



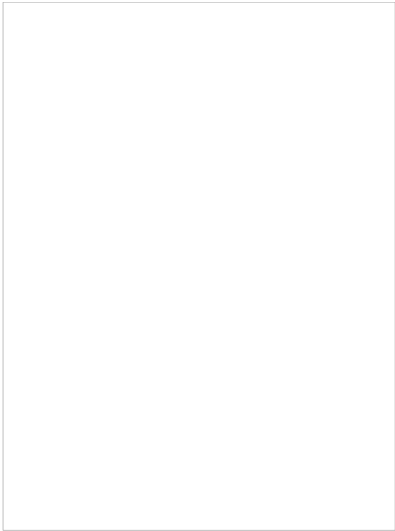
ZEB MOTOR PROTECTION RELAYS
136482


Overview


Specifications


Resources

How to



136482

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

How to buy



Designed to work together

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278311

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

100418

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

100417

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

101381

Eaton Moeller® series SDAINL
contactor combination, 380 V 400 V: 7.5
kW, 400 V 50 Hz, AC operation

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General specifications

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GENERAL SPECIFICATIONS

Product specifications

>

PRODUCT NAME	Eaton Moeller® series ZEB Electronic overload Rel
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

	Does not apply, since the entire switchgear needs to be tested.
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) AT DC - 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 disarming 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 60947-1)
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 tested.
10.5 PROTECTION AGAINST ELECTRIC SHOCK	Does not apply, since the entire switchgear needs to be tested.
EARTH FAULT PROTECTION	None
	600 V AC, Between main circuits, According to EN 60947-1

SAFE ISOLATION	440 V, Between auxiliary contacts and main contact 61140 240 V AC, Between auxiliary contacts, According to
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 instruction leaflet (IL) is observed.
10.2.6 MECHANICAL IMPACT	Does not apply, since the entire switchgear needs to
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
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) mm², Main cables 2 x (0.75 - 4) mm², 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 ITH 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 device
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	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.