Overload relay

ZB Overload Relay

ZEB Overload Relay

ATEX

Motor protection is a central task of electrical equipment for machinery. From cost-effective bimetal solutions to demanding full motor protection with cross-linkage - we offer the right solution for each application.

Bimetal relay - overload relay up to 630 A

- Direct mounting on contactor saves mounting time.
- ATEX approval for the protection of EEx e motors up to 250 A.
- Comprehensive motor protection through phase failure sensitivity.
- Integrated test pushbutton facilitates high safety.

ZEB electronic overload relay - overload relay up to 1500 A

- ATEX approval for protection of EEx e motors up to 1500 A.
- Adjustable tripping classes.
- Phase failure and unbalance protection.
- Optional earth fault detection.
- Additional current setting range (5:1).

EMT6 thermistor overload relay for machine protection

- Overload protection through direct evaluation of winding temperature.
- Quick detection of operating state through LED display.
- Suitable for overload monitoring of motors in EEx e range.
- Wide range power supply reduces amount of types.

ZB Overload Relay

ZB 12 - 10

Designation
ZB = Overload relay

Frame Size	
12: Frame I	= 0.1-16A
32: Frame II	= 0.1-38A
65: Frame III	= 6-75A
150: Frame IV	= 25-175A

Ampere Rating
0.1A-175A

Technical data

ZE, ZB

			ZB12, ZB32	ZB65	ZB150(KK)
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					
Open [1]		°C	-25…55	-25…55	-25…55
Enclosed [1]		°C	-25…40	-25…40	-25…40
Temperature compensation			Continuous		
Mounting position			See catalogue for more information		
Weight		kg	0.15	0.25	1.64
Mechanical shock resistance half-sinusoidal shock, 10 ms to IEC 60068-2-27		g	10	10	10
Protection type			IP20	IP00	IP00
Protection against direct contact when actuated from front (EN 50274)			Finger- and back-of-hand proof		
Main contacts					
Rated impulse withstand voltage	U_{imp}	V AC	6000	6000	8000
Overvoltage category/pollution degree			III/3	III/3	III/3
Rated insulation voltage					
AC	U_i	V AC	690	690	1000
Rated operating voltage	U_e	V AC	690	690	1000
Safe isolation according to EN 61140					
Between auxiliary contacts and main contacts		V AC	440	440	440
Between the main contacts		V AC	440	440	440
Overload relay setting range		A	0.1…38	6…75	25…175
Temperature compensation residual error > 40 °C		%/K	≦ 0.25	≦ 0.25	≦ 0.25
Short-circuit protection rating maximum fuse			See catalogue for more information		

Notes

[1] Ambient temperature: Operating range to IEC/EN 60947, PTB: -5°C to +55°C
[2] Use identical cross-section when using two conductors
[3] 6 mm flexible with ferrules to DIN 46228
[4] With ZB65-XEZ max 1 x (1… 16)
[5] ZB32-38: solid and flexible with ferrule, 2.5 - 25 mm^2, 3 Nm tightening torque. AWG10-b, 27 lb-in tightening torque for solid or stranded conductors.

ZEB Overload Relay

ZEB 12 1.65 - GF / KK

Designation
ZEB = Electronic overload relay

Frame Size	
12: Frame I	= 0.33-20A
32: Frame II	= 0.33-45A
65: Frame III	= 9-100A
150: Frame IV	= 20-170A

Ampere Rating	
1.65	= 0.33-1.65A
5	= 1-5A
20	= 4-20A
45	= 9-45A
100	= 20-100A

Product Family	
GF	= Ground fault function
Blank	= None

Mounting Mode	
KK	= Direct to contactor
Blank	= Separate mount

Technical data

ZEB			ZEB12, ZEB32	ZEB65-45	ZEB65-100	ZEB150
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						
Open		°C	–25…65	–25…65	–25…65	–25…65
Enclosed		°C	–25…65	–25…40	–25…40	–25…40
Temperature compensation			Continuous	Continuous	Continuous	Continuous
Mounting position			Any	Any	Any	Any
Mechanical shock resistance half-sinusoidal shock, 10 ms to IEC 60068-2-27		g	15	15	15	15
Protection type			IP20	IP20	IP20	IP20
Protection against direct contact when actuated from front (EN 50274)			Finger- and back-of-hand proof			
Main contacts						
Rated impulse withstand voltage	U_{imp}	V AC	6000	6000	6000	6000
Overvoltage category/pollution degree			III / 3	III / 3	III / 3	III / 3
Rated insulation voltage						
AC	U_i	V AC	690	690	690	690
Rated operating voltage	U_e	V AC	690	690	690	690
Safe isolation according to EN 61140						
Between auxiliary contacts and main contacts		V AC	600	600	600	600
Between the main contacts		V AC	600	600	600	600
Overload relay setting range		A	0.3…45	9…45	20…100	20…100