Specifications

Eaton 278470



Catalog Number: 278470

Eaton Moeller® series ZB Overload relay, ZB150, Ir= 70 - 100 A, 1 N/O, 1 N/C, Separate mounting, IP00

General specifications

Product Name
Eaton Moeller® series ZB Thermal overload relay

Catalog Number
278470

EAN
4015082784706

Product Length/Depth
134 mm

Product Height
121 mm

Product Width
118 mm

Product Weight
1.463 kg

Certifications
UL 60947-4-1
CSA Class No.: 3211-03
UL
UL Category Control No.: NKCR
CSA File No.: 012528
IEC/EN 60947
CE
IEC/EN 60947-4-1
CSA
UL File No.: E29184
CSA-C22.2 No. 60947-4-1-14
VDE 0660

Powering Business Worldwide

Product specifications

Features

Test/off button

Reset pushbutton manual/auto

Trip-free release

Phase-failure sensitivity (according to IEC/EN 60947, VDE 0660 Part 102)

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.

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.

Resources

Catalogs

Product Range Catalog Switching and protecting motors

eaton-product-overview-for-machinery-catalogue-ca08103003zen-en-us.pdf

Characteristic curve

eaton-tripping-devices-characteristic-zb-overload-relay-characteristic-curve-012.eps

eaton-tripping-zb-overload-relay-characteristic-curve-003.eps

Declarations of conformity

DA-DC-00005027.pdf

DA-DC-00005036.pdf

Drawings

eaton-tripping-devices-overload-relay-zb-overload-relay-dimensions-007.eps

eaton-tripping-devices-overload-relay-zb-overload-relay-3d-drawing-005.eps

eCAD model

ETN.278470.edz

Installation instructions

eaton-overload-relays-z5-zb150-il03407006z.pdf

mCAD model

DA-CD-zb150_kk

DA-CS-zb150_kk

Wiring diagrams

eaton-tripping-devices-overload-relay-zb-overload-relay-wiring-diagram.eps

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.

Pollution degree

3

Class

CLASS 10 A

Climatic proofing

Damp heat, constant, to IEC 60068-2-78
Damp heat, cyclic, to IEC 60068-2-30

Rated impulse withstand voltage (Uimp)

8000 V AC
4000 V (auxiliary and control circuits)

Rated operational current (Ie) at AC-15, 220 V, 230 V, 240 V

1.5 A

Rated operational current (Ie) at AC-15, 380 V, 400 V, 415 V

0.9 A

Rated operational current (Ie) at DC-13, 110 V

0.4 A

Rated operational current (Ie) at DC-13, 220 V, 230 V

0.2 A

Rated operational current (Ie) at DC-13, 24 V

0.9 A

Rated operational current (Ie) at DC-13, 60 V

0.75 A

Rated operational current for specified heat dissipation (In)

100 A

Static heat dissipation, non-current-dependent Pvs

0 W

Stripping length (control circuit cable)

8 mm

Stripping length (main cable)

24 mm

Voltage rating - max

600 VAC

Product category

Accessories
Overload relay ZB up to 150
A

Protection

Finger and back-of-hand proof, Protection against direct contact when actuated from front (EN 50274)

Frame size

ZB150

Adjustable current range - max

100 A

Adjustable current range - min

70 A

Ambient operating temperature - max

55 °C

Ambient operating temperature - min

-25 °C

Ambient operating temperature (enclosed) - max

40 °C

Ambient operating temperature (enclosed) - min

25 °C

Conventional thermal current ith of auxiliary contacts (1-pole,

open)

6 A

Equipment heat dissipation, current-dependent Pvid

25.2 W

Heat dissipation capacity Pdiss

0 W

Heat dissipation per pole, current-dependent Pvid

8.4 W

Number of auxiliary contacts (change-over contacts)

0

Number of auxiliary contacts (normally closed contacts)

1

Number of auxiliary contacts (normally open contacts)

1

Number of contacts (normally closed contacts)

1

Number of contacts (normally open contacts)

1

Overload release current setting - max

100 A

Overload release current setting - min

70 A

Rated operational voltage (Ue) - max

1000 V

Rated operational current (Ie) at AC-15, 120 V

1.5 A

Electrical connection type of main circuit

Screw connection

Reset function

Push-button

Automatic

Screwdriver size

2, Terminal screw, Control circuit cables, Pozidriv screwdriver

1 x 6 mm, Terminal screw, Control circuit cables, Standard screwdriver

Mounting method

Direct attachment

Separate mounting

Degree of protection

IP00

Overvoltage category

III

Safe isolation

440 V AC, Between main circuits, According to EN 61140
440 V, Between auxiliary contacts and main contacts, According to EN 61140
240 V AC, Between auxiliary contacts, According to EN 61140

Screw size

5 mm AF, Hexagon socket-head spanner, Terminal screw, Main cables
M10, Terminal screw, Main cables
M3.5, Terminal screw, Control circuit cables

Shock resistance

10 g, Mechanical, Sinusoidal, Shock duration 10 ms

Short-circuit current rating (basic rating)

200 A Class J, max. Fuse, SCCR (UL/CSA)
10 kA, SCCR (UL/CSA)

Terminal capacity (stranded)

2 x (16 - 70) mm², Main cables
1 x (16 - 70) mm², Main cables

Switching capacity (auxiliary contacts, pilot duty)

R300, DC operated (UL/CSA)
B300 at opposite polarity, AC operated (UL/CSA)
B600 at opposite polarity, AC operated (UL/CSA)

Short-circuit protection rating

315 A gG/gL, Fuse, Type “1” coordination
Max. 6 A gG/gL, fuse, Without welding, Auxiliary and control circuits
200 A gG/gL, Fuse, Type “2” coordination

Suitable for

Branch circuits, (UL/CSA)

Temperature compensation

≤ 0.25 %/K, residual error for T > 40°
Continuous

Terminal capacity (flexible with ferrule)

1 x (4 - 70) mm², Main cables
2 x (0.75 - 2.5) mm², Control circuit cables
1 x (0.75 - 2.5) mm², Control circuit cables
2 x (4 - 70) mm², Main cables

Terminal capacity (solid)

2 x (0.75 - 4) mm², Control circuit cables

1 x (0.75 - 4) mm², Control circuit cables

1 x (4 - 16) mm², Main cables

2 x (4 - 16) mm², Main cables

Terminal capacity (solid/stranded AWG)

3/0, Main cables

2 x (18 - 14), Control circuit cables

Tightening torque

10 Nm, Screw terminals, Main cables

1.2 Nm, Screw terminals, Control circuit cables

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