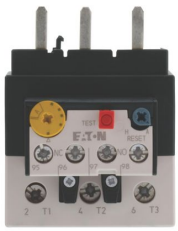
Specifications



Photo is representative





Eaton 278457

Eaton Moeller® series ZB Overload relay, ZB65, Ir= 16 - 24 A, 1 N/O, 1 N/C, Direct mounting, IP00

General specifications	
PRODUCT NAME	Eaton Moeller® series ZB Thermal overload relay
CATALOG NUMBER	278457
MODEL CODE	ZB65-24
EAN	4015082784577
PRODUCT LENGTH/DEPTH	88 mm
PRODUCT HEIGHT	75 mm
PRODUCT WIDTH	60 mm
PRODUCT WEIGHT	0.22 kg
CERTIFICATIONS	CE IEC/EN 60947-4-1 UL File No.: E29184 CSA-C22.2 No. 60947-4-1-14 CSA Class No.: 3211-03 UL UL Category Control No.: NKCR CSA VDE 0660 CSA File No.: 012528 IEC/EN 60947 UL 60947-4-1
GLOBAL CATALOG	278457
PRODUCT TYPE	Thermal overload relay

Product specifications

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

CATALOGS	eaton-product-overview-for-machinery-catalogue-ca08103003zen-en-us.pdf
CHARACTERISTIC CURVE	eaton-tripping-zb-overload-relay-characteristic-curve-002.eps eaton-tripping-devices-characteristic-zb-overload-relay-characteristic-curve-003.eps
DECLARATIONS OF CONFORMITY	eaton-thermal-overload-relay-declaration-of-conformity-uk251269en.pdf eaton-thermal-overload-relay-declaration-of-conformity-eu250786en.pdf
DRAWINGS	eaton-tripping-devices-overload-relay-zb-overload-relay-dimensions-005.eps eaton-tripping-devices-overload-relay-zb-overload-relay-dimensions-002.eps eaton-tripping-devices-overload-relay-zb-overload-relay-3d-drawing-003.eps
ECAD MODEL	ETN.ZB65-24
INSTALLATION INSTRUCTIONS	eaton-overload-relay-zb65-il03407008z.pdf
MCAD MODEL	zb65.stp
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.
POLLUTION DEGREE	3
CLASS	CLASS 10 A / IEC 60947-4-1, 8.2.1.5.1.1. c) 4 min
CLIMATIC PROOFING	Damp heat, cyclic, to IEC 60068-2-30 Damp heat, constant, to IEC 60068-2-78
RATED IMPULSE WITHSTAND VOLTAGE (UIMP)	6000 V AC 4000 V (auxiliary and control circuits)
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 CURRENT FOR SPECIFIED HEAT DISSIPATION (IN)	24 A
STATIC HEAT DISSIPATION, NON-CURRENT-DEPENDENT PVS	0 W
STRIPPING LENGTH (CONTROL CIRCUIT CABLE)	8 mm
STRIPPING LENGTH (MAIN CABLE)	11 mm
VOLTAGE RATING - MAX	600 VAC
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)
FRAME SIZE	ZB65
ADJUSTABLE CURRENT RANGE - MAX	24 A
ADJUSTABLE CURRENT RANGE - MIN	16 A
AMBIENT OPERATING TEMPERATURE - MAX	55 °C
AMBIENT OPERATING TEMPERATURE - MIN	-25 °C
AMBIENT OPERATING TEMPERATURE (ENCLOSED) - MAX	40 °C
AMBIENT OPERATING TEMPERATURE (ENCLOSED) - MIN	-25 °C
CONVENTIONAL THERMAL CURRENT ITH OF AUXILIARY CONTACTS (1-POLE, OPEN)	6 A
EQUIPMENT HEAT DISSIPATION, CURRENT-DEPENDENT PVID	5.7 W
HEAT DISSIPATION CAPACITY PDISS	0 W
HEAT DISSIPATION PER POLE, CURRENT-DEPENDENT PVID	1.9 W
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
OVERLOAD RELEASE CURRENT SETTING - MAX	24 A
OVERLOAD RELEASE CURRENT SETTING - MIN	16 A
RATED OPERATIONAL VOLTAGE (UE) - MAX	690 V
RATED OPERATIONAL CURRENT (IE) AT AC-15, 120 V	1.5 A
ELECTRICAL CONNECTION TYPE OF	Screw connection

MAIN CIRCUIT	
RESET FUNCTION	Push-button Automatic
SCREWDRIVER SIZE	2, Terminal screw, Pozidriv screwdriver 1 x 6 mm, Terminal screw, Standard screwdriver
MOUNTING METHOD	Direct attachment Direct mounting
DEGREE OF PROTECTION	IP00
OVERVOLTAGE CATEGORY	III
SAFE ISOLATION	240 V AC, Between auxiliary contacts, According to EN 61140 440 V, Between auxiliary contacts and main contacts, According to EN 61140 440 V AC, Between main circuits, According to EN 61140
SCREW SIZE	M6, Terminal screw, Main cables M3.5, Terminal screw, Control circuit cables
SHOCK RESISTANCE	10 g, Mechanical, Sinusoidal, Shock duration 10 ms
SHORT-CIRCUIT CURRENT RATING (BASIC RATING)	90 A, max. CB, SCCR (UL/CSA) 5 kA, SCCR (UL/CSA) 90 A, max. Fuse, SCCR (UL/CSA)
SHORT-CIRCUIT CURRENT RATING (HIGH FAULT AT 480 V)	100 kA, Fuse, SCCR (UL/CSA) 50 A, max. CB, SCCR (UL/CSA) 65 kA, CB, SCCR (UL/CSA) 45 A, Class J/CC, max. Fuse, SCCR (UL/CSA)
SHORT-CIRCUIT CURRENT RATING (HIGH FAULT AT 600 V)	100 kA, Fuse, SCCR (UL/CSA) 45 A, Class J/CC, max. Fuse, SCCR (UL/CSA)
TERMINAL CAPACITY (STRANDED)	1 x (16 - 25) mm², Main cables
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)
SHORT-CIRCUIT PROTECTION RATING	63 A gG/gL, Fuse, Type “1” coordination Max. 6 A gG/gL, fuse, Without welding, Auxiliary and control circuits 50 A gG/gL, Fuse, Type “2” coordination Information on Type "1" and Type"2" coordination applies to 100 kA and 690 V
SUITABLE FOR	Branch circuits, (UL/CSA)
TEMPERATURE	≤ 0.25 %/K, residual

COMPENSATION	`error for T > 40°` Continuous
TERMINAL CAPACITY (FLEXIBLE WITH FERRULE)	1 x (0.75 - 2.5) mm², Control circuit cables 2 x (0.75 - 2.5) mm², Control circuit cables 2 x (1 - 25) mm², Main cables 1 × (1 - 25) mm², Main cables
TERMINAL CAPACITY (SOLID)	2 x (1 - 16) mm², Main cables 1 x (0.75 - 4) mm², Control circuit cables 1 x (1 - 16) mm², Main cables 2 x (0.75 - 4) mm², Control circuit cables
TERMINAL CAPACITY (SOLID/STRANDED AWG)	14 - 2, Main cables 2 x (18 - 14), Control circuit cables
TIGHTENING TORQUE	3.5 Nm, Screw terminals, Main cables 1.2 Nm, Screw terminals, Control circuit cables

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.

© 2026 Eaton. All Rights Reserved.