

Overload relay, ZB65, Ir= 65 - 75 A, 1 N/O, 1 N/C, Direct mounting, IP00

**EATON**<sup>®</sup>

Powering Business Worldwide™

**Part no.** ZB65-75  
**Catalog No.** 108792  
**Alternate Catalog No.** XTOB075DC1

**Delivery program**

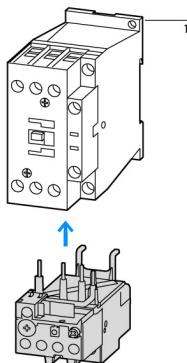
Product range	Overload relay ZB up to 150 A		
Product range	Accessories		
Accessories	Overload relays		
Frame size	ZB65		
Phase-failure sensitivity	IEC/EN 60947, VDE 0660 Part 102		
Description	Test/off button Reset pushbutton manual/auto Trip-free release		
Mounting type	Direct mounting		
	I <sub>r</sub>	A	65 - 75
<b>Auxiliary contacts</b>			
N/O = Normally open	1 N/O		
N/C = Normally closed	1 N/C		
For use with	DILM40 DILM50 DILM65 DILM72 DILMF40 DILMF50 DILMF65 DIULM40 DIULM50 DIULM65 SDAINLM70 SDAINLM90 SDAINLM115		

**Short-circuit protection**

Type "1" coordination	gG/gL	A	200
			
Type "2" coordination	gG/gL	A	125
			

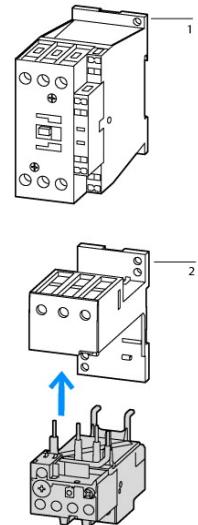
**Notes**

Fitted directly to the contactor



1 Contactor  
2 Bases

Separate mounting



## 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		0.23
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	6000
Oversupply category/pollution degree			III/3
Rated insulation voltage	$U_i$	V	690
Rated operational voltage	$U_e$	V AC	690
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	10.8
Maximum setting		W	14.4
Terminal capacities		mm <sup>2</sup>	
Solid		mm <sup>2</sup>	1 x (1 - 16) 2 x (1 - 16)
Flexible with ferrule		mm <sup>2</sup>	1 x (1 - 25) 2 x (1 - 25)
Stranded		mm <sup>2</sup>	1 x (16 - 25)
Solid or stranded		AWG	14 - 2
Terminal screw			M6
Tightening torque		Nm	3.5
Stripping length		mm	11
Tools			
Pozidriv screwdriver		Size	2
Standard screwdriver		mm	1 x 6

### Auxiliary and control circuits

Rated impulse withstand voltage	$U_{imp}$	V	4000
Oversupply category/pollution degree			III/3
Terminal capacities		mm <sup>2</sup>	
Solid		mm <sup>2</sup>	1 x (0.75 - 4) 2 x (0.75 - 4)
Flexible with ferrule		mm <sup>2</sup>	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	200	
max. CB	A	150	
480 V High Fault			
SCCR (fuse)	kA	100	
max. Fuse	A	125 Class J/CC	
SCCR (CB)	kA	65	
max. CB	A	100	
600 V High Fault			
SCCR (fuse)	kA	100	
max. Fuse	A	125 Class J/CC	

## Design verification as per IEC/EN 61439

Technical data for design verification			
Rated operational current for specified heat dissipation	$I_n$	A	75
Heat dissipation per pole, current-dependent	$P_{vid}$	W	4.8
Equipment heat dissipation, current-dependent	$P_{vid}$	W	14.4
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	65 - 75
Max. rated operation voltage Ue	V	690
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