

**BIMETAL OVERLOAD RELAYS**

**278462**



Overview



Specifications



Resources

How to buy

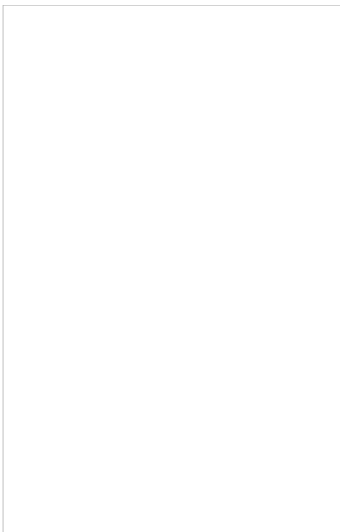


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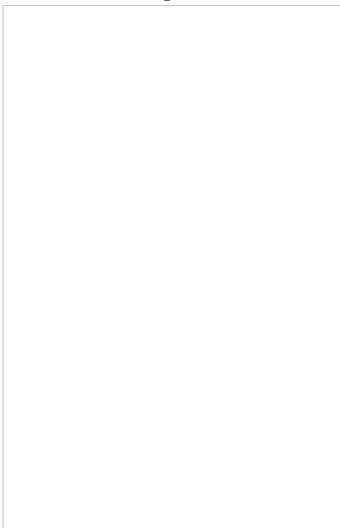


Photo is representative

**278462**

Eaton Moeller® series ZB Overload relay, ZB150, IP00  
Direct mounting, IP00

**How to buy**

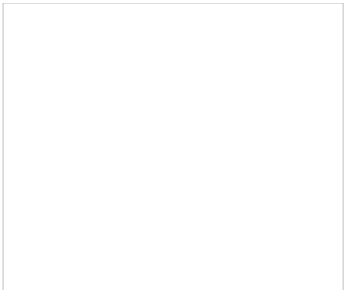


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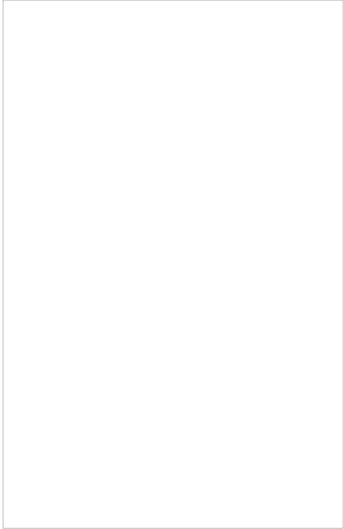


Photo is representative



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**254833**

Eaton Moeller® series M22 Release pushbutton, blue, Bezel: titanium

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**218194**

Eaton Moeller® series M22 Button plate, flat red, STOP

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**239581**

Eaton Moeller® series DILM Contactor, 380 V 400 V 55 kW, 2 N/O, 2 NC, RDC 24: 24 - 27 V DC, DC operation, Screw terminals

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**239579**

Eaton Moeller® series DILM Contactor, 380 V 400 V 55 kW, 2 N/O, 2 NC, 380 - 440 V 50/60 Hz, AC operation, Screw terminals

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## GENERAL SPECIFICATIONS

General specifications &gt;

<b>PRODUCT NAME</b>	Eaton Moeller® series ZB Thermal overload relay
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<b>CATALOG NUMBER</b>	278462
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Product specifications &gt;

<b>MODEL CODE</b>	ZB150-50
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<b>EAN</b>	4015082784621
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<b>PRODUCT LENGTH/DEPTH</b>	134 mm
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<b>PRODUCT HEIGHT</b>	135 mm
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<b>PRODUCT WIDTH</b>	118 mm
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<b>PRODUCT WEIGHT</b>	1.193 kg
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### CERTIFICATIONS

CSA Class No.: 3211-03  
IEC/EN 60947-4-1  
UL Category Control No.: NKCR  
VDE 0660  
CE  
CSA File No.: 012528  
CSA-C22.2 No. 60947-4-1-14  
UL 60947-4-1  
CSA  
IEC/EN 60947  
UL  
UL File No.: E29184

## PRODUCT SPECIFICATIONS

<b>RATED OPERATIONAL CURRENT FOR SPECIFIED HEAT DISSIPATION (IN)</b>	50 A
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<b>TERMINAL CAPACITY (FLEXIBLE WITH FERRULE)</b>	2 x (4 - 70) mm <sup>2</sup> , Main cables 1 x (0.75 - 2.5) mm <sup>2</sup> , Control circuit cables 2 x (0.75 - 2.5) mm <sup>2</sup> , Control circuit cables 1 x (4 - 70) mm <sup>2</sup> , Main cables
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<b>10.11 SHORT-CIRCUIT RATING</b>	Is the panel builder's responsibility. The specifications must be observed.
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<b>STRIPPING LENGTH (CONTROL CIRCUIT CABLE)</b>	8 mm
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<b>AMBIENT OPERATING TEMPERATURE (ENCLOSED) - MIN</b>	25 °C
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<b>10.4 CLEARANCES AND CREEPAGE DISTANCES</b>	Meets the product standard's requirements.
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<b>10.12 ELECTROMAGNETIC COMPATIBILITY</b>	Is the panel builder's responsibility. The specifications must be observed.
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<b>MOUNTING METHOD</b>	Direct mounting Direct attachment
<b>10.2.5 LIFTING</b>	Does not apply, since the entire switchgear needs to
<b>STRIPPING LENGTH (MAIN CABLE)</b>	24 mm
<b>AMBIENT OPERATING TEMPERATURE (ENCLOSED) - MAX</b>	40 °C
<b>10.2.3.1 VERIFICATION OF THERMAL STABILITY OF ENCLOSURES</b>	Meets the product standard's requirements.
<b>RESET FUNCTION</b>	Automatic Push-button
<b>SHORT-CIRCUIT CURRENT RATING (BASIC RATING)</b>	200 A, max. CB, SCCR (UL/CSA) 5 kA, SCCR (UL/CSA) 225 A, max. Fuse, SCCR (UL/CSA)
<b>10.8 CONNECTIONS FOR EXTERNAL CONDUCTORS</b>	Is the panel builder's responsibility.
<b>SCREW SIZE</b>	M10, Terminal screw, Main cables M3.5, Terminal screw, Control circuit cables 5 mm AF, Hexagon socket-head spanner, Terminal
<b>ADJUSTABLE CURRENT RANGE - MIN</b>	35 A
<b>PROTECTION</b>	Finger and back-of-hand proof, Protection against dirt actuated from front (EN 50274)
<b>TERMINAL CAPACITY (STRANDED)</b>	1 x (16 - 70) mm <sup>2</sup> , Main cables 2 x (16 - 70) mm <sup>2</sup> , Main cables
<b>AMBIENT OPERATING TEMPERATURE - MAX</b>	55 °C
<b>CLIMATIC PROOFING</b>	Damp heat, constant, to IEC 60068-2-78 Damp heat, cyclic, to IEC 60068-2-30
<b>FEATURES</b>	Test/off button Trip-free release Phase-failure sensitivity (according to IEC/EN 60944-102) Reset pushbutton manual/auto
<b>STATIC HEAT DISSIPATION, NON-CURRENT-DEPENDENT PVS</b>	0 W
<b>ELECTRICAL CONNECTION TYPE OF MAIN CIRCUIT</b>	Screw connection
<b>10.9.3 IMPULSE WITHSTAND VOLTAGE</b>	Is the panel builder's responsibility.
<b>VOLTAGE RATING - MAX</b>	600 VAC
<b>AMBIENT OPERATING TEMPERATURE - MIN</b>	-25 °C
<b>10.6 INCORPORATION OF SWITCHING DEVICES AND COMPONENTS</b>	Does not apply, since the entire switchgear needs to
<b>10.5 PROTECTION AGAINST ELECTRIC SHOCK</b>	Does not apply, since the entire switchgear needs to
<b>SAFE ISOLATION</b>	440 V AC, Between main circuits, According to EN 60439-1 440 V, Between auxiliary contacts and main contact

	61140 240 V AC, Between auxiliary contacts, According to
<b>RATED OPERATIONAL CURRENT (IE) AT AC-15, 220 V, 230 V, 240 V</b>	1.5 A
<b>CLASS</b>	CLASS 10 A
<b>10.13 MECHANICAL FUNCTION</b>	The device meets the requirements, provided the instruction leaflet (IL) is observed.
<b>10.2.6 MECHANICAL IMPACT</b>	Does not apply, since the entire switchgear needs to
<b>10.9.4 TESTING OF ENCLOSURES MADE OF INSULATING MATERIAL</b>	Is the panel builder's responsibility.
<b>NUMBER OF CONTACTS (NORMALLY CLOSED CONTACTS)</b>	1
<b>10.3 DEGREE OF PROTECTION OF ASSEMBLIES</b>	Does not apply, since the entire switchgear needs to
<b>RATED OPERATIONAL CURRENT (IE) AT AC-15, 380 V, 400 V, 415 V</b>	0.9 A
<b>HEAT DISSIPATION PER POLE, CURRENT-DEPENDENT PVID</b>	7.2 W
<b>PRODUCT CATEGORY</b>	<ul style="list-style-type: none"> <li>• Accessories</li> <li>• Overload relay ZB up to 150 A</li> </ul>
<b>OVERLOAD RELEASE CURRENT SETTING - MIN</b>	35 A
<b>RATED OPERATIONAL CURRENT (IE) AT DC-13, 60 V</b>	0.75 A
<b>EQUIPMENT HEAT DISSIPATION, CURRENT-DEPENDENT PVID</b>	21.6 W
<b>HEAT DISSIPATION CAPACITY PDISS</b>	0 W
<b>SUITABLE FOR</b>	Branch circuits, (UL/CSA)
<b>TEMPERATURE COMPENSATION</b>	Continuous ≤ 0.25 %/K, residual error for T > 40°
<b>TERMINAL CAPACITY (SOLID)</b>	1 x (0.75 - 4) mm <sup>2</sup> , Control circuit cables 2 x (4 - 16) mm <sup>2</sup> , Main cables 1 x (4 - 16) mm <sup>2</sup> , Main cables 2 x (0.75 - 4) mm <sup>2</sup> , Control circuit cables
<b>NUMBER OF AUXILIARY CONTACTS (NORMALLY CLOSED CONTACTS)</b>	1
<b>10.2.3.2 VERIFICATION OF RESISTANCE OF INSULATING MATERIALS TO NORMAL HEAT</b>	Meets the product standard's requirements.
<b>10.2.3.3 RESIST. OF INSUL. MAT. TO ABNORMAL HEAT/FIRE BY INTERNAL ELECT. EFFECTS</b>	Meets the product standard's requirements.
<b>RATED OPERATIONAL CURRENT (IE) AT DC-13, 220 V, 230 V</b>	0.2 A
<b>CONVENTIONAL THERMAL CURRENT ITH OF AUXILIARY CONTACTS (1-POLE, OPEN)</b>	6 A

<b>OVERLOAD RELEASE CURRENT SETTING - MAX</b>	50 A
<b>TERMINAL CAPACITY (SOLID/STRANDED AWG)</b>	3/0, Main cables 2 x (18 - 14), Control circuit cables
<b>10.9.2 POWER-FREQUENCY ELECTRIC STRENGTH</b>	Is the panel builder's responsibility.
<b>DEGREE OF PROTECTION</b>	IP00
<b>OVERVOLTAGE CATEGORY</b>	III
<b>NUMBER OF AUXILIARY CONTACTS (CHANGE-OVER CONTACTS)</b>	0
<b>POLLUTION DEGREE</b>	3
<b>10.7 INTERNAL ELECTRICAL CIRCUITS AND CONNECTIONS</b>	Is the panel builder's responsibility.
<b>RATED IMPULSE WITHSTAND VOLTAGE (UIMP)</b>	8000 V AC 4000 V (auxiliary and control circuits)
<b>10.10 TEMPERATURE RISE</b>	The panel builder is responsible for the temperature Eaton will provide heat dissipation data for the device
<b>TIGHTENING TORQUE</b>	1.2 Nm, Screw terminals, Control circuit cables 10 Nm, Screw terminals, Main cables
<b>ADJUSTABLE CURRENT RANGE - MAX</b>	50 A
<b>FRAME SIZE</b>	ZB150
<b>SCREWDRIVER SIZE</b>	2, Terminal screw, Control circuit cables, Pozidriv 1 x 6 mm, Terminal screw, Control circuit cables, S
<b>RATED OPERATIONAL CURRENT (IE) AT AC-15, 120 V</b>	1.5 A
<b>10.2.2 CORROSION RESISTANCE</b>	Meets the product standard's requirements.
<b>10.2.4 RESISTANCE TO ULTRA-VIOLET (UV) RADIATION</b>	Meets the product standard's requirements.
<b>10.2.7 INSCRIPTIONS</b>	Meets the product standard's requirements.
<b>NUMBER OF CONTACTS (NORMALLY OPEN CONTACTS)</b>	1
<b>SHORT-CIRCUIT PROTECTION RATING</b>	Max. 6 A gG/gL, fuse, Without welding, Auxiliary 125 A gG/gL, Fuse, Type "2" coordination 160 A gG/gL, Fuse, Type "1" coordination
<b>NUMBER OF AUXILIARY CONTACTS (NORMALLY OPEN CONTACTS)</b>	1
<b>RATED OPERATIONAL CURRENT (IE) AT DC-13, 110 V</b>	0.4 A
<b>RATED OPERATIONAL VOLTAGE (UE) - MAX</b>	1000 V
<b>SHOCK RESISTANCE</b>	10 g, Mechanical, Sinusoidal, Shock duration 10 ms
<b>RATED OPERATIONAL CURRENT (IE) AT DC-13, 24 V</b>	0.9 A
<b>SWITCHING CAPACITY (AUXILIARY CONTACTS, ...)</b>	R300, DC operated (UL/CSA) B600 at opposite polarity, AC operated (UL/CSA)

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Catalogs

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Characteristic curve

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Declarations of conformity

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Drawings

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eCAD model

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Installation instructions

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Manuals and user guides

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mCAD model

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Wiring diagrams

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278462



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.

