

Specifications



Photo is representative



Eaton 278472

Eaton Moeller® series ZB Overload relay,
ZB150, Ir= 120 - 150 A, 1 N/O, 1 N/C,
Separate mounting, IP00

General specifications

PRODUCT NAME	Eaton Moeller® series ZB Thermal overload relay
CATALOG NUMBER	278472
EAN	4015082784720
PRODUCT LENGTH/DEPTH	134 mm
PRODUCT HEIGHT	121 mm
PRODUCT WIDTH	118 mm
PRODUCT WEIGHT	1.44 kg
CERTIFICATIONS	UL File No.: E29184 CE IEC/EN 60947 IEC/EN 60947-4-1 UL VDE 0660 CSA CSA-C22.2 No. 60947-4-1-14 CSA File No.: 012528 UL 60947-4-1 UL Category Control No.: NKCR CSA Class No.: 3211-03
MODEL CODE	ZB150-150/KK

Features & Functions

FEATURES

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

General information

AMBIENT OPERATING TEMPERATURE - MIN	-25 °C
AMBIENT OPERATING TEMPERATURE - MAX	55 °C
AMBIENT OPERATING TEMPERATURE (ENCLOSED) - MIN	25 °C
AMBIENT OPERATING TEMPERATURE (ENCLOSED) - MAX	40 °C
CLASS	CLASS 10 A
CLIMATIC PROOFING	Damp heat, cyclic, to IEC 60068-2-30 Damp heat, constant, to IEC 60068-2-78
DEGREE OF PROTECTION	IP00
FRAME SIZE	ZB150
MOUNTING METHOD	Separate mounting Direct attachment
OVERLOAD RELEASE CURRENT SETTING - MIN	120 A
OVERLOAD RELEASE CURRENT SETTING - MAX	150 A
OVERVOLTAGE CATEGORY	III
POLLUTION DEGREE	3
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)
RATED IMPULSE WITHSTAND VOLTAGE (UIMP)	4000 V (auxiliary and control circuits) 8000 V AC
SHOCK RESISTANCE	10 g, Mechanical, Sinusoidal, Shock duration 10 ms
SUITABLE FOR	Branch circuits, (UL/CSA)
TEMPERATURE COMPENSATION	≤ 0.25 %/K, residual error for T > 40° Continuous

Terminal capacities

TERMINAL CAPACITY (FLEXIBLE WITH FERRULE)	1 x (4 - 70) mm ² , Main cables 2 x (0.75 - 2.5) mm ² , Control circuit cables 1 x (0.75 - 2.5) mm ² , Control circuit cables 2 x (4 - 70) mm ² , Main cables
TERMINAL CAPACITY (SOLID)	2 x (4 - 16) mm ² , Main cables 1 x (4 - 16) mm ² , Main cables 1 x (0.75 - 4) mm ² , Control circuit cables 2 x (0.75 - 4) mm ² , Control circuit cables
TERMINAL CAPACITY (SOLID/STRANDED AWG)	3/0, Main cables 2 x (18 - 14), Control circuit cables
TERMINAL CAPACITY (STRANDED)	2 x (16 - 70) mm ² , Main cables 1 x (16 - 70) mm ² , Main cables
STRIPPING LENGTH (MAIN CABLE)	24 mm
STRIPPING LENGTH (CONTROL CIRCUIT CABLE)	8 mm
SCREW SIZE	M10, Terminal screw, Main cables M3.5, Terminal screw, Control circuit cables 5 mm AF, Hexagon socket-head spanner, Terminal screw, Main cables
SCREWDRIVER SIZE	1 x 6 mm, Terminal screw, Control circuit cables, Standard screwdriver 2, Terminal screw, Control circuit cables, Pozidriv screwdriver
TIGHTENING TORQUE	10 Nm, Screw terminals, Main cables 1.2 Nm, Screw terminals, Control circuit cables

Electrical rating

CONVENTIONAL THERMAL CURRENT ITH OF AUXILIARY CONTACTS (1-POLE, OPEN)	6 A
RATED OPERATIONAL CURRENT (IE) AT AC-15, 120 V	1.5 A
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 VOLTAGE (UE) - MAX	1000 V
SAFE ISOLATION	440 V AC, Between main circuits, According to EN 61140 240 V AC, Between auxiliary contacts, According to EN 61140 440 V, Between auxiliary contacts and main contacts, According to EN 61140
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)
VOLTAGE RATING - MAX	600 VAC

Short-circuit rating

SHORT-CIRCUIT CURRENT RATING (BASIC RATING)	10 kA, SCCR (UL/CSA) 300 A Class J, max. Fuse, SCCR (UL/CSA)
SHORT-CIRCUIT PROTECTION RATING	Max. 6 A gG/gL, fuse, Without welding, Auxiliary and control circuits 250 A gG/gL, Fuse, Type "2" coordination 315 A gG/gL, Fuse, Type "1" coordination

Contacts

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

Design verification

EQUIPMENT HEAT DISSIPATION, CURRENT-DEPENDENT PVID	25.5 W
HEAT DISSIPATION CAPACITY PDISS	0 W
HEAT DISSIPATION PER POLE, CURRENT-DEPENDENT PVID	8.5 W
RATED OPERATIONAL CURRENT FOR SPECIFIED HEAT DISSIPATION (IN)	150 A
STATIC HEAT DISSIPATION, NON-CURRENT-DEPENDENT PVS	0 W
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.
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.

Resources

CATALOGUES	eaton-product-overview-for-machinery-catalogue-ca08103003zen-en-us.pdf Product Range Catalog Switching and protecting motors
CHARACTERISTIC CURVE	eaton-tripping-devices-zb-overload-relay-characteristic-curve-012.eps eaton-tripping-zb-overload-relay-characteristic-curve-003.eps
DECLARATIONS OF CONFORMITY	eaton-thermal-overload-relay-declaration-of-conformity-eu250786en.pdf eaton-thermal-overload-relay-declaration-of-conformity-uk251269en.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.278472.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

10.7 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.
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.

PROJECT NAME:
PROJECT NUMBER:
PREPARED BY:
DATE:



Eaton Corporation plc
 Eaton House
 30 Pembroke Road
 Dublin 4, Ireland
 Eaton.com

Follow us on social media to get the latest product and support information.

