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Eaton Moeller® series ZEB Overload relay, Direct mounting, Earth-fault protection: none, Ir= 9 - 45 A, 1 N/O, 1 N/C ZEB65-45

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- General specifications
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General specifications

Product Name
Eaton Moeller® series ZEB Electronic overload Relay
Catalog Number
136502
Model Code
ZEB65-45
EAN
4015081332823
Product Length/Depth
108 mm
Product Height
110 mm
Product Width
45 mm
Product Weight
0.267 kg
Certifications
CE
UL Category Control No.: NKCR
UL 508
IEC/EN 60947-4-1
IEC/EN 60947
VDE 0660
CSA Class No.: 3211-03

CSA-C22.2 No. 14
CSA File No.: 2290956
UL
CSA
UL File No.: E1230
Catalog Notes
Rated operational current: Switch-on and switch-off conditions based on DC-13, time constant as specified.

Product specifications

Rated operational current for specified heat dissipation (In)
45 A
Terminal capacity (flexible with ferrule)
2 x (0.75 - 2.5) 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
Operating voltage at AC, 50 Hz - max
690 V
Rated control supply voltage (Us) at AC, 50 Hz - min
0 V
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)
13 mm
Ambient operating temperature (enclosed) - max
45 °C
Operating voltage at DC - max
0 V
10.2.3.1 Verification of thermal stability of enclosures
Meets the product standard's requirements.
Reset function
Push-button
Automatic
Rated control supply voltage (Us) at DC - min
0 V
Short-circuit current rating (high fault at 600 V)
100 kA, Fuse, SCCR (UL/CSA)
180 A, Class J, max. Fuse, SCCR (UL/CSA)
Rated control supply voltage (Us) at AC, 50 Hz - max
0 V
10.8 Connections for external conductors
Is the panel builder's responsibility.
Screw size
M3.5, Terminal screw, Control circuit cables
Adjustable current range - min
9 A
Protection
Finger and back-of-hand proof, Protection against direct contact when actuated from front (EN 50274)
Operating voltage at DC - min
0 V
Ambient operating temperature - max
65 °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)
Static heat dissipation, non-current-dependent Pvs
0 W
Electrical connection type of main circuit
Screw connection
Rated control supply voltage (Us) at DC - max
0 V
10.9.3 Impulse withstand voltage
Is the panel builder's responsibility.
Voltage rating - max
600 V
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.
Earth fault protection
None
Safe isolation
240 V AC, Between auxiliary contacts, According to EN 61140
600 V AC, Between main circuits, According to EN 61140
440 V, Between auxiliary contacts and main contacts, According to EN 61140
Operating voltage at AC, 50 Hz - min
230 V
Rated operational current (Ie) at AC-15, 220 V, 230 V, 240 V
1.5 A
Class
Adjustable
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.
Heat dissipation per pole, current-dependent Pvid
1.43 W
Rated operational current (Ie) at AC-15, 380 V, 400 V, 415 V
0.9 A
Voltage type
Self powered
Product Category
Electronic overload relays ZEB
Overload release current setting - min
9 A
Equipment heat dissipation, current-dependent Pvid
4.3 W
Heat dissipation capacity Pdis
0 W
Rated operational current (Ie) at DC-13, 60 V
0.75 A
Suitable for
Branch circuits, (UL/CSA)
Terminal capacity (solid)
2 x (0.75 - 4) mm², Control circuit cables
1 x (4 - 16) mm², Main cables
Number of auxiliary contacts (normally closed contacts)
1
Rated frequency - min
50 Hz
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 (Ie) at DC-13, 220 V, 230 V

0.2 A

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

5 A

Operating voltage at AC, 60 Hz - max

690 V

Overload release current setting - max

45 A

Terminal capacity (solid/stranded AWG)

1 x (14 - 4), 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

Rated frequency - max

60 Hz

Number of auxiliary contacts (change-over contacts)

0

Voltage type of operating voltage

AC

Rated operational voltage (Ue) at AC - max

690 V

Pollution degree

3

Rated control supply voltage (Us) at AC, 60 Hz - min

0 V

10.7 Internal electrical circuits and connections

Is the panel builder's responsibility.

Rated impulse withstand voltage (Uimp)

6000 V AC

6000 V (auxiliary circuits)

10.10 Temperature rise

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

Functions

Filament bulb (24 V)

Operating voltage at AC, 60 Hz - min

230 V

Tightening torque

0.8 - 1.2 Nm, Screw terminals, Control circuit cables

7 lb-in, Screw terminals

Adjustable current range - max

45 A

Screwdriver size

1 x 6 mm, Terminal screw, Standard screwdriver

2, Terminal screw, Pozidriv 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.

Rated control supply voltage (Us) at AC, 60 Hz - max

0 V


Number of contacts (normally open contacts)

1

Short-circuit protection rating

Max 6 A gG/gL, fuse, Without welding, Auxiliary and control circuits

Number of auxiliary contacts (normally open contacts)
1
Rated operational current (Ie) at DC-13, 110 V
0.4 A
Shock resistance
Mechanical, According to IEC/EN 60068-2-27
15 g, Mechanical, According to IEC/EN 60068-2-27, Shock duration 10 ms
Rated operational current (Ie) at DC-13, 24 V
0.9 A
Switching capacity (auxiliary contacts, pilot duty)
B600, AC operated (UL/CSA)
R300, DC operated (UL/CSA)
Serial Number Verified :

Authenticated: 
The product is verified as being authentic; however, this does not guarantee the condition or fit for purpose of the product.

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Characteristic curve

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Declarations of conformity

- [DA-DC-00004860.pdf](#)
- [DA-DC-00004872.pdf](#)

Drawings

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