DATASHEET - ZB32-32

Overload relay, ZB32, Ir= 24 - 32 A, 1 N/O, 1 N/C, Direct mounting, IP20

Part no.	ZB32-32
	278454
EL Number (Norway)	4131849

General specifications

Product name	Eaton Moeller® series ZB Thermal overload relay
Part no.	ZB32-32
EAN	4015082784546
Product Length/Depth	96 millimetre
Product height	67 millimetre
Product width	45 millimetre
Product weight	0.141 kilogram
Certifications	CSA Class No.: 3211-03 CSA File No.: 012528 UL 60947-4-1 IEC/EN 60947 UL File No.: E29184 CE CSA-C22.2 No. 60947-4-1-14 UL Category Control No.: NKCR UL CSA VDE 0660 IEC/EN 60947-4-1
Product Tradename	ZB
Product Type	Thermal overload relay
Product Sub Type	None
Catalog Notes	Ambient air temperature: Operating range to IEC/EN 60947, PTB: -5°C to +55°C Ambient operating temperature (according to IEC/EN 60947) PTB: -5 °C - +55 °C Rated operational current: Switch-on and switch-off conditions based on DC-13, time constant as specified.

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	IP20
Frame size	ZB32
Mounting method	Direct attachment Direct mounting
Overload release current setting - min	24 A
Overload release current setting - max	32 A
Overvoltage category	III
Pollution degree	3
Product category	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) 6000 V AC
Shock resistance	10 g, Mechanical, Sinusoidal, Shock duration 10 ms
Suitable for	Branch circuits, (UL/CSA)

Temperature compensation		Continuous ≤ 0.25 %/K, residual error for T > 40°

Terminal capacities

Terminal capacity (flexible with ferrule)		2 x (0.75 - 2.5) mm², Control circuit cables 1 x (1 - 4) mm², Main cables 2 x (1 - 4) mm², Main cables 1 x (0.75 - 2.5) mm², Control circuit cables
Terminal capacity (solid)		2 x (0.75 - 4) mm², Control circuit cables 1 x (0.75 - 4) mm², Control circuit cables 1 x (1 - 6) mm², Main cables 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		1 x 6 mm, Terminal screw, Standard screwdriver 2, Terminal screw, Pozidriv screwdriver
Tightening torque		1.8 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		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) R300, DC operated (UL/CSA) B600 at opposite polarity, AC operated (UL/CSA)
Voltage rating - max		600 V AC

Short-circuit rating

Short-circuit current rating (high fault at 600 V)		100 kA, Fuse, SCCR (UL/CSA) 60 A, Class J, max. Fuse, SCCR (UL/CSA)
Short-circuit protection rating		125 A gG/gL, Fuse, Type "1" coordination 63 A gG/gL, Fuse, Type "2" coordination Max. 6 A gG/gL, fuse, Without welding, Auxiliary and control circuits

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		6 W
Heat dissipation capacity Pdiss		0 W
Heat dissipation per pole, current-dependent Pvid		2 W
Rated operational current for specified heat dissipation (In)		32 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.
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.

Technical data ETIM 9.0

Low-voltage industrial components (EG000017) / Thermal overload relay (EC000106)			
Electric engineering, automation, process control engineering / Low-voltage switch technology / Overload protection device / Thermal overload relay (ecl@ss13-27-37-15-01 [AKF075019])			
Adjustable current range	A	24 - 32	
Max. rated operation voltage Ue	V	690	
Mounting method		Direct attachment	
Type of electrical connection of main circuit		Screw connection	
Number of auxiliary contacts as normally closed contact		1	
Number of auxiliary contacts as normally open contact		1	
Number of auxiliary contacts as change-over contact		0	
Release class		CLASS 10 A	
Reset function input		No	
Reset function automatic		Yes	
Reset function push-button		Yes	