



BZ887 T

Safety Relay 110V DC

B+Z Art. Nr. 677

According to standard EN 50155

Electronic devices in rolling stock



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Application / function

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Application

This safety relay is designed for use in industrial continuous operation applications. Safety relay according to standard EN61810 type A with forcibly guided contacts and integrated circuit protection for mounting on standard T Rail system.

The LED on the front panel indicates when power is applied to the coil.

- Contacts : 3 NO / 3 NC
- Nominal voltages available for 15VDC / 24VDC / 36VDC / 48VDC / 72VDC
- With reverse polarity protection, overvoltage surge protection, LED status indicator
- Wire connector : 1 wire terminal block on all pins
- Screwless front connector - wires plugable without special tools; AWG 24-16
- Optional front connector block for looping through on all pins available

Technical data

Type designation: **BZ887T 110V**

• Standards

The product is manufactured in accordance with the following standards:

ISO 9001:2015

Electronic equipment used on rolling stock: EN50155

Isolation: EN50124-1

Shock and vibration: EN50155/EN61373

Fire protection according to EN 45545

The standards applicable to this product are dependent on the version available at the time of development.

• Operating Voltage

Nominal voltage: 110V DC
Tolerance according to railway standard: -30% +25%

Current : ca. 18mA at 110VDC

Hold power: 0.2Watt

Protection circuits: Reverse polarity protection, protective circuit for relay coil and Transients suppression diodes

• Internal electrical protection

Transzorbdiode protecting against voltage spikes

Polarity protection diode



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Safety Relay 110VDC

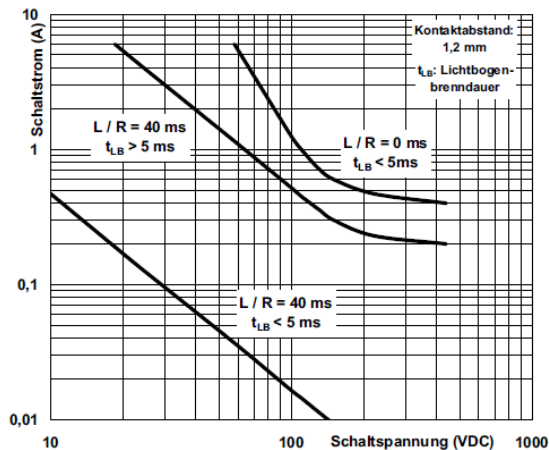
• Contact loads

Relay type: A, according to EN61810, IEC 61810-1, UL 508
 Max. load current: AC-15 230/240V I_e = 3,0 A; DC-13 24V I_e = 2,5 A
 Minimum current: 10mA at 10 VDC

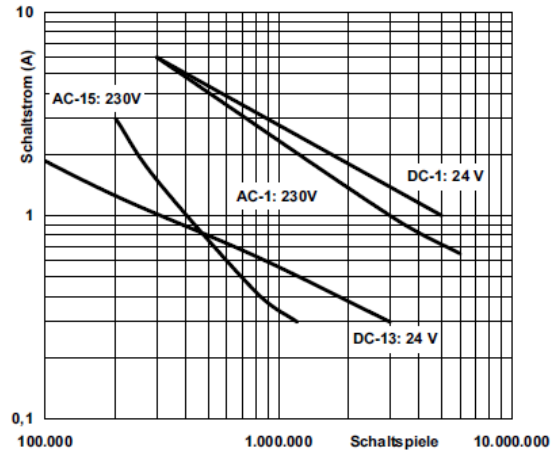
• Relay data

Mech. Lifetime without load	>10 ⁷ switch cycles	Kontaktmaterial	AgCuNi+0,2-0,4μm Au
Elec. Lifetime (using nom. load)	>10 ⁵ switch cycles	Kontakt type	Singlekontakt
Switching frequency mechanical	max 10 Hz	Switching load	AC 1.380 VA, DC *W
Delay time NO	typical 21 ms	Max. switching voltage	AC 230/240 V, DC *V
Delay time NC	typical 16 ms	Max. current I _{th2}	6 A
Reopening delay NO	typical 6 ms	Max. current I _{th2} 2 contacts same time used	6,0 A
Reopening delay NC	typical 11 ms	Max. current I _{th2} 3 contacts same time used	4,9 A
Schock resistancy NO/NC 10/8 g, 11 ms halfsinus		Max. current I _{th2} 4 contacts same time used	4,2 A
Swingresistancy NO/NC 10/5 g, 10–200 Hz		Max. current I _{th2} 5 contacts same time used	3,8 A
Test voltage Coil to contacts	2'500V _{eff} 1min		
Testvoltage contact to contact	2'500V _{eff} 1min		
		Switching voltage range	10 to 250VDC/VAC
		Switching current range typical	10 mA bis 6A
		Switching poer range typical	100mW bis 1'300W (VA)
Coil resistance value	ca. 600 Ohm ati 20 degree celsius		
			* see DC-Switchoff characteristics

Max. Load DC



Lifecycle values



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Connector

- **Screwfree front edge connector**

14-pin edge connector: WAGO (codeable)

- **Counter connector (optional)**

14-pin female connector strip: WAGO single row or double row available
Grid 5.08mm. (not included at delivery)

Mechanical data

Measures (WxHxD): 22,5 x 85 x 72mm
Weight: ca. 115g (without counterconnector)

- **Materials**

Housing: Plastic
PCB: Epoxy resin

Mounting: Horizontal on standard Rail 35mm, (EN-50022-35)
Connector type: 14-pin single row terminal strip, Type WAGO

- **Marking / Labeling**

Wiring label on housing

Other conditions

- **Climatic conditions**

Environment temperature: -20°C bis +70°C Class T3
Humidity : max 90% rF, at30°C, non condensing.

- **Disposal / Recycling**

According to local regulations

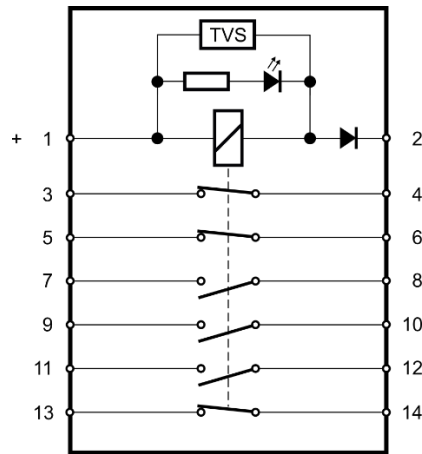


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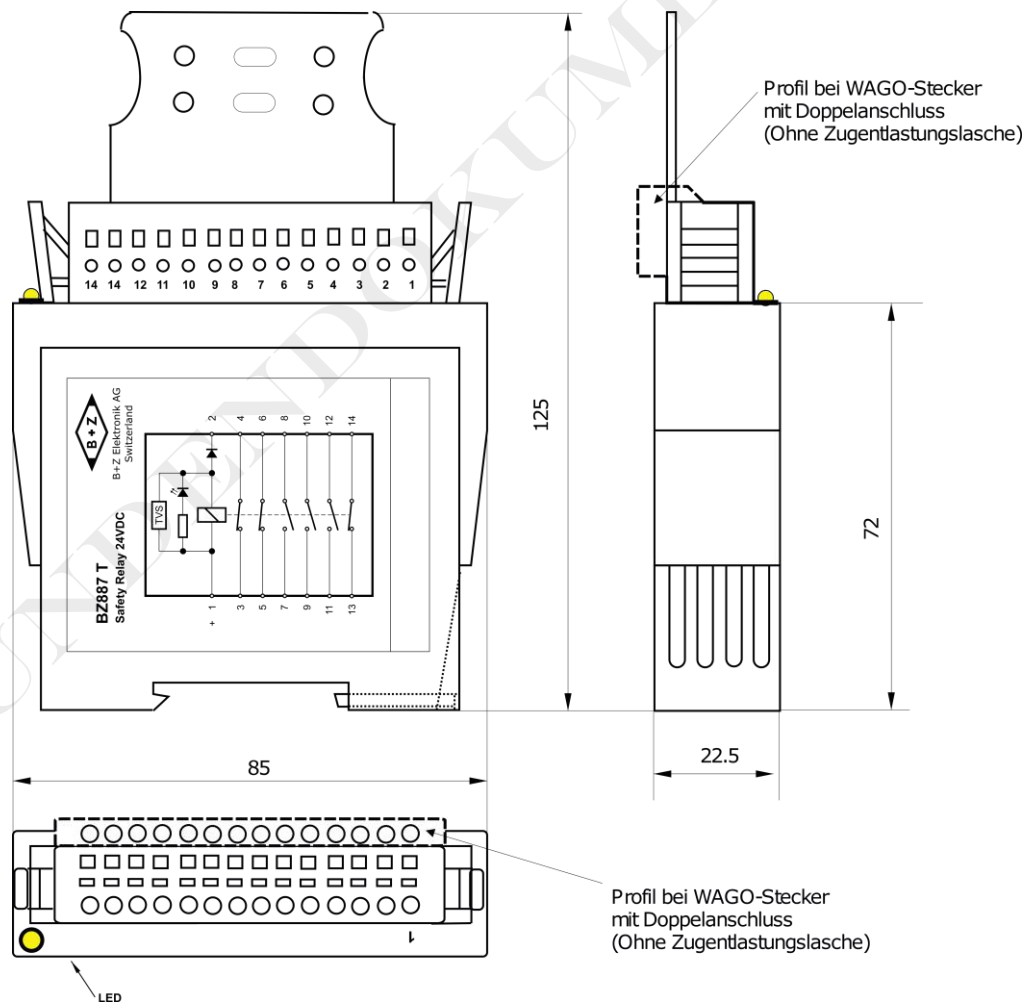
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Connection / Wiring diagram



*TVS: Transient voltage suppression

Measures / mounting



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