

## Overload relay 4 - 6A

**Part no.** ZB12-6

**Article no.** 278439



Powering Business Worldwide™

### Program

Product range			Overload relay ZB up to 150 A
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	4 - 6
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 DS7-34...SX005...
Short-circuit protection			
Type "1" coordination	gG/gL	A	25
Type "2" coordination	gG/gL	A	20

#### 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.



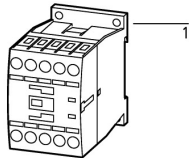
II (2) GD

PTB 10 ATEX 3010

Observe manual AWB2300-1527D/GB.

#### Notes

Fitted directly to the contactor



1 Contactor

### Approbationen

UL approval	Yes
CSA approval	Yes

Product Standards  
 UL File No.  
 UL CCN  
 CSA File No.  
 CSA Class No.  
 NA Certification  
 Specially designed for NA  
 Suitable for  
 Max. Voltage Rating  
 Degree of Protection

UL 508; CSA-C22.2 No. 14; IEC/EN 60947-4-1; 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 90274)			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 VDE 0106 Part 101 and Part 101/A1			
Between auxiliary contacts and main contacts		V AC	440
Between main circuits		V AC	440
Temperature compensation residual error > 40°C			$\frac{\Delta R}{R} = 0.25\%/K$
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) 2 x (1 - 6) 6 mm <sup>2</sup> Flexible with ferrules to DIN 46228
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 VDE 0106 Part 101 and Part 101/A1			
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
240 V	$I_e$	A	1.5
415 V	$I_e$	A	0.5
500 V	$I_e$	A	0.5
Break contact			
120 V	$I_e$	A	1.5
240 V	$I_e$	A	1.5
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

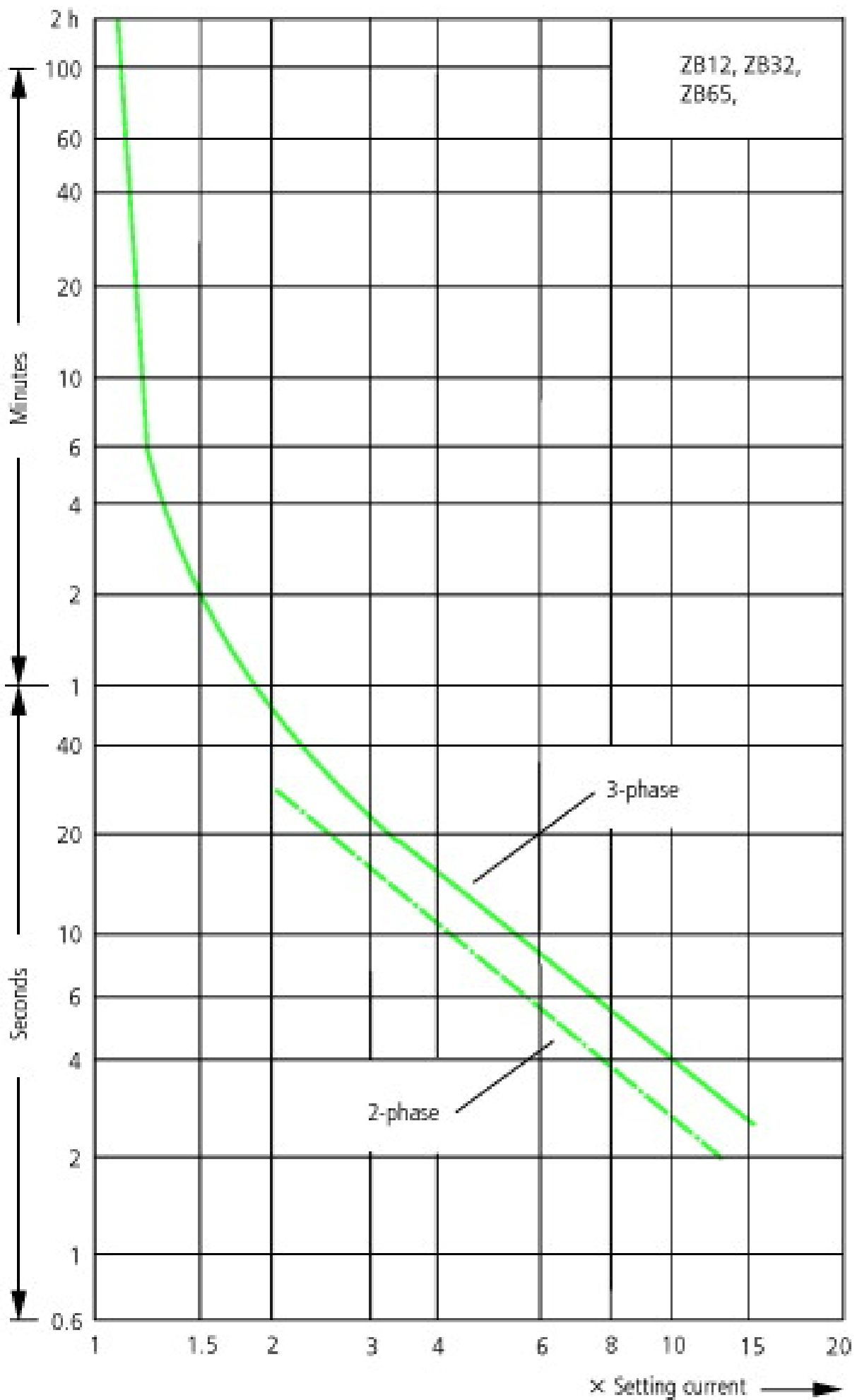
## Notes

**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 according to ETIM 4.0

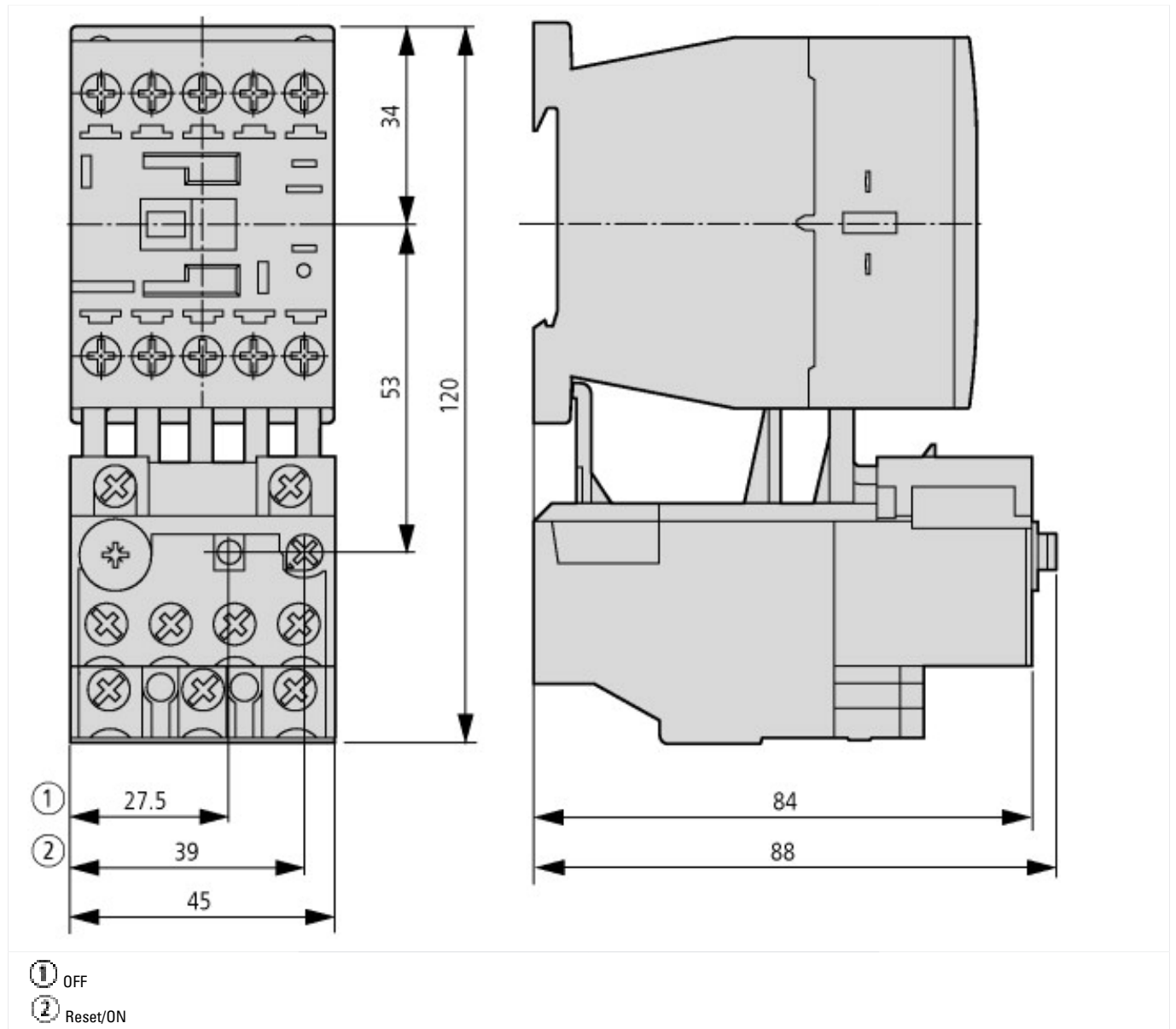
Number of auxiliary contacts as N/Cs			1
Number of auxiliary contacts as N/Os			1
Mounting type			Direct mounting
Adjustable current range		A	6
Connection type main circuit			Screw connection
Tripping class			CLASS 10
Number of auxiliary contacts as changeover contacts			0

## Characteristics



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



Additional product information (links)

IL03407015Z (IL03407015Z) Overload relay

[ftp://ftp.moeller.net/DOCUMENTATION/AWA\\_INSTRUCTIONS/IL03407015Z2010\\_10.pdf](ftp://ftp.moeller.net/DOCUMENTATION/AWA_INSTRUCTIONS/IL03407015Z2010_10.pdf)