

**BIMETAL OVERLOAD RELAYS**

278433



Overview



Specifications



Resources

How to buy

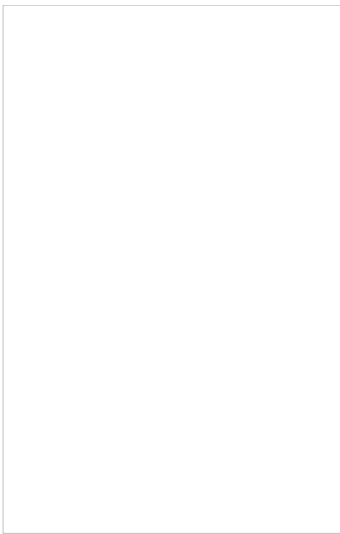


Photo is representative

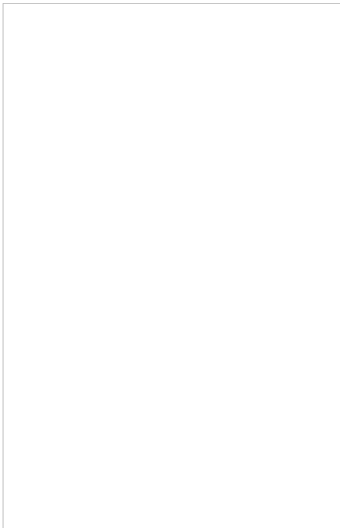


Photo is representative

278433

Eaton Moeller® series ZB Overload relay, ZB12, Ir  
Direct mounting, IP20

How to buy

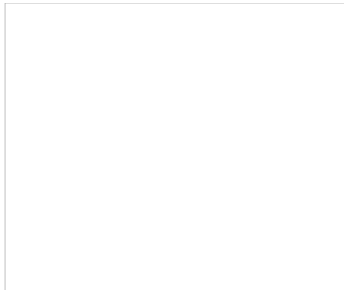


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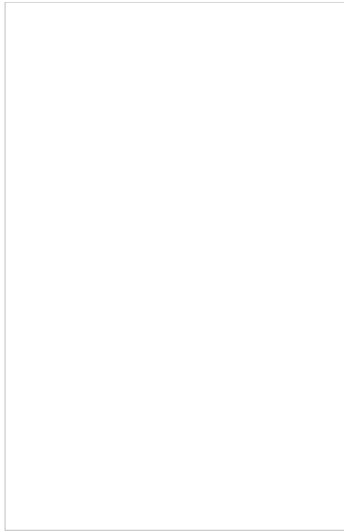


Photo is representative



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**254834**

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

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**254833**

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

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**216423**

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

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**218153**

Eaton Moeller® series M22 Button plate, flat red

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## GENERAL SPECIFICATIONS

General specifications	>	<b>PRODUCT NAME</b>	Eaton Moeller® series ZB Thermal overload relay
		<b>CATALOG NUMBER</b>	278433
Product specifications	>	<b>MODEL CODE</b>	ZB12-0,4
		<b>EAN</b>	4015082784331
		<b>PRODUCT LENGTH/DEPTH</b>	88 mm
		<b>PRODUCT HEIGHT</b>	67 mm
		<b>PRODUCT WIDTH</b>	45 mm
		<b>PRODUCT WEIGHT</b>	0.141 kg
		<b>CERTIFICATIONS</b>	CE CSA File No.: 012528 CSA-C22.2 No. 60947-4-1-14 UL Category Control No.: NKCR UL File No.: E29184 VDE 0660 CSA CSA Class No.: 3211-03 UL UL 60947-4-1 IEC/EN 60947-4-1 IEC/EN 60947

## PRODUCT SPECIFICATIONS

<b>RATED OPERATIONAL CURRENT FOR SPECIFIED HEAT DISSIPATION (IN)</b>	0.4 A
<b>TERMINAL CAPACITY (FLEXIBLE WITH FERRULE)</b>	2 x (1 - 4) mm <sup>2</sup> , Main cables 2 x (0.75 - 2.5) mm <sup>2</sup> , Control circuit cables 1 x (1 - 4) mm <sup>2</sup> , Main cables 1 x (0.75 - 2.5) mm <sup>2</sup> , Control circuit cables
<b>10.11 SHORT-CIRCUIT RATING</b>	Is the panel builder's responsibility. The specifications must be observed.
<b>STRIPPING LENGTH (CONTROL CIRCUIT CABLE)</b>	8 mm
<b>AMBIENT OPERATING TEMPERATURE (ENCLOSED) - MIN</b>	-25 °C
<b>10.4 CLEARANCES AND CREEPAGE DISTANCES</b>	Meets the product standard's requirements.
<b>10.12 ELECTROMAGNETIC COMPATIBILITY</b>	Is the panel builder's responsibility. The specifications must be observed.

<b>MOUNTING METHOD</b>	Direct attachment Direct mounting
<b>10.2.5 LIFTING</b>	Does not apply, since the entire switchgear needs to
<b>STRIPPING LENGTH (MAIN CABLE)</b>	10 mm
<b>AMBIENT OPERATING TEMPERATURE (ENCLOSED) - MAX</b>	40 °C
<b>RESET FUNCTION</b>	Automatic Push-button
<b>SHORT-CIRCUIT CURRENT RATING (HIGH FAULT AT 600 V)</b>	100 kA, Fuse, SCCR (UL/CSA) 1 A, Class J/CC, max. Fuse, SCCR (UL/CSA)
<b>10.8 CONNECTIONS FOR EXTERNAL CONDUCTORS</b>	Is the panel builder's responsibility.
<b>SCREW SIZE</b>	M4, Terminal screw M3.5, Terminal screw, Control circuit cables
<b>ADJUSTABLE CURRENT RANGE - MIN</b>	0.24 A
<b>PROTECTION</b>	Finger and back-of-hand proof Protection against di actuated from front (EN 50274)
<b>AMBIENT OPERATING TEMPERATURE - MAX</b>	55 °C
<b>CLIMATIC PROOFING</b>	Damp heat, cyclic, to IEC 60068-2-30 Damp heat, constant, to IEC 60068-2-78
<b>FEATURES</b>	Test/off button Phase-failure sensitivity (according to IEC/EN 6094 102) Trip-free release 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>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>	240 V AC, Between auxiliary contacts, According to 440 V AC, Between main circuits, According to EN 440 V AC, Between auxiliary contacts and main co EN 61140
<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 inf instruction leaflet (IL) is observed.

<b>10.2.6 MECHANICAL IMPACT</b>	Does not apply, since the entire switchgear needs to
<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>	1.8 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>	0.24 A
<b>RATED OPERATIONAL CURRENT (IE) AT DC-13, 60 V</b>	0.75 A
<b>EQUIPMENT HEAT DISSIPATION, CURRENT-DEPENDENT PVID</b>	5.4 W
<b>HEAT DISSIPATION CAPACITY PDISS</b>	0 W
<b>SUITABLE FOR</b>	Branch circuits, (UL/CSA)
<b>TEMPERATURE COMPENSATION</b>	≤ 0.25 %/K, residual error for T > 40° Continuous
<b>TERMINAL CAPACITY (SOLID)</b>	1 x (0.75 - 4) mm <sup>2</sup> , Control circuit cables 2 x (1 - 6) mm <sup>2</sup> , Main cables 1 x (1 - 6) 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 I<sub>TH</sub> OF AUXILIARY CONTACTS (1-POLE, OPEN)</b>	6 A
<b>OVERLOAD RELEASE CURRENT SETTING - MAX</b>	0.4 A
<b>TERMINAL CAPACITY (SOLID/STRANDED AWG)</b>	18 - 8, 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>	IP20
<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>	4000 V (auxiliary and control circuits) 6000 V AC
<b>10.10 TEMPERATURE RISE</b>	The panel builder is responsible for the temperature Eaton will provide heat dissipation data for the device
<b>ADJUSTABLE CURRENT RANGE - MAX</b>	0.4 A
<b>FRAME SIZE</b>	ZB12
<b>SCREWDRIVER SIZE</b>	2, Terminal screw, Pozidriv screwdriver 1 x 6 mm, Terminal screw, Standard screwdriver
<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>	2 A gG/gL, Fuse, Type "2" coordination Max. 6 A gG/gL, fuse, Without welding, Auxiliary 25 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>	690 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, PILOT DUTY)</b>	B300 at opposite polarity, AC operated (UL/CSA) B600 at opposite polarity, AC operated (UL/CSA) R300, DC operated (UL/CSA)

Catalogs

Characteristic curve

Declarations of conformity

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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278433



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