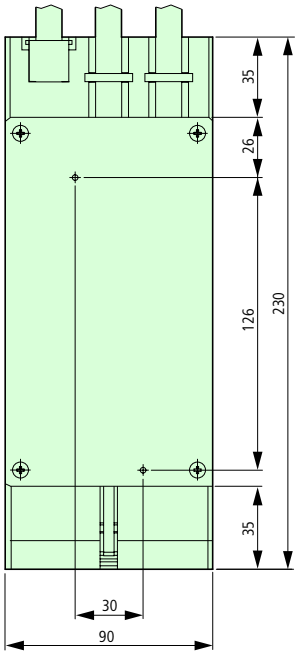
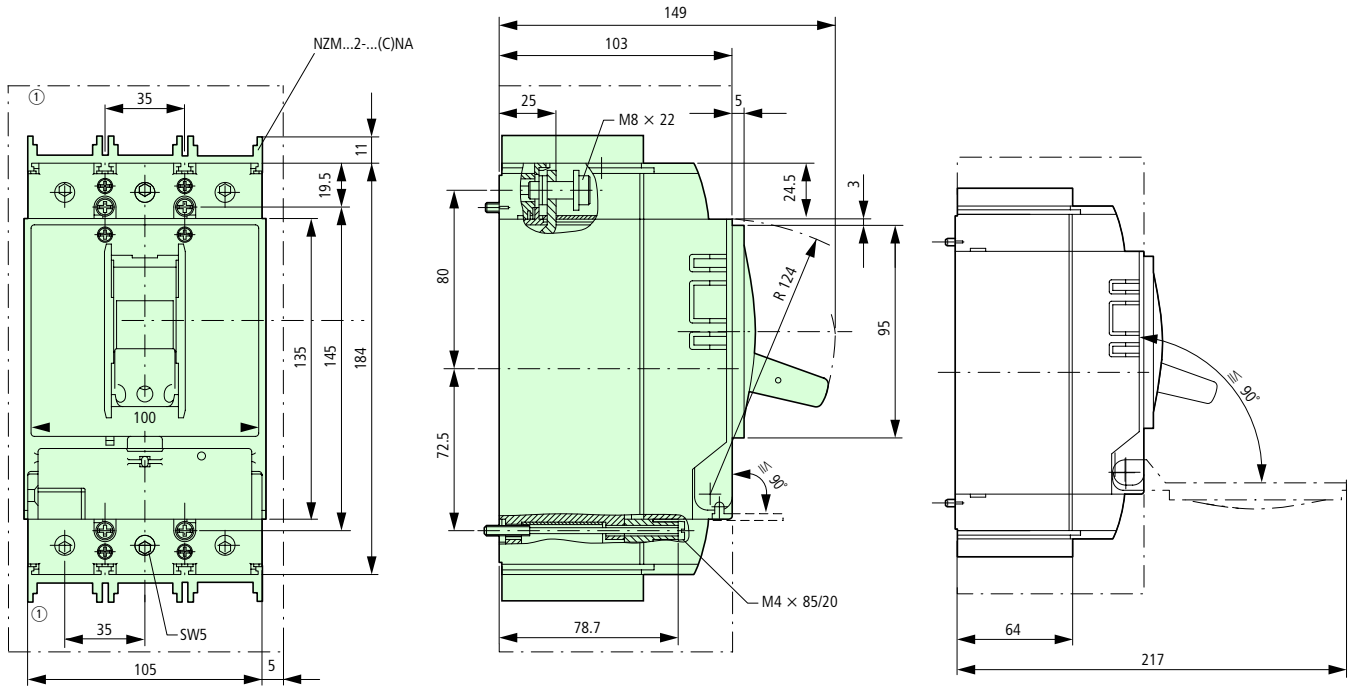
**Component adapter**
AD100

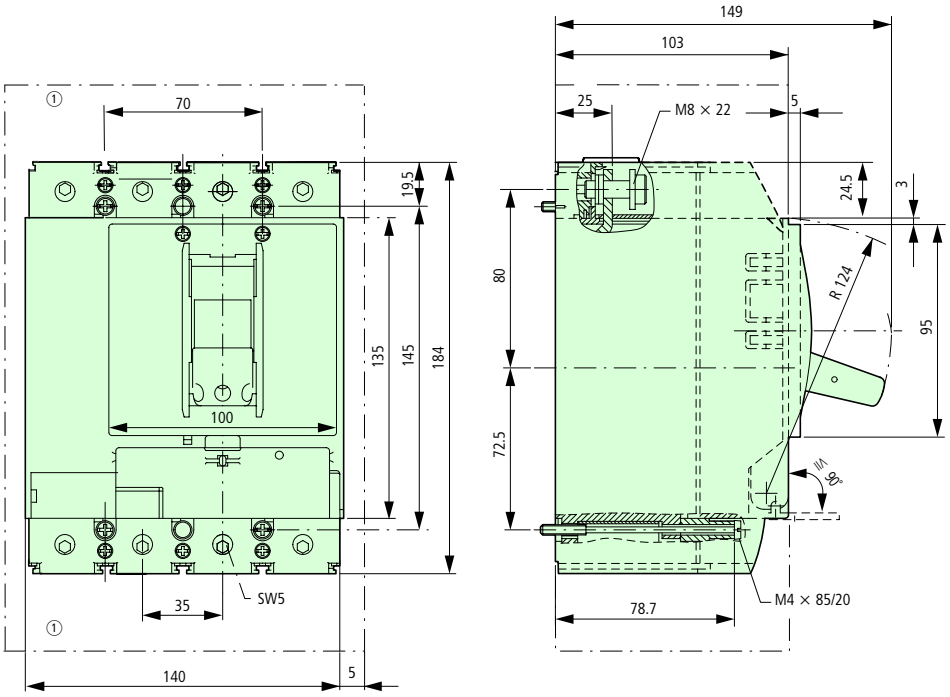


**Circuit-breaker, switch-disconnector, 3-pole**
NZMB2, NZMN2, NZMH2, NZML2, PN2, N2




① Clearance from conductive parts ≧ 35 mm, laterally ≧ 5 mm

**Circuit-breaker, switch-disconnector, 4-pole**
NZMB2-4, NZMN2-4, NZMH2-4, NZML2-4, PN2-4, N2-4




① Clearance from conductive parts ≧ 35 mm, laterally ≧ 5 mm

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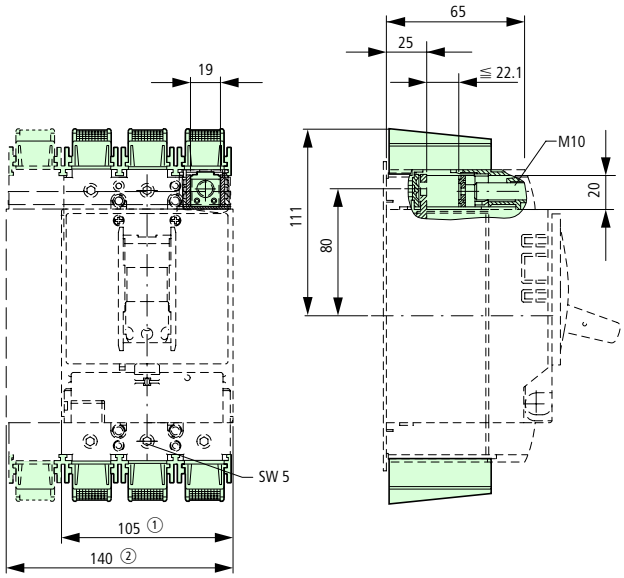
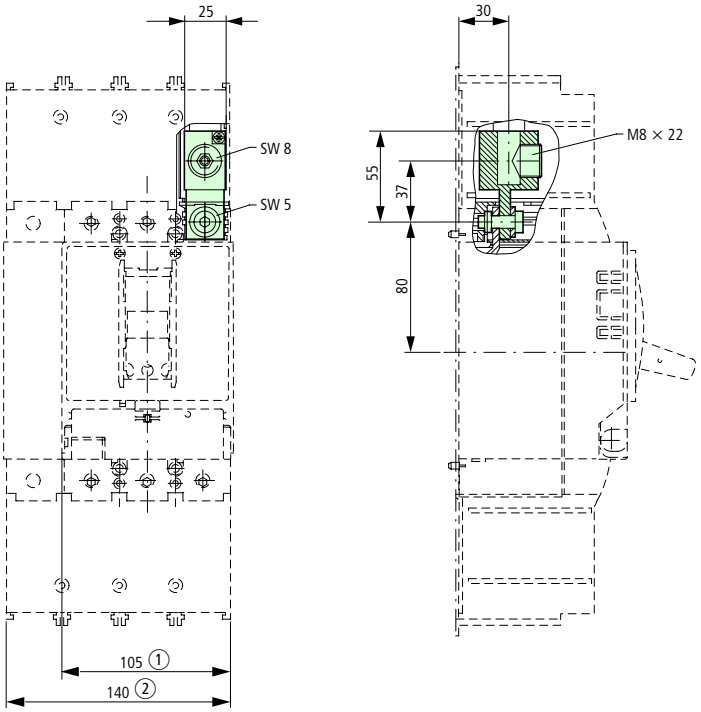
**Box terminal**
NZM2(-4)-...-XKC(O)(U)
**IP2X protection against contact with a finger**
NZM2(-4)-XIPK

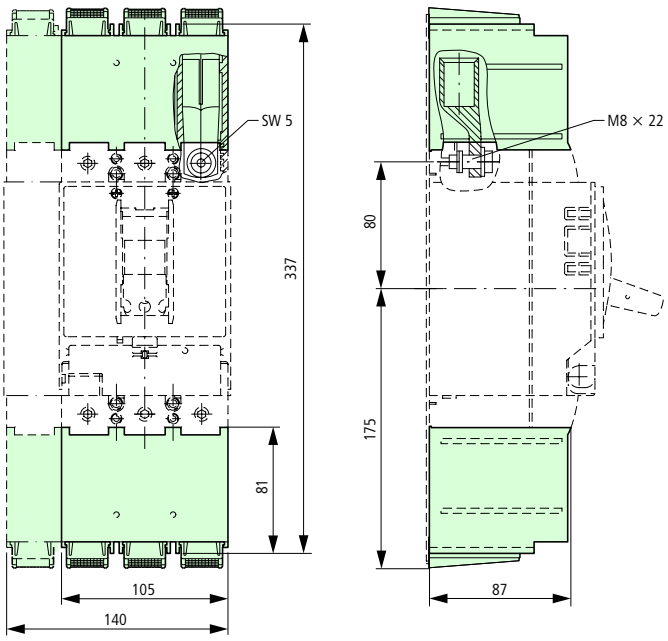



**Tunnel terminal**
NZM2(-4)-XKA



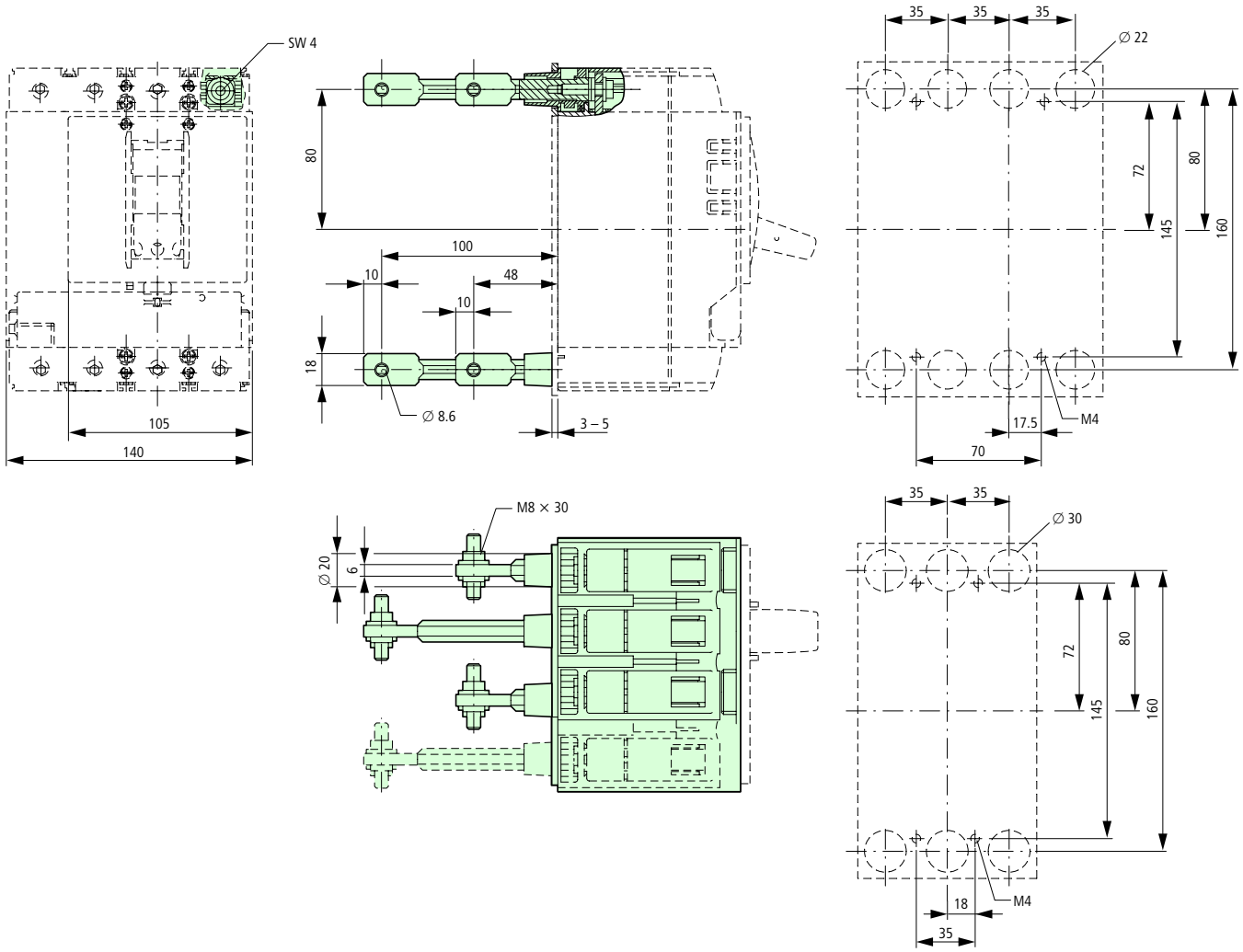

① 3-pole
② 4-pole

**Cover for screw terminals**
NZM2(-4)-XKSA
**Cable lug**
NZM2-XKS185
**IP2X protection against contact with a finger for shroud**
NZM2(-4)-XIPA



**Connection on rear**

(+)NZM2(-4)-XKR(O)(U)



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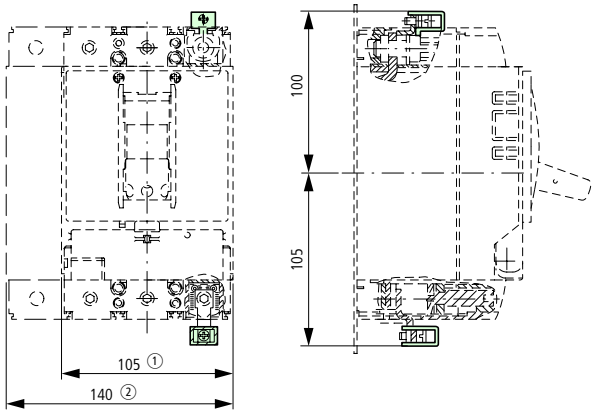
**Control circuit terminal**

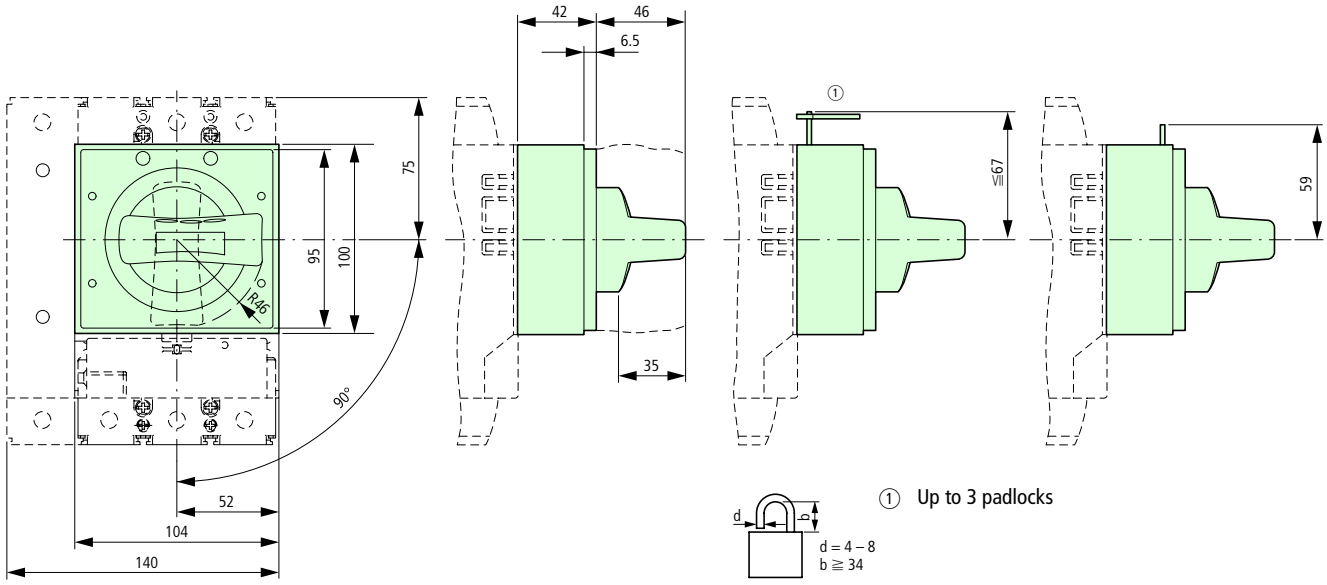
NZM2-XSTS, NZM2-XSTK




① 3-pole
② 4-pole

**Rotary drive, rotary handle for circuit-breaker**

NZM2-XD NZM2-XDV(R) NZM2-XDTV(R)



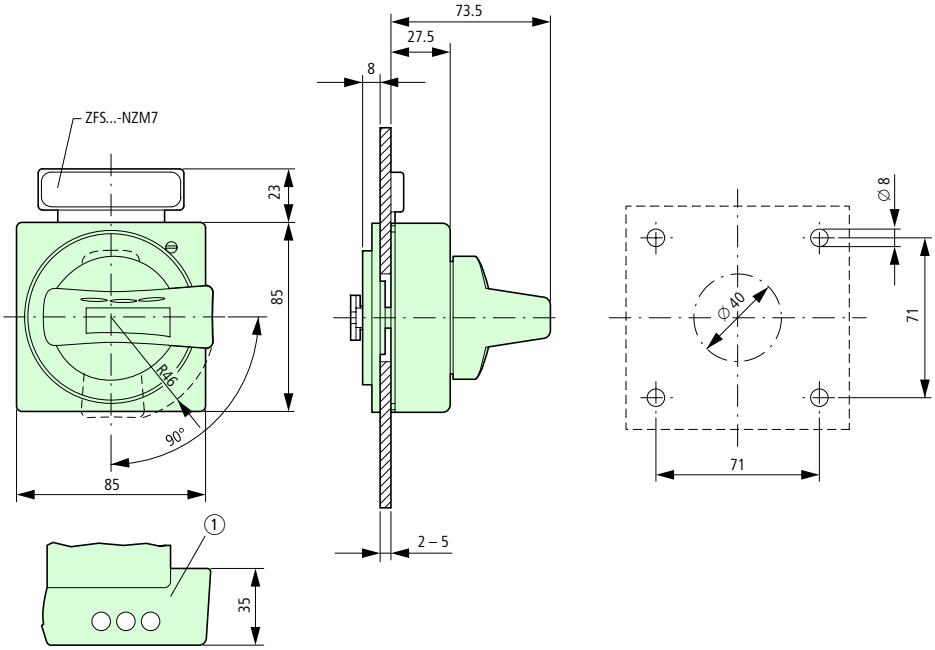


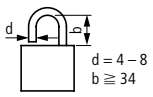


① Up to 3 padlocks

**Door coupling rotary handle**

NZM2-XT(V)D(V)(R)



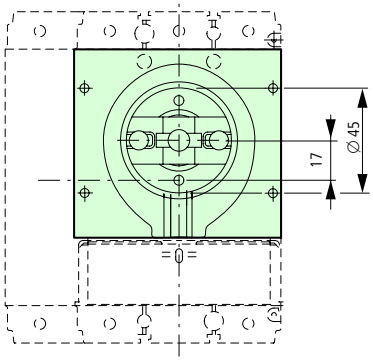



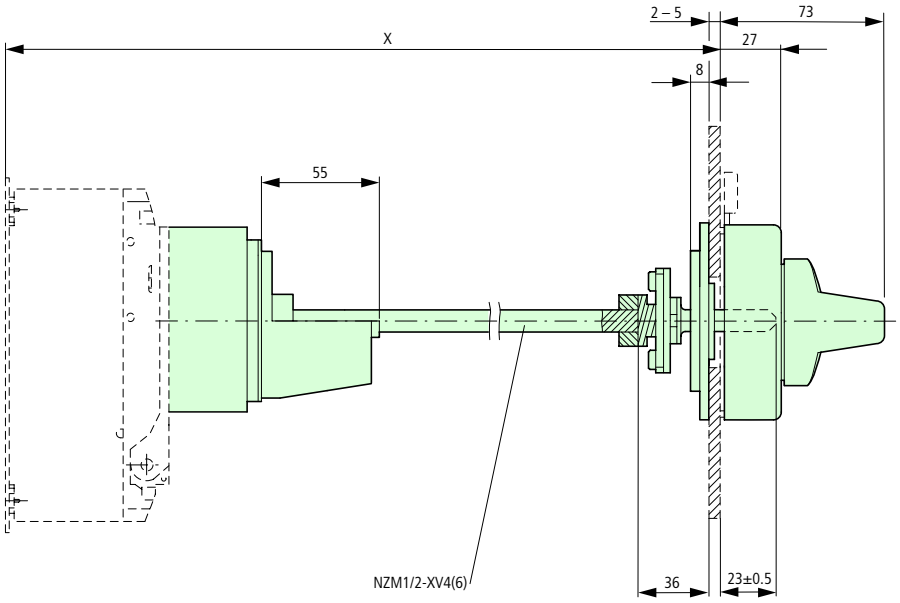

① Up to 3 padlocks

**Door coupling rotary handle with extension shaft**

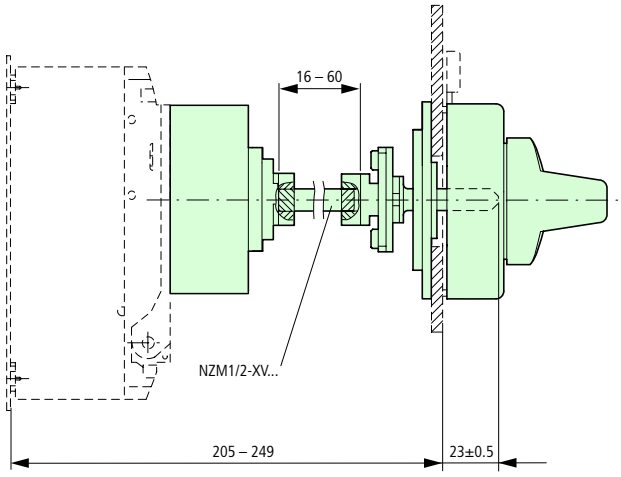
NZM2-XT(V)D(V)(R)
NZM1/2-XV4(6)

| | x |
|---|---|
| NZM1/2-XV4 | 245 – 400 |
| NZM1/2-XV6 | 400 – 600 |

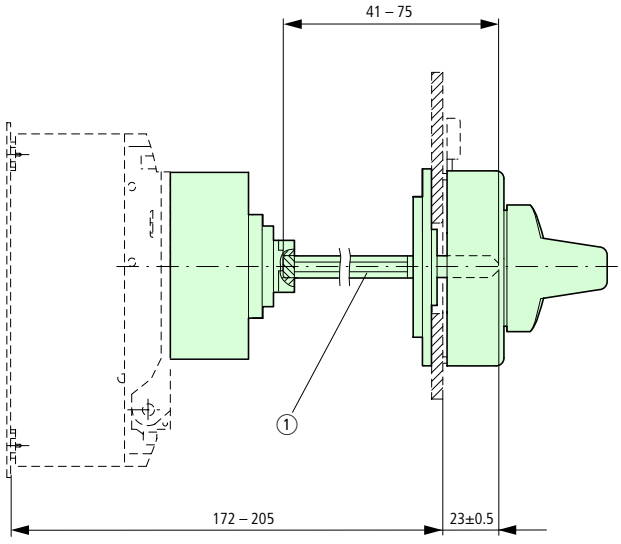



NZM2-XT(V)D(V)(R)-60

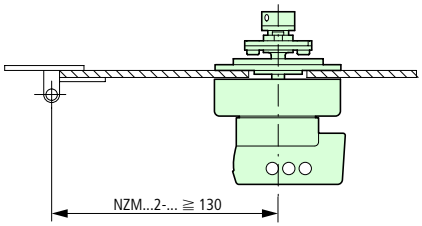



NZM2-XT(V)D(V)(R)-0




① Special tip

**Minimum door coupling rotary handle clearance from door pivot point**



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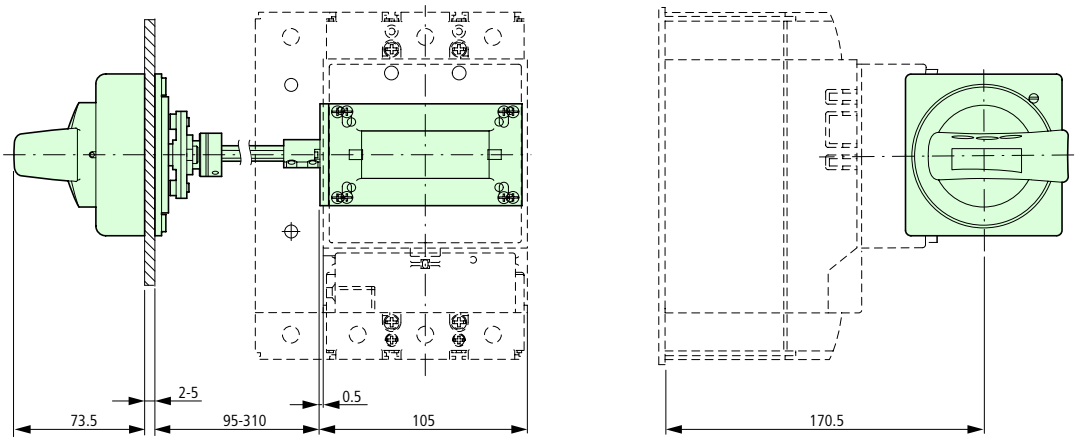
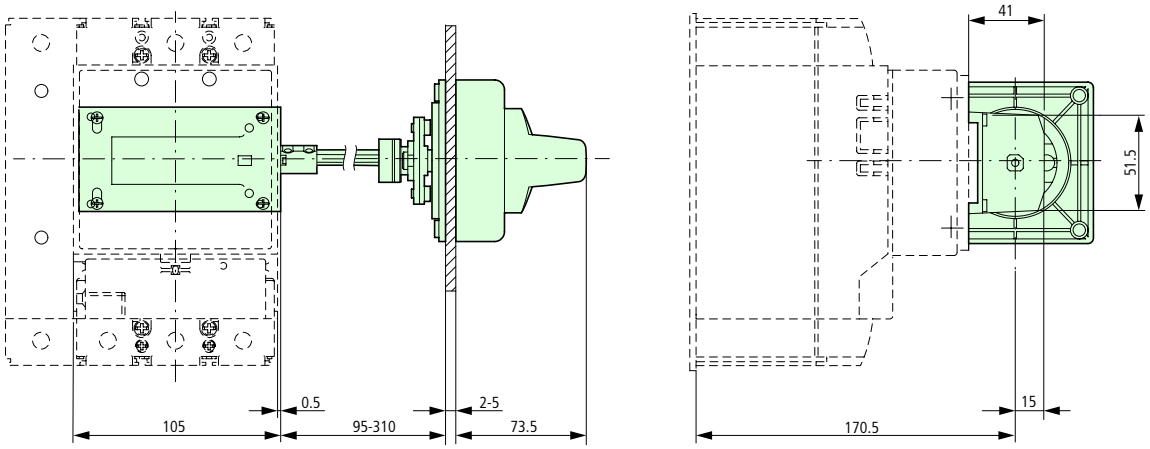
**Main switch assembly kit for side wall installation**

NZM2-XS(R)-L

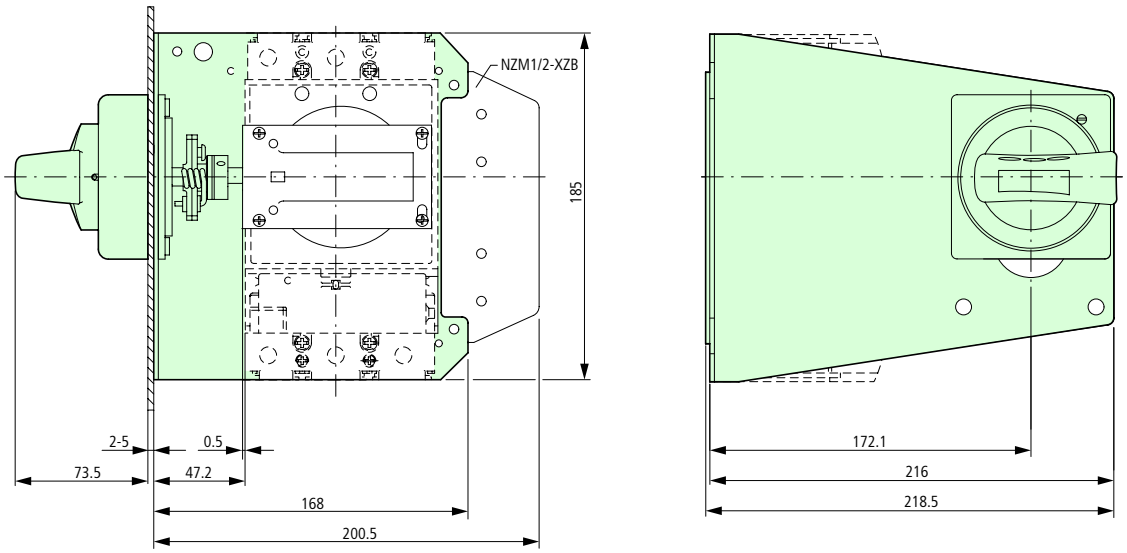



NZM2-XS(R)-R

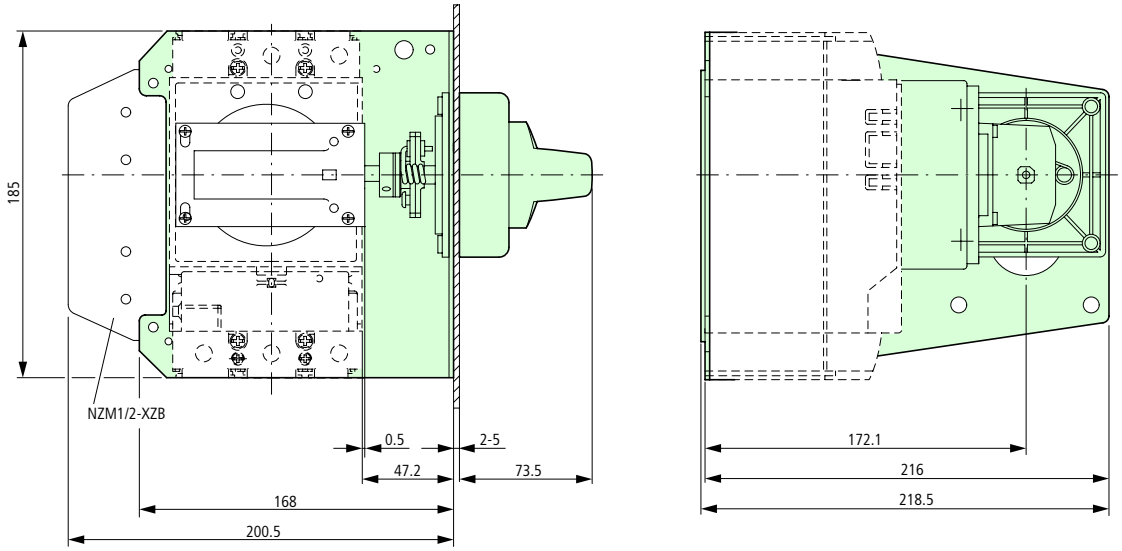


**Main switch assembly kit for side panel mounting with mounting bracket**

NZM2-XS(R)M-L




NZM2-XS(R)M-R



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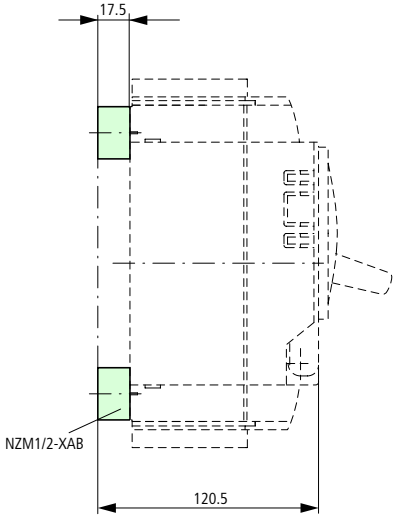
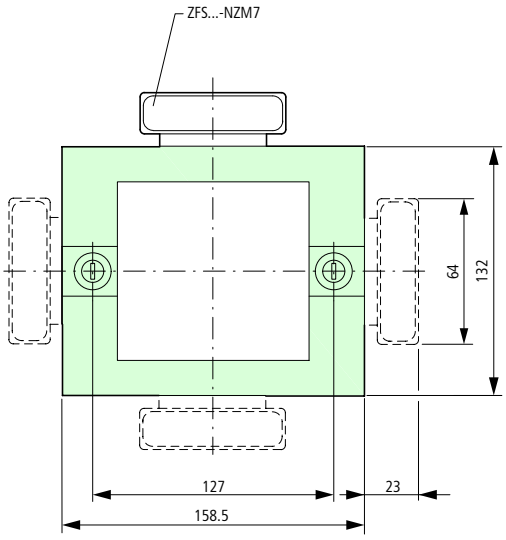
**Spacers**

NZM1/2-XAB

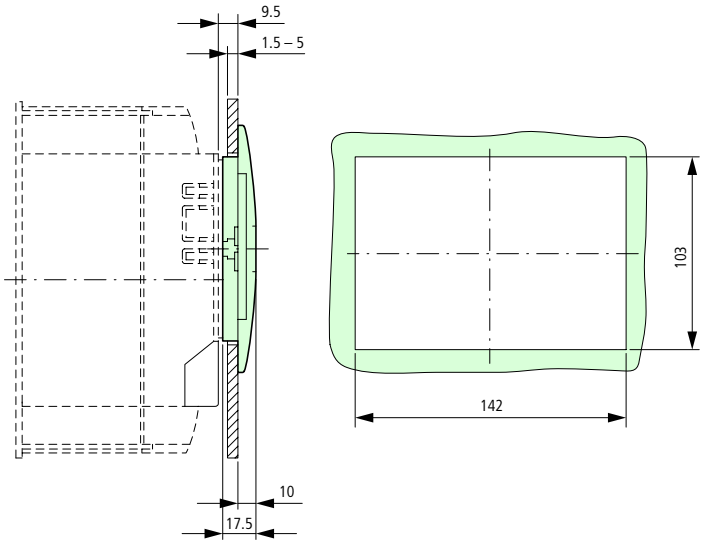



**Insulating surround**

NZM2-XBR

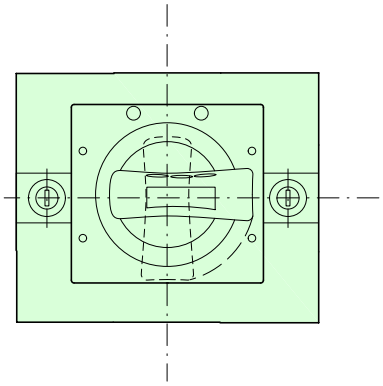


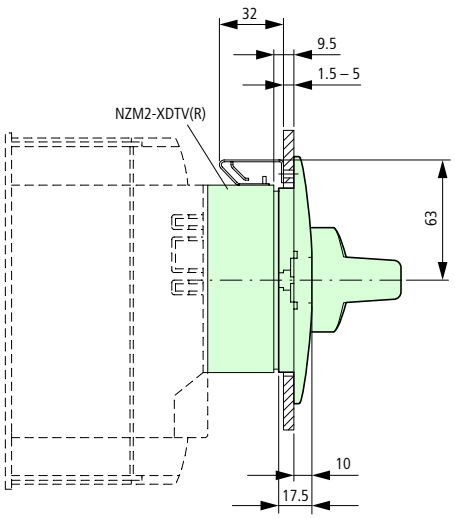

Mounting aperture



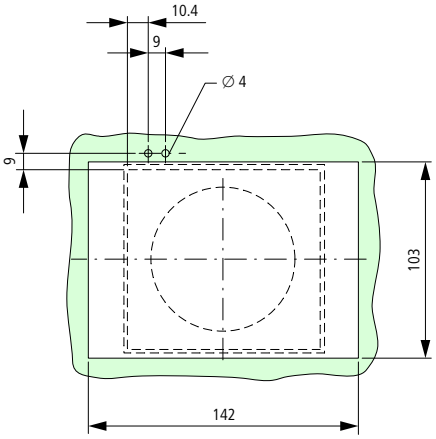

**Rotary handle on switch with door interlock**

NZM2-XDTV(R)



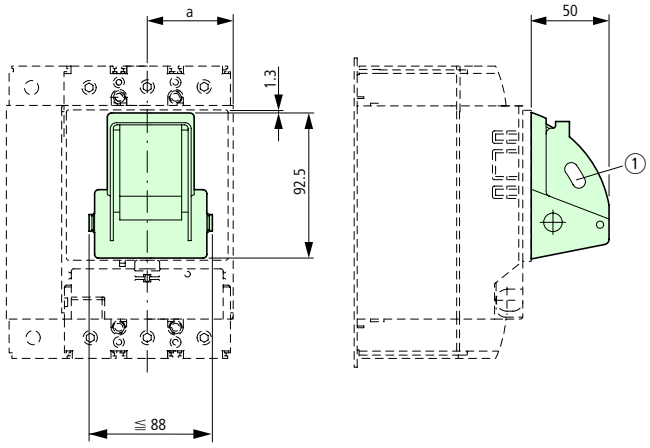


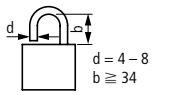

Mounting aperture



**Toggle lever interlock device**

NZM2/3-XKAV



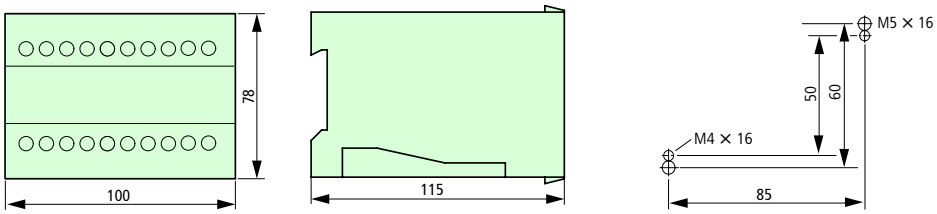




① Up to 3 padlocks

| | a |
|---|---|
| NZM2, PN2, N2 | 52.5 |
| NZM3, PN3, N3 | 70 |

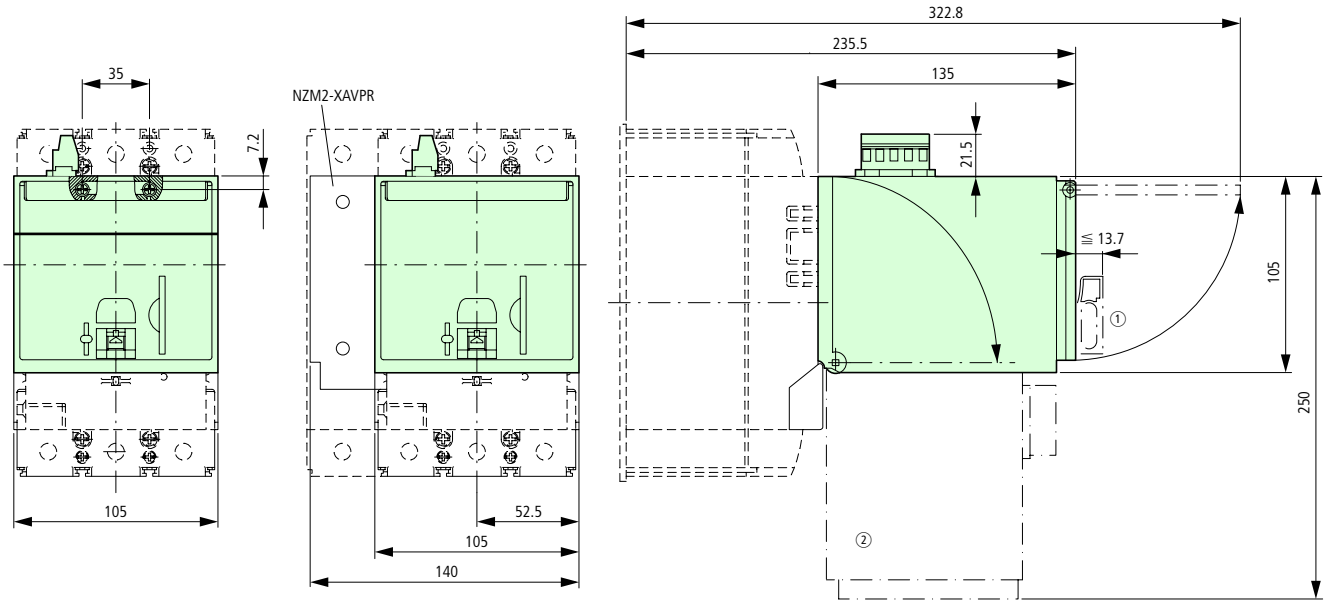
**Capacitor unit**

NZM-XCM



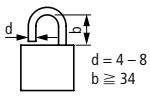

**Remote operator**

NZM2-XR...




① Up to 3 padlocks

② Remote operator folded



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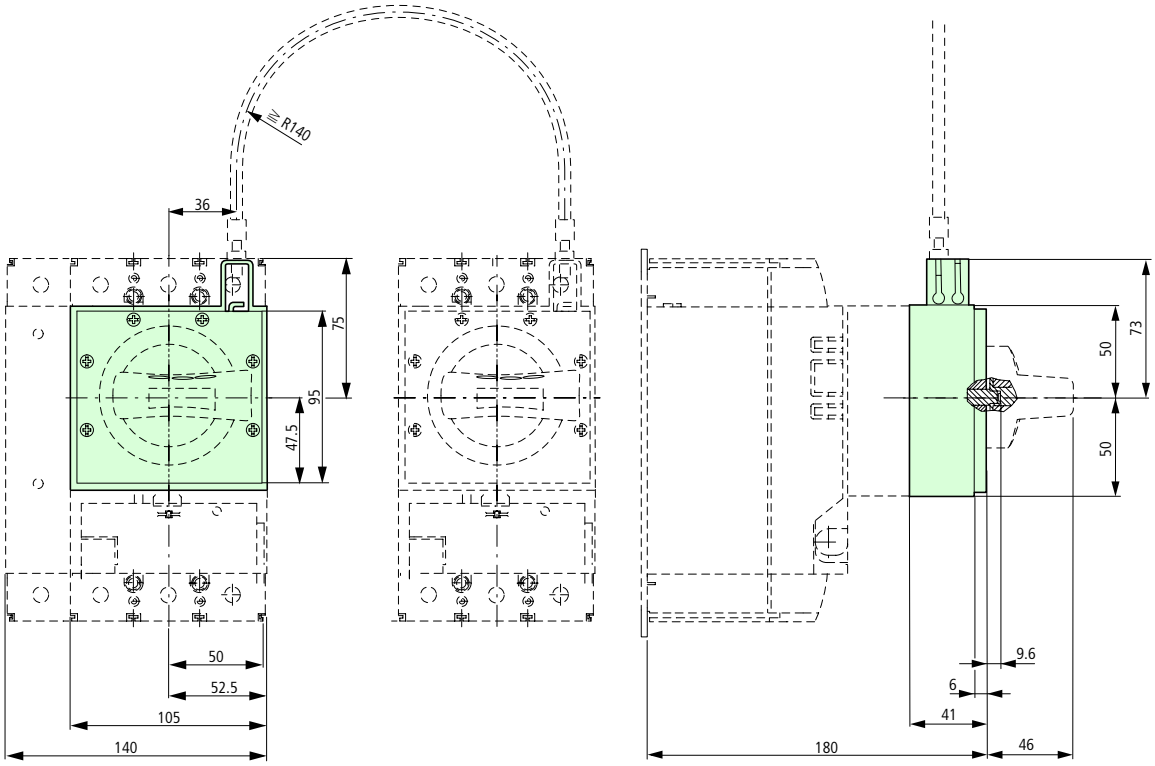
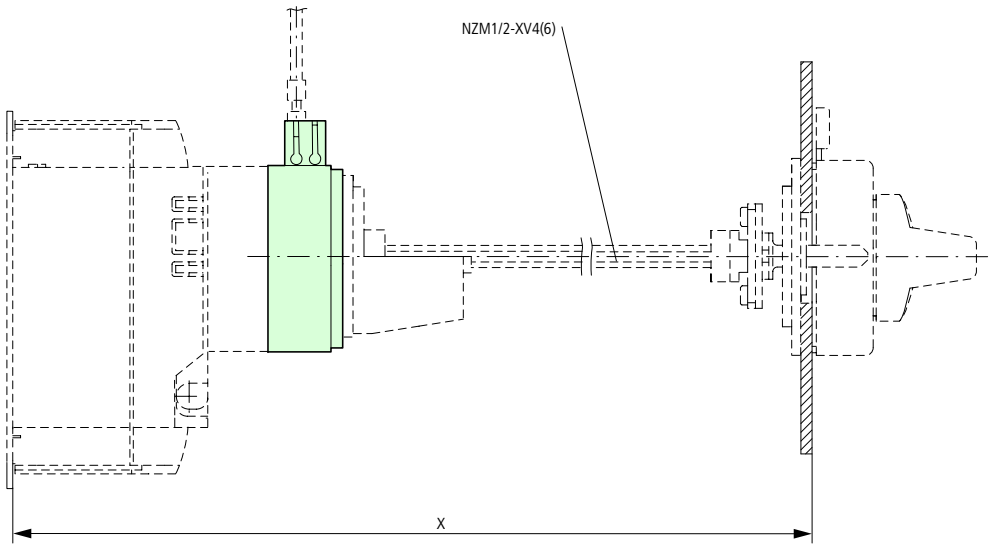
**Mechanical interlock**

NZM2-XMV with NZM2-XD

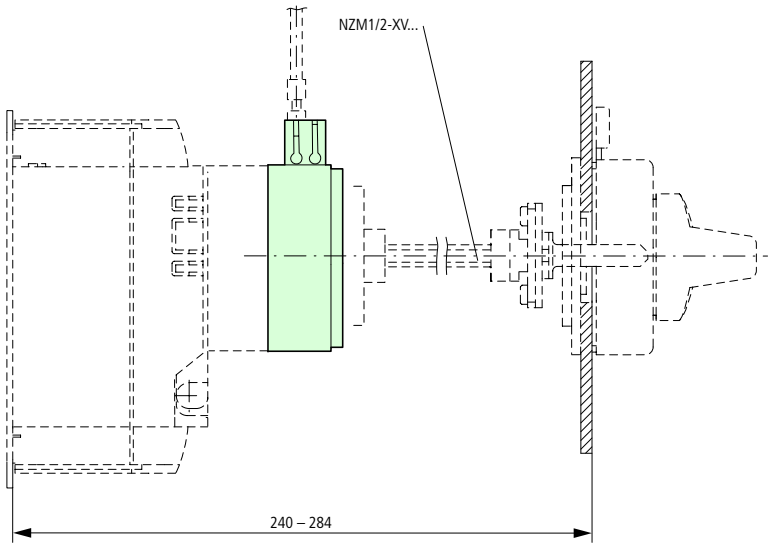



NZM2-XMV with NZM2-XT(V)D(V)(R)

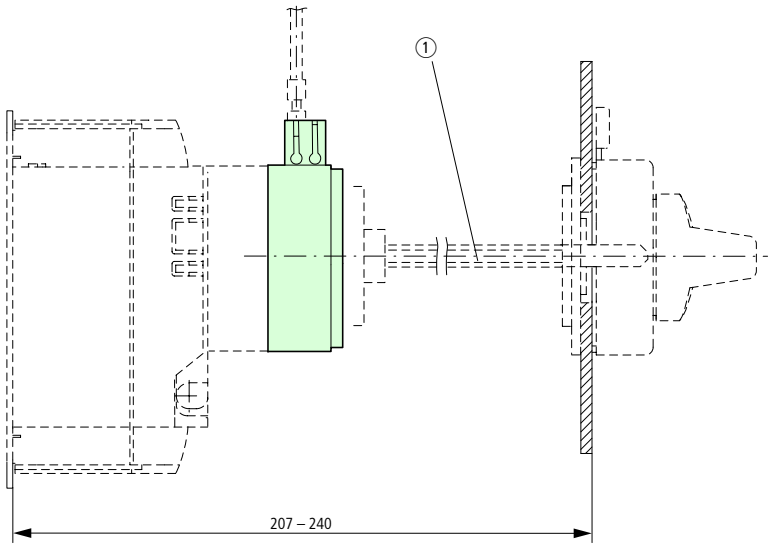



| | x |
|---|---|
| NZM1/2-XV4 | 280 – 400 |
| NZM1/2-XV6 | 400 – 600 |

NZM2-XMV with NZM2-XT(V)D(V)(R)-60



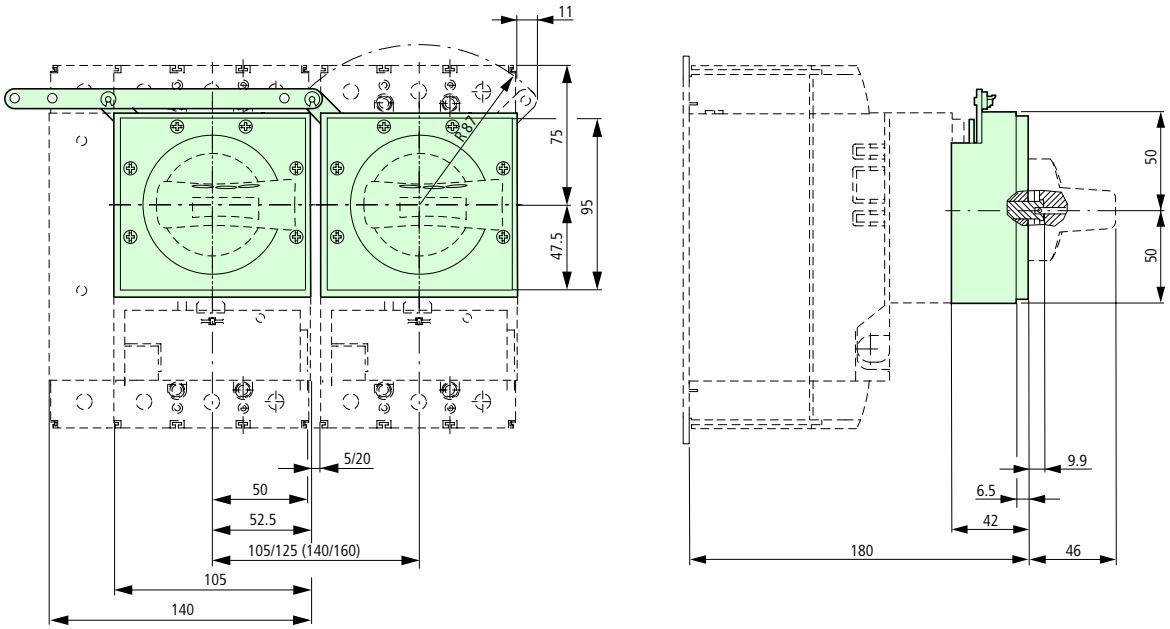

NZM2-XMV with NZM2-XT(V)D(V)(R)-0




① Special tip

**Paralleling mechanism**

PN2-XPA with NZM2-XD



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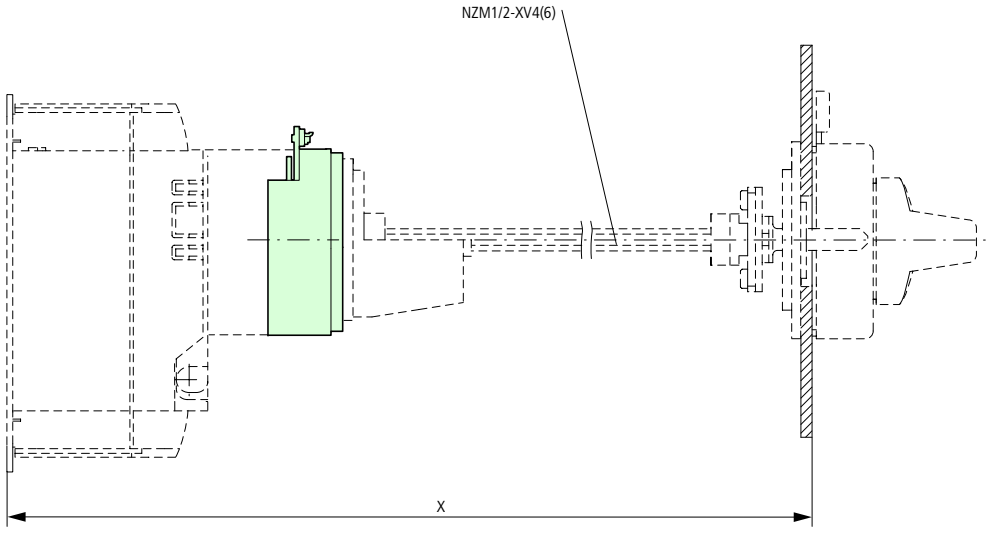
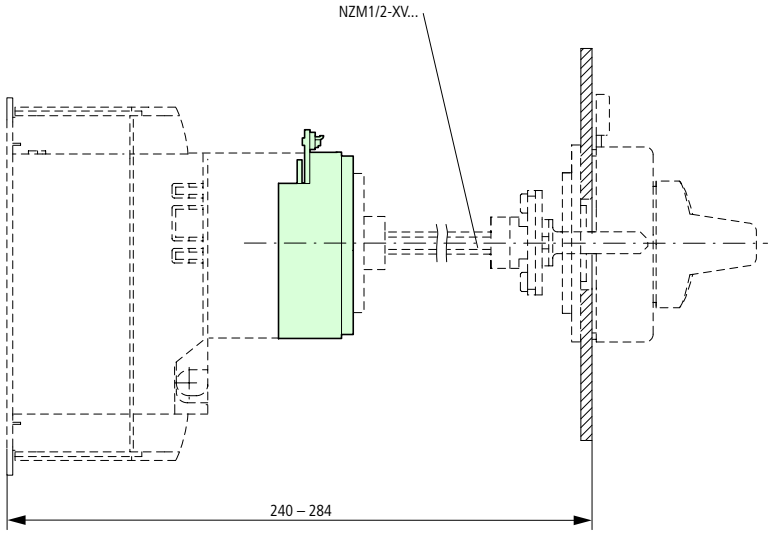
PN2-XPA with NZM2-XTD

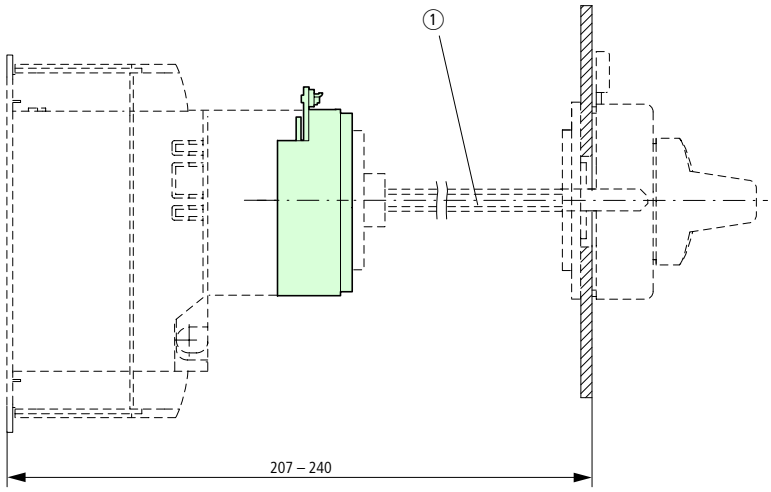



| | x |
|---|---|
| NZM1/2-XV4 | 280 – 400 |
| NZM1/2-XV6 | 400 – 600 |

PN2-XPA with NZM2-XTD-60



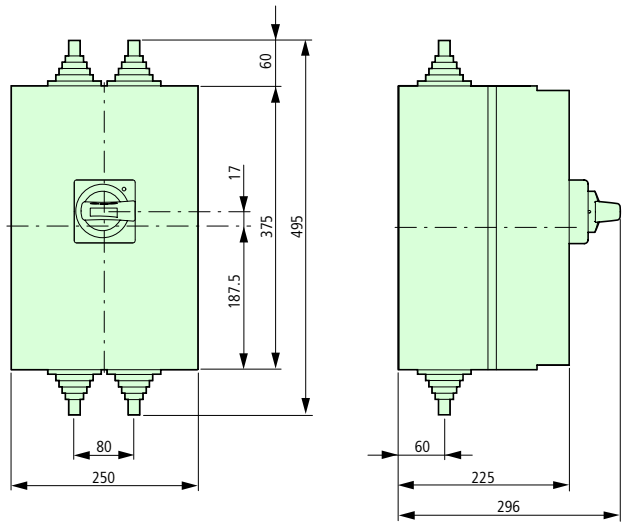

PN2-XPA with NZM2-XTD-0



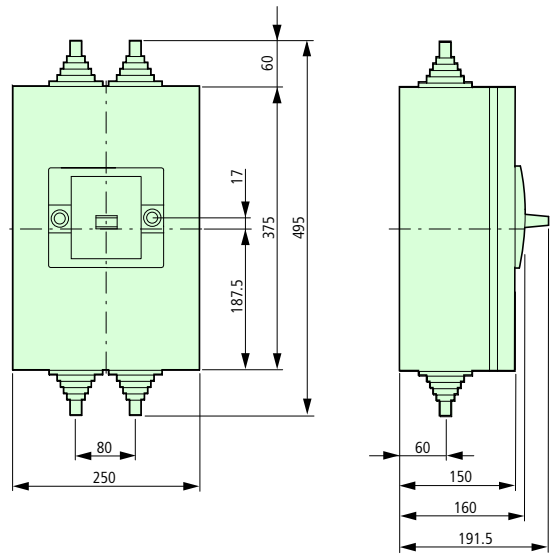

① Special tip

**Insulated enclosures**

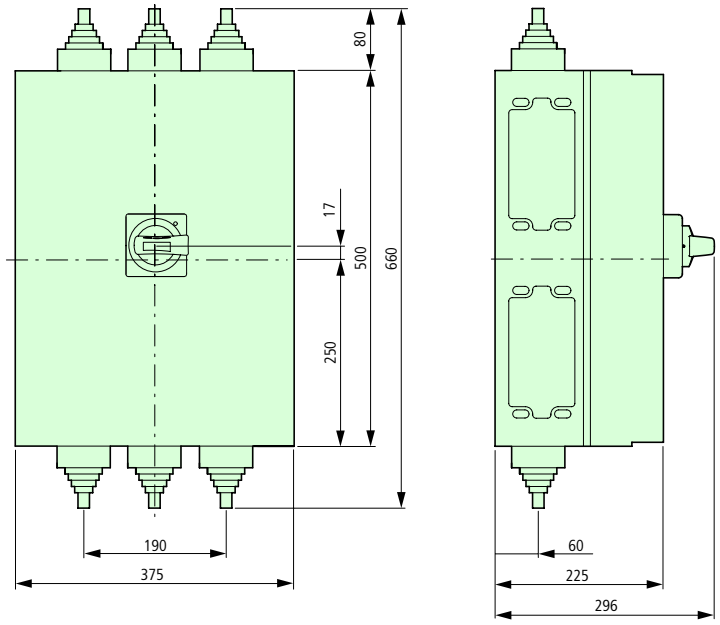
NZM2-XCI43-T...




NZM2-XCI43-BR




NZM2-XCI45-T...



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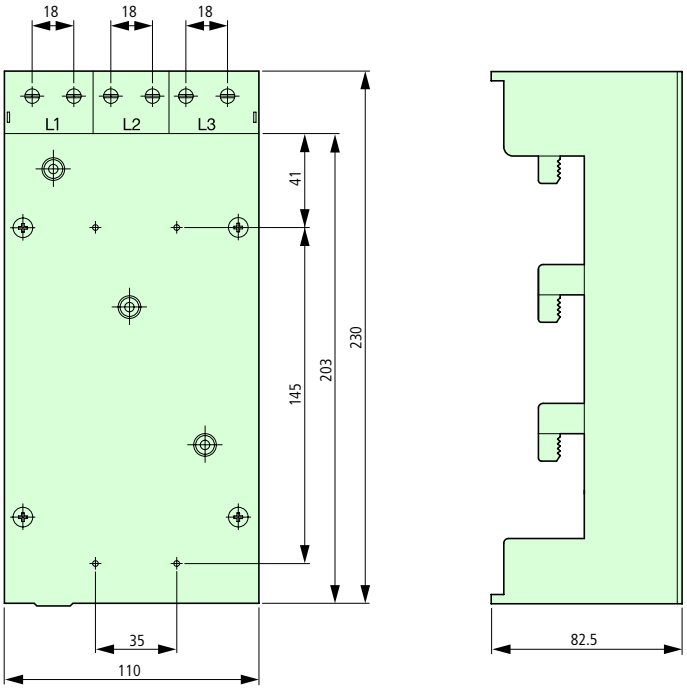
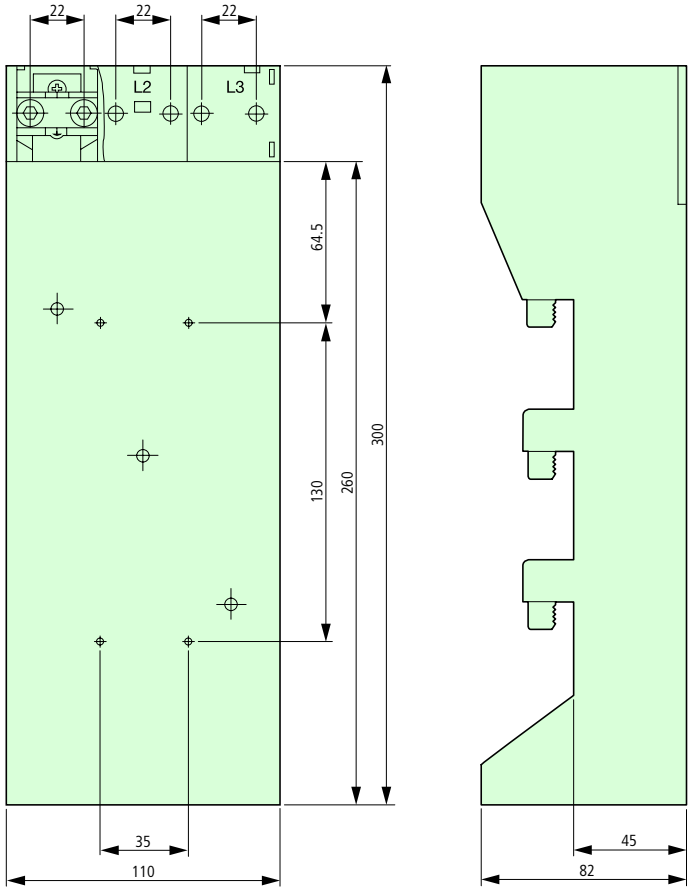
**Component adapter**

SV34381

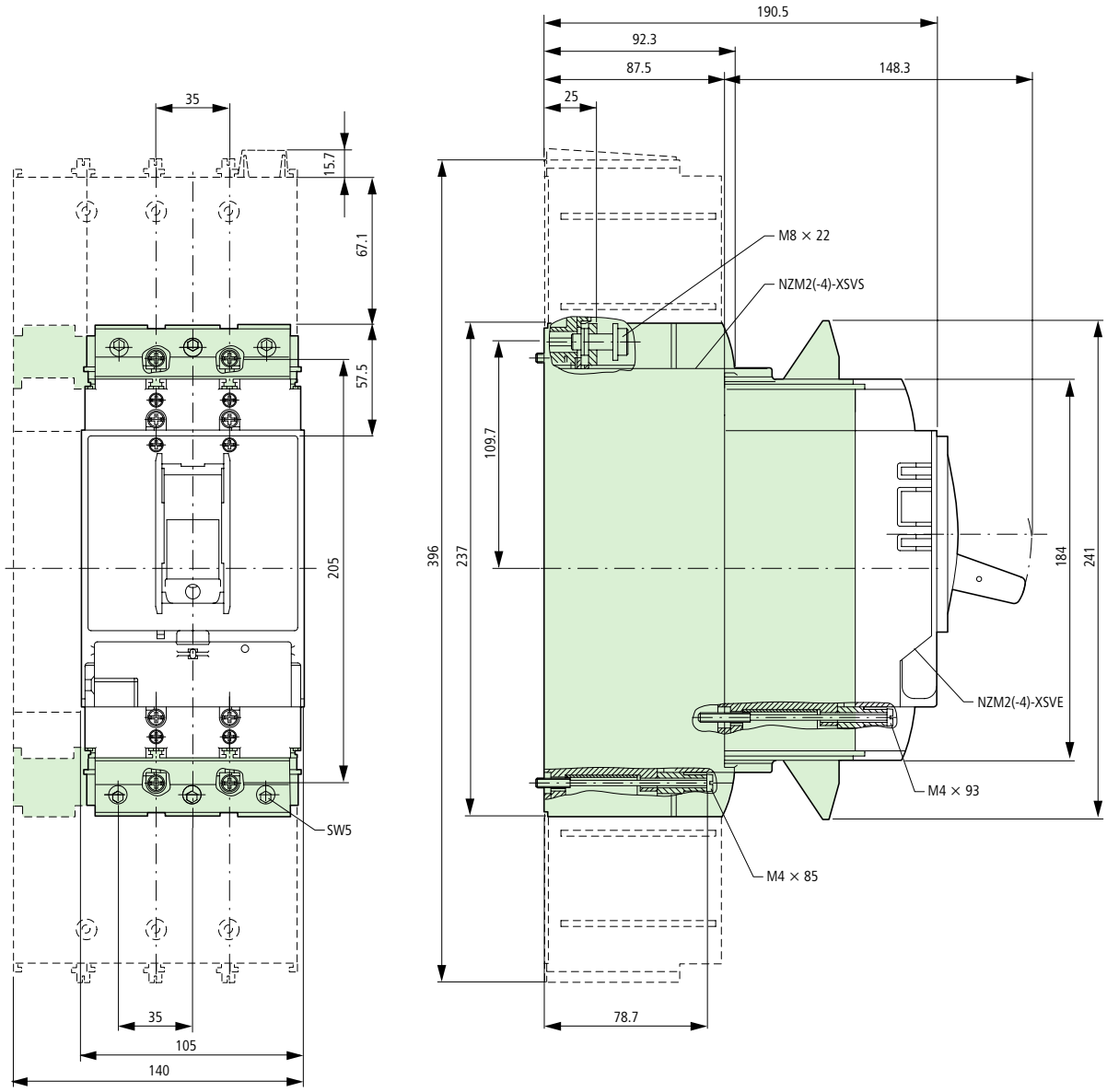



SV34372



**Plug-in adapter elements**

+NZM2(-4)-XSV



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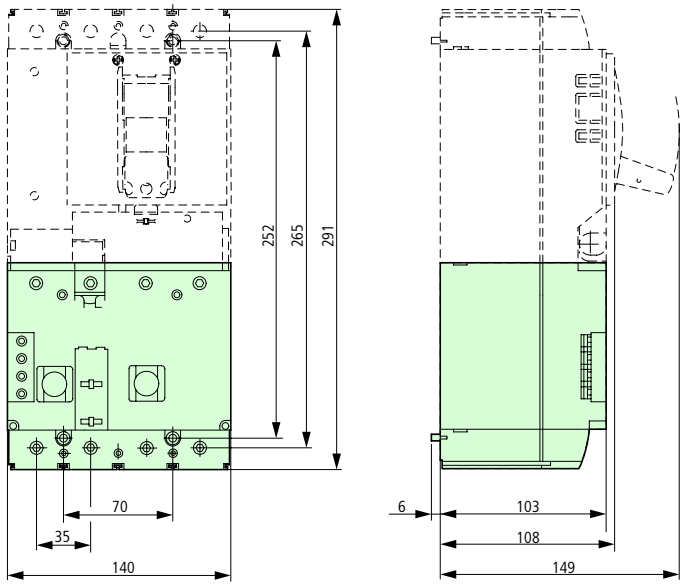
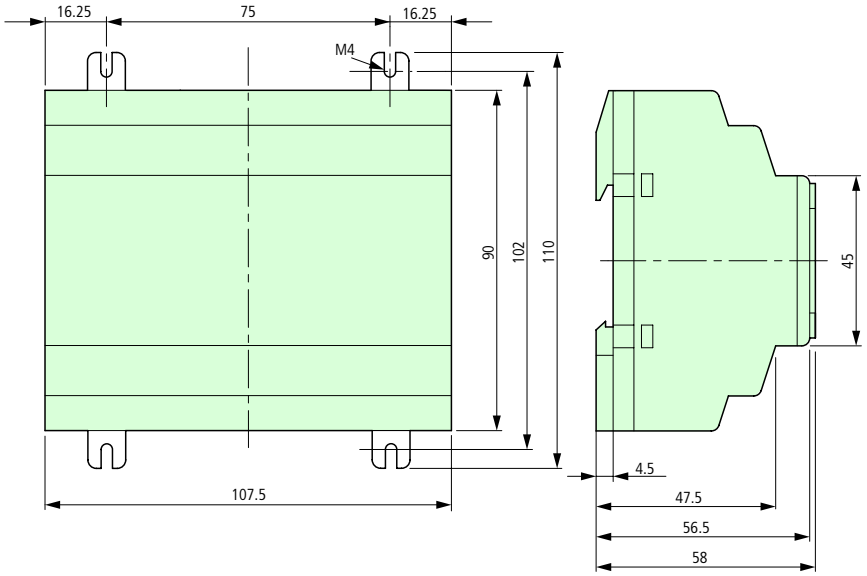
**Earth-fault release**

+NZM2-4-XFI30, +NZM2-4-XFI, +NZM2-4-XFIA30, +NZM2-4-XFIA



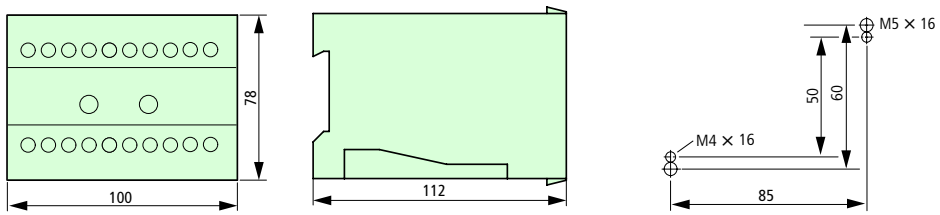

**Data Management Interface (DMI Module)**

NZM-XDMI612

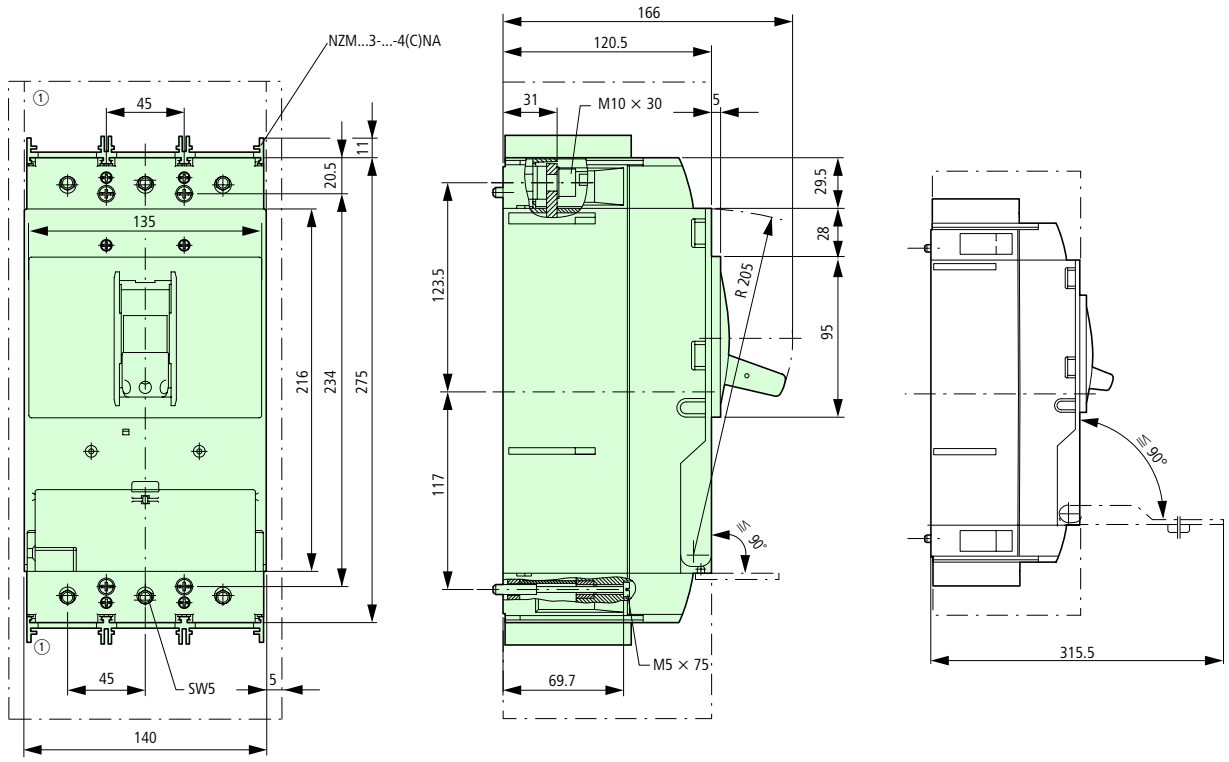



**Undervoltage release, delayed**

UVU-NZM

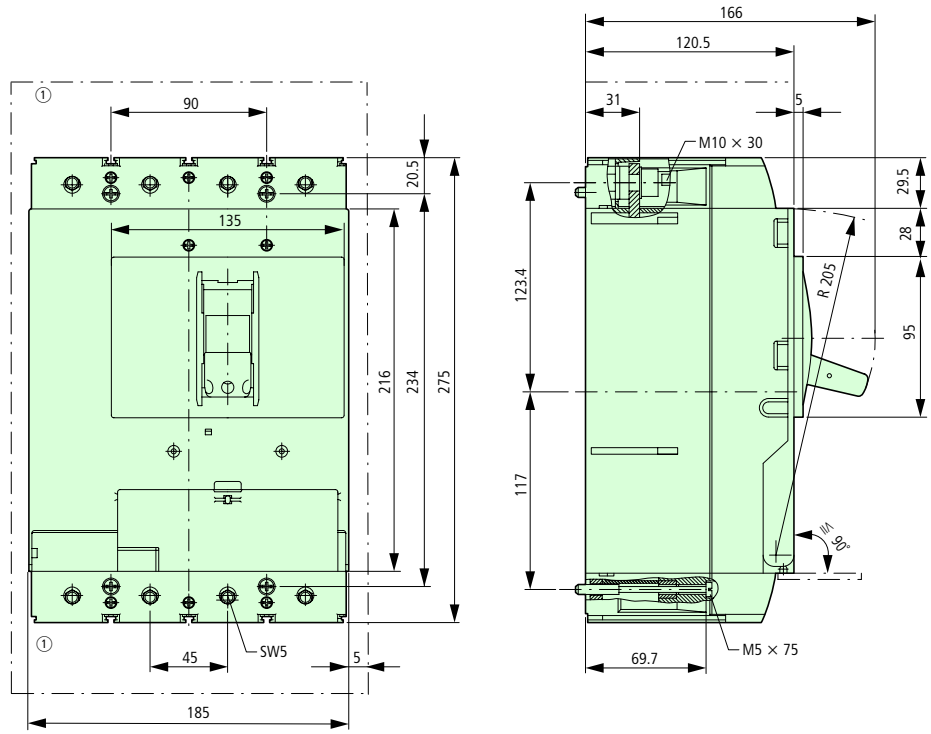


**Circuit-breaker, switch-disconnector, 3-pole**
NZMN3, NZMH3, NZML3, PN3, N3




① Clearance from conductive parts ≧ 60 mm, laterally ≧ 5 mm

**Circuit-breaker, switch-disconnector, 4-pole**
NZMN3-4, NZMH3-4, NZML3-4, PN3-4, N3-4




① Clearance from conductive parts ≧ 60 mm, laterally ≧ 5 mm

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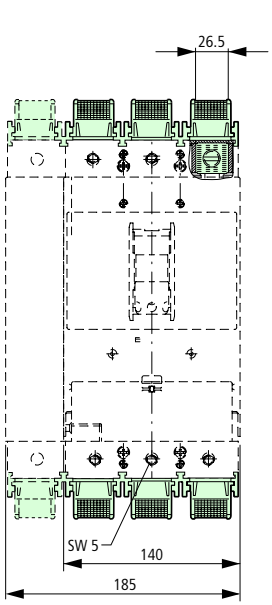
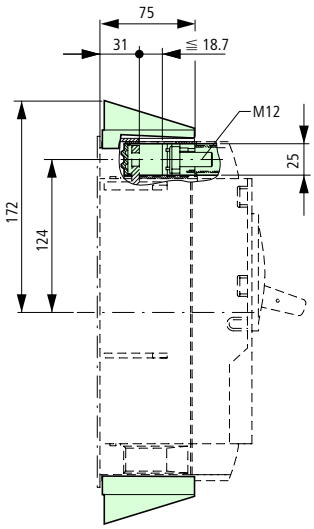
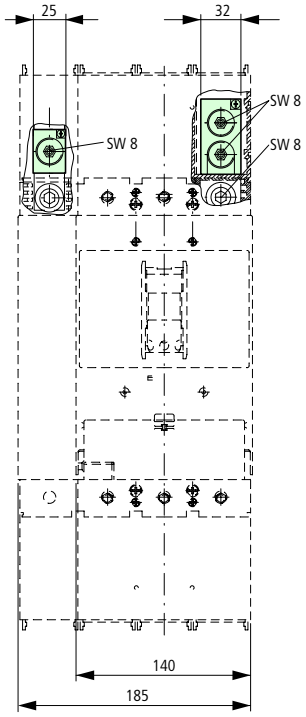
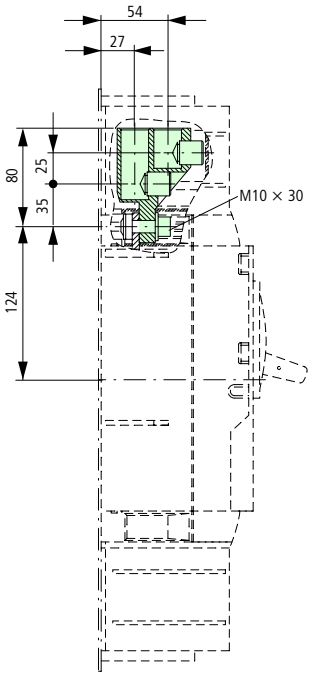
**Box terminal**
NZM3(-4)-XKC(O)(U)
**IP2X protection against contact with a finger**
NZM3(-4)-XIPK



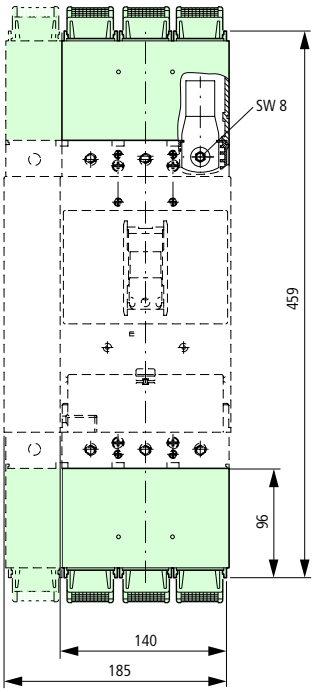



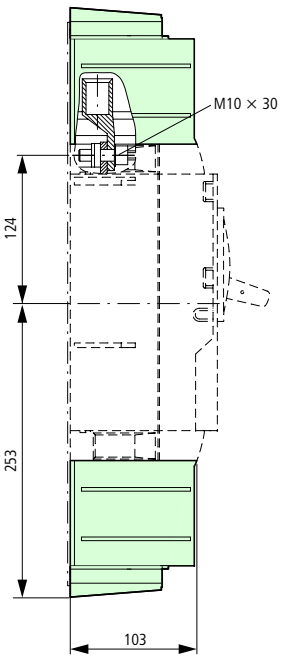

**Tunnel terminal**
NZM3(-4)-XKA1(2)



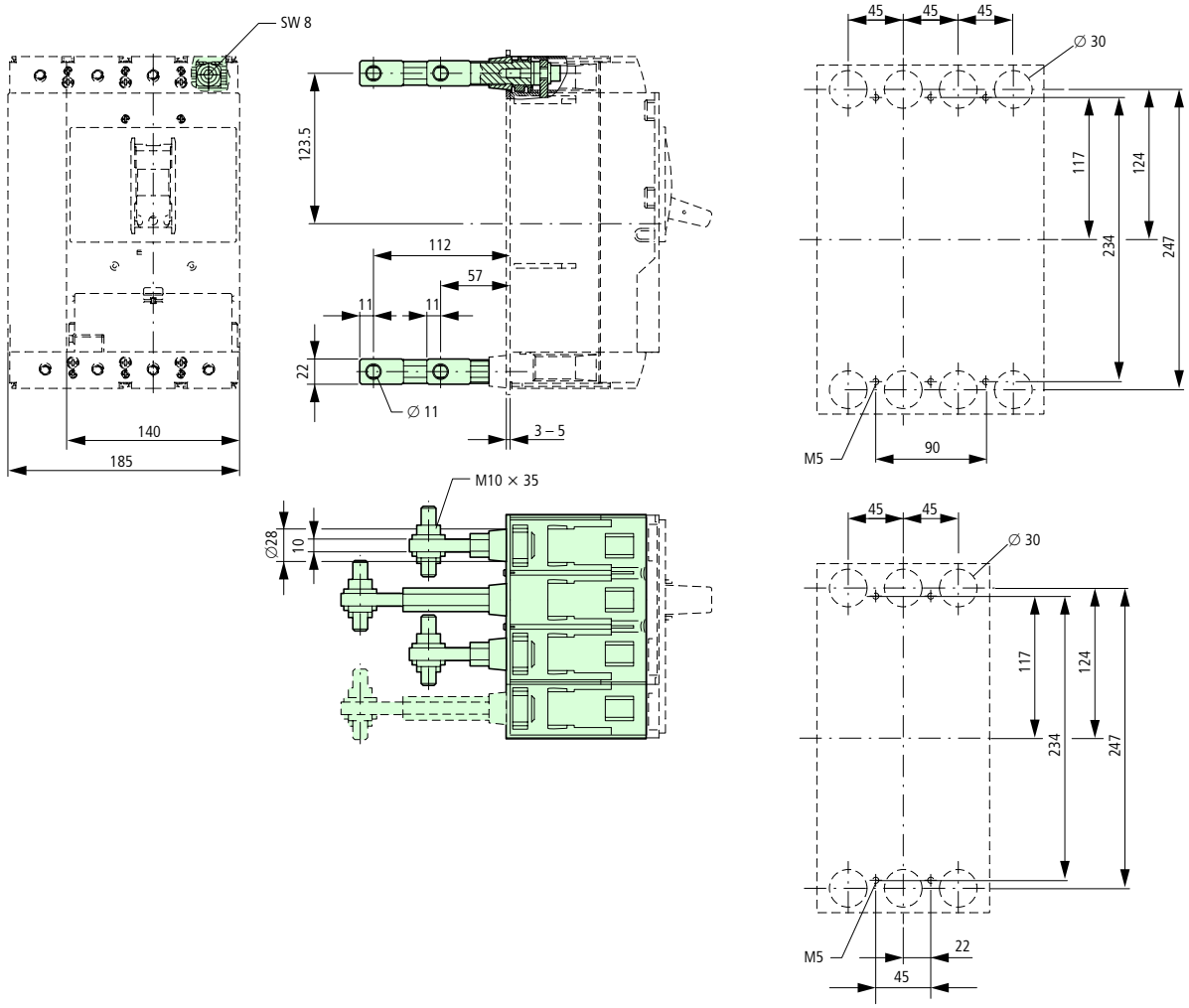




**Cover for screw terminals**
NZM3(-4)-XKSA
**Cable lug**
NZM3-XKS185
**IP2X protection against contact with a finger for shroud**
NZM3(-4)-XIPA

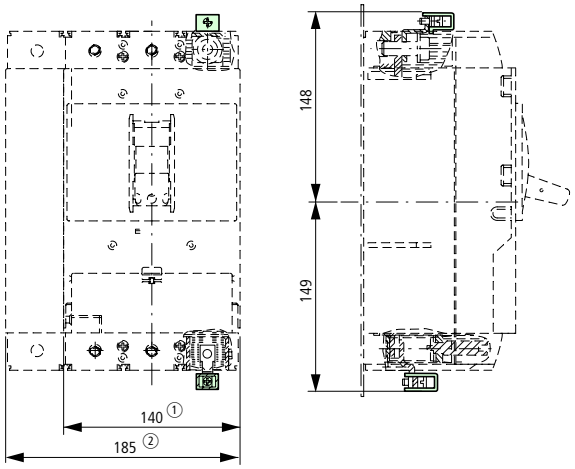


**Connection on rear**
(+)NZM3(-4)-XKR(O)(U)




**Control circuit terminal**
NZM3/4-XSTS
NZM-XSTK




① 3-pole
② 4-pole

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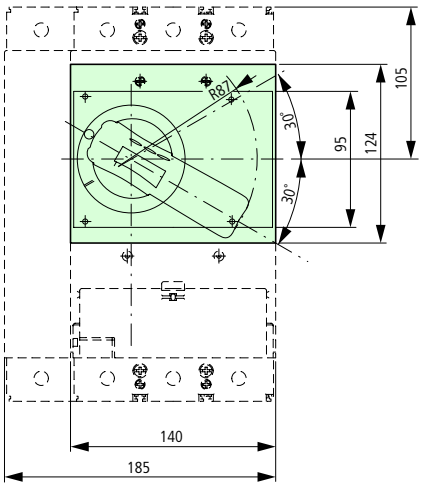
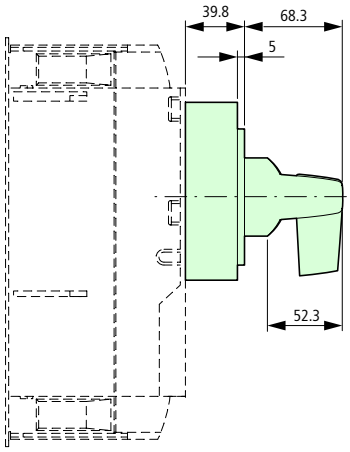
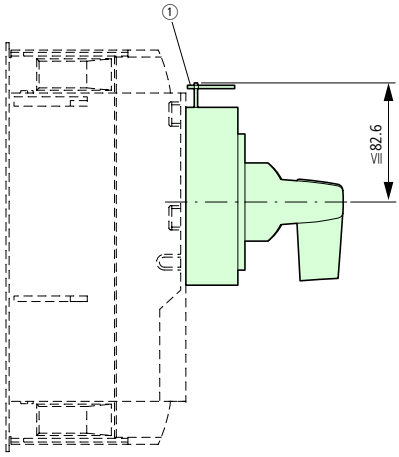
**Rotary handle on circuit-breaker**

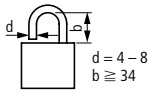
NZM3-XD




NZM3-XDV(R)

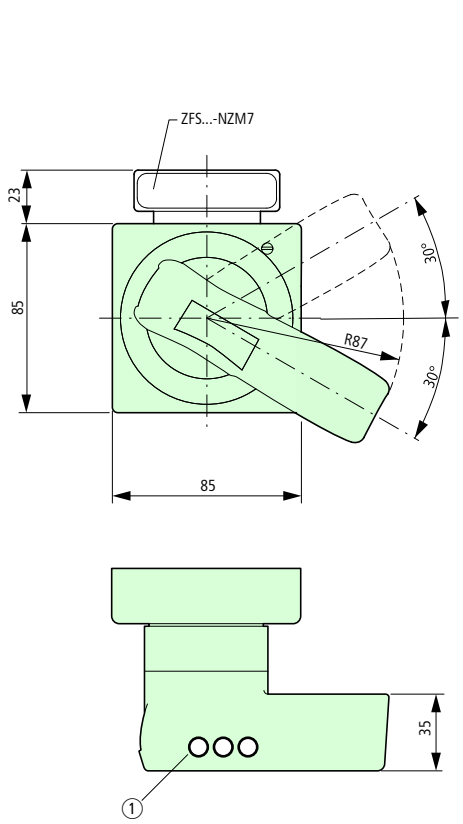


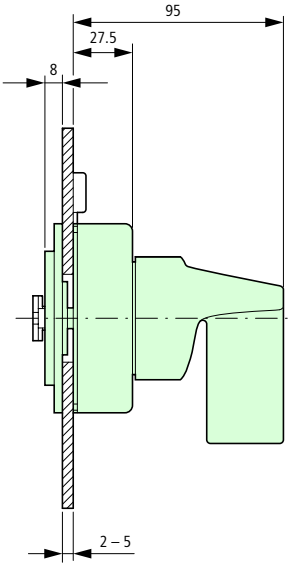



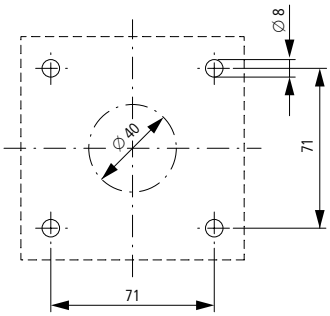

① Up to 3 padlocks

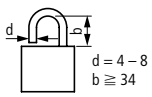
**Door coupling rotary handle**

NZM3-XT(V)D(V)(R)



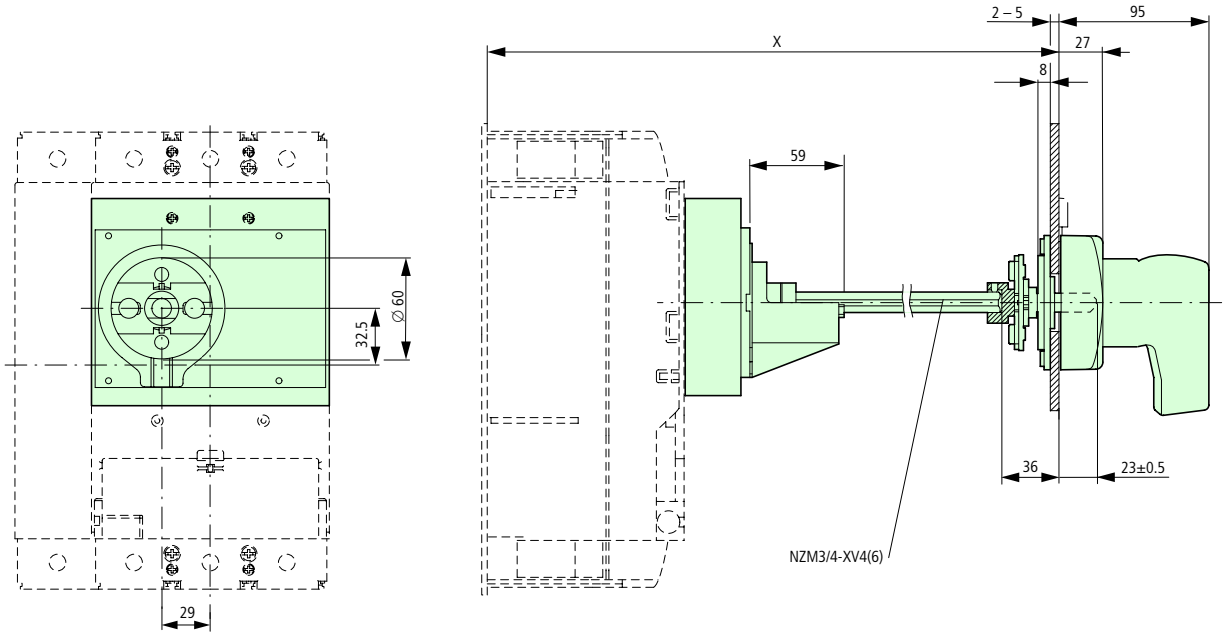




① Up to 3 padlocks

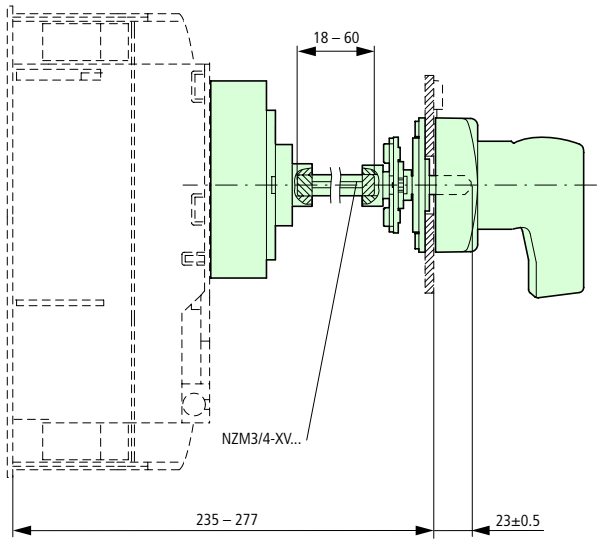
**Door coupling rotary handle with extension shaft**

NZM3-XT(V)D(V)(R)
NZM3/4-XV4(6)

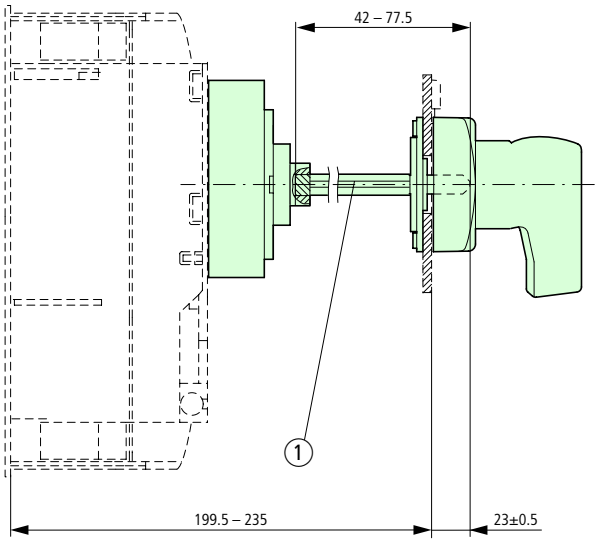



| | x |
|---|---|
| NZM3/4-XV4 | 270 – 400 |
| NZM3/4-XV6 | 400 – 600 |

NZM3-XT(V)D(V)(R)-60

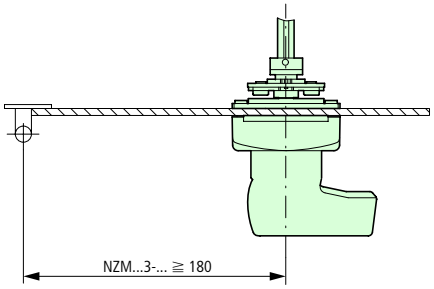



NZM3-XT(V)D(V)(R)-0




① Special tip

**Minimum door coupling rotary handle clearance from door pivot point**



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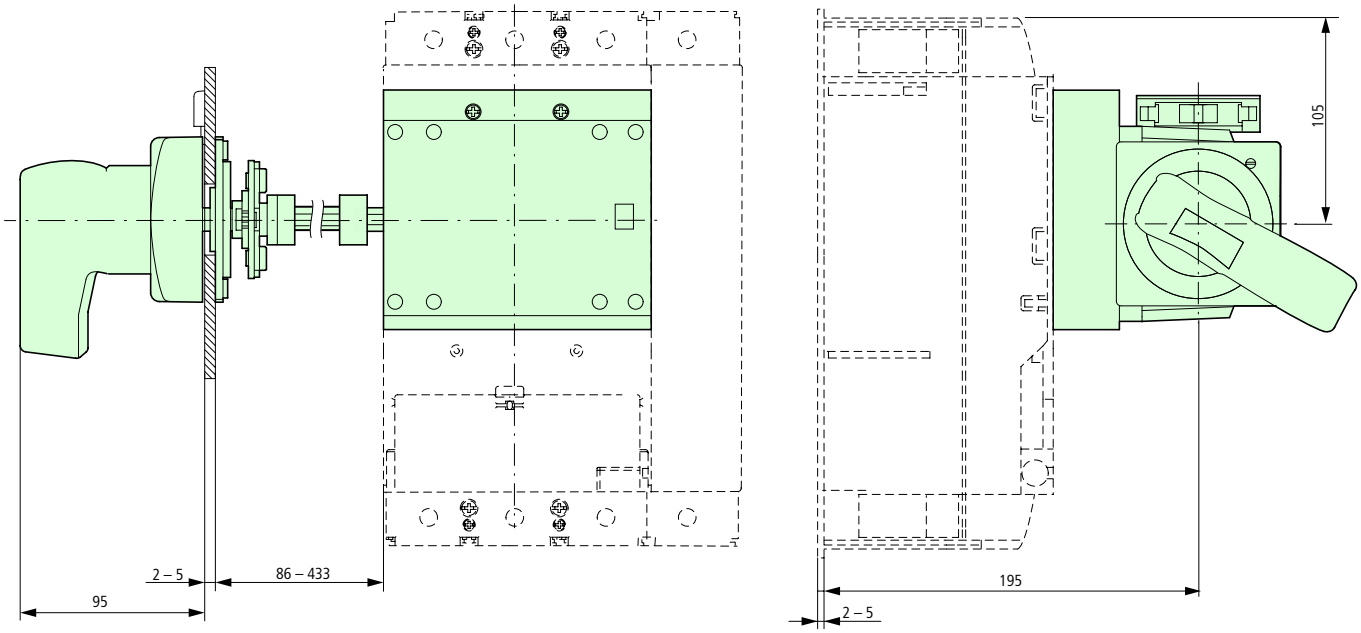
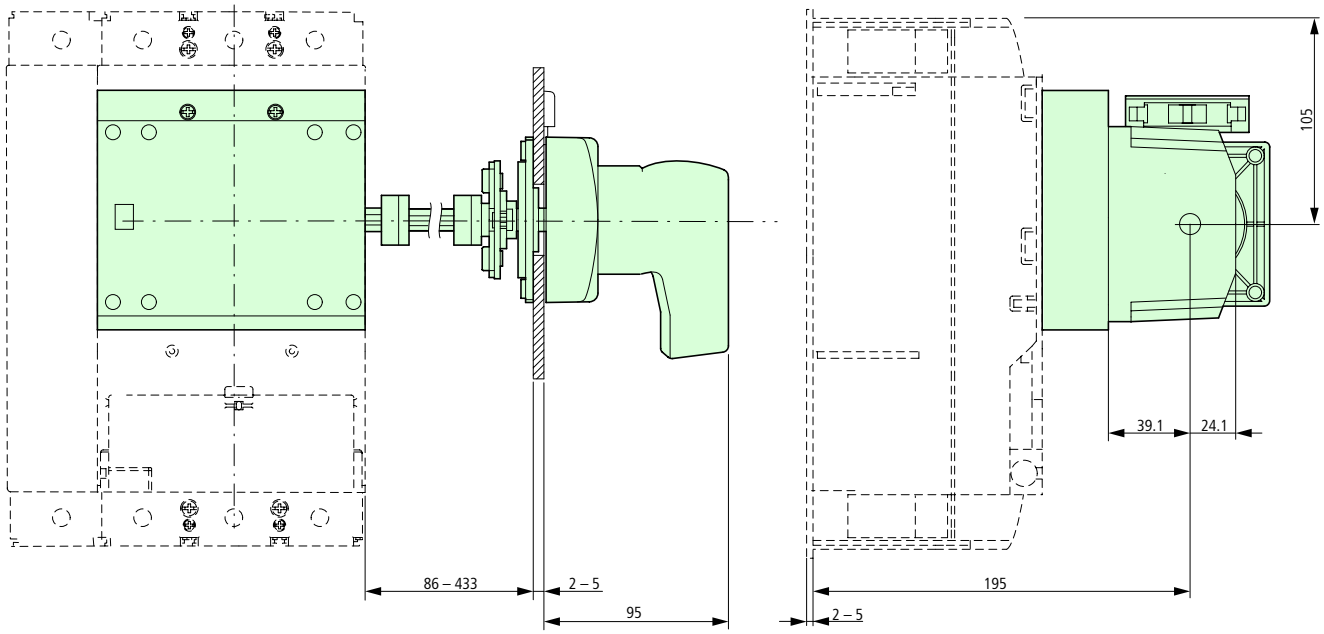
**Main switch assembly kit for side wall installation**

NZM3-XS(R)-L

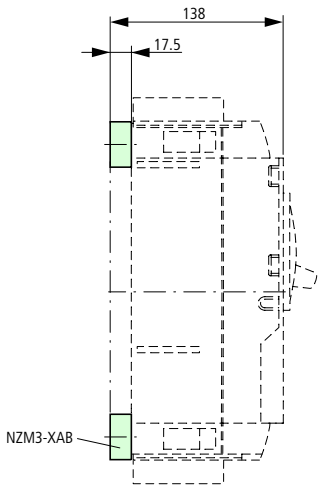



NZM3-XS(R)-R

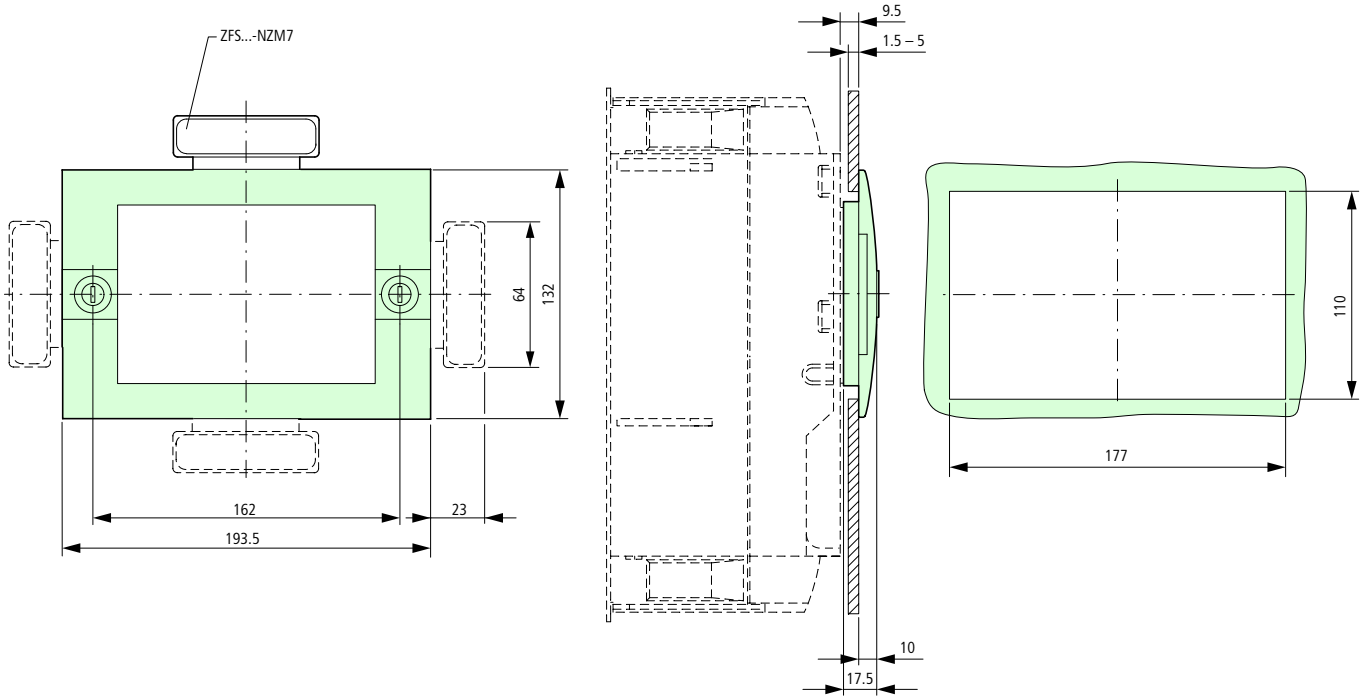



**Spacers**

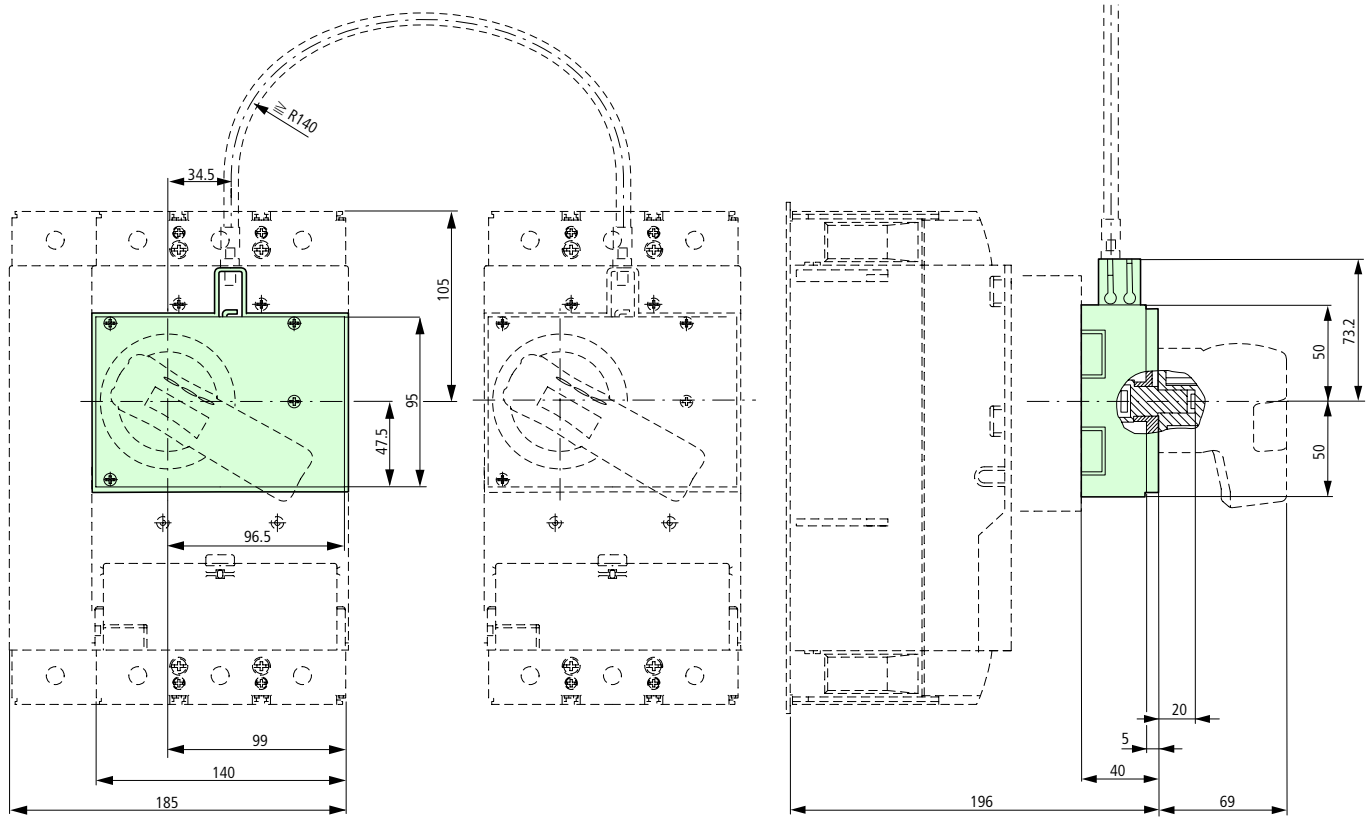
NZM3-XAB



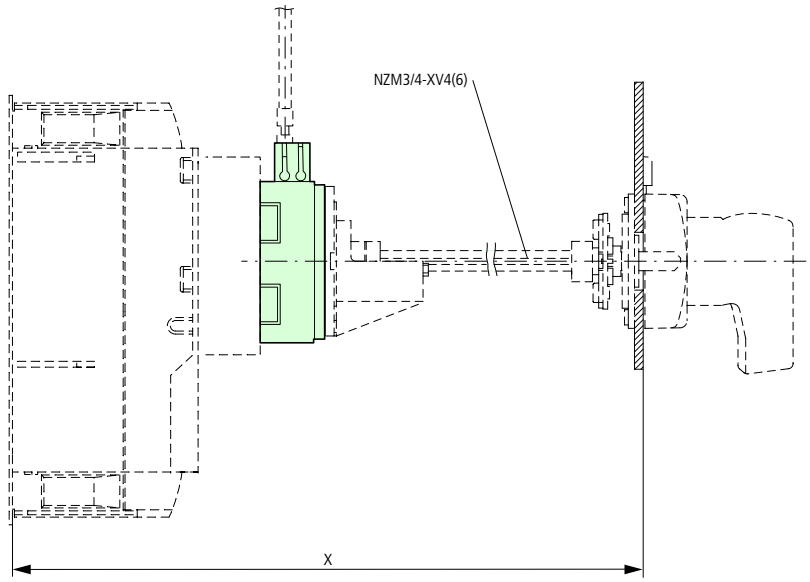
**Insulating surround**
NZM3-XBR




**Mechanical interlock**
NZM3-XMV with NZM3-XD

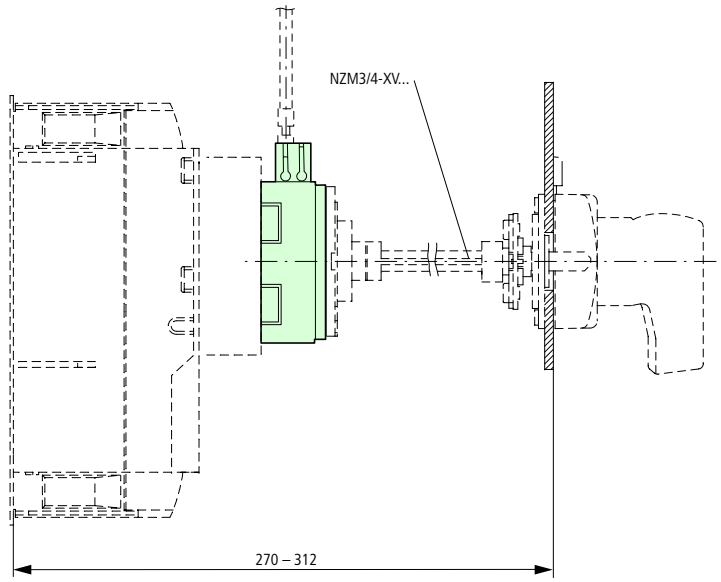


NZM3-XMV with NZM3-XT(V)D(V)(R)

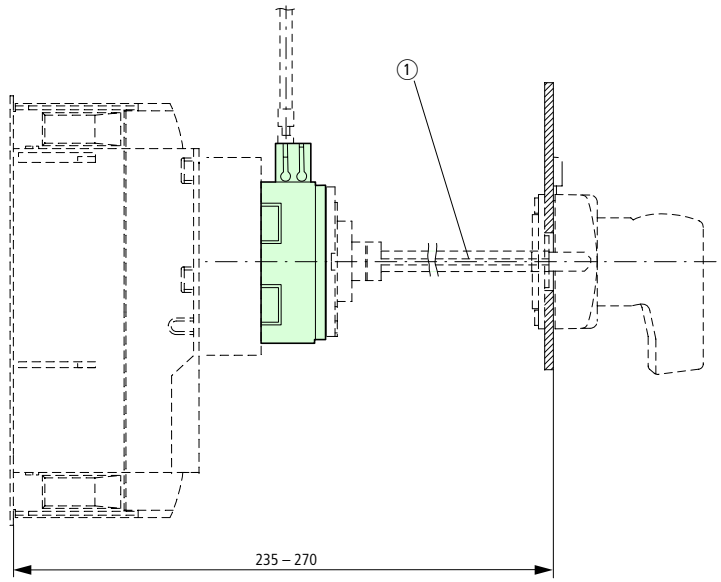



| | x |
|---|---|
| NZM3/4-XV4 | 305 – 400 |
| NZM3/4-XV6 | 400 – 600 |

NZM3-XMV with NZM3-XT(V)D(V)(R)-60



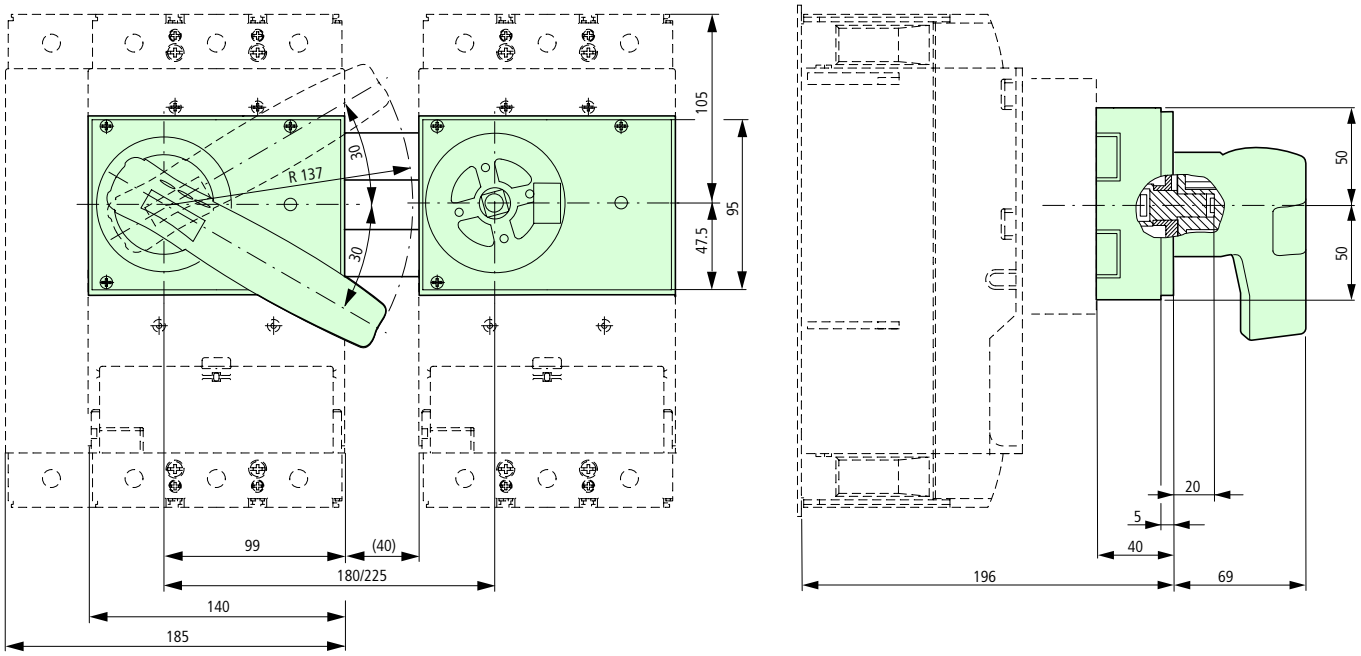

NZM3-XMV with NZM3-XT(V)D(V)(R)-0



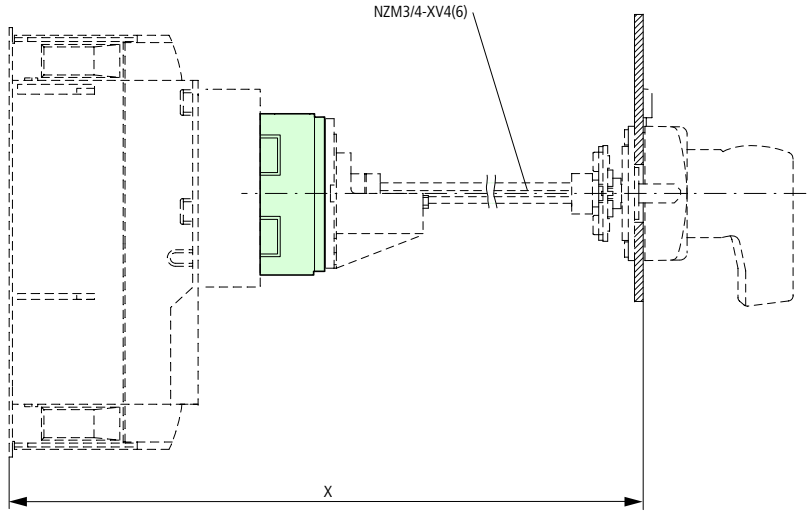

① Special tip

**Paralleling mechanism**

PN3-XPA with NZM3-XD

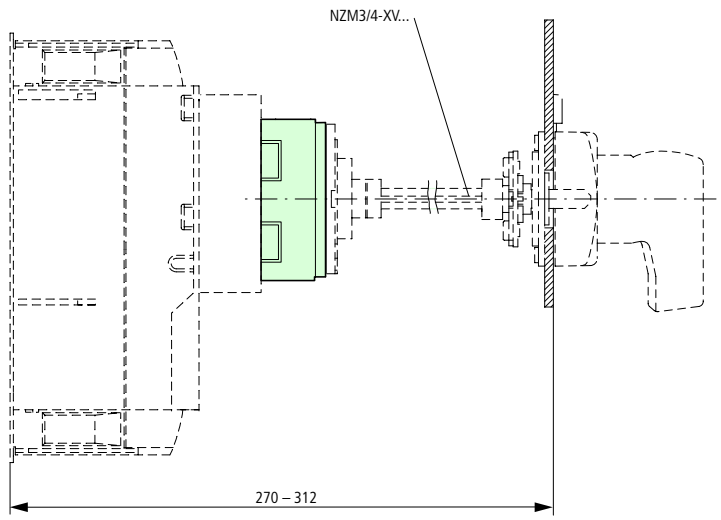



PN3-XPA with NZM3-XTD




| | x |
|---|---|
| NZM3/4-XV4 | 305 – 400 |
| NZM3/4-XV6 | 400 – 600 |

PN3-XPA with NZM3-XTD-60



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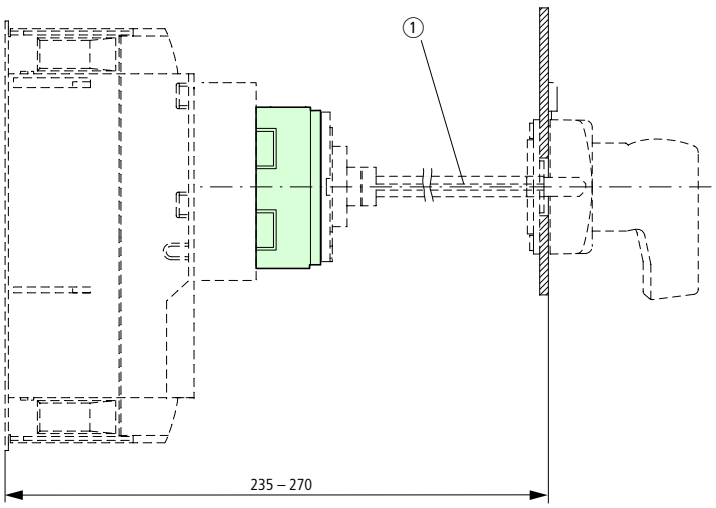
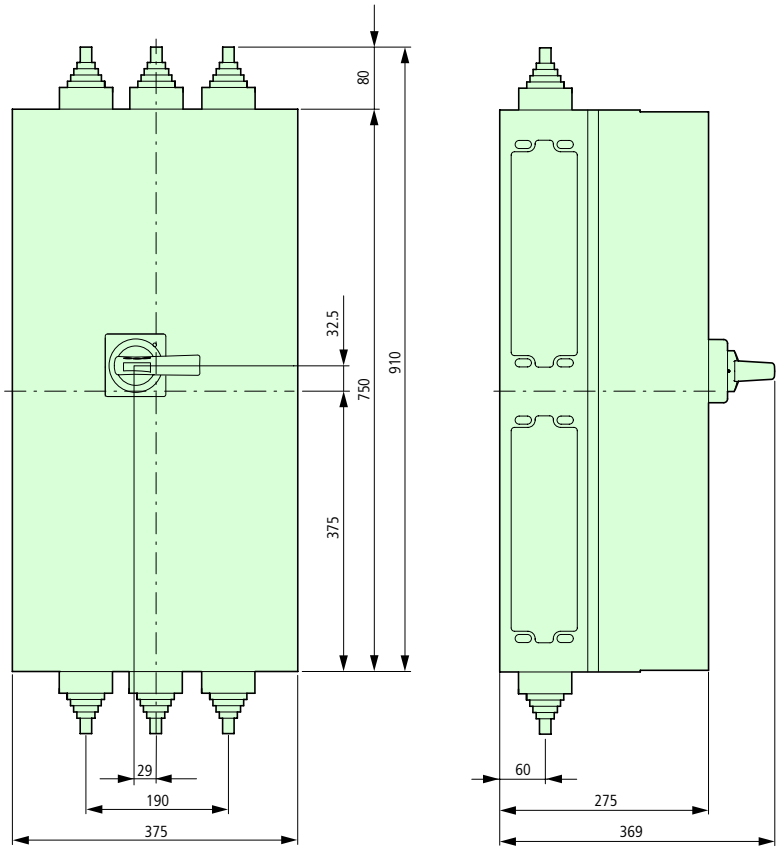
PN3-XPA with NZM3-XTD-0




① Special tip

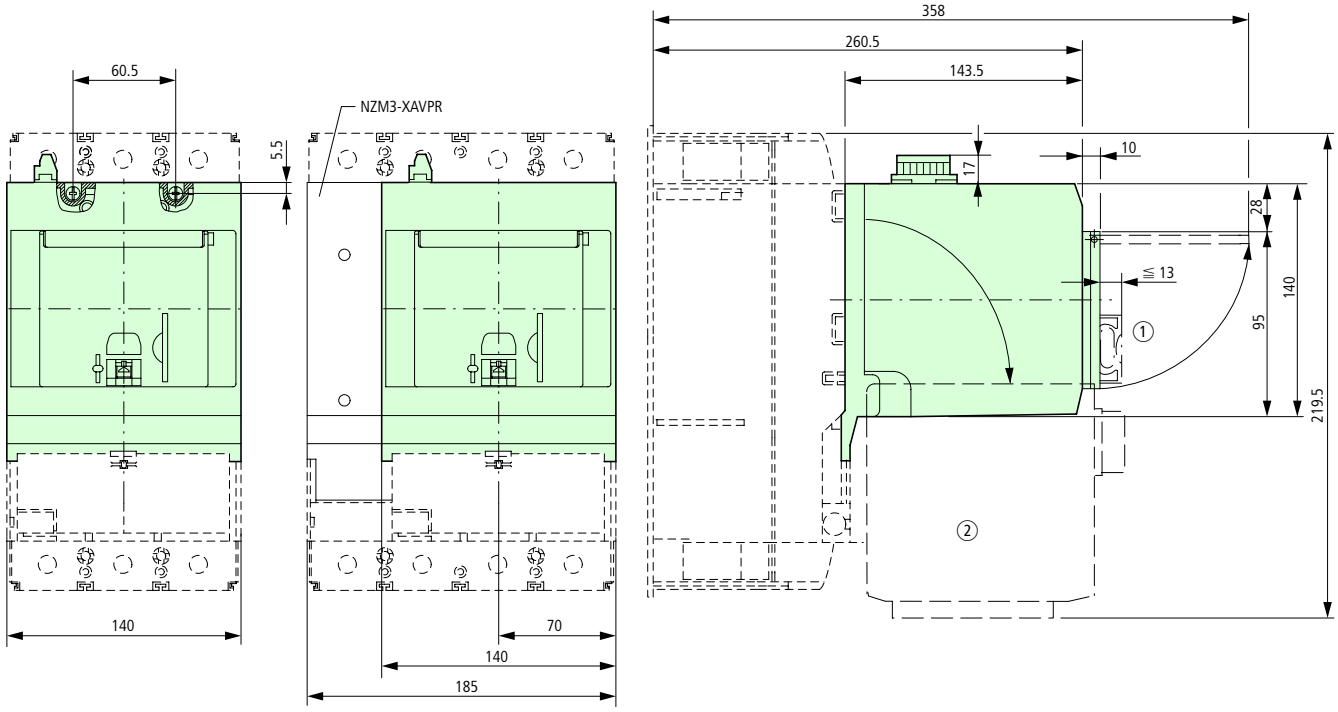
**Insulated enclosures**

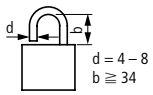
NZM3-XCI48-T...



**Remote operator**

NZM3-XR...

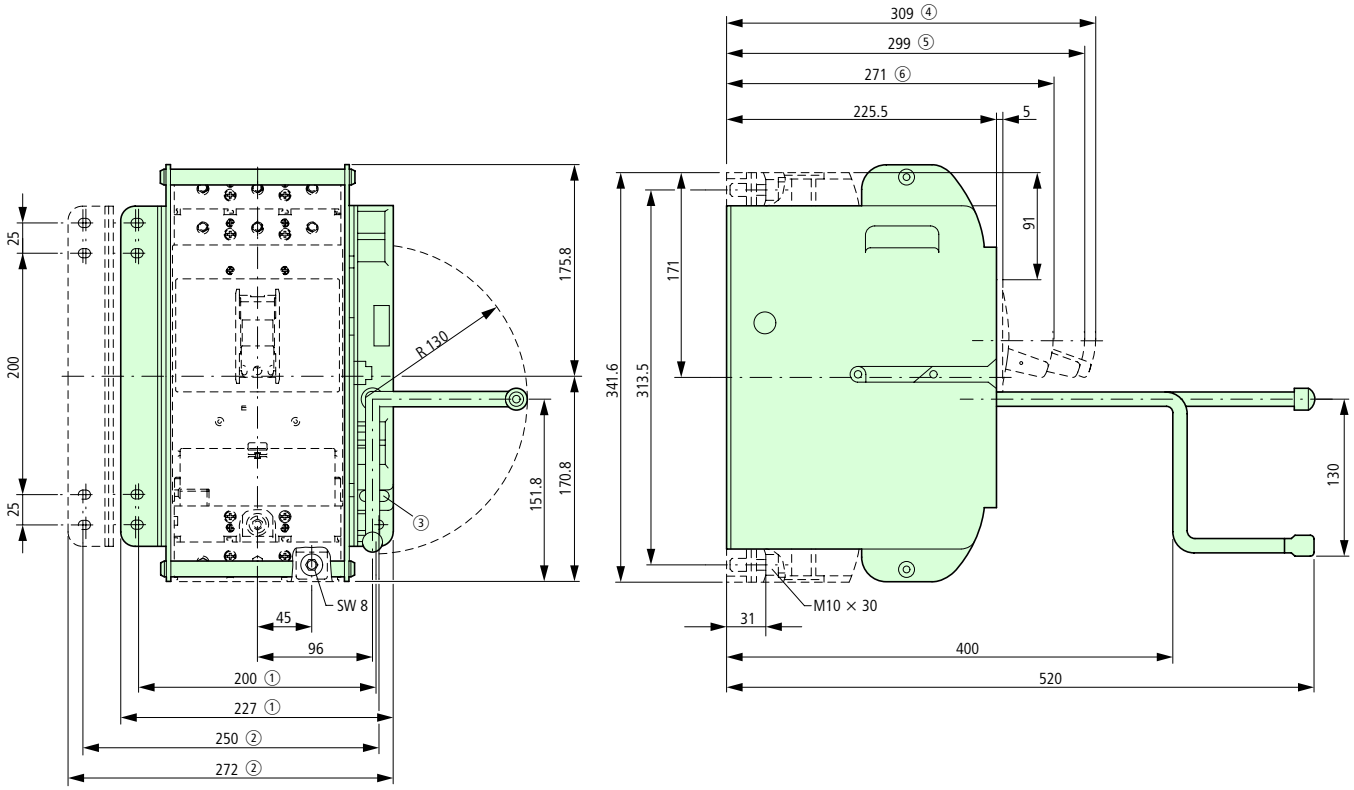


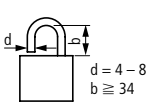

① Up to 3 padlocks
② Remote operator folded

**Withdrawable unit**

+NZM3(-4)-XAV




① 3-pole
② 4-pole
③ max. 3 padlocks




④ disconnected
⑤ test
⑥ connected

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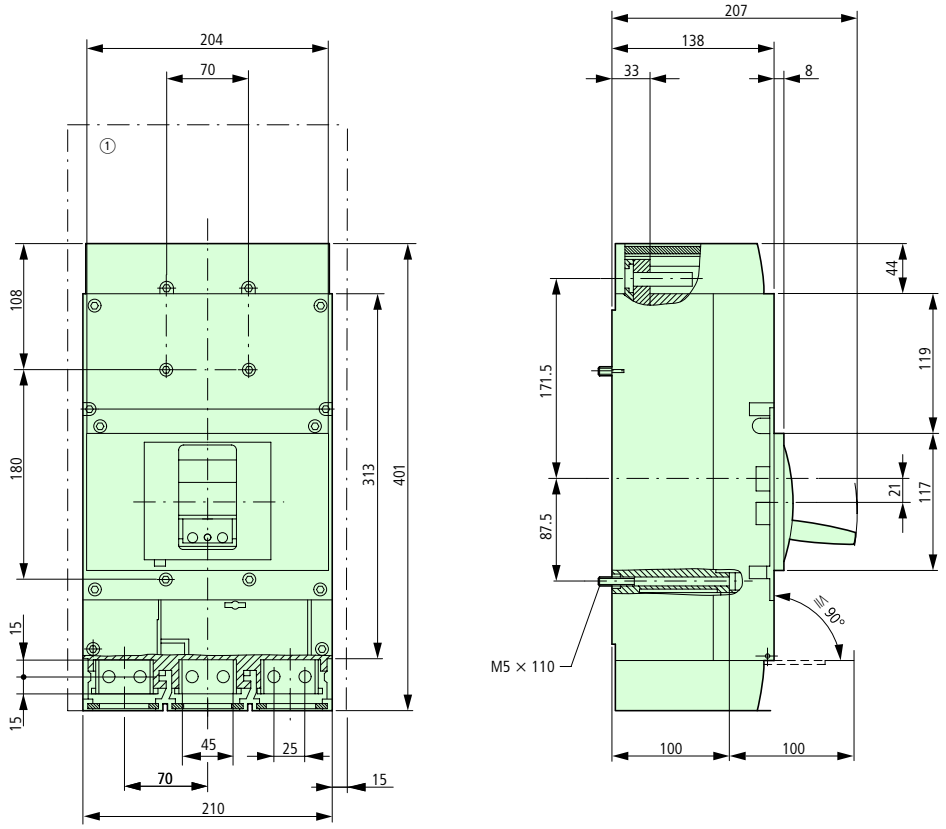
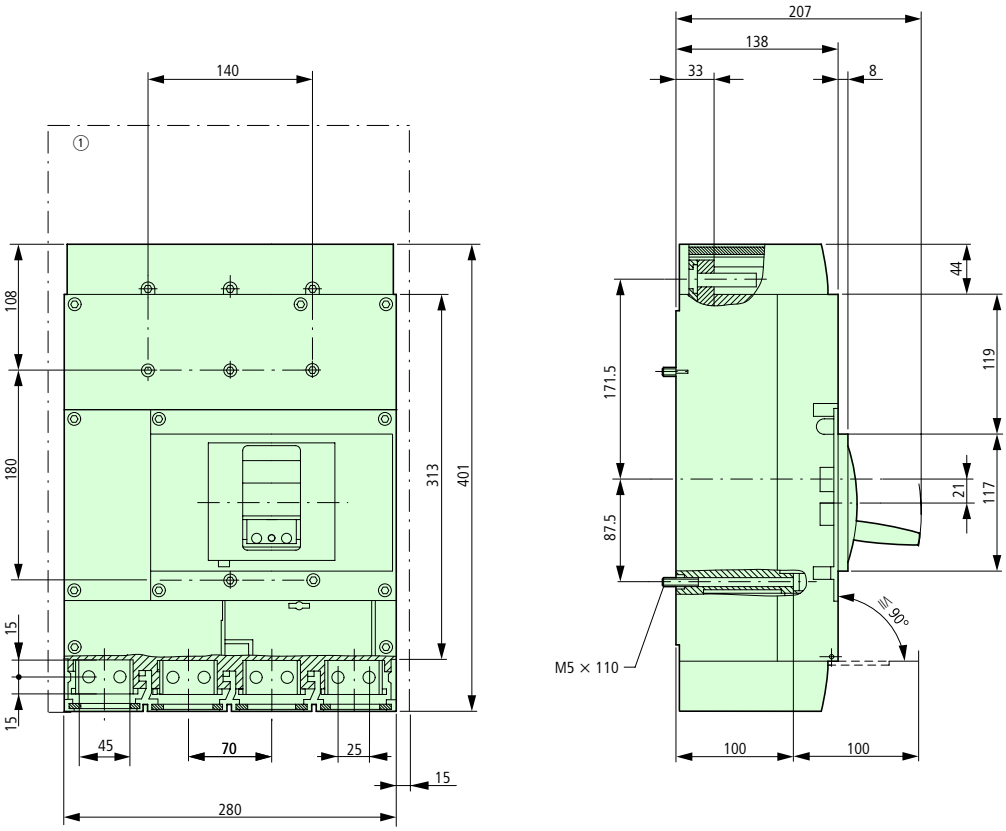
**Circuit-breaker, switch-disconnector, 3-pole**
NZMN4, NZMH4, NZML4, N4




① Clearance from conductive parts ≧ 100 mm, laterally ≧ 15 mm

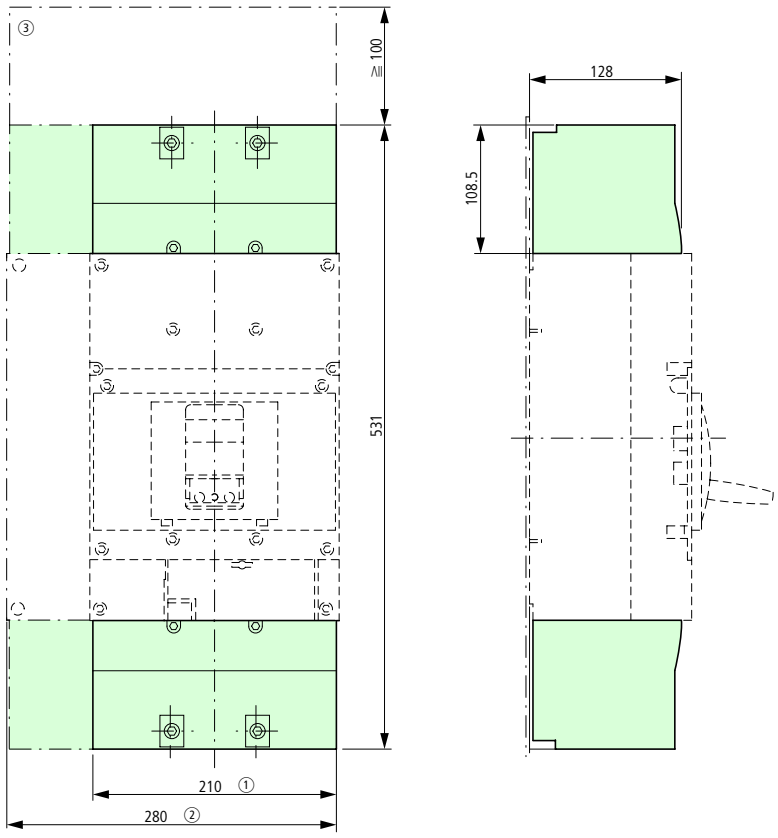
**Circuit-breaker, switch-disconnector, 4-pole**
NZMN4-4, NZMH4-4, NZML4-4, N4-4




① Clearance from conductive parts ≧ 100 mm, laterally ≧ 15 mm

**Cover**

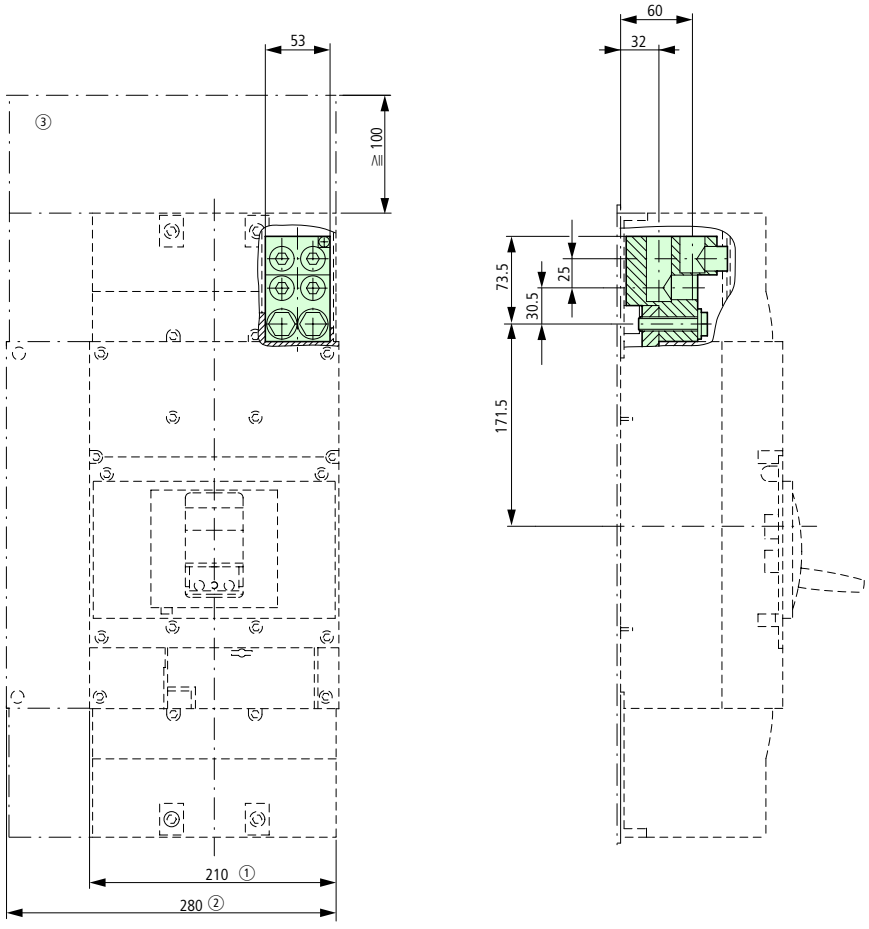
NZM4(-4)-XKSA




① 3-pole
② 4-pole
③ Clearance from conductive parts ≧ 100 mm

**Tunnel terminal**

NZM4(-4)-XKA




① 3-pole
② 4-pole
③ Clearance from conductive parts ≧ 100 mm

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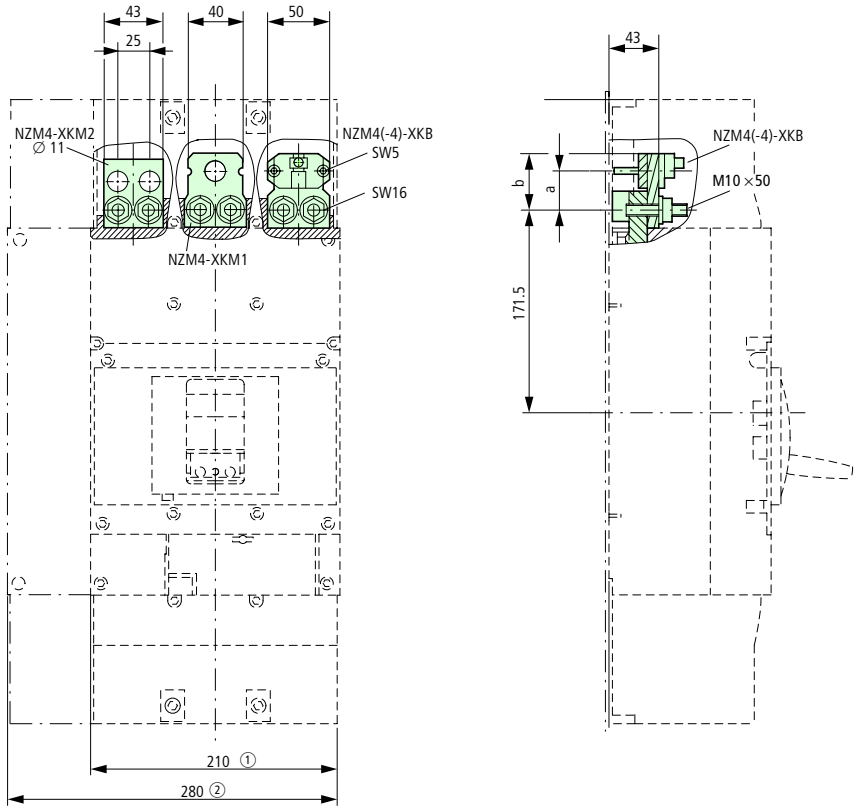
**Screw connection**

**Module plate 1-hole**
NZM4(-4)-XKM1

**Module plate 2-hole**
NZM4(-4)-XKM2

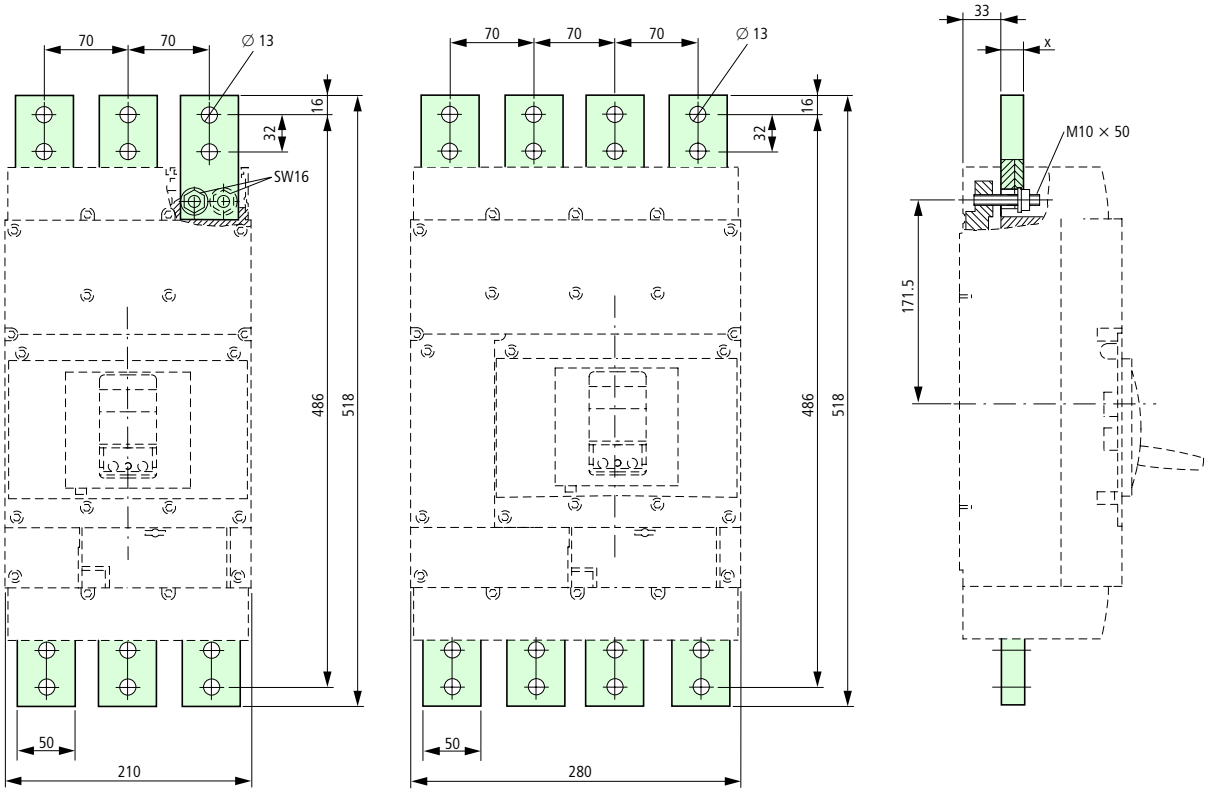
**Flat cable teminal**
NZM4(-4)-XKB




① 3-pole
② 4-pole
③ Clearance from conductive parts ≧ 100 mm

| | a | b |
|---|---|---|
| NZM4(-4)-XKM1 | 36 | 47 |
| NZM4(-4)-XKM2 | 32 | 40 |
| NZM4(-4)-XKB | – | 47 |

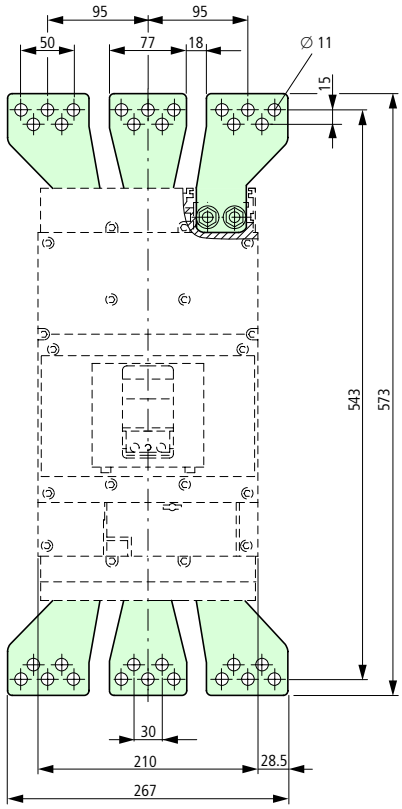
**Module plate**
NZM4(-4)-XKM2S



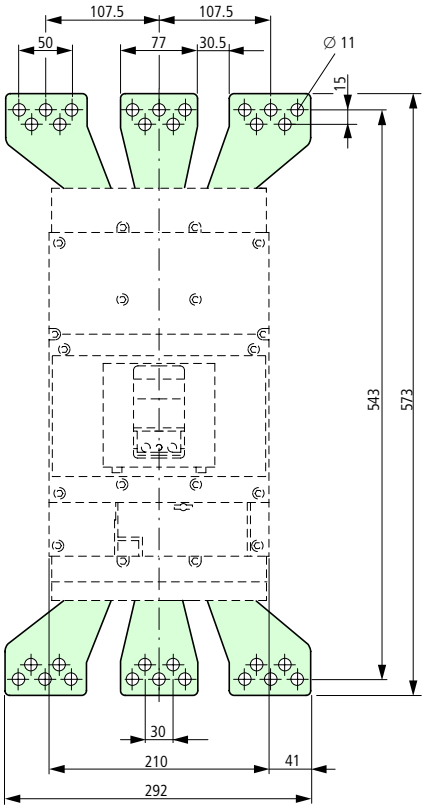

| | x |
|---|---|
| NZM4(-4)-XKM2S-1250 | 12 |
| NZM4(-4)-XKM2S-1600 | 20 |

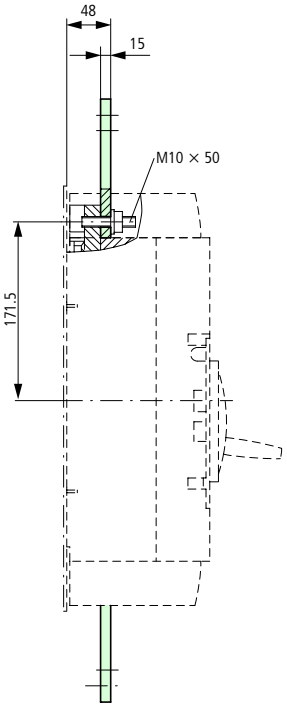
**Connection width extension**

NZM4-XKV95

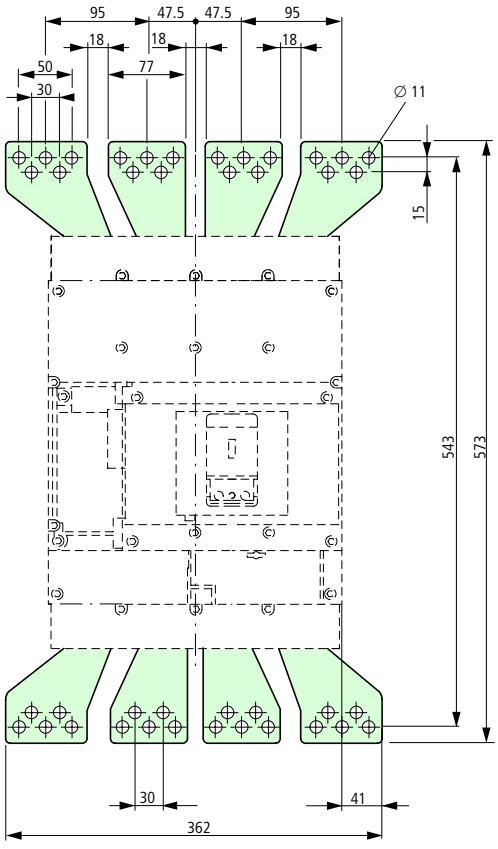



NZM4-XKV110

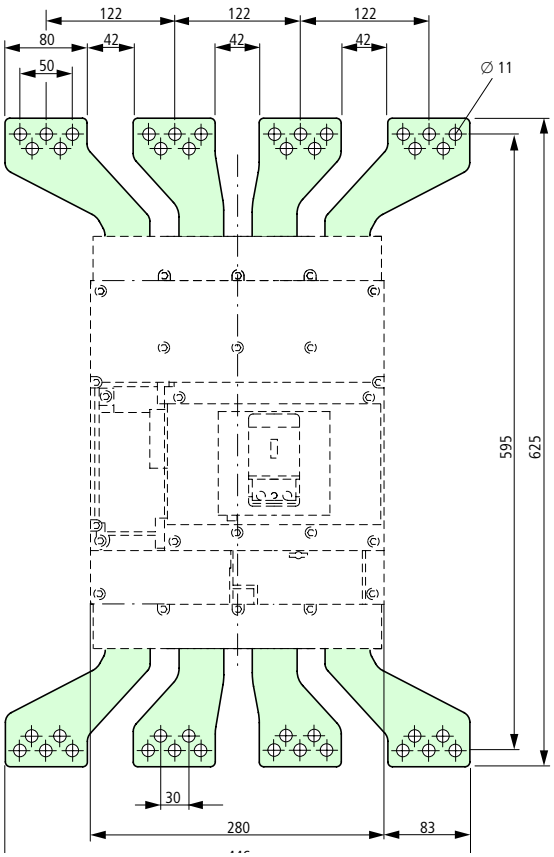


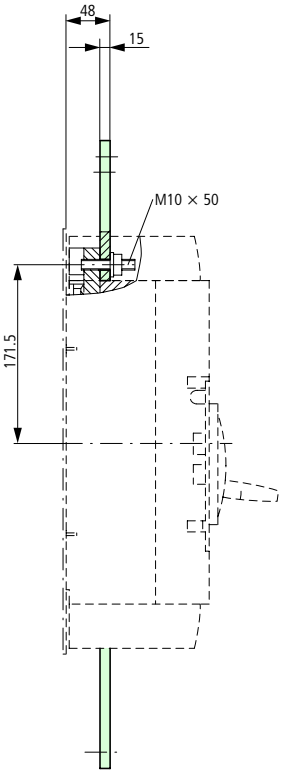




NZM4-4-XKV95




NZM4-4-XKV120



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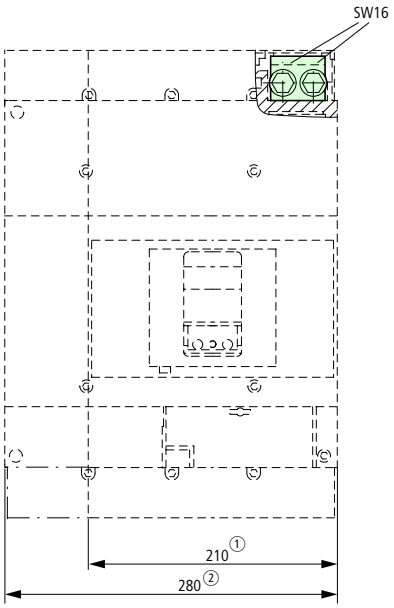
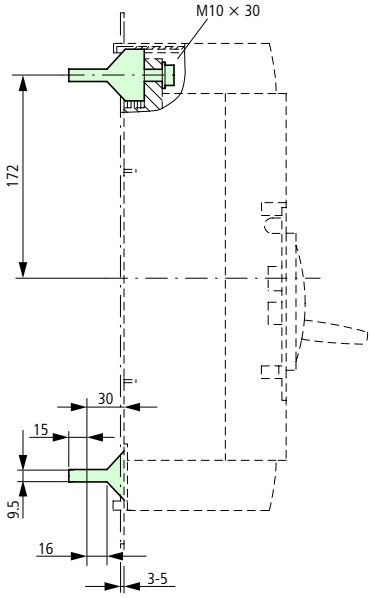
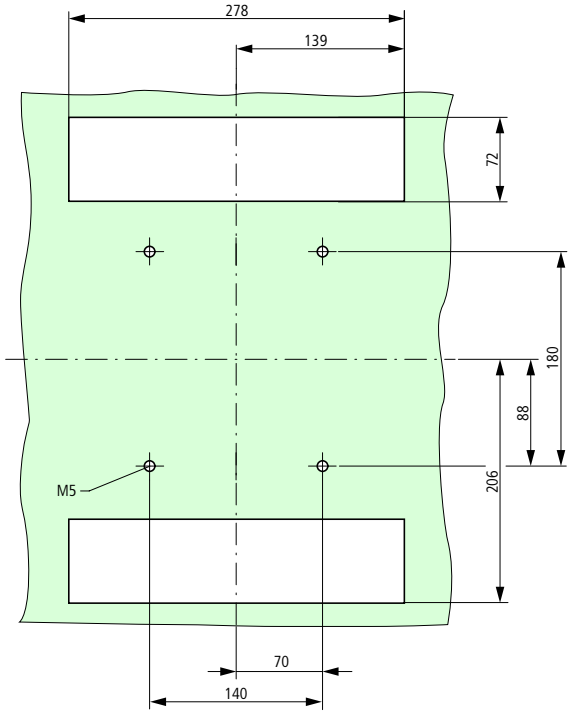
**Connection on rear**

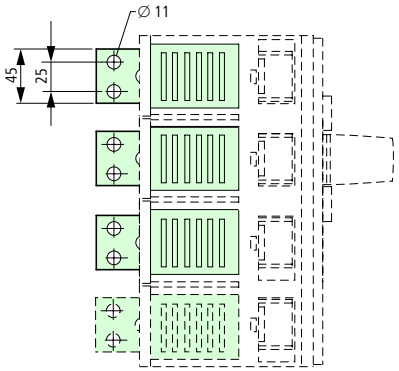
NZM4(-4)-XKR

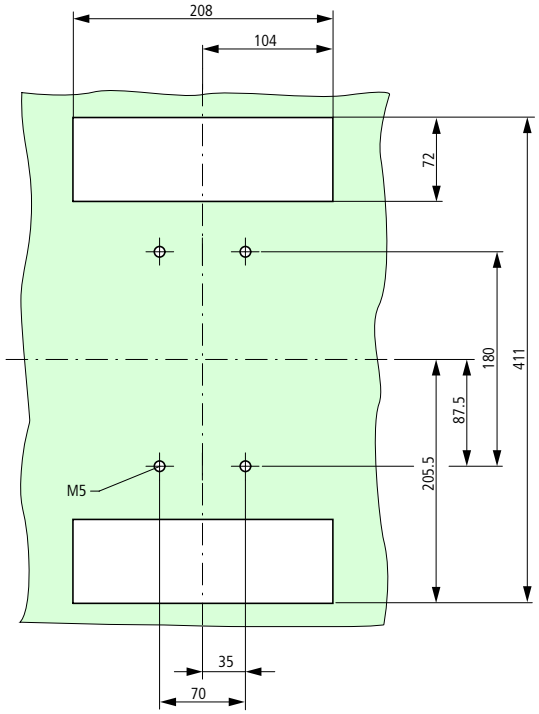



Fitting on mounting plate



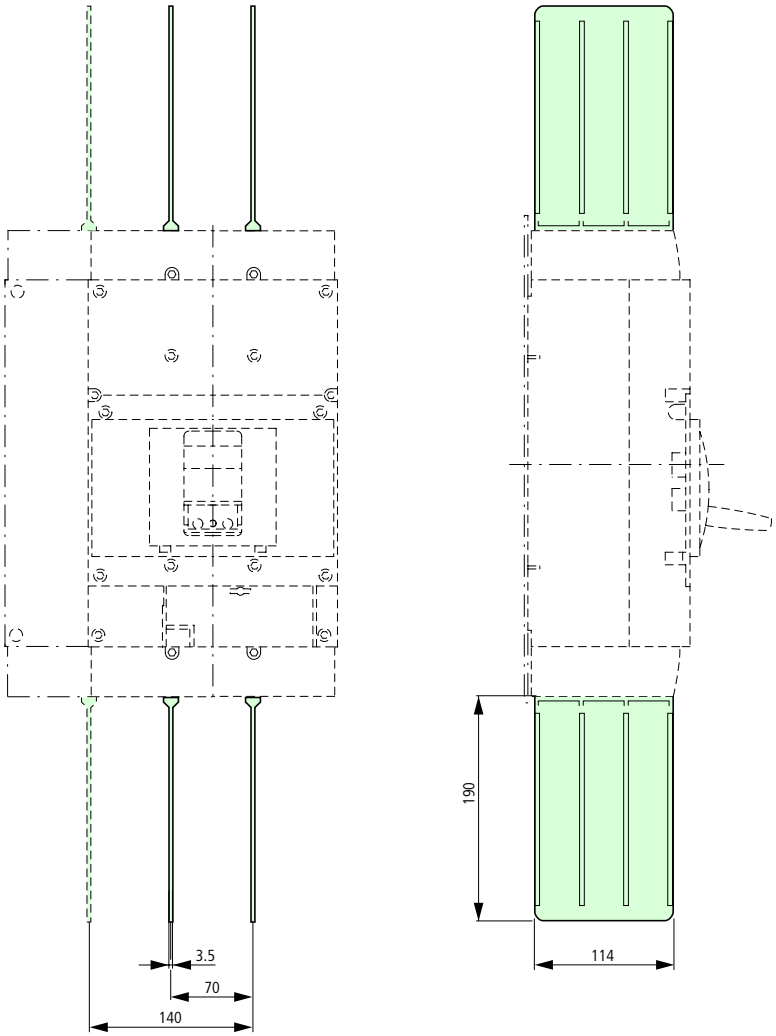




Rear connection possible also with rotation by 90°.

① 3-pole
② 4-pole

**Phase isolator**

NZM4(-4)-XKP



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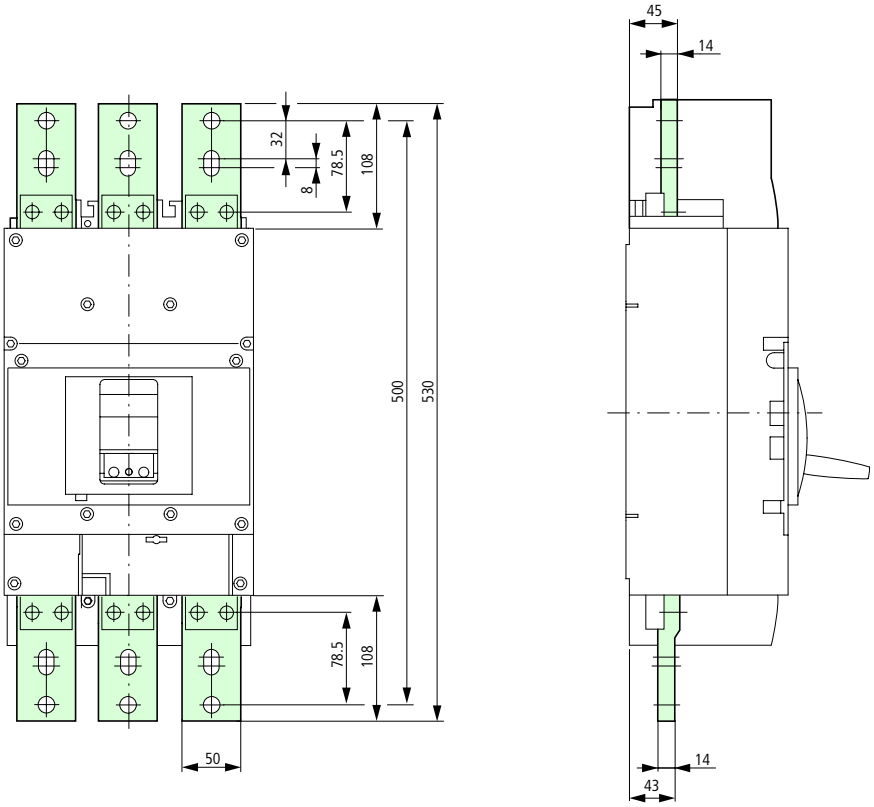
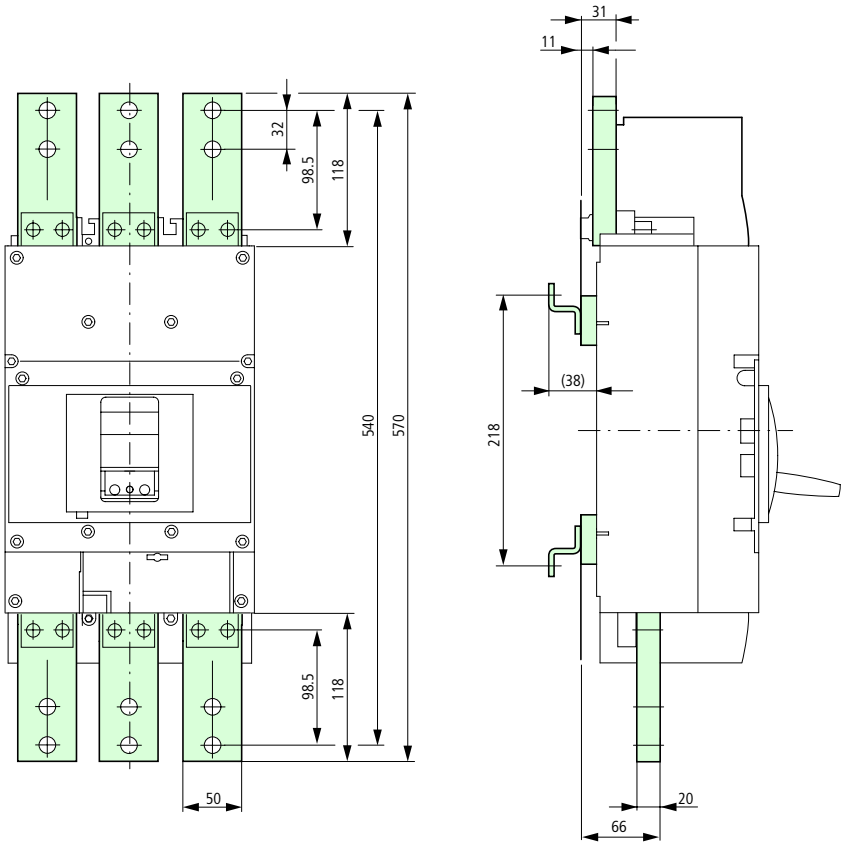
**Set of adapters**

NZM4-XAS14-1250

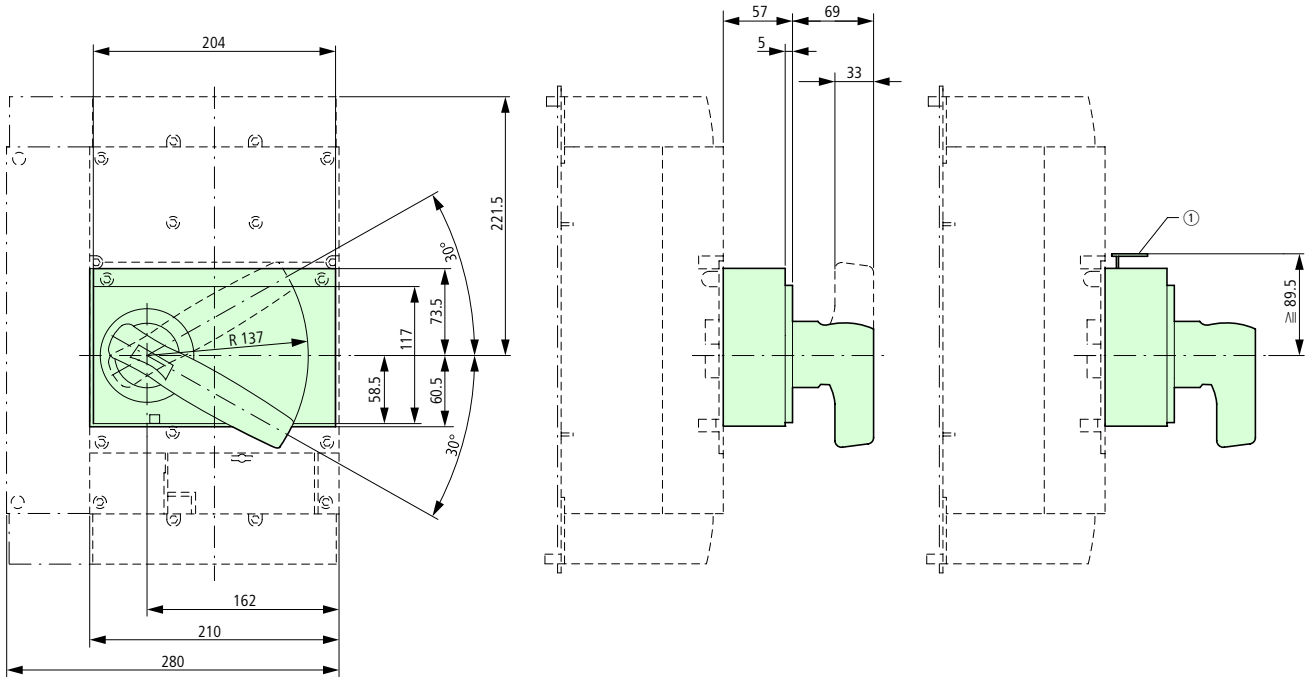


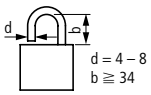

NZM4-XAS14-1600



**Rotary handle on circuit-breaker**

NZM4-XD(V)(R)

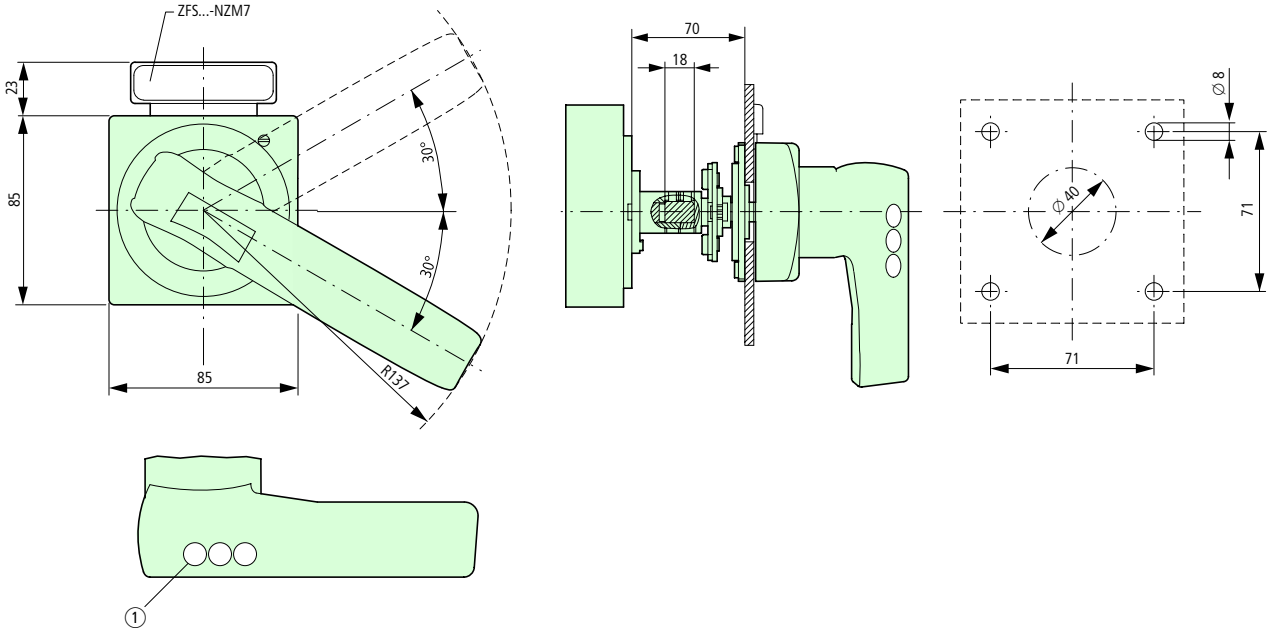


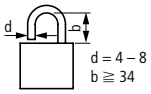




① Up to 3 padlocks

**Door coupling rotary handle**

NZM4-XT(V)D(V)(R)




① Up to 3 padlocks

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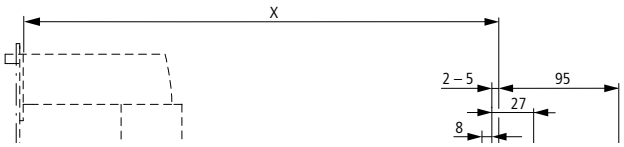
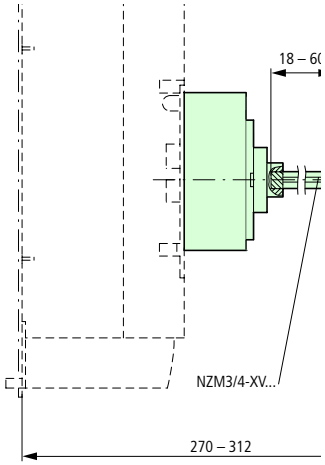
**Door coupling rotary handle with extension shaft**

NZM4-XT(V)D(V)(R)
NZM3/4-XV4(6)

| | x |
|---|---|
| NZM3/4-XV4 | 300 – 400 |
| NZM3/4-XV6 | 400 – 600 |



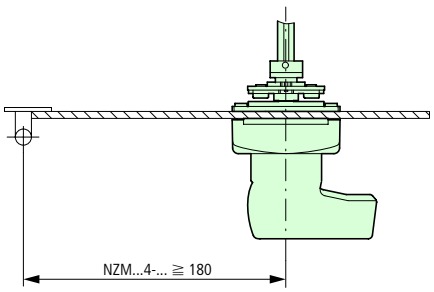

NZM4-XT(V)D(V)(R)-60




NZM4-XT(V)D(V)(R)-0

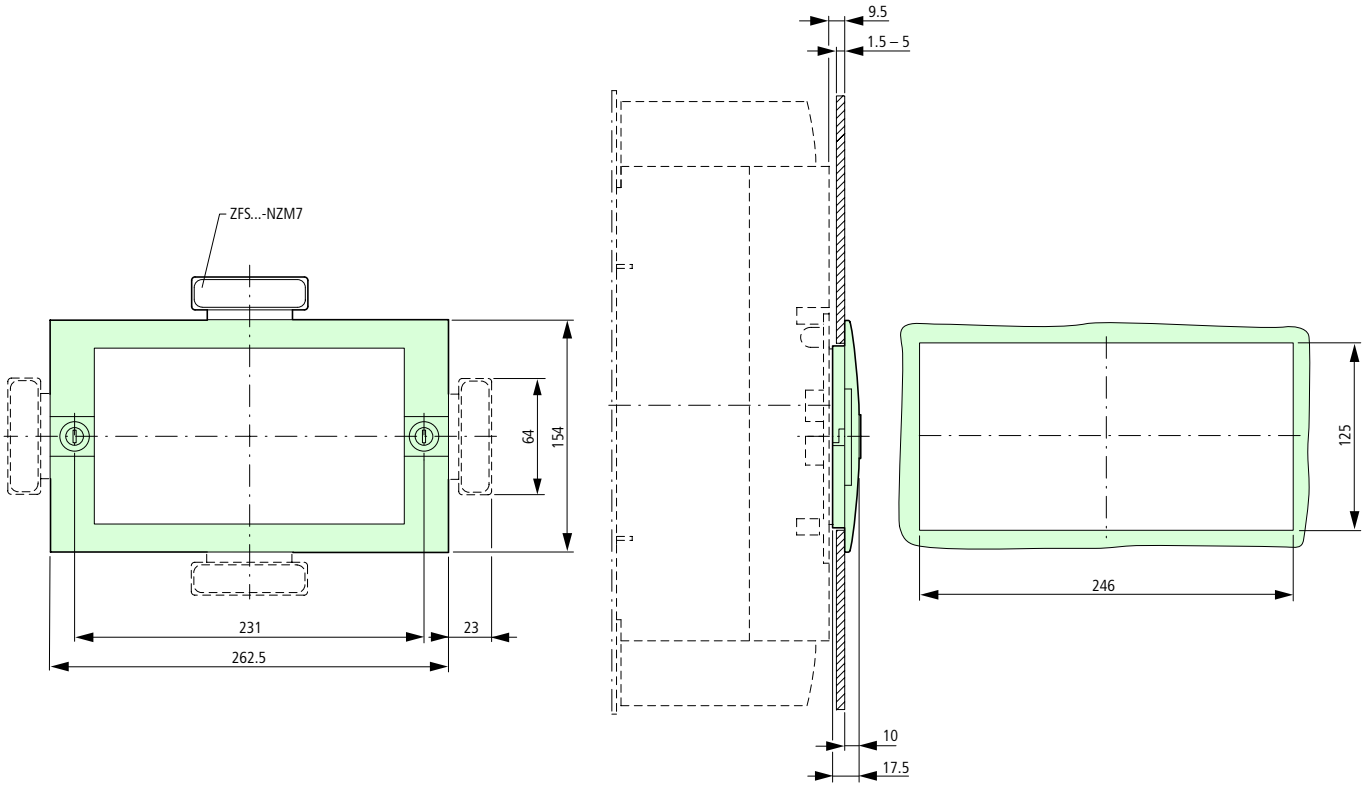
① Special tip

**Minimum door coupling rotary handle clearance from door pivot point**



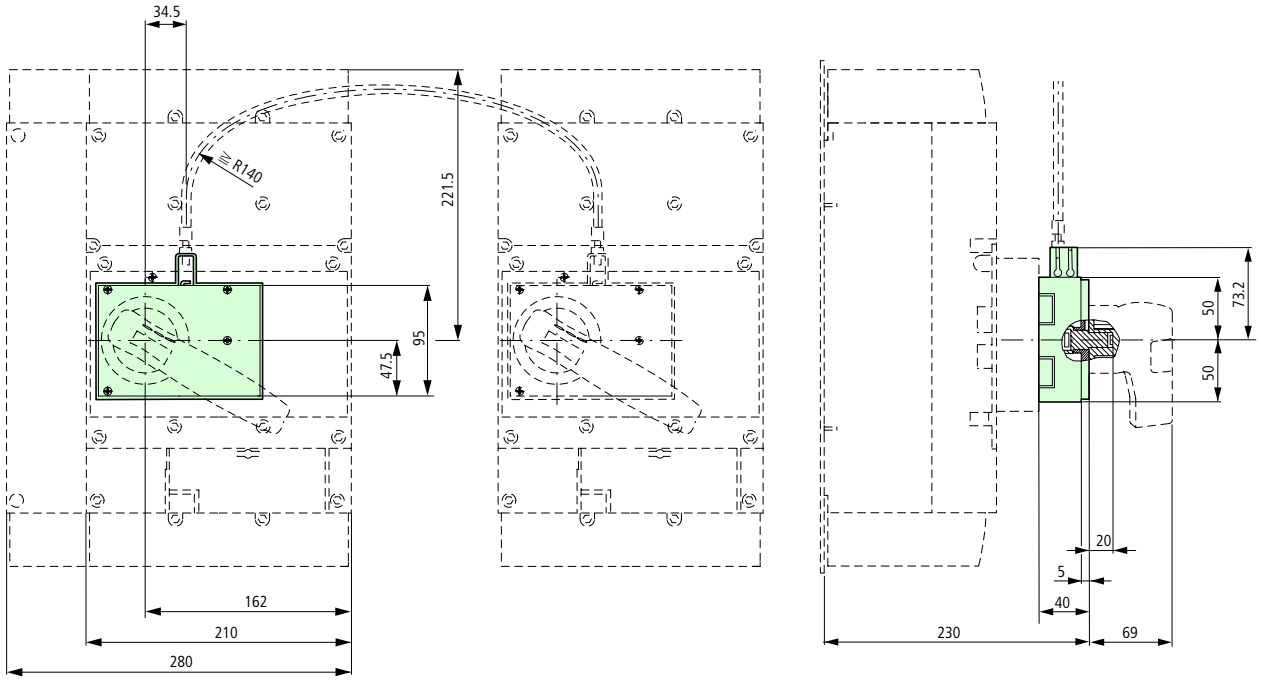
**Insulating surround**

NZM4-XBR




**Mechanical interlock**

NZM4-XMV with NZM4-XD



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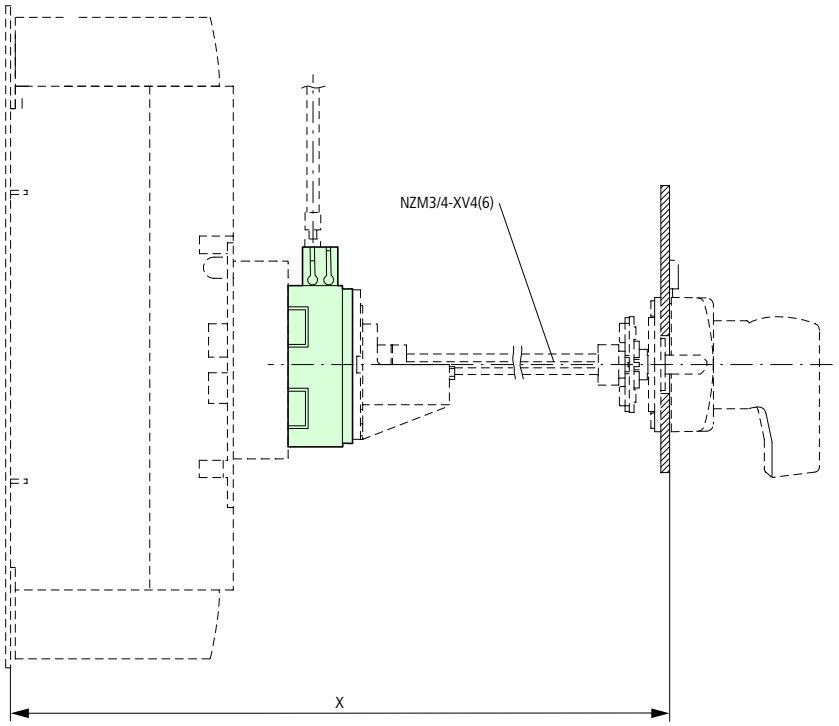
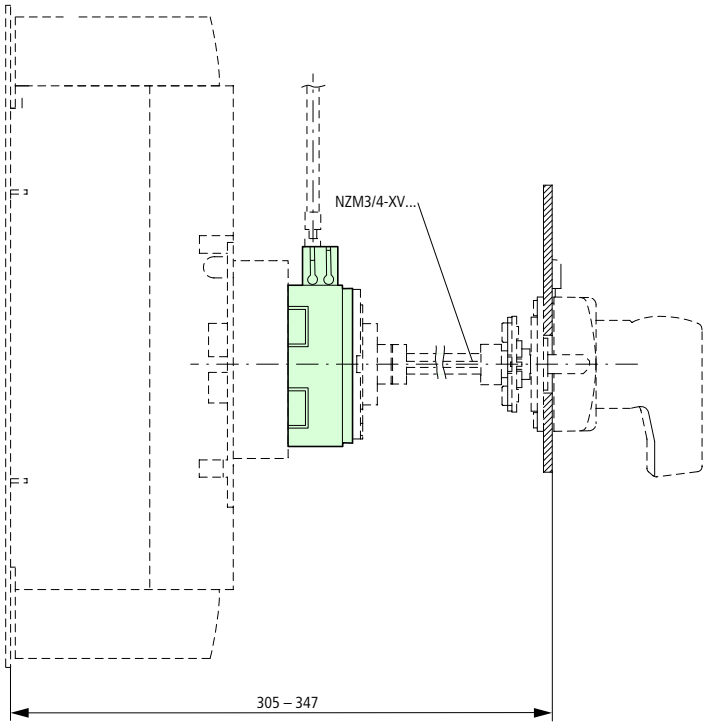
NZM4-XMV with NZM4-XT(V)D(V)(R)

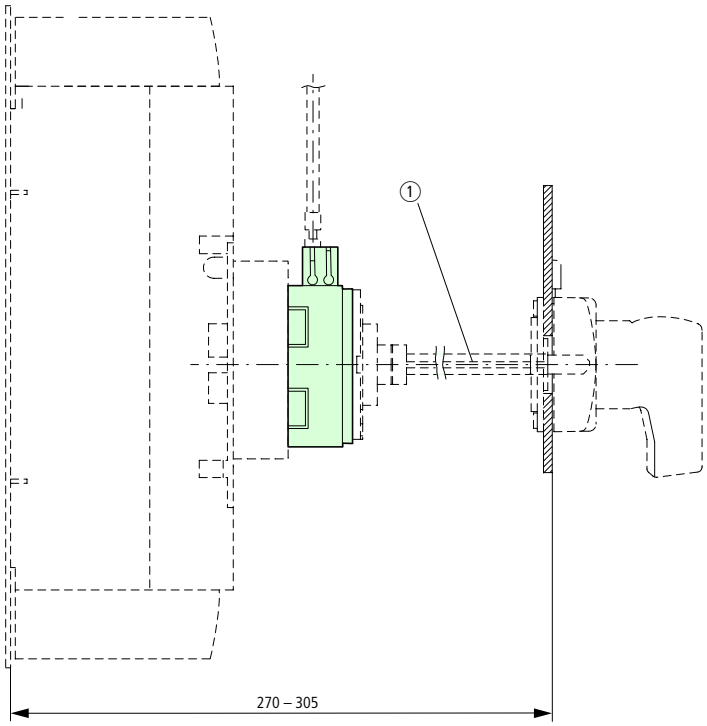



| | x |
|---|---|
| NZM3/4-XV4 | 335 – 400 |
| NZM3/4-XV6 | 400 – 600 |

NZM4-XMV with NZM4-XT(V)D(V)(R)-60



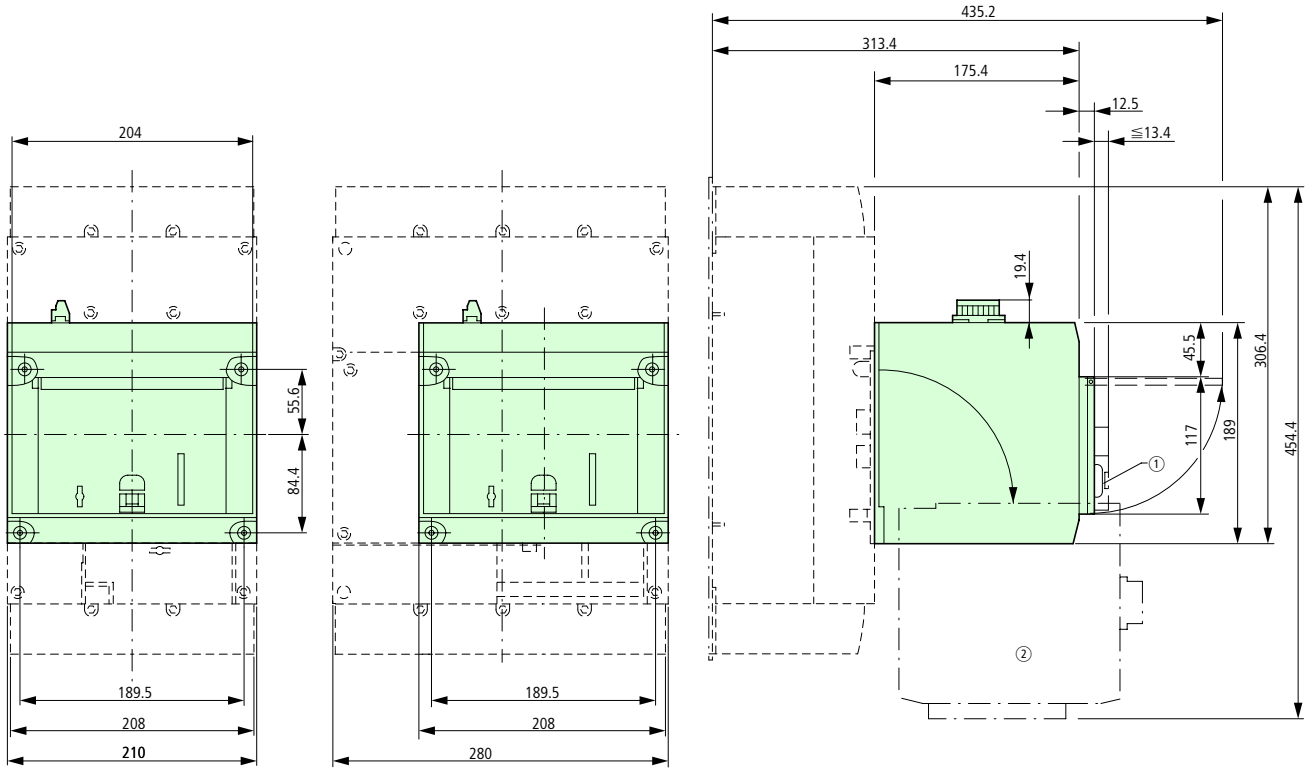
NZM4-XMV with NZM4-XT(V)D(V)(R)-0




① Special tip

**Remote operator**

NZM4-XR...



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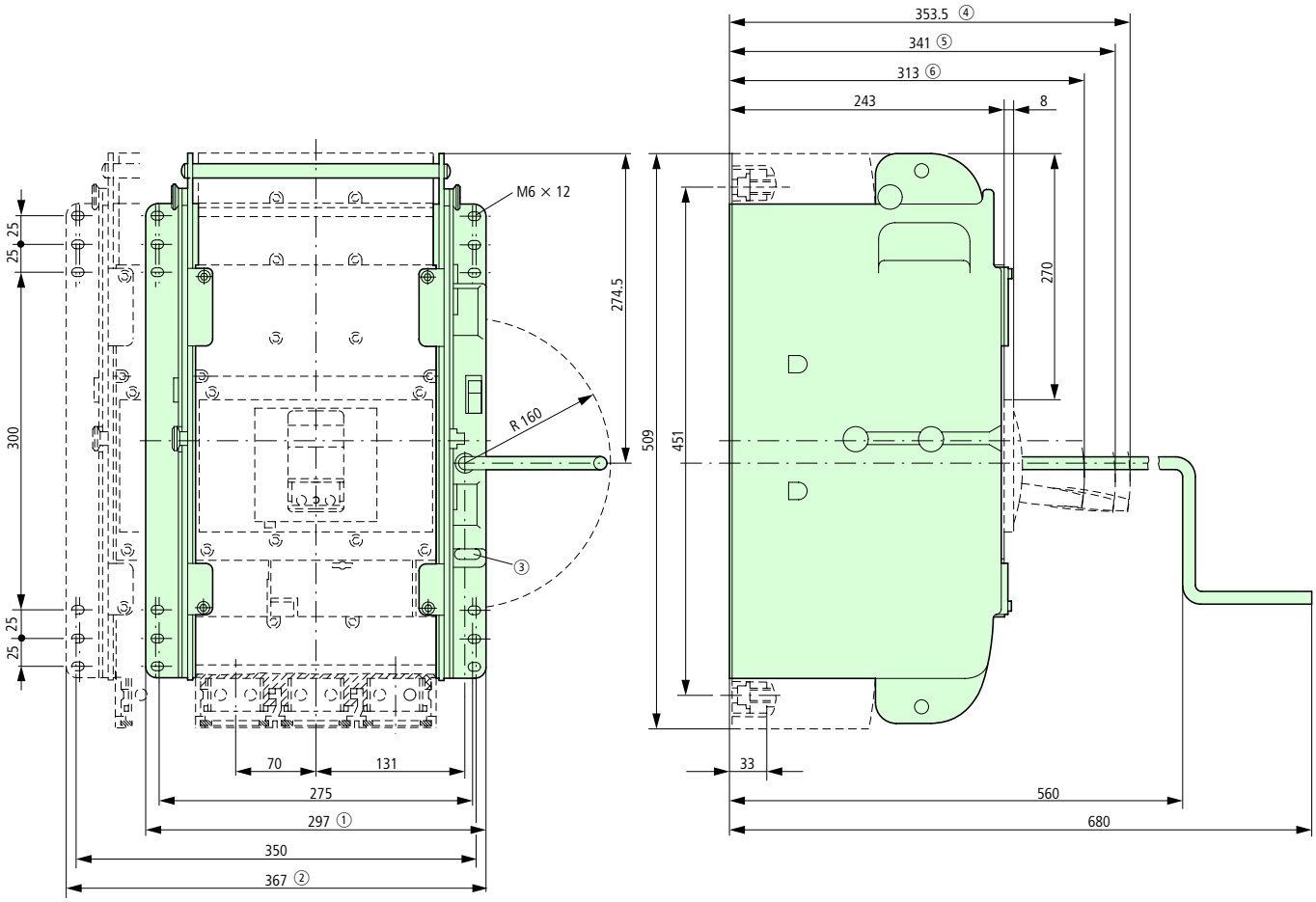
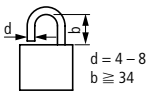
**Withdrawable unit**

+NZM4(-4)-XAV




① 3-pole
② 4-pole
③ max. 3 padlocks




④ disconnected
⑤ test
⑥ connected