

ZEB MOTOR PROTECTION RELAYS

136482



Overview



Specifications



Resources

How to



136482

Eaton Moeller® series ZEB Overload relay, Direct mounting, protection: none, $I_r = 4 - 20$ A, 1 N/O, 1 N/C ZEB12-2

How to buy

Designed to work together

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278311

100418

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Eaton Moeller® series SDAINL Star-delta contactor combination, 380 V 400 V: 7.5 kW, 230 V 50 Hz, 240 V 60 Hz, AC operation

Eaton Moeller® series SDAINL Star-delta contactor combination, 380 V 400 V: 11 kW, 24 V DC, DC operation

Eaton Moeller® series SDAINL Star-delta contactor combination, 380 V 400 V: 7.5 kW, 24 V DC, DC operation

Eaton Moeller® series SDAINL contactor combination, 380 V 40 kW, 400 V 50 Hz, AC operation

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GENERAL SPECIFICATIONS

General specifications

>

PRODUCT NAME

Eaton Moeller® series ZEB Electronic overload Rel

Product specifications

>

CATALOG NUMBER

136482

MODEL CODE

ZEB12-20

EAN

4015081332625

PRODUCT LENGTH/DEPTH

108 mm

PRODUCT HEIGHT

110 mm

PRODUCT WIDTH

45 mm

PRODUCT WEIGHT

0.29 kg

CERTIFICATIONS

IEC/EN 60947-4-1

CSA

UL Category Control No.: NKCR

VDE 0660

CSA Class No.: 3211-03

IEC/EN 60947

UL

CSA File No.: 2290956

UL 508

CE

CSA-C22.2 No. 14

UL File No.: E1230

CATALOG NOTES

Rated operational current: Switch-on and switch-off DC-13, time constant as specified.

PRODUCT SPECIFICATIONS

RATED OPERATIONAL CURRENT FOR SPECIFIED HEAT DISSIPATION (IN)

20 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 specification 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 specification must be observed.

MOUNTING METHOD

Direct attachment
Direct mounting

10.2.5 LIFTING

Does not apply since the entire switchgear needs to

STRIPPING LENGTH (MAIN CABLE)	13 mm
AMBIENT OPERATING TEMPERATURE (ENCLOSED) - MAX	65 °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	Automatic Push-button
RATED CONTROL SUPPLY VOLTAGE (US) ATDC - MIN	0 V
SHORT-CIRCUIT CURRENT RATING (HIGH FAULT AT 600 V)	100 kA, Fuse, SCCR (UL/CSA) 30 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	4 A
PROTECTION	Finger and back-of-hand proof, Protection against direct actuated from front (EN 50274)
OPERATING VOLTAGE AT DC - MIN	0 V
AMBIENT OPERATING TEMPERATURE - MAX	65 °C
CLIMATIC PROOFING	Damp heat, constant, to IEC 60068-2-78 Damp heat, cyclic, to IEC 60068-2-30
FEATURES	Phase-failure sensitivity (according to IEC/EN 60940-102)
STATIC HEAT DISSIPATION, NON-CURRENT-DEPENDENT PVS	0 W
ELECTRICAL CONNECTION TYPE OF MAIN CIRCUIT	Screw connection
RATED CONTROL SUPPLY VOLTAGE (US) ATDC - 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
10.5 PROTECTION AGAINST ELECTRIC SHOCK	Does not apply, since the entire switchgear needs to
EARTH FAULT PROTECTION	None
600 V AC, Between main circuits, According to EN 60940-1	

SAFE ISOLATION	440 V, Between auxiliary contacts and main contact 61140 240 V AC, Between auxiliary contacts, According to IEC 60947-5-1
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 instructions in the instruction leaflet (IL) is observed.
10.2.6 MECHANICAL IMPACT	Does not apply, since the entire switchgear needs to be tested.
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 tested.
HEAT DISSIPATION PER POLE, CURRENT-DEPENDENT PVID	0.77 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	4 A
EQUIPMENT HEAT DISSIPATION, CURRENT-DEPENDENT PVID	2.31 W
HEAT DISSIPATION CAPACITY PDISS	0 W
RATED OPERATIONAL CURRENT (IE) AT DC-13, 60 V	0.75 A
SUITABLE FOR	Branch circuits, (UL/CSA)
TERMINAL CAPACITY (SOLID)	1 x (1.5 - 16) mm ² , Main cables 2 x (0.75 - 4) mm ² , Control circuit 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 I_{TH} OF AUXILIARY CONTACTS (1-POLE, OPEN)	5 A

OPERATING VOLTAGE AT AC, 60 HZ - MAX	690 V
OVERLOAD RELEASE CURRENT SETTING - MAX	20 A
TERMINAL CAPACITY (SOLID/STRANDED AWG)	2 x (18 - 12), Control circuit cables 1 x (14 - 4), Main 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 (auxiliary circuits) 6000 V AC
10.10 TEMPERATURE RISE	The panel builder is responsible for the temperature Eaton will provide heat dissipation data for the devi
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 cable 7 lb-in, Screw terminals
ADJUSTABLE CURRENT RANGE - MAX	20 A
SCREWDRIVER SIZE	2, Terminal screw, Pozidriv screwdriver 1 x 6 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.
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
NUMBER OF AUXILIARY CONTACTS (NORMALLY OPEN CONTACTS)	1
RATED OPERATIONAL CURRENT (IE) AT DC-13, 110 V	0.4 A
SHOCK RESISTANCE	15 g, Mechanical, According to IEC/EN 60068-2-27 ms Mechanical, According to IEC/EN 60068-2-27
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)

Brochures

Characteristic curve

Declarations of conformity

Drawings

eCAD model

Installation instructions

mCAD model

Wiring diagrams

136482

Eaton is an intelligent power management company dedicated to improving the quality of life and protecting the environment for people everywhere. We are guided by our commitment to do business right, to operate sustainably and to help our customers manage power—today and well into the future. By

capitalizing on the global growth trends of electrification and digitalization, we're accelerating the planet's transition to renewable energy and helping to solve the world's most urgent power management challenges.