

Overload relay, ZB150, Ir= 145 - 175 A, 1 N/O, 1 N/C, Direct mounting, IP00



Powering Business Worldwide™

Part no. ZB150-175
Catalog No. 107316
Alternate Catalog No. XTOB175GC1

Delivery program

Product range			Overload relay ZB up to 150 A
Product range			Accessories
Accessories			Overload relays
Frame size			ZB150
Phase-failure sensitivity			IEC/EN 60947, VDE 0660 Part 102
Description			Test/off button Reset pushbutton manual/auto Trip-free release
Mounting type			Direct mounting
	I _r	A	145 - 175

Auxiliary contacts

N/O = Normally open		1 N/O	
N/C = Normally closed		1 N/C	
For use with		DILM80 DILM95 DILM115 DILM150 DILM170 DILMF80 DILMF95 DILMF115 DILMF150 DIULM80 DIULM95 DIULM115 DIULM150 SDAINLM140 SDAINLM165 SDAINLM200 SDAINLM260	
	gG/gL	A	315
	gG/gL	A	250

Short-circuit protection

Type "1" coordination		gG/gL	A	315

Type "2" coordination		gG/gL	A	250

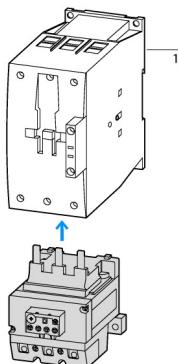
Notes

Overload release: tripping class 10 A

Short-circuit protection: Observe the maximum permissible fuse of the contactor with direct device mounting.

Notes

Fitted directly to the contactor



1 Contactor

Technical data

General

Standards			IEC/EN 60947, VDE 0660, UL, CSA
Climatic proofing			Damp heat, constant, to IEC 60068-2-78 Damp heat, cyclic, to IEC 60068-2-30
Ambient temperature			Operating range to IEC/EN 60947
Open	°C	-25 - +55	
Enclosed	°C	-25 - 40	
Temperature compensation			Continuous
Weight	kg	1.21	
Mechanical shock resistance	g	10 Sinusoidal Shock duration 10 ms	
Degree of Protection			IP00
Protection against direct contact when actuated from front (EN 50274)			Finger and back-of-hand proof
Altitude	m	Max. 2000	

Main conducting paths

Rated impulse withstand voltage	U _{imp}	V AC	8000
Overtoltage category/pollution degree			III/3
Rated insulation voltage	U _i	V	1000
Rated operational voltage	U _e	V AC	1000
Safe isolation to EN 61140			
Between auxiliary contacts and main contacts		V AC	440
Between main circuits		V AC	440
Temperatur compensation residual error > 40 °C			≤ 0.25 %/K
Current heat loss (3 conductors)			
Lower value of the setting range		W	23.7
Maximum setting		W	34.5
Terminal capacities		mm ²	
Solid		mm ²	1 x (4 - 16) 2 x (4 - 16)
Flexible with ferrule		mm ²	1 x (4 - 70) 2 x (4 - 70)
Stranded		mm ²	1 x (16 - 70) 2 x (16 - 70)
Solid or stranded		AWG	3/0
Terminal screw			M10
Tightening torque		Nm	10
Stripping length		mm	24
Tools			
Hexagon socket-head spanner	SW	mm	5

Auxiliary and control circuits

Rated impulse withstand voltage	U _{imp}	V	4000
Overtoltage category/pollution degree			III/3
Terminal capacities		mm ²	
Solid		mm ²	1 x (0.75 - 4) 2 x (0.75 - 4)
Flexible with ferrule		mm ²	1 x (0.75 - 2.5) 2 x (0.75 - 2.5)
Solid or stranded		AWG	2 x (18 - 14)
Terminal screw			M3.5
Tightening torque		Nm	1.2
Stripping length		mm	8
Tools			
Pozidriv screwdriver		Size	2
Standard screwdriver		mm	1 x 6

Rated insulation voltage	U _i	V AC	500
Rated operational voltage	U _e	V AC	500
Safe isolation to EN 61140			
between the auxiliary contacts		V AC	240
Conventional thermal current	I _{th}	A	6
Rated operational current	I _e	A	
AC-15			
Make contact			
120 V	I _e	A	1.5
220 V 230 V 240 V	I _e	A	1.5
380 V 400 V 415 V	I _e	A	0.5
500 V	I _e	A	0.5
Break contact			
120 V	I _e	A	1.5
220 V 230 V 240 V	I _e	A	1.5
380 V 400 V 415 V	I _e	A	0.9
500 V	I _e	A	0.8
DC L/R \leq 15 ms			Switch-on and switch-off conditions based on DC-13, time constant as specified.
24 V	I _e	A	0.9
60 V	I _e	A	0.75
110 V	I _e	A	0.4
220 V	I _e	A	0.2
Short-circuit rating without welding			
max. fuse		A gG/gL	6

Notes

Notes Ambient air temperature: Operating range to IEC/EN 60947, PTB: -5°C to +55°C

Main circuits terminal capacity solid and flexible conductors with ferrules: When using 2 conductors use equal cross-sections.

Rating data for approved types

Auxiliary contacts			
Pilot Duty			
AC operated			B300 at opposite polarity B600 at same polarity
DC operated			R300
Short Circuit Current Rating	SCCR		
Basic Rating			
SCCR	kA	10	
max. Fuse	A	600 Class K5	
max. CB	A	600	

Design verification as per IEC/EN 61439

Technical data for design verification			
Rated operational current for specified heat dissipation	I _n	A	175
Heat dissipation per pole, current-dependent	P _{vid}	W	11.5
Equipment heat dissipation, current-dependent	P _{vid}	W	34.5
Static heat dissipation, non-current-dependent	P _{vs}	W	0
Heat dissipation capacity	P _{diss}	W	0
Operating ambient temperature min.		°C	-25
Operating ambient temperature max.		°C	55
IEC/EN 61439 design verification			
10.2 Strength of materials and parts			
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 Verification of resistance of insulating materials to abnormal heat and fire due to internal electric 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 Insulation properties		
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 8.0

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@ss10.0.1-27-37-15-01 [AKF075014])

Adjustable current range	A	145 - 175
Max. rated operation voltage Ue	V	1000
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