## **DATASHEET - ZB12-0,16**



Overload relay, ZB12, Ir= 0.1 - 0.16 A, 1 N/O, 1 N/C, Direct mounting, IP20



Powering Business Worldwide

Part no. ZB12-0,16 Catalog No. 278431 Alternate Catalog XTOBP16BC1

No.

EL-Nummer 0004131826

(Norway)

Similar to illustration

		Overload relay ZB up to 150 A
		Accessories
		Overload relays
		ZB12
		IEC/EN 60947, VDE 0660 Part 102
		Test/off button Reset pushbutton manual/auto Trip-free release
		Direct mounting
l <sub>r</sub>	Α	0.1 - 0.16
		97 95 2 4 6 98 96 A2 14/ 22
		1 N/0
		1 N/C
		DILM7, DILM9, DILM12, DILM15, DIULM7, DIULM9, DIULM12, SDAINLM12, SDAINLM16, SDAINLM22
gG/gL	A	25
gG/gL	A	0.5
	gG/gL	gG/gL A

#### Notes

Overload release: tripping class 10 A

short-circuit protective device: Observe the maximum permissible fuse of the contactor with direct device mounting.

Suitable for protection of Ex e-motors.



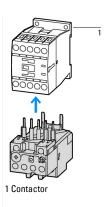
II(2)G [Ex d] [Ex e] [Ex px], II(2)D [Ex p] [Ex t]

PTB 10 ATEX 3010

Observe manual MN03407005Z-DE/EN.

### Notes

Fitted directly to the contactor



### Technical data General

Sandarders         Climatic proofing         Each Edit MoNAY / NE BORGU UL CSA           Climatic proofing         Che March Configurations         Che Command Peaks Constant on the ECONS-278           Ambient temperature         "C         25 - 55           Open         "C         25 - 45           Enclased         "C         25 - 45           Temperature compensation         "C         25 - 40           Meight         Ma         14         14           Meschanical shock resistance         "B         16         142           Postection against direct contact when actuated from front (EM S0274)         "C         150 -	General			
Ambient temperature         Demp heat. cyclic, to IEC 60068 2-30           Ambient temperature         Common service of PTBs. 17 c. 48 °C         Common service of PTBs. 17 c. 48 °C         PTBs. 17 c. 48 °C         Common service of PTBs. 18 °C	Standards			IEC/EN 60947, VDE 0660, UL, CSA
Open	Climatic proofing			
PTBs167 C-455 TC   Enclosed	Ambient temperature			
Enclosed   Continuous   Cont				Operating range to IEC/EN 60947 PTB: -5 °C - +55 °C
Temperature compensation Weight Mechanical shock resistance Mechanical shock resistance Protection Organo of Protection Protection against direct contact when actuated from front [EN 50274] Protection against direct contact when actuated from front [EN 50274] Altitude Mechanical shock resistance Protection against direct contact when actuated from front [EN 50274] Altitude Mechanical size of the setting and size of the setting range  Bated impulses withstand voltage  Our-ording category/pollution degree  Rated impulses withstand voltage  Uay VAC 8000  Safe isolation to ROTHU  Bated impulses and main contacts  Uay VAC 8000  Safe isolation to EN 61140  Batewane auxiliary contacts and main contacts  Batewane main circuits  Batewane main circui	Open		°C	-25 - +55
Weight         Key         0.141           Mechanical shock resistance         4         8g         0.141           Degree of Protection         1         8g         Sinusoidal Sinuso	Enclosed		°C	- 25 - 40
Machanical shock resistance         general Protection         Shock duration 10 ms           Dagree of Protection against direct contact when actuated from front (EN 59274)         1220           Attitude         m         Max. 2000           Main conducting paths         IIII         Finger and back-of-hand proof           Rated insulation voltage         Ump         VAC         6000           Overvoltage category/pollution degree         Ui,         V         690           Rated insulation voltage         Ui,         V         690           Safe isolation to EN 81140         VAC         440           Between auxiliary contacts and main contacts         VAC         440           Between main circuits         20.25 %/K         2.25 %/K           Current heat loss Conductors)         20.25 %/K         2.25 %/K           Lower value of the setting range         W         5.4         2.25 %/K           Solid         Maximum setting         W         5.4         2.2 (1 - 6)           Flexible with ferrule         W         5.4         2.2 (1 - 6)           Solid or stranded         W         4.0         2.2 (1 - 6)           Tipping length         W         4.0         2.2 (1 - 6)           Tools         W <t< td=""><td>Temperature compensation</td><td></td><td></td><td>Continuous</td></t<>	Temperature compensation			Continuous
Degree of Protection	Weight		kg	0.141
Protection against direct contact when actuated from front (EN 50274)         Image: Ingreand back-of-hand proof           Altitude         m         Max. 2000           Maintenance         Weak and producting paths           Rated impulse withstand voltage         Vac         600           Overvoltage category/pollution degree         Ui         V         690           Rated insulation voltage         Ui         V AC         890           Safe isolation to N 61140         VAC         990           Between auxiliary contacts and main contacts         V AC         440           Between namic ricruits         VAC         440           Temperatur compensation residual error > 40 °C         VAC         40           Current heat loss (3 conductors)         VAC         40           Insulation strain         Maximum setting         VA         2.5 ½%           Maximum setting         Mm²         2.1 (1.6)         2.2 (1.6)           Plexible with ferrule         Mm²         2.2 (1.6)         2.2 (1.6)           Solid or stranded         Mm²         3.8 (2.1 (1.6)         3.1 (1.6)         3.1 (1.6)         3.1 (1.6)         3.1 (1.6)         3.1 (1.6)         3.1 (1.6)         3.1 (1.6)         3.1 (1.6)         3.1 (1.6)         3.1 (1.6)         3.	Mechanical shock resistance		g	Sinusoidal
Altotude         m         Max. 2000           Main conducting paths         Vamp         V AC         8000           Overvoltage category/pollution degree         U         VAC         800           Rated insulation voltage         U         V AC         890           Rated operational voltage         U         V AC         890           Sale isolation to EN 61140         Frequent of the Still of Still o	Degree of Protection			IP20
Main conducting paths           Rated impulse withstand voltage         Ump         VAC         6000           Overovitage category/pollution degree         III/3         III/3           Rated insulation voltage         U <sub>e</sub> VAC         690           Rated operational voltage         VAC         690           Safe isolation to Eh 61140         VAC         440           Between auxiliary contacts and main contacts         VAC         440           Between nain circuits         VAC         440           Current heat loss (3 conductors)         VAC         40           Current heat loss (3 conductors)         W         5.4           Terminal capacities         mm²         5.4           Solid         mm²         1 x(1 - 6)           Solid         mm²         1 x(1 - 6)           Solid or stranded         May         1 x(1 - 6)           Flexible with ferrule         Ma         1 x(1 - 6)           Solid or stranded         Ma         1 x(1 - 6)           Terminal screw         Ma         1 x(1 - 6)           Tipping length         Ma         1 x(1 - 6)           Tools         Ma         1 x(1 - 6)           Solid or stranded         Ma         1 x	Protection against direct contact when actuated from front (EN 50274)			Finger and back-of-hand proof
Rated impulse withstand voltage         Uimp         V AC         6000           Overvoltage category/pollution degree         III/3         III/3           Rated category/pollution degree         Ui         V AC         690           Rated operational voltage         V AC         990           Safe isolation to R61140         V AC         440           Between auxiliary contacts and main contacts         V AC         440           Between nain circuits         V AC         400           Between nain circuits         V AC         400           Current heat loss (3 conductors)         V AC         40           Current heat loss (3 conductors)         V AC         54           Inward value of the setting range         W         2.1           Maximum setting         mm²         1.1 (1-6)           Solid         mm²         1.1 (1-6)           Solid         mm²         1.1 (1-6)           Flexible with ferrule         mm²         1.1 (1-4)           Solid or stranded         M         1.8           Flexible with ferrule         mm²         1.2 (1-6)           Typing length         mm²         1.2 (1-6)           Typing length         mm²         1.2 (1-6)	Altitude		m	Max. 2000
Overvoltage category/pollution degree         U <sub>1</sub> V         690           Rated insulation voltage         U <sub>0</sub> V AC         690           Safe isolation to EN 61140         V         440           Between auxiliary contacts and main contacts         V AC         440           Between main circuits         V AC         440           Temperatur compensation residual error >40 °C         V AC         40           Current heat loss (3 conductors)         W         5.25 %/K           Lower value of the setting range         W         5.4           Maximum setting         W         5.4           Terminal capacities         mm²         1 x (1 - 6)           Flexible with ferrule         mm²         1 x (1 - 4)           Solid or stranded         AWG         18 - 8           Terminal screw         M4         4           Tipping length         mm         10           Tools         mm         10           Pozidriv screwdriver         size         2           Standard screwdriver         size         2           Standard screwdriver         mm         1 x 6           Standard screwdriver         mm         1 x 6           Standard screwdriver </td <td></td> <td></td> <td></td> <td></td>				
Rated insulation voltage         Ui         V         690           Safe isolation to EN 61140         V         440           Between auxiliary contacts and main contacts         V         440           Between main circuits         V         40           Temperatur compensation residual error > 40 °C         V         2.25 %/K           Current heat loss (3 conductors)         W         5.4           Lower value of the setting range         W         5.4           Maximum setting         W         5.4           Flexible with ferrule         mm²         1 x(1 - 6) 2 x(1	Rated impulse withstand voltage	U <sub>imp</sub>	V AC	6000
Rated operational voltage         Ue         V AC         690           Safe isolation to EN 61140         VAC         440           Between auxiliary contacts and main contacts         V AC         440           Between main circuits         V AC         440           Temperatur compensation residual error > 40 °C         S 0.25 %/K           Current heat loss (3 conductors)         W         2.1           Lower value of the setting range         W         5.4           Maximum setting         mm²         1 x (1 - 6)           Solid         mm²         1 x (1 - 6)           Flexible with ferrule         mm²         1 x (1 - 6)           Solid or stranded         AWG         18 - 8           Terminal screw         M4         4           Tightening torque         Nm         1.8           Stripping length         mm         10           Tools         Pozidriv screwdriver         Size         2           Pozidriv screwdriver         Size         2           Standard screwdriver         mm         1 x 6           Auxiliary and control circuits         mm         1 x 6           Rated impulse withstand voltage         Umm         4000           Ouvevoltage categor	Overvoltage category/pollution degree			111/3
Safe isolation to EN 61140  Between auxiliary contacts and main contacts Between main circuits  VAC 440  Temperatur compensation residual error > 40 °C  Current heat loss (3 conductors)  Lower value of the setting range  Maximum setting  Solid  Flexible with ferrule  Solid or stranded  Flexible with ferrule  Solid or stranded  AWG 18 - 8  Terminal screw  MA  Terminal screw  Printing torque  Nm 1.8  Stripping length  Tools  Pozidriv screwdriver  Standard screwdriver  Standard screwdriver  Standard screwdriver  Rated impulse withstand voltage  Overvoltage category/pollution degree	Rated insulation voltage	Ui	V	690
Between auxiliary contacts and main contacts Between main circuits  Temperatur compensation residual error > 40 °C  Current heat loss (3 conductors)  Lower value of the setting range Maximum setting  Terminal capacities  Solid  Flexible with ferrule  Flexible with ferrule  Solid or stranded  Terminal screw  Terminal screw  Flexible with ferrule  Solid or stranded  Terminal screw  Flexible with ferrule  Solid or stranded  Terminal screw  Terminal screw  Flexible with ferrule  Solid or stranded  Terminal screw  Flexible with ferrule  Solid or stranded  Terminal screw  Tightening torque  Stripping length  Tools  Pozidriv screwdriver  Standard screwdriver  Standard screwdriver  Standard screwdriver  Standard screwdriver  Standard screwdriver  Standard screwdriver  Rated impulse withstand voltage  Overvoltage category/pollution degree  Ill/3	Rated operational voltage	U <sub>e</sub>	V AC	690
Between main circuits  Temperatur compensation residual error > 40 °C Current heat loss (3 conductors)  Lower value of the setting range  Maximum setting  Maximum setting  Solid  Flexible with ferrule  Flexible with ferrule  Solid or stranded  Terminal screw  Terminal screw  Flexible grange  MAWS  18 - 8  Terminal screw  Terminal screw  Terminal screw  Flexible with ferrule  Solid or stranded  Terminal screw  Tools  Pozidriv screwdriver  Standard screwdriver  Standard screwdriver  Standard screwdriver  Standard screwdriver  Tools  Pozidriv screwdriver  Standard screwdriver  Standard screwdriver  Tools  Pozidriv screwdriver  Tools  Pozidriv screwdriver  Tools  Pozidriv screwdriver  Standard screwdriver  Tools  Hill/3	Safe isolation to EN 61140			
Temperatur compensation residual error > 40 °C Current heat loss (3 conductors)  Lower value of the setting range  Maximum setting  Terminal capacities  Solid  Flexible with ferrule  Solid or stranded  Terminal screw  Terminal screw  Terminal screw  Terminal screw  Tools  Pozidriv screwdriver  Standard screwdriver  M4  4000  Webbard to the setting to the screwdriver  Standard screwdriver  M4  Standard screwdriver  M4  Standard screwdriver  M4  Standard screwdriver  M5  Standard screwdriver  M6  Standard screwdriver  M7  Standard screwdriver  M6  Standard screwdriver  M7  Standard screwdr	Between auxiliary contacts and main contacts		V AC	440
Current heat loss (3 conductors)  Lower value of the setting range  Maximum setting  Terminal capacities  Solid  mm²  Solid  mm²  1 x (1 - 6) 2 x (1 - 6)  Flexible with ferrule  Flexible with ferrule  Solid or stranded  AWG 18 - 8  Terminal screw  Terminal screw  M4  Tightening torque  Stripping length  Tools  Pozidriv screwdriver  Standard screwdriver  Standard screwdriver  Auxiliary and control circuits  Rated impulse withstand voltage  Vue 2.1  W 2.1  W 5.4  Mm²  1 x (1 - 6) 2 x (1 - 6)  M4  18 - 8  Terminal screw  M4  Tightening torque  Nm 1.8  Stripping length  mm 10  Veryoltage category/pollution degree	Between main circuits		V AC	440
Lower value of the setting range  Maximum setting  W 5.4  Terminal capacities  mm²  Solid  mm²  1 x (1 - 6) 2 x (1 - 6) 2 x (1 - 6) 2 x (1 - 6)  Flexible with ferrule  Solid or stranded  AWG 18 - 8  Terminal screw  Terminal screw  Tightening torque  Nm 1.8  Stripping length  Tools  Pozidriv screwdriver  Standard screwdriver  Standard screwdriver  Standard screwdriver  Maxiliary and control circuits  Rated impulse withstand voltage  Uimp V 4000  Overvoltage category/pollution degree	Temperatur compensation residual error > 40 $^{\circ}\text{C}$			≦ 0.25 %/K
Maximum setting  Terminal capacities  mm²  Solid  mm²  1 x (1 - 6) 2 x (1 - 6) 2 x (1 - 6)  Flexible with ferrule  mm²  1 x (1 - 4) 2 x (1 - 4) 2 x (1 - 4)  Solid or stranded  AWG  18 - 8  Terminal screw  Tightening torque  Nm  10  Tools  Pozidriv screwdriver  Standard screwdriver  Standard screwdriver  Standard screwdriver  Auxiliary and control circuits  Rated impulse withstand voltage  Vump  V  4000  Vervoltage category/pollution degree	Current heat loss (3 conductors)			
Terminal capacities mm²  Solid mm² 1x (1 - 6) 2x (1 - 4) 2x (1 - 4	Lower value of the setting range		W	2.1
Solid  mm² 1x(1-6) 2x(1-6)  Flexible with ferrule  mm² 1x(1-4) 2x(1-4)  Solid or stranded  AWG 18-8  Terminal screw  M4  Tightening torque  Nm 1.8  Stripping length  Tools  Pozidriv screwdriver  Standard screwdriver  Standard screwdriver  Auxiliary and control circuits  Rated impulse withstand voltage  Overvoltage category/pollution degree  mm² 1x(1-6) 2x(1-6)  M4  18-8  19-8  10  1-8  40  4000  10  10  10  11  10  11  11	Maximum setting		W	5.4
Flexible with ferrule  Tightening torque  Stripping length  Tools  Pozidriv screwdriver Standard screwdriver  Standard screwdriver  Auxiliary and control circuits  Rated impulse withstand voltage  Overvoltage category/pollution degree  Tightening 2 x (1 - 6)  mm² 1 x (1 - 4)  2 x (1 - 4)  2 x (1 - 6)  mm² 1 x (1 - 4)  2 x (1 - 6)  mm² 1 x (1 - 4)  2 x (1 - 6)  mm² 1 x (1 - 4)  2 x (1 - 6)  mm² 1 x (1 - 4)  2 x (1 - 6)  mm² 1 x (1 - 4)  2 x (1 - 6)  mm² 1 x (1 - 4)  2 x (1 - 6)  mm² 1 x (1 - 4)  2 x (1 - 6)  mm² 1 x (1 - 4)  2 x (1 - 6)  mm² 1 x (1 - 4)  2 x (1 - 6)  mm² 1 x (1 - 4)  2 x (1 - 6)  mm² 1 x (1 - 4)  2 x (1 - 6)  mm² 1 x (1 - 4)  2 x (1 - 6)  mm² 2 x (1 - 6)  mm² 1 x (1 - 4)  mm² 1 x (1	Terminal capacities		mm <sup>2</sup>	
Solid or stranded  AWG 18 - 8  Terminal screw  M4  Tightening torque  Nm 1.8  Stripping length  Tools  Pozidriv screwdriver  Standard screwdriver  Standard screwdriver  Mathematical screwdriver  Size 2  Standard screwdriver  mm 1 x 6  Auxiliary and control circuits  Rated impulse withstand voltage  Uimp V 4000  Overvoltage category/pollution degree	Solid		mm <sup>2</sup>	
Terminal screw Tightening torque Nm 1.8 Stripping length Tools Pozidriv screwdriver Standard screwdriver Standard screwdriver Mm 1 x 6  Auxiliary and control circuits Rated impulse withstand voltage Uimp V 4000 Overvoltage category/pollution degree	Flexible with ferrule		mm <sup>2</sup>	
Tightening torque  Nm 1.8  Stripping length  Tools  Pozidriv screwdriver  Size 2  Standard screwdriver  mm 1 x 6  Auxiliary and control circuits  Rated impulse withstand voltage  Uimp  V 4000  Overvoltage category/pollution degree	Solid or stranded		AWG	18 - 8
Stripping length  Tools  Pozidriv screwdriver Size 2 Standard screwdriver mm 1 x 6  Auxiliary and control circuits  Rated impulse withstand voltage Uimp V 4000  Overvoltage category/pollution degree	Terminal screw			M4
Tools  Pozidriv screwdriver  Size 2  Standard screwdriver  mm 1 x 6  Auxiliary and control circuits  Rated impulse withstand voltage  U <sub>imp</sub> V 4000  Overvoltage category/pollution degree	Tightening torque		Nm	1.8
Pozidriv screwdriver Size 2 Standard screwdriver mm 1 x 6  Auxiliary and control circuits  Rated impulse withstand voltage Uimp V 4000  Overvoltage category/pollution degree	Stripping length		mm	10
Standard screwdriver mm 1 x 6  Auxiliary and control circuits  Rated impulse withstand voltage U <sub>imp</sub> V 4000  Overvoltage category/pollution degree III/3	Tools			
Auxiliary and control circuits  Rated impulse withstand voltage  Uimp  V 4000  Overvoltage category/pollution degree  III/3	Pozidriv screwdriver		Size	2
Rated impulse withstand voltage U <sub>imp</sub> V 4000  Overvoltage category/pollution degree III/3	Standard screwdriver		mm	1 x 6
Overvoltage category/pollution degree III/3				
	Rated impulse withstand voltage	U <sub>imp</sub>	V	4000
Terminal capacities mm <sup>2</sup>	Overvoltage category/pollution degree			111/3
	Terminal capacities		$\text{mm}^2$	
Solid mm <sup>2</sup> 1 x (0.75 - 4)	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)
		111111	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	Ui	V AC	500
Rated operational voltage	U <sub>e</sub>	V AC	500
Safe isolation to EN 61140			
between the auxiliary contacts		V AC	240
Conventional thermal current	$I_{th}$	Α	6
Rated operational current	le	Α	
AC-15			
Make contact			
120 V	Ie	Α	1.5
220 V 230 V 240 V	Ie	Α	1.5
380 V 400 V 415 V	l <sub>e</sub>	Α	0.5
500 V	I <sub>e</sub>	Α	0.5
Break contact			
120 V	I <sub>e</sub>	Α	1.5
220 V 230 V 240 V	I <sub>e</sub>	Α	1.5
380 V 400 V 415 V	I <sub>e</sub>	Α	0.9
500 V	I <sub>e</sub>	Α	0.8
DC L/R ≦ 15 ms			
			Switch-on and switch-off conditions based on DC-13, time constant as specified.
24 V	le	Α	0.9
60 V	I <sub>e</sub>	Α	0.75
110 V	I <sub>e</sub>	Α	0.4
220 V	I <sub>e</sub>	A	0.2
	·e		<u></u>
Short-circuit rating without welding max. fuse		V aG/al	6
IIIaa. Iuse		A gG/gL	U

#### 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		F	R300
Short Circuit Current Rating	SC	CCR	
600 V High Fault			
SCCR (fuse)	kA	. 1	100
max. Fuse	А	1	1 Class J/CC

# Design verification as per IEC/EN 61439

Technical data for design verification			
Rated operational current for specified heat dissipation	In	Α	0.16
Heat dissipation per pole, current-dependent	P <sub>vid</sub>	W	1.8
Equipment heat dissipation, current-dependent	P <sub>vid</sub>	W	5.4
Static heat dissipation, non-current-dependent	$P_{vs}$	W	0

Heat dissipation capacity	P <sub>diss</sub>	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 switch gear must be observed. $\label{eq:specification}$
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 7.0**

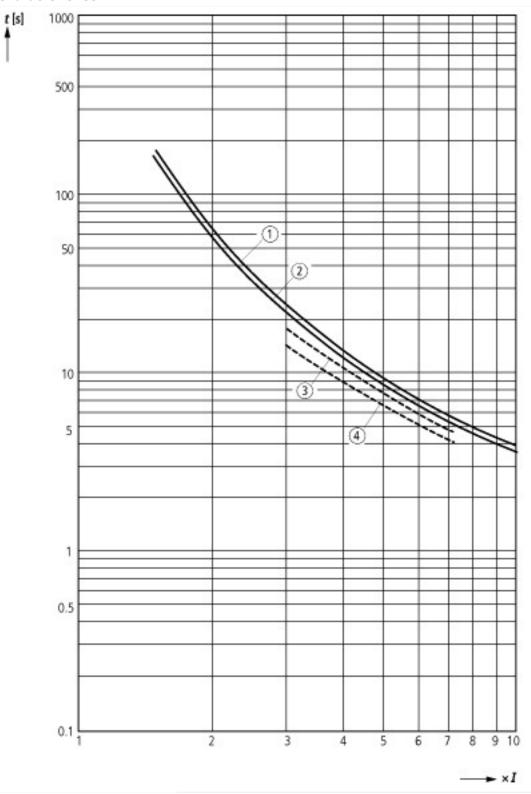
Low-voltage industrial components (EG000017) / Thermal overload relay (EC000106) Electric engineering, automation, process control engineering / Low-voltage switch technology / Overload protection device / Thermal overload relay (ecl@ss10.0.1-27-37-15-01 [AKF075014]) Α 0.1 - 0.16 Adjustable current range ٧ 690 Max. rated operation voltage Ue Mounting method Direct attachment Type of electrical connection of main circuit Screw connection Number of auxiliary contacts as normally closed contact Number of auxiliary contacts as normally open contact Number of auxiliary contacts as change-over contact 0 CLASS 10 Release class No Reset function input Yes Reset function automatic Reset function push-button Yes

# **Approvals**

Product Standards	IEC/EN 60947-4-1; UL 60947-4-1; CSA - C22.2 No. 60947-4-1-14; CE marking
UL File No.	E29184
UL Category Control No.	NKCR
CSA File No.	12528
CSA Class No.	3211-03
North America Certification	UL listed, CSA certified
Specially designed for North America	No
Suitable for	Branch circuits

600 V AC Max. Voltage Rating IEC: IP20, UL/CSA Type: -Degree of Protection

### **Characteristics**



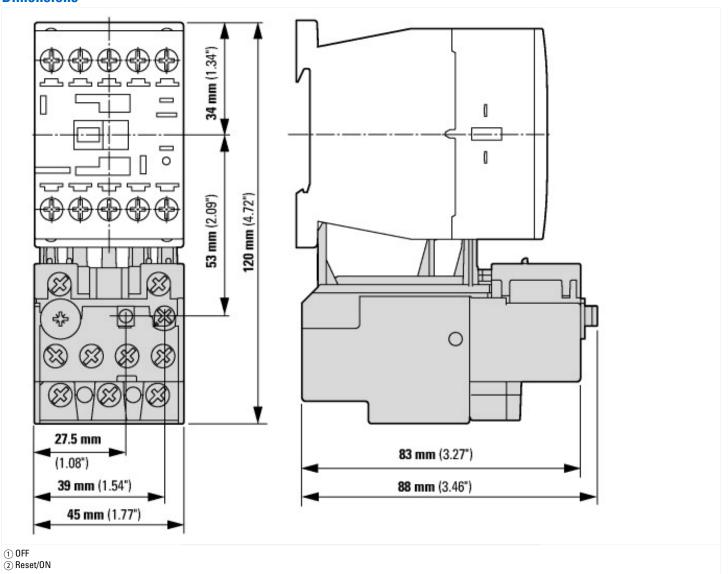
These tripping characteristics are mean values of the spreads at 20 °C ambient air temperature in a cold state.

Tripping time depends on response current.

When the devices are at operational temperature the tripping time of the overload relay falls to approx. 25 % of the read off value.

- 1: Minimum level, 3-phase
- 2: Maximum level, 3-phase
- 3: Minimum marker, 2-phase 4: Highest marker, 2-phase

## **Dimensions**



### **Assets (links)**

**Declaration of CE Conformity** 00002855

**Instruction Leaflets** 

IL03407015Z2018\_04

Manuals

MN03407004Z\_DE\_EN (English)