



Switch-disconnector 3p 630A terminals

Part no. N3-630-BT
Article no. 110317

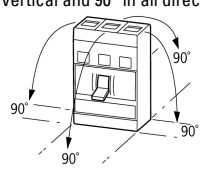
Similar to illustration

Delivery program


| | | | |
|--|-------------|------|--|
| Product range | | | Switch-disconnectors |
| Protective function | | | Disconnectors/main switches |
| Standard/Approval | | | IEC |
| Installation type | | | Fixed |
| Construction size | | | N3 |
| Description | | | Main switch characteristics including positive drive to IEC/EN 60204 and VDE 0113. Isolating characteristics to IEC/EN 60947-3 and VDE 0660. Busbar tag shroud to VDE 0160 Part 100. |
| Number of poles | | | 3 pole |
| Standard equipment | | | Box terminal |
| Switch positions | | | I, +, 0 |
| Rated current = rated uninterrupted current | $I_n = I_u$ | A | 630 |
| Short-circuit protection max. fuse gL-characteristic | | A gL | 630 |

Technical data

General

| | | | |
|---|--|------|--|
| Standards | | | IEC/EN 60947 |
| Protection against direct contact | | | Finger and back-of-hand proof to DIN EN 50274/VDE 0106 part 110 |
| Climatic proofing | | | Damp heat, constant, to IEC 60068-2-78 Damp heat, cyclic, to IEC 60068-2-30 |
| Ambient temperature | | | |
| Ambient temperature, storage | | °C | - 40 - + 70 |
| Operation | | °C | -25 - +70 |
| Mechanical shock resistance (10 ms half-sinusoidal shock) according to IEC 60068-2-27 | | g | 20 (half-sinusoidal shock 20 ms) |
| Safe isolation to EN 61140 | | | |
| Between auxiliary contacts and main contacts | | V AC | 500 |
| between the auxiliary contacts | | V AC | 300 |
| Mounting position | | | |
| Mounting position | | | Vertical and 90° in all directions  With residual-current release XFI: - NZM1, N1, NZM2, N2: vertical and 90° in all directions with plug-in adapter elements - NZM1, N1, NZM2, N2: vertical, 90° right/left with withdrawable unit: - NZM3, N3: vertical, 90° left - NZM4, N4: vertical with remote operator: - NZM2, N(S)2, NZM3, N(S)3, NZM4, N(S)4: vertical and 90° in all directions |
| Direction of incoming supply | | | as required |
| Degree of protection | | | |
| Device | | | In the area of the HMI devices: IP20 (basic protection type) |
| Enclosures | | | With insulating surround: IP40 With door coupling rotary handle: IP66 |
| Terminations | | | Tunnel terminal: IP10 Phase isolator and band terminal: IP00 |

Switch-disconnectors

| | | | |
|---|-------------|------|---|
| Rated surge voltage invariability | U_{imp} | | |
| Main contacts | | V | 8000 |
| Auxiliary contacts | | V | 6000 |
| Rated operational voltage | U_e | V AC | 690 |
| Rated operating frequency | f | Hz | 50/60 |
| Rated current = rated uninterrupted current | $I_n = I_u$ | A | 630 |
| Overvoltage category/pollution degree | | | III/3 |
| Rated insulation voltage | U_i | V | 1000 |
| Use in unearthed supply systems | | V |  690 |
| Other technical data (sheet catalogue) | | | Weight Temperature dependency, Derating Effective power loss |

Rated short-circuit making capacity

| | | | |
|---------------|-------|----|----|
| 690 V 50/60 H | I_c | kA | 25 |
|---------------|-------|----|----|

Rated short-time withstand current

| | | | |
|-----------|----------|----|----|
| t = 0.3 s | I_{cw} | kA | 12 |
| t = 1 s | I_{cw} | kA | 12 |

Rated conditional short-circuit current

| | | | |
|----------------------|--|---------|------------------------|
| With back-up fuse | | A gG/gL | PN3(N3)-400...630: 630 |
| 400 ... 415 V | | kA | 100 |
| 690 V | | kA | 80 |
| With downstream fuse | | A gG/gL | PN3(N3)-400...630: 630 |
| 400 ... 415 V | | kA | 100 |
| 690 V | | kA | 80 |

Rated making and breaking capacity

| | | | |
|---------------------------|------------|-------|-------|
| Rated operational current | I_e | A | |
| 415 V | I_e | A | 630 |
| 690 V | I_e | A | 630 |
| 415 V | I_e | A | 630 |
| 690 V | I_e | A | 630 |
| Lifespan, mechanical | Operations | | 15000 |
| Max. operating frequency | | Ops/h | 60 |

Lifespan, electrical

| | | | |
|----------------|------------|--|------|
| 400 V 50/60 Hz | Operations | | 5000 |
| 415 V 50/60 Hz | Operations | | 5000 |
| 690 V 50/60 Hz | Operations | | 3000 |
| 400 V 50/60 Hz | Operations | | 3000 |
| 415 V 50/60 Hz | Operations | | 3000 |
| 690 V 50/60 Hz | Operations | | 2000 |

Terminal capacity

| | | | |
|--|--|-----------------|---|
| Standard equipment | | | Box terminal |
| Optional accessories | | | Screw connection Tunnel terminal connection on rear |
| Copper conductors and cables | | | |
| Box terminal | | | |
| Solid | | mm ² | 2 x 16 |
| Stranded | | mm ² | 1 x (35 - 240) 2 x (25 - 120) |
| Tunnel terminal | | | |
| Stranded | | mm ² | |
| 1-hole | | mm ² | 1 x (25 - 185) |
| Double hole fitting | | mm ² | 1 x (50 - 240) 2 x (50 - 240) |
| Bolt terminal and rear-side connection | | | |
| Direct on the switch | | | |
| Solid | | mm ² | 1 x 16 |

| | | | |
|---|------|-----------------|--|
| | | | 2 x 16 |
| Stranded | | mm ² | 1 x (25 - 120) 2 x (25 - 120) |
| Connection width extension | | mm ² | |
| Connection width extension | | mm ² | 2 x 300 |
| Al conductors, Al cable | | | |
| Solid | | mm ² | 1 x 16 |
| Stranded | | mm ² | |
| 1-hole | | mm ² | 1 x (25 - 185) ²⁾ |
| | | | ²⁾ Je nach Kabelhersteller bis zu 240 mm ² anschließbar. |
| Double hole fitting | | mm ² | 1 x (50 - 240) 2 x (50 - 240) |
| Bolt terminal and rear-side connection | | | |
| Direct on the switch | | | |
| Solid | | mm ² | 1 x 16 2 x (10 - 16) |
| Stranded | | mm ² | 1 x (25 - 120) 2 x (25 - 120) |
| Cu strip (number of segments x width x segment thickness) | | | |
| Box terminal | | | |
| | min. | mm | 6 x 16 x 0.8 |
| | max. | mm | 10 x 24 x 1.0 + 5 x 24 x 1.0 (2 x) 8 x 24 x 1.0 |
| Bolt terminal and rear-side connection | | | |
| Flat copper strip, with holes | min. | mm | 6 x 16 x 0.8 |
| Flat copper strip, with holes | max. | mm | 10 x 32 x 1.0 + 5 x 32 x 1.0 |
| Connection width extension | | mm | (2 x) 10 x 50 x 1.0 |
| Copper busbar (width x thickness) | | | |
| Bolt terminal and rear-side connection | | | |
| Screw connection | | | M10 |
| Direct on the switch | | | |
| | min. | mm | 20 x 5 |
| Connection width extension | | mm | |
| Connection width extension | max. | mm | 2 x (10 x 50) |

Design verification as per IEC/EN 61439

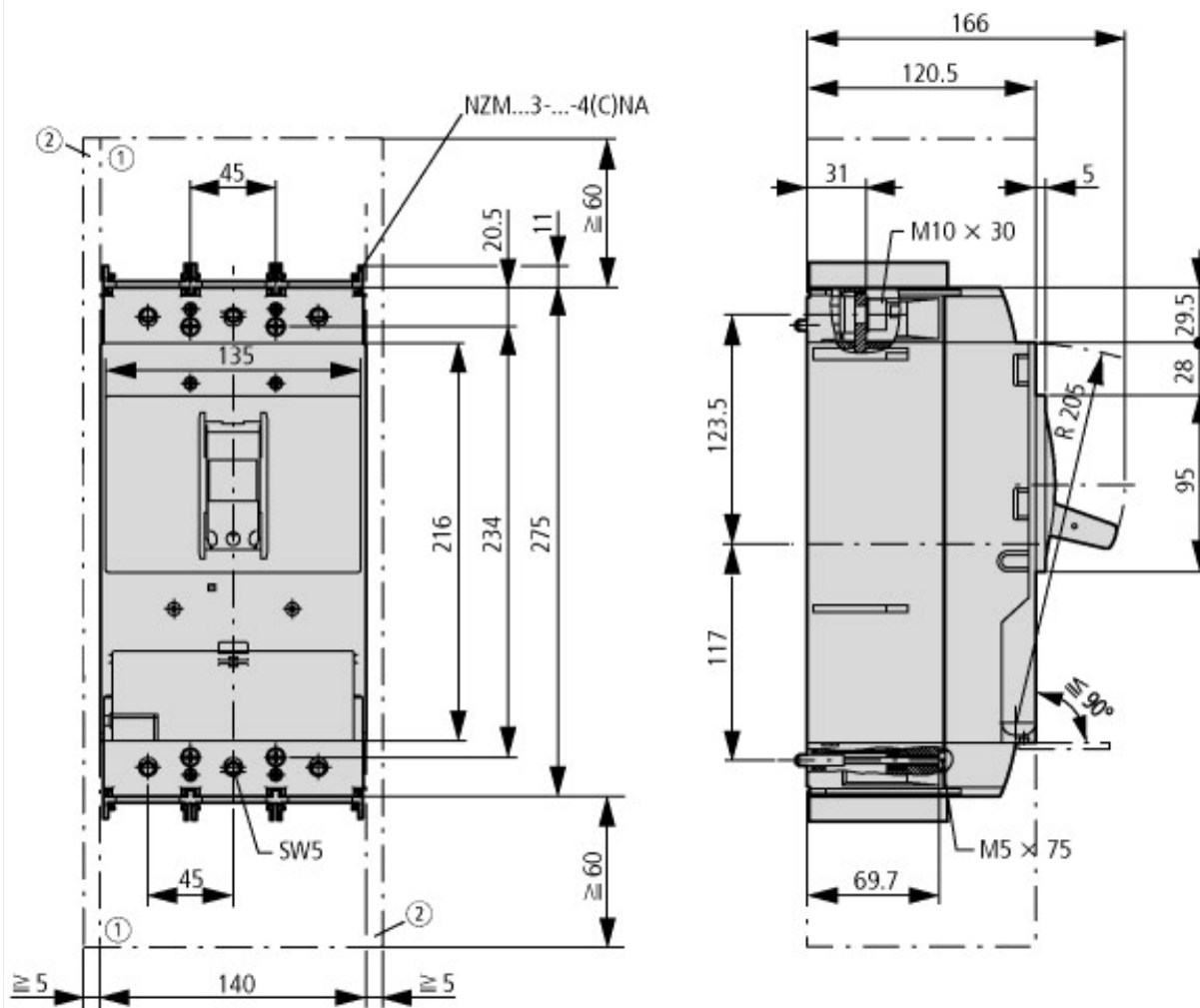
| | | | |
|--|------------------|----|--|
| Technical data for design verification | | | |
| Rated operational current for specified heat dissipation | I _n | A | 630 |
| Equipment heat dissipation, current-dependent | P _{vid} | W | 107.16 |
| Operating ambient temperature min. | | °C | -25 |
| Operating ambient temperature max. | | °C | 70 |
| IEC/EN 61439 design verification | | | |
| 10.2 Strength of materials and parts | | | |
| 10.2.2 Corrosion resistance | | | |
| 10.2.2.1 Verification of thermal stability of enclosures | | | Meets the product standard's requirements. |
| 10.2.3.2 Verification of resistance of insulating materials to normal heat | | | Meets the product standard's requirements. |
| 10.2.3.3 Verification of resistance of insulating materials to abnormal heat and fire due to internal electric effects | | | Meets the product standard's requirements. |
| 10.2.4 Resistance to ultra-violet (UV) radiation | | | Meets the product standard's requirements. |
| 10.2.5 Lifting | | | Does not apply, since the entire switchgear needs to be evaluated. |
| 10.2.6 Mechanical impact | | | Does not apply, since the entire switchgear needs to be evaluated. |
| 10.2.7 Inscriptions | | | Meets the product standard's requirements. |
| 10.3 Degree of protection of ASSEMBLIES | | | Does not apply, since the entire switchgear needs to be evaluated. |
| 10.4 Clearances and creepage distances | | | Meets the product standard's requirements. |
| 10.5 Protection against electric shock | | | Does not apply, since the entire switchgear needs to be evaluated. |

| | | |
|--|--|--|
| 10.6 Incorporation of switching devices and components | | Does not apply, since the entire switchgear needs to be evaluated. |
| 10.7 Internal electrical circuits and connections | | Is the panel builder's responsibility. |
| 10.8 Connections for external conductors | | Is the panel builder's responsibility. |
| 10.9 Insulation properties | | |
| 10.9.2 Power-frequency electric strength | | Is the panel builder's responsibility. |
| 10.9.3 Impulse withstand voltage | | Is the panel builder's responsibility. |
| 10.9.4 Testing of enclosures made of insulating material | | Is the panel builder's responsibility. |
| 10.10 Temperature rise | | The panel builder is responsible for the temperature rise calculation. Eaton will provide heat dissipation data for the devices. |
| 10.11 Short-circuit rating | | Is the panel builder's responsibility. The specifications for the switchgear must be observed. |
| 10.12 Electromagnetic compatibility | | Is the panel builder's responsibility. The specifications for the switchgear must be observed. |
| 10.13 Mechanical function | | The device meets the requirements, provided the information in the instruction leaflet (IL) is observed. |

Technical data ETIM 6.0

| | | | |
|--|----|--|--|
| Low-voltage industrial components (EG000017) / Switch disconnecter (EC000216) | | | |
| Electric engineering, automation, process control engineering / Low-voltage switch technology / Off-load switch, circuit breaker, control switch / Switch disconnecter (ecl@ss8.1-27-37-14-03 [AKF060010]) | | | |
| Version as main switch | | | Yes |
| Version as maintenance-/service switch | | | Yes |
| Version as safety switch | | | No |
| Version as emergency stop installation | | | Yes |
| Version as reversing switch | | | No |
| Max. rated operation voltage Ue AC | V | | 690 |
| Rated operating voltage | V | | 690 - 690 |
| Rated permanent current Iu | A | | 630 |
| Rated permanent current at AC-21, 400 V | A | | 0 |
| Rated operation power at AC-3, 400 V | kW | | 0 |
| Rated short-time withstand current Icw | kA | | 12 |
| Rated operation power at AC-23, 400 V | kW | | 315 |
| Switching power at 400 V | kW | | 0 |
| Conditioned rated short-circuit current Iq | kA | | 0 |
| Number of poles | | | 3 |
| Number of auxiliary contacts as normally closed contact | | | 0 |
| Number of auxiliary contacts as normally open contact | | | 0 |
| Number of auxiliary contacts as change-over contact | | | 0 |
| Motor drive optional | | | Yes |
| Motor drive integrated | | | No |
| Voltage release optional | | | Yes |
| Device construction | | | Built-in device fixed built-in technique |
| Suitable for ground mounting | | | Yes |
| Suitable for front mounting 4-hole | | | No |
| Suitable for front mounting center | | | No |
| Suitable for distribution board installation | | | Yes |
| Suitable for intermediate mounting | | | Yes |
| Colour control element | | | Black |
| Type of control element | | | Rocker lever |
| Interlockable | | | Yes |
| Type of electrical connection of main circuit | | | Frame clamp |
| Degree of protection (IP), front side | | | IP20 |

Dimensions



- ① Blow out area, minimum clearance to adjacent parts
- ② Minimum clearance to adjacent parts



Additional product information (links)

IL01208009Z (AWA1230-1992) Circuit-Breaker, basic unit

IL01208009Z (AWA1230-1992) Circuit-Breaker, basic unit ftp://ftp.moeller.net/DOCUMENTATION/AWA_INSTRUCTIONS/IL01208009Z2015_11.pdf

Weight <http://ecat.moeller.net/flip-cat/?edition=HPLEN&startpage=17.171>

Temperature dependency, Derating <http://ecat.moeller.net/flip-cat/?edition=HPLEN&startpage=17.172>

Effective power loss <http://ecat.moeller.net/flip-cat/?edition=HPLEN&startpage=17.174>

CurveSelect characteristics program <http://www.eaton.eu/DE/Europe/Electrical/CustomerSupport/ConfigurationTools/CharacteristicsProgram/index.htm>

Eaton configurator <http://www.eaton.eu/DE/Europe/Electrical/CustomerSupport/ConfigurationTools/ConfiguratorCircuitBreaker/index.htm>