

Eaton 014518

Catalog Number: 014518

Eaton Moeller® series ZE Overload relay, Ir= 2.4 - 4 A, 1 N/O, 1 N/C, Direct mounting

General specifications



Product Name

Eaton Moeller® series ZE Thermal
overload relay

Catalog Number

014518

Model Code

ZE-4

EAN

4015080145189

Product Length/Depth

52 mm

Product Height

65 mm

Product Width

45 mm

Product Weight

0.077 kg

Certifications

UL 508

CSA

IEC/EN 60947-5-1

CE

CSA File No.: 012528

IEC/EN 60947-4-1

UL Category Control No.: NKCR

UL File No.: E29184

UL

IEC/EN 60947

CSA-C22.2 No. 14

VDE 0660

CSA Class No.: 3211-03

Product specifications

Rated operational current for specified heat dissipation (In)

4 A

Terminal capacity (flexible with ferrule)

2 x (0.5 - 1.5) mm², Main cables

1 x (0.5 - 1.5) mm², Main cables

1 x (0.5 - 1.5) mm², Control circuit cables

10.11 Short-circuit rating

Is the panel builder's responsibility. The specifications for the switchgear must be observed.

Stripping length (control circuit cable)

8 mm

Ambient operating temperature (enclosed) - min

25 °C

10.4 Clearances and creepage distances

Meets the product standard's requirements.

10.12 Electromagnetic compatibility

Is the panel builder's responsibility. The specifications for the switchgear must be observed.

Mounting method

Direct mounting

Direct attachment

10.2.5 Lifting

Does not apply, since the entire switchgear needs to be evaluated.

Stripping length (main cable)

8 mm

Ambient operating temperature (enclosed) - max

40 °C

10.2.3.1 Verification of thermal stability of enclosures

Meets the product standard's requirements.

Reset function

Automatic

Push-button

Short-circuit current rating (basic rating)

5 kA, SCCR (UL/CSA)

15 A, max. CB, CB for max. 480 V, SCCR (UL/CSA)

15 A, max. Fuse, SCCR (UL/CSA)

Resources

Catalogs

[Product Range Catalog Switching and protecting motors](#)

Certification reports

[DA-DC-00004328.pdf](#)

Characteristic curve

[eaton-tripping-ze-overload-relay-characteristic-curve-008.eps](#)

[eaton-tripping-ze-overload-relay-characteristic-curve.eps](#)

Declarations of conformity

[DA-DC-00004839.pdf](#)

[DA-DC-00004858.pdf](#)

Drawings

[eaton-tripping-devices-ze-overload-relay-dimensions.eps](#)

[eaton-tripping-devices-overload-relay-ze-overload-relay-dimensions.eps](#)

eCAD model

[DA-CE-ETN.ZE-4](#)

Installation instructions

[IL03407007Z](#)

Manuals and user guides

[eaton-motor-protective-relay-ze-overload-monitoring-exe-manual-mn03407003z-de-de-en-us.pdf](#)

mCAD model

[DA-CD-ze](#)

[DA-CS-ze](#)

Wiring diagrams

[eaton-tripping-devices-overload-relay-zb-overload-relay-wiring-diagram.eps](#)

[eaton-general-release-zeb-overload-relay-wiring-diagram.eps](#)

10.8 Connections for external conductors

Is the panel builder's responsibility.

Screw size

M3.5, Terminal screw

Adjustable current range - min

2.4 A

Protection

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

Ambient operating temperature - max

50 °C

Climatic proofing

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

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

Features

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

Trip-free release

Reset pushbutton manual/auto

Test/off button

Static heat dissipation, non-current-dependent P_{vs}

0 W

Rated operational current (I_e) at AC-15, 500 V

0.5 A

Electrical connection type of main circuit

Screw connection

10.9.3 Impulse withstand voltage

Is the panel builder's responsibility.

Voltage rating - max

600 VAC

Ambient operating temperature - min

-25 °C

10.6 Incorporation of switching devices and components

Does not apply, since the entire switchgear needs to be evaluated.

10.5 Protection against electric shock

Does not apply, since the entire switchgear needs to be evaluated.

Safe isolation

300 V AC, Between auxiliary contacts and main contacts,
According to EN 61140
300 V AC, Between main circuits, According to EN 61140
250 V AC, Between auxiliary contacts, According to EN 61140

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

1.5 A

Class

CLASS 10 A

10.13 Mechanical function

The device meets the requirements, provided the information in the instruction leaflet (IL) is observed.

10.2.6 Mechanical impact

Does not apply, since the entire switchgear needs to be evaluated.

10.9.4 Testing of enclosures made of insulating material

Is the panel builder's responsibility.

Number of contacts (normally closed contacts)

1

10.3 Degree of protection of assemblies

Does not apply, since the entire switchgear needs to be evaluated.

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

0.7 A

Heat dissipation per pole, current-dependent P_{vid}

1.9 W

Switching capacity (auxiliary contacts, general use)

1.5 A, 240V AC, (UL/CSA)

0.6 A, 600V AC, (UL/CSA)

Product category

ZE overload relays for mini contactor relays

Overload release current setting - min

2.4 A

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

0.75 A

Equipment heat dissipation, current-dependent P_{vid}

5.7 W

Heat dissipation capacity P_{diss}

0 W

Suitable for

Branch circuits, (UL/CSA)

Temperature compensation

$\leq 0.25\text{ \%}/\text{K}$, residual error for $T > 40^\circ$

Continuous

Terminal capacity (solid)

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

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

1 x (0.75 - 2.5) mm², Main cables

Number of auxiliary contacts (normally closed contacts)

1

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.

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

0.2 A

Conventional thermal current I_{th} of auxiliary contacts (1-pole, open)

6 A

Overload release current setting - max

4 A

Terminal capacity (solid/stranded AWG)

18 - 14, Main cables

2 x (18 - 12), Control circuit cables

10.9.2 Power-frequency electric strength

Is the panel builder's responsibility.

Degree of protection

IP20

Overvoltage category

III

Number of auxiliary contacts (change-over contacts)

0

Pollution degree

3

10.7 Internal electrical circuits and connections

Is the panel builder's responsibility.

Rated impulse withstand voltage (Uimp)

4000 V (auxiliary and control circuits)

6000 V AC

10.10 Temperature rise

The panel builder is responsible for the temperature rise calculation. Eaton will provide heat dissipation data for the devices.

Tightening torque

1.2 Nm, Screw terminals

Adjustable current range - max

4 A

Screwdriver size

2, Terminal screw, Pozidriv screwdriver

0.8 x 5.5 mm, Terminal screw, Standard screwdriver

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

1.5 A

10.2.2 Corrosion resistance

Meets the product standard's requirements.

10.2.4 Resistance to ultra-violet (UV) radiation

Meets the product standard's requirements.

10.2.7 Inscriptions

Meets the product standard's requirements.

Number of contacts (normally open contacts)

1

Short-circuit protection rating

35 A gG/gL, Fuse, Type "1" coordination

Max. 4 A gG/gL, Fuse, Auxiliary contacts

10 A gG/gL, Fuse, Type "2" coordination

Number of auxiliary contacts (normally open contacts)

1

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

0.4 A

Rated operational voltage (Ue) - max

690 V

Shock resistance

10 g, Mechanical, Sinusoidal, Shock duration 10 ms

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

0.9 A

Switching capacity (auxiliary contacts, pilot duty)

D300, AC operated (UL/CSA)

R300, DC operated (UL/CSA)



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