Specifications

Eaton 210070



Catalog Number: 210070

Eaton Moeller® series Z5 Overload relay, Ir= 50 - 70 A, 1 N/O, 1 N/C, For use with: DILM250

General specifications

Product Name
Eaton Moeller® series Z5 Thermal overload relay

Catalog Number
210070

EAN
4015082100704

Product Length/Depth
146 mm

Product Height
167 mm

Product Width
128 mm

Product Weight
1.725 kg

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

Powering Business Worldwide

Product specifications

Features

Phase-failure sensitivity (according to IEC/EN 60947, VDE 0660 Part 102)
Test/off button
Trip-free release
Reset pushbutton manual/auto

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

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

Product Range Catalog Switching and protecting motors

Characteristic curve

eaton-tripping-devices-z5-overload-relay-characteristic-curve.eps

eaton-tripping-z5-overload-relay-characteristic-curve.eps

Declarations of conformity

DA-DC-00004846.pdf

DA-DC-00004856.pdf

Drawings

eaton-tripping-devices-overload-relay-z5-overload-relay-dimensions-002.eps

eaton-tripping-devices-overload-relay-z5-overload-relay-3d-drawing.eps

eCAD model

ETN.210070.edz

Installation instructions

IL03407081Z

IL03407138Z

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

Manuals and user guides

DA-MN-h1476dgb

mCAD model

DA-CS-z5_ff250

DA-CD-z5_ff250

Wiring diagrams

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

eaton-general-release-zeb-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, cyclic, to IEC 60068-2-30
Damp heat, constant, to IEC 60068-2-78

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)

70 A

Static heat dissipation, non-current-dependent Pvs

0 W

Stripping length (control circuit cable)

8 mm

Voltage rating - max

600 VAC

Product category

Overload relay Z5

Protection

With terminal cover, Protection against direct contact when actuated from front (EN 50274)

Adjustable current range - max

70 A

Adjustable current range - min

50 A

Ambient operating temperature - max

60 °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

21 W

Heat dissipation capacity Pdiss

0 W

Heat dissipation per pole, current-dependent Pvid

7 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

70 A

Overload release current setting - min

50 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

Automatic

Push-button

Screwdriver size

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

2, Terminal screw, Control circuit cables, Pozidriv screwdriver

Mounting method

Direct attachment

Separate mounting

Direct mounting

Degree of protection

IP00

Overvoltage category

III

Safe isolation

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

Screw size

M3.5, Terminal screw, Control circuit cables
M10 x 35, Terminal screw, Main connections

Shock resistance

10 g, Mechanical, Sinusoidal, Shock duration 10 ms

Short-circuit current rating (basic rating)

250 A, max. Fuse, SCCR (UL/CSA)
250 A, max. CB, SCCR (UL/CSA)
10 kA, SCCR (UL/CSA)

Switching capacity (auxiliary contacts, pilot duty)

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

Short-circuit protection rating

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

Suitable for

Branch circuits, (UL/CSA)

Temperature compensation

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

Terminal capacity (busbar)

25 mm width, Main connection

Terminal capacity (flexible with cable lug)

185 mm²

Terminal capacity (flexible with ferrule)

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

Terminal capacity (solid)

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

Terminal capacity (solid/stranded AWG)

2 x (18 - 14), Control circuit cables
2/0 - 500 MCM, Main cables

Terminal capacity (stranded with cable lug)

185 mm²

Tightening torque

18 Nm, Main cable connection screw/bolt

1.2 Nm, Screw terminals, Control circuit cables

Width across flats

16 mm (Hexagon head spanner SW)

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