


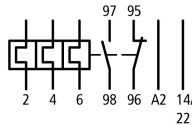


**Overload relay, 10-16A, 1N/O+1N/C**



Powering Business Worldwide™

**Part no.** ZB12-16  
**Article no.** 290168  
**Catalog No.** XTOB016BC1

**Delivery programme**

Product range			Overload relay ZB up to 150 A
Frame size			ZB12
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	12 - 16
Contact sequence			
Auxiliary contacts			
N/O = Normally open			1 N/O
N/C = Normally closed			1 N/C
For use with			DILM7, DILM9, DILM12, DILM15, DIULM7, DIULM9, DIULM12, SDAINLM12, SDAINLM16, SDAINLM22
Short-circuit protection			
Type "1" coordination 	gG/gL	A	50
Type "2" coordination 	gG/gL	A	25

**Notes**

Overload release: tripping class 10 A

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

Suitable for protection of Ex e-motors.



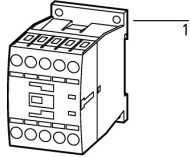
II (2) GD

PTB 10 ATEX 3010

Observe manual MN03407004Z-DE/EN.

**Notes**

Fitted directly to the contactor



1 Contactor

**Approvals**

Product Standards  
 UL File No.  
 UL Category Control No.  
 CSA File No.  
 CSA Class No.  
 North America Certification  
 Specially designed for North America  
 Suitable for  
 Max. Voltage Rating  
 Degree of Protection

UL 508; CSA-C22.2 No. 14; IEC/EN 60947-4-1; IEC/EN 60947-5-1; CE marking  
 E29184  
 NKCR  
 12528  
 3211-03  
 UL listed, CSA certified  
 No  
 Branch circuits  
 600 V AC  
 IEC: IP20, UL/CSA Type: -

**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		°C	
			Operating range to IEC/EN 60947 PTB: -5 °C - +55 °C
Open		°C	- 25 - 55
Enclosed		°C	- 25 - 40
Temperature compensation			Continuous
Weight		kg	0.15
Mechanical shock resistance		g	10 Sinusoidal Shock duration 10 ms
Protection type			IP20
Protection against direct contact when actuated from front (EN 50274)			Finger and back-of-hand proof

**Main conducting paths**

Rated impulse withstand voltage	$U_{imp}$	V AC	6000
Overvoltage 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
Temperature compensation residual error > 40 °C			$\pm$ 0.25 %/K
Current heat loss (3 conductors)			
Lower value of the setting range		W	2.5
Maximum setting		W	6
Terminal capacities		mm <sup>2</sup>	
Solid		mm <sup>2</sup>	2 x (1 - 6)
Flexible with ferrule		mm <sup>2</sup>	2 x (1 - 4)
Solid or stranded		AWG	14 - 8
Terminal screw			M4

Tightening torque		Nm	1.8
Tools			
Pozidriv screwdriver		Size	2
Standard screwdriver		mm	1 x 6

### Auxiliary and control circuits

Rated impulse withstand voltage	$U_{imp}$	V	6000
Overvoltage category/pollution degree			III/3
Terminal capacities		mm <sup>2</sup>	
Solid		mm <sup>2</sup>	2 x (0.75...4)
Flexible with ferrule		mm <sup>2</sup>	2 x (0.75 - 2.5)
Solid or stranded		AWG	2 x (18 - 12)
Terminal screw			M3.5
Tightening torque		Nm	0.8 - 1.2
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-13 L/R - 15 ms			
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 temperature: Operating range to IEC/EN 60947, PTB: -5°C to +55°C  
Rated operational current: Making and breaking conditions to DC-13, L/R constant as stated  
Main contacts terminal capacity solid and stranded conductors with ferrules: When using 2 conductors use identical cross-section  
See overlay "Fuses" for short-circuit rating time/current characteristic (please enquire)  
6 mm flexible with ferrules to DIN 46228  
Rated operational current DC-13, 60 V: N/O auxiliary contact 0.6 A  
at ZB65-XEZ max 1 x (1...16)

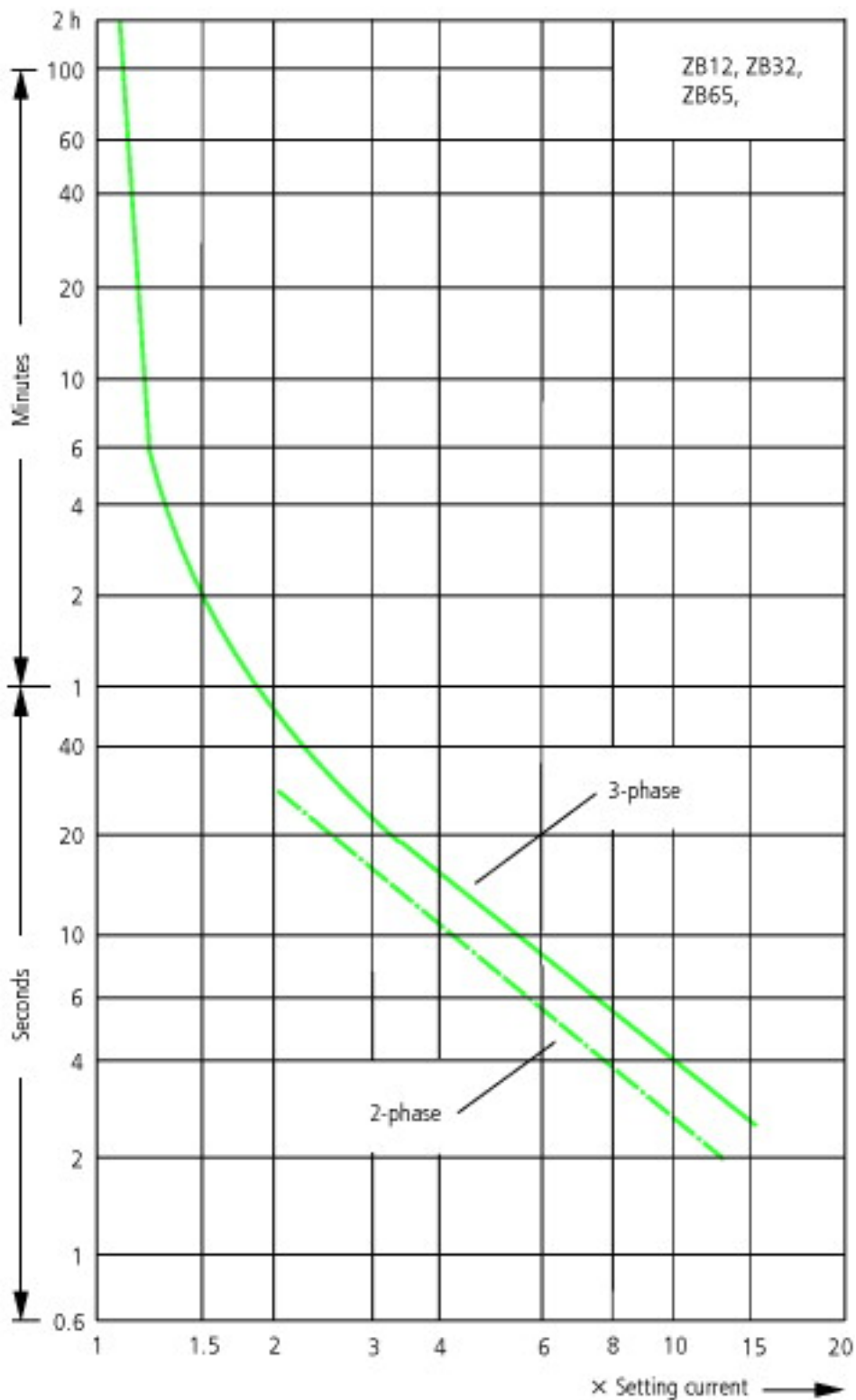
### Technical data ETIM 5.0

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@ss8-27-37-15-01 [AKF075010])			
Adjustable current range		A	12 - 16

Mounting method		Direct attachment
Connection type main current 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

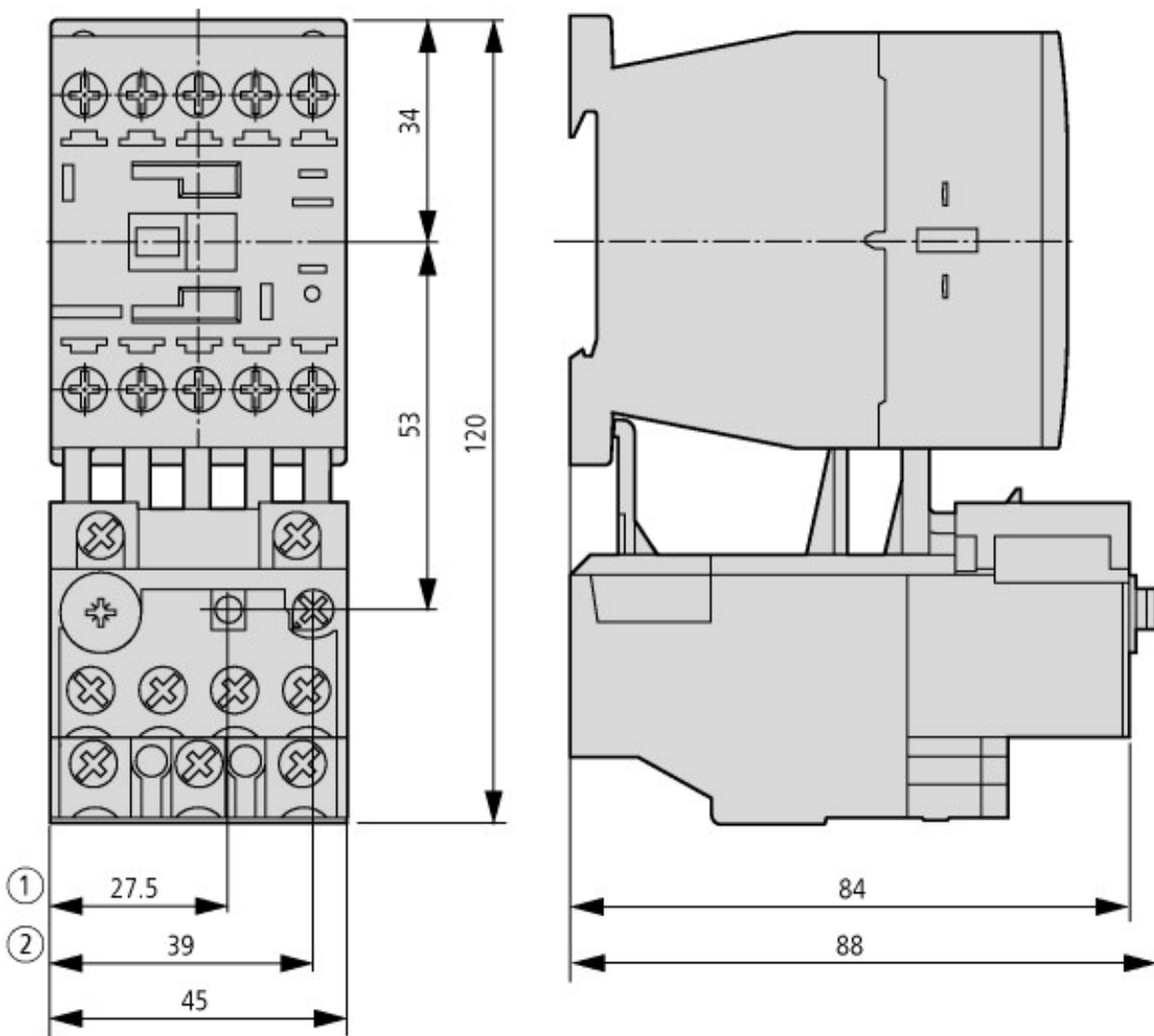
## Characteristics

Characteristic curves



These tripping characteristics are mean values of the spread at 20 °C ambient temperature in a cold state. Tripping time depends on response current. On devices at operating temperature the tripping time of the overload relay drops to approx. 25 % of the read value. Specific characteristics for each individual setting range can be found in the manual.

## Dimensions



- ① OFF
- ② Reset/ON

### Additional product information (links)

#### IL03407015Z (AWA2300-2114) Overload relay

IL03407015Z (AWA2300-2114) Overload relay

[ftp://ftp.moeller.net/DOCUMENTATION/AWA\\_INSTRUCTIONS/IL03407015Z2013\\_01.pdf](ftp://ftp.moeller.net/DOCUMENTATION/AWA_INSTRUCTIONS/IL03407015Z2013_01.pdf)