Spécifications



La photo est représentative



Eaton 278440

Eaton Moeller® series ZB Overload relay, ZB12, Ir= 6 - 10 A, 1 N/O, 1 N/C, Direct mounting, IP20

Spécifications générales	
PRODUCT NAME	Eaton Moeller® series ZB Thermal overload relay
CATALOG NUMBER	278440
MODEL CODE	ZB12-10
EAN	4015082784409
PRODUCT LENGTH/DEPTH	88 mm
PRODUCT HEIGHT	67 mm
PRODUCT WIDTH	45 mm
PRODUCT WEIGHT	0.145 kg
CERTIFICATIONS	CSA CSA-C22.2 No. 60947-4-1-14 IEC/EN 60947 UL UL Category Control No.: NKCR CSA File No.: 012528 UL 60947-4-1 CE CSA Class No.: 3211-03 UL File No.: E29184 IEC/EN 60947-4-1 VDE 0660

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Features & Functions

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

General

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, constant, to IEC 60068-2-78 Damp heat, cyclic, to IEC 60068-2-30
DEGREE OF PROTECTION	IP20
FRAME SIZE	ZB12
MOUNTING METHOD	Direct mounting
OVERLOAD RELEASE CURRENT SETTING - MIN	6 A
OVERLOAD RELEASE CURRENT SETTING - MAX	10 A
OVERVOLTAGE CATEGORY	III
POLLUTION DEGREE	3
PRODUCT CATEGORY	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)	6000 V AC 4000 V (auxiliary and control circuits)
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)	2 x (1 - 4) mm², Main cables 2 x (0.75 - 2.5) mm², Control circuit cables 1 x (1 - 4) mm², Main cables 1 x (0.75 - 2.5) mm², Control circuit cables
TERMINAL CAPACITY (SOLID)	1 x (0.75 - 4) mm², Control circuit cables 2 x (0.75 - 4) mm², Control circuit cables 1 x (1 - 6) mm², Main 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,	1.5 A

	2 x (1 - 6) mm², Main cables
TERMINAL CAPACITY (SOLID/STRANDED AWG)	2 x (18 - 14), Control circuit cables 18 - 8, Main cables
STRIPPING LENGTH (MAIN CABLE)	10 mm
STRIPPING LENGTH (CONTROL CIRCUIT CABLE)	8 mm
SCREW SIZE	M3.5, Terminal screw, Control circuit cables M4, Terminal screw
SCREWDRIVER SIZE	2, Terminal screw, Pozidriv screwdriver 1 x 6 mm, Terminal screw, Standard screwdriver
TIGHTENING TORQUE	1.8 Nm, Screw terminals, Main cables 1.2 Nm, Screw terminals, Control circuit cables

220 V, 230 V, 240 V	
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	690 V
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
SWITCHING CAPACITY (AUXILIARY CONTACTS, PILOT DUTY)	B300 at opposite polarity, AC operated (UL/CSA) B600 at opposite polarity, AC operated (UL/CSA) R300, DC operated (UL/CSA)
VOLTAGE RATING - MAX	600 VAC
VOLTAGE RATING - MAX	600 VAC

Short-circuit rating

SHORT-CIRCUIT CURRENT RATING (HIGH FAULT AT 600 V)	100 kA, Fuse, SCCR (UL/CSA) 15 A, Class J/CC, max. Fuse, SCCR (UL/CSA)
SHORT-CIRCUIT PROTECTION RATING	Max. 6 A gG/gL, fuse, Without welding, Auxiliary and control circuits 50 A gG/gL, Fuse, Type “1” coordination 25 A gG/gL, Fuse, Type “2” 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-	6 W

Ressources

CHARACTERISTIC CURVE	230U082

DEPENDENT PVID	
HEAT DISSIPATION CAPACITY PDISS	0 W
HEAT DISSIPATION PER POLE, CURRENT-DEPENDENT PVID	2 W
RATED OPERATIONAL CURRENT FOR SPECIFIED HEAT DISSIPATION (IN)	10 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.
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.

	eaton-tripping-devices-zb-overload-relay-characteristic-curve-009.eps 2310DIA-1
DECLARATIONS OF CONFORMITY	DA-DC-00005033.pdf DA-DC-00005030.pdf
ECAD MODEL	ETN.ZB12-10
INSTRUCTIONS D'INSTALLATION	IL03407195Z eaton-overload-relays-zb12-zb32-il03407015z.pdf
MCAD MODEL	eaton-cadenas-side_view-zb12_side.pra DA-CS-zb12 eaton-cadenas-front_view-zb12_front.pra DA-CD-zb12 eaton-cadenas-path-01-geo-zb12.3db
SCHÉMAS	2310DIM-3 230I093
SCHÉMAS ÉLECTRIQUES	230S035

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, Irlande
Eaton.com

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