



# BZ891

## Proportional voltage controller for UBatt (50-90V) with 0-10V signal input B+Z Art.Nr. 630



Ident Nr: 3EGM064938R0001

### Content:

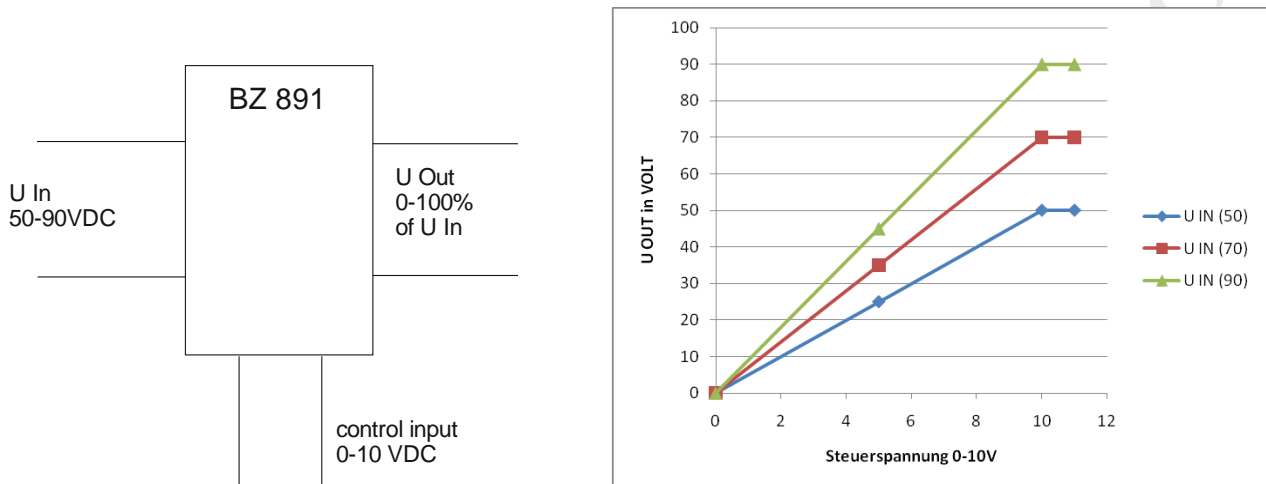
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## Application / function

### Application / Function

This device is used to regulate a battery voltage signal (UBatt 50to90V) proportionally between 0-100% by using a control voltage of 0-10Volt DC at the controlling input. The output voltage is linear over the complete range. The device is used to remote control locomotives via a multiline control wire.



## Technical data

Type designation: **BZ891**

### • Standards

The product is manufactured in accordance with the following standards:

ISO 9001:2015  
Electronic equipment used on rolling stock: EN50155  
Electromagnetic compatibility: EN50121-3-2  
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.



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UBatt (50-90V) voltage controller

## Electrical data

- **Operating voltage**

Input voltage: 50-90VDC  
Control voltage: 0-10 Volt DC

- **Constant current use**

Max. current at Vout: ca. 200 mA at 90 VDC input voltage

Minimum input current at BATT+ / BATT- 40 mA at 50 VDC

- **Electrical protection**

Transzorb diodes at input and output

- **Mechanical protection**

Protection class: IP30

## Mechanical data

- **Measures**

Case (without connector plug) L x H x W: 172 x 70 x 130 mm  
Weight : ca. 400 g

- **Used materials**

PCB: Epoxy  
Housing: Aluminium  
Front panel: Epoxy

- **Mounting method**

Mounting : with 4 screws M4

- **Front connectors**

9-pin D-Sub connector For control input voltage; labeled : X1  
3 pcs. FASTON AMP For Input Voltage and signal output; labeled : BATT+, BATT-, Vout

The D-Sub front connector is equipped with a reference output voltage signal which can be used for simulation purpose.



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## Other conditions

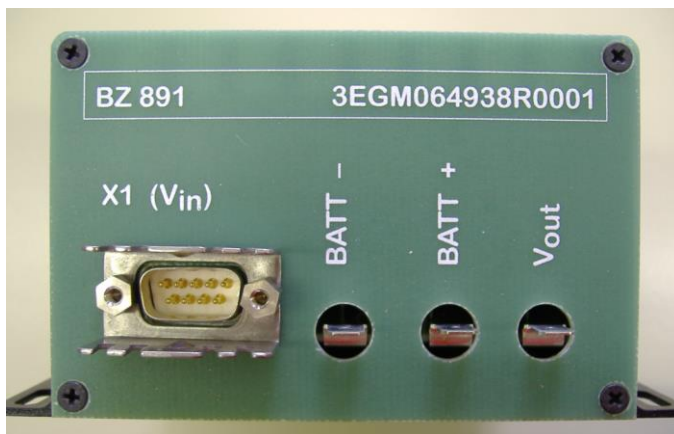
- **Climatic conditions**

Environment temperature: -40°C bis +60°C

- **Disposal**

According to local regulations

## Connection / Wiring diagram



FASTON 1 = BATT- (Minus)  
FASTON 2 = BATT+ (Plus)  
FASTON 3 = Vout (Plus)

X1 (Vin):  
DSub Pin1 = Input 0-10V (Plus)  
DSub Pin3 = Input 0-10V (Minus)

Shield is connected to D-Sub case

X1 Pin5 = Ref.output voltage +10VDC  
For potentiometer 0 ... 10VDC

Ground / earth connector  
on the side of the housing



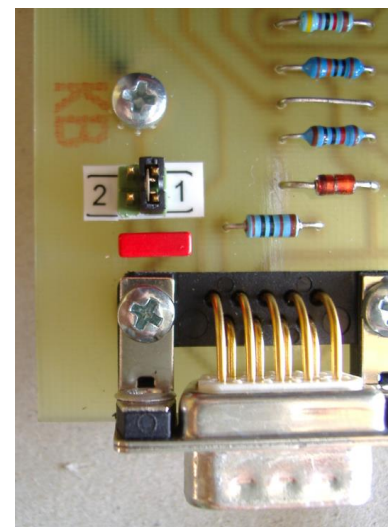
## Shield information

Inside the case there is a jumper for defining the shield of the controlling cable.

(0-10V Signal)

Position 1 connects the cable shield to ground (**factory setting**)

Position 2 connects the cable shield via capacitor to ground



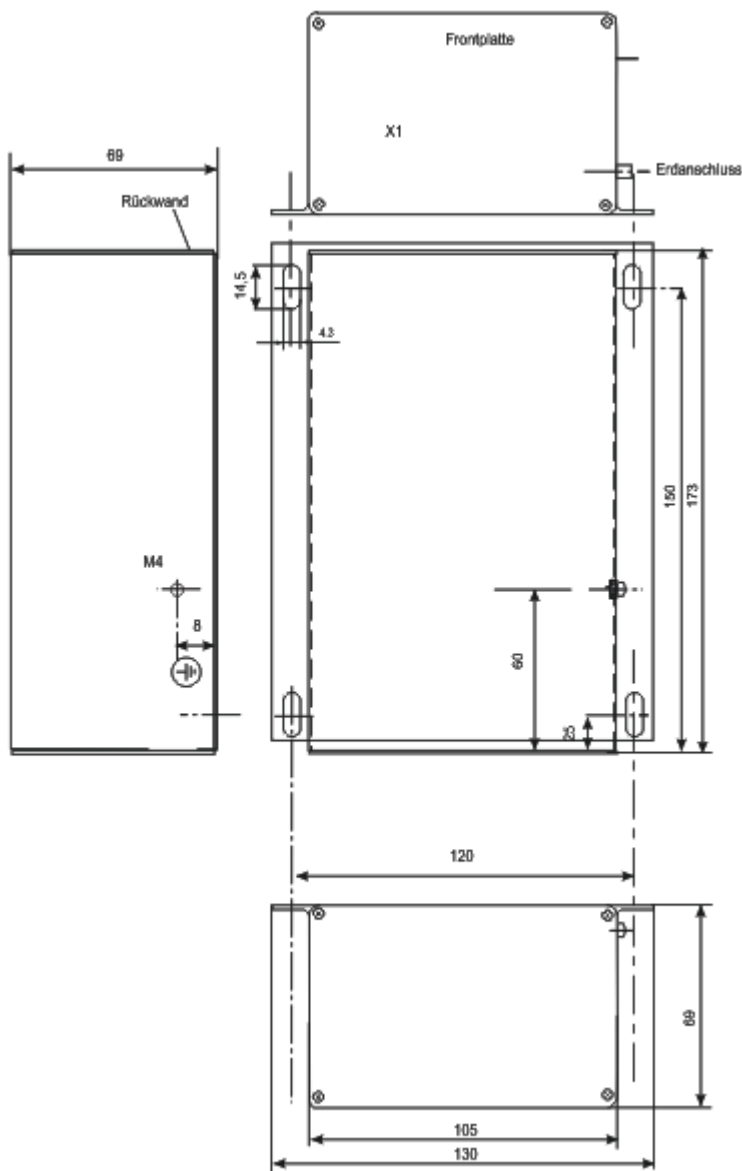
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## Measures / mounting



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