DATASHEET - LN2-250-I

Switch-disconnector, 3 p, 250A, frame size 2

Part no. **LN2-250-I**
112004

Powering Business Worldwide

General specifications

Product name	Eaton Moeller series Power Defense molded case switch-disconnector
Part no.	LN2-250-I
EAN	4015081115525
Product Length/Depth	142 millimetre
Product height	185 millimetre
Product width	105 millimetre
Product weight	2.15 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	LN2
Number of poles	Three-pole
Amperage Rating	250 A
Features	Version as emergency stop installation Version as main switch Motor drive optional Version as maintenance-/service switch
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: 250 A

Technical Data - Electrical

Voltage rating	690 V - 690 V
Rated operating voltage (Ue) at AC - max	400 V
Rated insulation voltage (Ui)	690 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	250 A (690 V AC-22/23A, making and breaking capacity) 250 A (415 V AC-1, making and breaking capacity) 250 A (690 V AC-1, making and breaking capacity) 250 A (415 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	100 kA at 400/415 V PN2(N2)-160…250: 250 AgGgL 80 kA at 690 V
Rated conditional short-circuit current with downstream fuse	80 kA at 690 V PN2(N2)-160…250: 250 AgGgL 100 kA at 400/415 V
Rated short-time withstand current (Icw)	3.5 kA
Rated short-time withstand current (t = 0.3 s)	3.5 kA
Rated short-time withstand current (t = 1 s)	3.5 kA
Rated operating frequency	50 Hz
Rated short-circuit making capacity Icm at 690 V, 50/60 Hz	5.5 kA
Rated operating power at AC-3, 400 V	0 kW
Rated operating power at AC-23, 400 V	132 kW
Switching power at 400 V	0 kW
Short-circuit total breaktime	< 10 ms

Short-circuit protective device fuses - max	250 A gL
Electrical connection type of main circuit	Screw connection
Number of operations per hour - max	120
Handle type	Rocker lever
Overvoltage category	III
Pollution degree	3
Lifespan, electrical	5000 operations at 690 V AC-3 10000 operations at 400 V AC-1 7500 operations at 690 V AC-1 10000 operations at 415 V AC-1 7500 operations at 400 V AC-3 7500 operations at 415 V AC-3

Technical Data - Mechanical

Mounting Method	Built-in device fixed built-in technique Ground mounting Fixed Distribution board installation 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: 250 A
Lifespan, mechanical	20000 operations

Technical Data - Mechanical - Terminals

Standard terminals	Screw terminal
Terminal capacity (control cable)	0.75 mm^2 - 1.5 mm^2 (2x) 0.75 mm^2 - 2.5 mm^2 (1x)
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. 16 mm x 5 mm direct at switch rear-side connection M8 at rear-side screw connection Max. 20 mm x 5 mm direct at switch rear-side connection
Terminal capacity (copper solid conductor/cable)	4 mm^2 - 16 mm^2 (2x) direct at switch rear-side connection 16 mm^2 - 185 mm^2 (1x) at tunnel terminal 4 mm^2 - 16 mm^2 (1x) at box terminal 4 mm^2 - 16 mm^2 (2x) at box terminal 4 mm^2 - 16 mm^2 (1x) direct at switch rear-side connection
Terminal capacity (copper stranded conductor/cable)	25 mm^2 - 185 mm^2 (1x) direct at switch rear-side connection 25 mm^2 - 70 mm^2 (2x) direct at switch rear-side connection 25 mm^2 - 185 mm^2 (1x) at box terminal 25 mm^2 - 185 mm^2 (1x) at tunnel terminal 25 mm^2 - 70 mm^2 (2x) at box terminal
Terminal capacity (copper strip)	Min. 2 segements of 16 mm x 0.8 mm at rear-side connection (punched) Max. 10 segments of 16 mm x 0.8 mm at box terminal Max. 10 segments of 16 mm x 0.8 mm at rear-side connection (punched) Min. 2 segments of 9 mm x 0.8 mm at box terminal

Design verification as per IEC/EN 61439 - technical data

Rated operational current for specified heat dissipation (In)	250 A
Equipment heat dissipation, current-dependent	48 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		Disconnectors/main switches Interlockable Voltage release optional