

Switch-disconnector, 4 p, 400A, frame size 3



Part no. LN3-4-400-I
112010

| General specifications | | |
|--|--|---|
| Product name | | Eaton Moeller series Power Defense molded case switch-disconnector |
| Part no. | | LN3-4-400-I |
| EAN | | 4015081115587 |
| Product Length/Depth | | 166 millimetre |
| Product height | | 275 millimetre |
| Product width | | 185 millimetre |
| Product weight | | 6.349 kilogram |
| Compliances | | RoHS conform |
| Certifications | | IEC |
| Product Tradename | | Power Defense |
| Product Type | | Molded case switch-disconnector |
| Product Sub Type | | None |
| Delivery program | | |
| Application | | Use in unearthed supply systems at 690 V |
| Type | | Switch-disconnector |
| Circuit breaker frame type | | LN3 |
| Number of poles | | Four-pole |
| Amperage Rating | | 400 A |
| Features | | Motor drive optional Version as maintenance-/service switch Version as main switch Version as emergency stop installation |
| Special features | | 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. Rated current = rated uninterrupted current: 400 A |
| Technical Data - Electrical | | |
| Voltage rating | | 690 V - 690 V |
| Rated operating voltage (Ue) at AC - max | | 400 V |
| Rated insulation voltage (Ui) | | 1000 V |
| Rated impulse withstand voltage (Uimp) at auxiliary contacts | | 6000 V |
| Rated impulse withstand voltage (Uimp) at main contacts | | 8000 V |
| Rated conditional short-circuit current (Iq) | | 100 kA |
| Rated operational current | | 630 A (415 V AC-22/23A, making and breaking capacity) 630 A (415 V AC-1, making and breaking capacity) 630 A (690 V AC-1, making and breaking capacity) 630 A (690 V AC-22/23A, making and breaking capacity) |
| Rated permanent current at AC-21, 400 V | | 0 A |
| Rated conditional short-circuit current with back-up fuse | | PN3(N3)-400...630: 630 AgGgL 80 kA at 690 V 100 kA at 400/415 V |
| Rated conditional short-circuit current with downstream fuse | | 80 kA at 690 V PN3(N3)-400...630: 630 AgGgL 100 kA at 400/415 V |
| Rated short-time withstand current (Icw) | | 12 kA |
| Rated short-time withstand current (t = 0.3 s) | | 12 kA |
| Rated short-time withstand current (t = 1 s) | | 12 kA |
| Rated operating frequency | | 50 Hz |
| Rated short-circuit making capacity Icm at 690 V, 50/60 Hz | | 25 kA |
| Rated operating power at AC-3, 400 V | | 0 kW |
| Rated operating power at AC-23, 400 V | | 200 kW |
| Switching power at 400 V | | 0 kW |
| Short-circuit total breaktime | | < 10 ms |

| | | |
|--|--|--|
| Short-circuit protective device fuses - max | | 630 A gL |
| Electrical connection type of main circuit | | Screw connection |
| Number of operations per hour - max | | 60 |
| Handle type | | Rocker lever |
| Overvoltage category | | III |
| Pollution degree | | 3 |
| Lifespan, electrical | | 5000 operations at 400 V AC-1 2000 operations at 690 V AC-3 3000 operations at 400 V AC-3 3000 operations at 415 V AC-3 3000 operations at 690 V AC-1 5000 operations at 415 V AC-1 |
| Technical Data - Mechanical | | |
| Mounting Method | | Ground mounting Distribution board installation Fixed Built-in device fixed built-in technique Intermediate mounting |
| Degree of protection (IP), front side | | IP20 |
| Number of auxiliary contacts (change-over contacts) | | 0 |
| Number of auxiliary contacts (normally closed contacts) | | 0 |
| Number of auxiliary contacts (normally open contacts) | | 0 |
| Handle color | | Gray |
| Switch positions | | I, +, 0 |
| Special features | | 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. Rated current = rated uninterrupted current: 400 A |
| Lifespan, mechanical | | 15000 operations |
| Technical Data - Mechanical - Terminals | | |
| Standard terminals | | Screw terminal |
| Terminal capacity (control cable) | | 0.75 mm ² - 2.5 mm ² (1x) 0.75 mm ² - 1.5 mm ² (2x) |
| Terminal capacity (aluminum solid conductor/cable) | | 16 mm ² (1x) at tunnel terminal |
| Terminal capacity (aluminum stranded conductor/cable) | | 25 mm ² - 185 mm ² (1x) at tunnel terminal |
| Terminal capacity (copper busbar) | | Min. 20 mm x 5 mm direct at switch rear-side connection Max. 10 mm x 50 mm (2x) at rear-side width extension M10 at rear-side screw connection Max. 30 mm x 10 mm + 30 mm x 5 mm direct at switch rear-side connection |
| Terminal capacity (copper solid conductor/cable) | | 16 mm ² - 185 mm ² (1x) at tunnel terminal 16 mm ² (2x) direct at switch rear-side connection 16 mm ² (2x) at box terminal 16 mm ² (1x) direct at switch rear-side connection 300 mm ² (2x) at rear-side width extension |
| Terminal capacity (copper stranded conductor/cable) | | 25 mm ² - 240 mm ² (1x) direct at switch rear-side connection 25 mm ² - 240 mm ² (2x) direct at switch rear-side connection 50 mm ² - 240 mm ² (2x) at 2-hole tunnel terminal 35 mm ² - 240 mm ² (1x) at box terminal 25 mm ² - 120 mm ² (2x) at box terminal 25 mm ² - 185 mm ² (1x) at tunnel terminal 50 mm ² - 240 mm ² (1x) at 2-hole tunnel terminal |
| Terminal capacity (copper strip) | | 10 segments of 50 mm x 1 mm (2x) at rear-side width extension Max. 8 segments of 24 mm x 1 mm (2x) at box terminal Min. 6 segments of 16 mm x 0.8 mm at rear-side connection (punched) Max. 10 segments of 24 mm x 1 mm + 5 segments of 24 mm x 1 mm Max. 10 segments of 32 mm x 1 mm + 5 segments of 32 mm x 1 mm at rear-side connection (punched) Min. 6 segments of 16 mm x 0.8 mm at box terminal |
| Design verification as per IEC/EN 61439 - technical data | | |
| Rated operational current for specified heat dissipation (I _n) | | 400 A |
| Equipment heat dissipation, current-dependent | | 43.2 W |
| Design verification as per IEC/EN 61439 | | |
| 10.2.2 Corrosion resistance | | Meets the product standard's requirements. |
| 10.2.3.1 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 Resist. of insul. mat. to abnormal heat/fire by internal elect. 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. |
| 10.9.2 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. |
| Additional information | | |
| Functions | | Voltage release optional Interlockable Disconnectors/main switches |