

Specifications



Photo is representative



Eaton 278446

Eaton Moeller® series ZB Overload relay, ZB32, Ir= 0.6 - 1 A, 1 N/O, 1 N/C, Direct mounting, IP20

General specifications

PRODUCT NAME	Eaton Moeller® series ZB Thermal overload relay
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CATALOG NUMBER	278446
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MODEL CODE	ZB32-1
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EAN	4015082784461
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PRODUCT LENGTH/DEPTH	96 mm
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PRODUCT HEIGHT	67 mm
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PRODUCT WIDTH	45 mm
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PRODUCT WEIGHT	0.142 kg
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CERTIFICATIONS	CSA-C22.2 No. 60947-4-1-14 VDE 0660 CE IEC/EN 60947 CSA File No.: 012528 UL File No.: E29184 UL Category Control No.: NKCR CSA CSA Class No.: 3211-03 IEC/EN 60947-4-1 UL UL 60947-4-1
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GLOBAL CATALOG	278446
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PRODUCT TYPE	Thermal overload relay
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Product specifications

FEATURES	Reset pushbutton manual/auto Test/off button Phase-failure sensitivity (according to IEC/EN 60947, VDE 0660 Part 102) Trip-free release
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-zb-overload-relay-characteristic-curve-002.eps eaton-tripping-devices-zb-overload-relay-characteristic-curve-006.eps
DECLARATIONS OF CONFORMITY	eaton-thermal-overload-relay-declaration-of-conformity-uk251269en.pdf eaton-thermal-overload-relay-declaration-of-conformity-eu250786en.pdf
DRAWINGS	eaton-tripping-devices-zb-overload-relay-dimensions-002.eps eaton-tripping-devices-overload-relay-zb-overload-relay-dimensions.eps eaton-tripping-devices-overload-relay-zb-overload-relay-dimensions-004.eps eaton-tripping-devices-overload-relay-zb-overload-relay-3d-drawing-002.eps
ECAD MODEL	ETN.ZB32-1
INSTALLATION INSTRUCTIONS	eaton-overload-relays-zb12-zb32-il03407015z.pdf IL03407195Z
MCAD MODEL	DA-CD-zb32 DA-CS-zb32
PEP ECO-PASSPORT	eaton-thermal-overload-relays-pep-eato-00458-v0101-en.pdf

WIRING DIAGRAMS

[eaton-tripping-devices-overload-relay-zb-overload-relay-wiring-diagram-003.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)	6000 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	1 A

CURRENT FOR SPECIFIED HEAT DISSIPATION (IN)	
STATIC HEAT DISSIPATION, NON-CURRENT-DEPENDENT PVS	0 W
STRIPPING LENGTH (CONTROL CIRCUIT CABLE)	8 mm
STRIPPING LENGTH (MAIN CABLE)	10 mm
VOLTAGE RATING - MAX	600 VAC
PRODUCT CATEGORY	<ul style="list-style-type: none"> • 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	ZB32
ADJUSTABLE CURRENT RANGE - MAX	1 A
ADJUSTABLE CURRENT RANGE - MIN	0.6 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	6.9 W
HEAT DISSIPATION CAPACITY PDISS	0 W
HEAT DISSIPATION PER POLE, CURRENT-DEPENDENT PVID	2.3 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	1 A
OVERLOAD RELEASE CURRENT SETTING - MIN	0.6 A
RATED OPERATIONAL VOLTAGE (UE) - MAX	690 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	1 x 6 mm, Terminal screw, Standard screwdriver 2, Terminal screw, Pozidriv screwdriver
MOUNTING METHOD	Direct mounting Direct attachment
DEGREE OF PROTECTION	IP20
OVERVOLTAGE CATEGORY	III
SAFE ISOLATION	440 V, Between auxiliary contacts and main contacts, According to EN 61140 240 V AC, Between auxiliary contacts, According to EN 61140 440 V AC, Between main circuits, According to EN 61140
SCREW SIZE	M4, Terminal screw M3.5, Terminal screw, Control circuit cables
SHOCK RESISTANCE	10 g, Mechanical, Sinusoidal, Shock duration 10 ms
SHORT-CIRCUIT CURRENT RATING (HIGH FAULT AT	1 A, Class J/CC, max. Fuse, SCCR (UL/CSA)

600 V)	100 kA, Fuse, SCCR (UL/CSA)
SWITCHING CAPACITY (AUXILIARY CONTACTS, PILOT DUTY)	B600 at opposite polarity, AC operated (UL/CSA) R300, DC operated (UL/CSA) B300 at opposite polarity, AC operated (UL/CSA)
SHORT-CIRCUIT PROTECTION RATING	25 A gG/gL, Fuse, Type "1" coordination Max. 6 A gG/gL, fuse, Without welding, Auxiliary and control circuits 4 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 (0.75 - 2.5) mm ² , Control circuit cables 1 x (1 - 4) mm ² , Main cables 2 x (1 - 4) mm ² , Main cables 2 x (0.75 - 2.5) mm ² , Control circuit cables
TERMINAL CAPACITY (SOLID)	2 x (0.75 - 4) mm ² , Control circuit cables 2 x (1 - 6) mm ² , Main cables 1 x (0.75 - 4) mm ² , Control circuit cables 1 x (1 - 6) mm ² , Main cables
TERMINAL CAPACITY (SOLID/STRANDED AWG)	18 - 8, Main cables 2 x (18 - 14), Control circuit cables
TIGHTENING TORQUE	1.2 Nm, Screw terminals, Control circuit cables 1.8 Nm, Screw terminals, Main cables

PROJECT NAME:

PROJECT NUMBER:

PREPARED BY:

DATE:



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