DATASHEET - ZW7-630

Current transformer-operated overload relay, 420-630A, 1N/O+1N/C

Part no. **ZW7-630**
050075

Powering Business Worldwide™

General specifications

Product name	Eaton Moeller® series ZW7 Current transformer-operated overload relay
Part no.	ZW7-630
EAN	4015080500759
Product Length/Depth	162.5 millimetre
Product height	97 millimetre
Product width	200.5 millimetre
Product weight	0.64 kilogram
Certifications	IEC/EN 60947 VDE 0660
Product Tradename	ZW7
Product Type	Current transformer-operated overload relay
Product Sub Type	None
Catalog Notes	Rated operational current: Switch-on and switch-off conditions based on DC-13, time constant as specified.

Features & Functions

Features	Protection with heavy starting duty Test/off button Trip-free release Reset pushbutton manual/auto

General information

Ambient operating temperature - min	-25 °C
Ambient operating temperature - max	50 °C
Ambient operating temperature (enclosed) - min	-25 °C
Ambient operating temperature (enclosed) - max	40 °C
Class	Other
Climatic proofing	Damp heat, constant, to IEC 60068-2-78 Damp heat, cyclic, to IEC 60068-2-30
Degree of protection	IP00
Mounting method	Separate positioning Separate mounting
Mounting position	As required
Opening diameter	27 mm
Overload release current setting - min	420 A
Overload release current setting - max	630 A
Overvoltage category	III
Pollution degree	3
Product category	ZW7 current transformer-operated overload relays
Protection	Finger and back-of-hand proof, Protection against direct contact when actuated from front (EN 50274)
Rated impulse withstand voltage (Uimp)	8000 V AC 4000 V (auxiliary and control circuits)
Shock resistance	10 g, Mechanical, Sinusoidal, Shock duration 10 ms
Suitable for	Branch circuits, (UL/CSA)
Temperature compensation	Continuous

Terminal capacities

Terminal capacity (flexible with ferrule)	2 x (0.75 - 2.5) mm^2 1 x (0.75 - 2.5) mm^2
Terminal capacity (solid)	2 x (0.75 - 4) mm^2 1 x (0.75 - 4) mm^2
Terminal capacity (solid/stranded AWG)	2 x (18 - 14)
Stripping length (control circuit cable)	8 mm
Screw size	M3.5, Terminal screw

Screwdriver size	2, Terminal screw, Pozidriv screwdriver 1 x 6 mm, Terminal screw, Control circuit cables, Standard screwdriver
Tightening torque	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 AC, 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)	B600 at opposite polarity, AC operated (UL/CSA) R300, DC operated (UL/CSA) B300 at opposite polarity, AC operated (UL/CSA)
Short-circuit rating	
Short-circuit protection	With overload relay in conjunction with a transformer as required for the contactor, Max. Fuse, Main conducting paths
Short-circuit protection rating	Max. 6 A gG/gL, Fuse, Auxiliary contacts
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	8.1 W
Heat dissipation capacity Pdiss	0 W
Heat dissipation per pole, current-dependent Pvid	2.7 W
Rated operational current for specified heat dissipation (In)	630 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	420 - 630
Max. rated operation voltage Ue		V	690
Mounting method			Separate positioning
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			Other
Reset function input			No
Reset function automatic			Yes
Reset function push-button			Yes