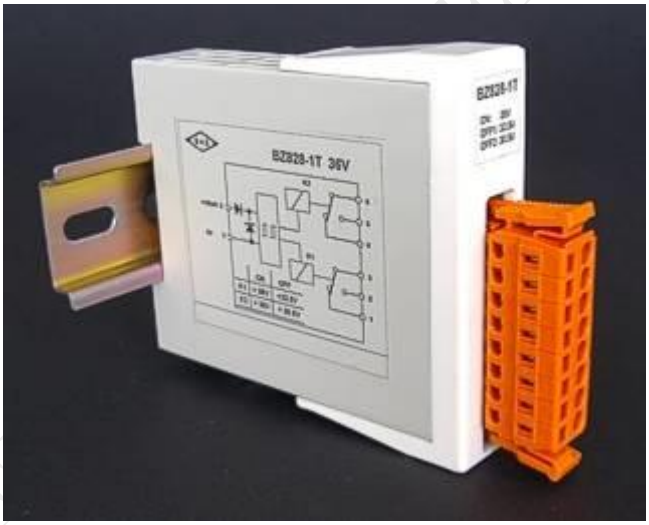
BZ 903

Voltage Monitoring Relay 110VDC

B+Z Art. Nr: 703



Content: page

B + Z Elektronik AG
CH-8108 Dällikon
Tel: +41(0)44 8440355
www.bahnelektronik.ch

Erstellt: 10.03.10
Änderung: 09.06.10
Index:
Datei: BZ903T_e_kd.doc

1. Function / Requirements

1.1. Object / Function

The BZ903 Voltage Monitoring Relay monitors two voltage thresholds and forwards the status by its relay contacts. A typical application is to shut-off battery voltage dependent powered devices in case of low battery voltage. The unit comes in a sturdy plastic case and features a front connector.

The minimum voltage relay is monitoring 3 switching thresholds that can be set in a defined area using internal potentiometers . 2 changeover contacts are always activated at the upper switching threshold . The one contact switches at the central switching threshold , the other contact switches at the lower switching threshold . From the factory, the values specified on the device are preset - but can be adjusted individually according to customer requirements.
The two independent relay contacts are used to control e.g. external relays or magnetic contactors. As long as the input voltage criteria are in the preset working range (battery voltage is OK) the relay contacts remain closed.

2. Technical specifications

- **Standards**

The product is produced according to following standards / norms:

ISO 9001:2015
Electronic devices on railway vehicles: EN50155
Electro-magnetic compatibility: EN50121-3-2
Isolation: EN50124-1
Vibration swingles and shocking: EN50155/EN61373
Fire protection after EN 45545

The norm state for this product is dependent on the valid standards at the development time.

- **Mechanical Data**

- **Measurements**

W x H x D:	22,5 x 85 x 120 mm
Max. mounting depth :	including connector approx. 160 mm
Weight :	approx. 150 g

- **Material**

Case :	Plastic

- **Mounting**

Fixation :	clipping into place on TS35mm rail as per standard EN50022-35.

- **Front Panel**

Case cover :	labels with function range and connector layout

Front output connector : plug in CAGE - CLAMP connector, 6-pins
with locking bracket (included in delivery)
Type: WAGO

Electrical Data

- **Power requirements**

Supply Voltage 110VDC (+25% -30%)
Current consumption: <40mA at 110VDC (relay contacts closed)
<10mA (relay contacts open)

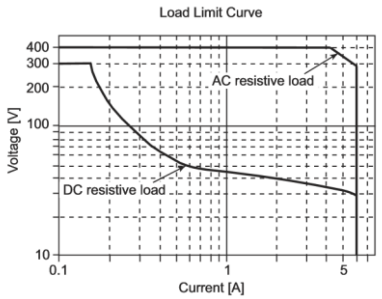
- **Input**

Internal voltage monitoring of the supplied battery voltage

- **Outputs**

Two relay contacts (normally open). Potential free contacts

Max. current per contact: 4A
Max. voltage per contact: 250VDC



Load type		Voltage	Current	Ambient temperature	No. of ops.
Resistive load		250V AC	6 A	85°C 185°F	30,000
Inductive load	AC 15	250V AC	3 A	25°C 77°F	20,000
	DC 13	24V DC	2 A	25°C 77°F	6,000

Notes: 1. Switch contacts are all on N.O. side.
2. AC 15 and DC 13 comply with IEC-60947-5-1 testing conditions.

- **Threshold / switching characteristics**

		(Tolerance: ± 0.3V)	% of UBatt	Hysteresis
Contact 1:	ON	**> 98V** (110V -11%)	(89%)	
	OFF	**< 93V** (110V -15%)	(85%)	5V
Contact 2:	ON	**> 98V** (110V -11%)	(89%)	
	OFF	**< 89V** (110V -19%)	(81%)	9V

- **Electrical protection measures**

Transient protection diodes on battery input

- **General protection measures**

protection norm: IP 20

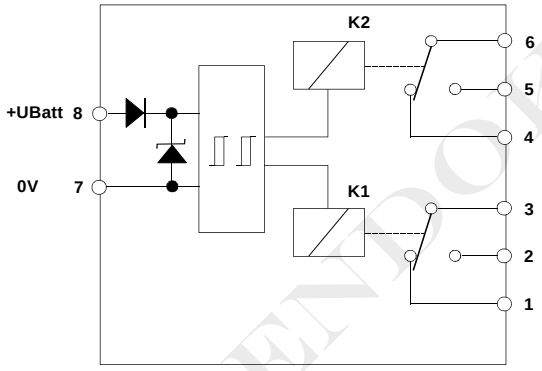
2.3. Environment conditions

Operating temperature : -40°C to +70°C
Humidity: up to 95% rel. at 30°C

- **Waste disposal**

According to local regulations

3. Block diagram



Relay K1	active if U_{Batt}	>	98VDC
	not active if U_{Batt}	<	93VDC
Relay K2	active if U_{Batt}	>	98VDC
	not active if U_{Batt}	<	89VDC

4. Measures / mounting