

OMNICOMM

Galvanic Isolation Unit BR15

Datasheet

24.04.2019

Contents

3 **Operation and Technical Specification**

3 Device Assignment

3 Technical Specification

4 Operation Principle

4 Marking

5 Packaging

5 **Intended Use**

5 Operational Limitations

5 Preparation for Use

5 Operation

5 Technical Service

5 Maintenance

6 *Appendix. Dimensions and Pinout*

Galvanic Isolation Unit BR15

The galvanic isolation unit BR15 (hereafter BR15) is intended for connecting vehicle monitoring systems and telematics devices using up to four Omnicomm LLS fuel level sensors and the power protection unit BIS to the battery. BR15 provides protection against power supply overvoltage and short-circuits.

Operation and Technical Specification

Device Assignment

The galvanic isolation unit BR15 allows simultaneous connection of:

- GPS/GPRS terminals;
- Up to four Omnicomm BIS power protection units;
- Up to four Omnicomm LLS fuel level sensors;
- Up to four contactless sensors (ultrasonic sensors) or pulse converters;
- BR15 allows the connection of other devices whose common power consumption does not exceed the maximal BR15 output power.

The galvanic isolation unit BR15 is used on vehicles with a nominal board voltage of 12 or 24 V.

Technical Specification

Table 1:

No.	Specification	Value
1	Input voltage, V	10 ... 32
2	Output voltage, V	14.5 ± 0.5
3	Maximal output power, W	15

Operation and Technical Specification

No.	Specification	Value
4	Maximal output current, A	1.0
5	Energy conversion efficiency, %	Not less than 80
6	Maximal constant voltage that does not damage the unit, V	90, any polarity
7	Isolation voltage, V	1000
8	Dimensions, mm	111 × 84.5 × 31
9	Operating temperature, °C	-40 ... +60
10	Ingress protection rating	IP40

Operation Principle

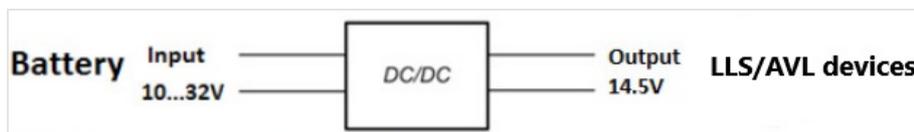


Figure 1. Block diagram of BR15

BR15 has protection against overvoltages of more than 33 V, protection against polarity reversal, and protection against short-circuits on the output.

BR15 provides stabilized output voltage and galvanic isolation between input and output. The unit operates in “step up” and “step down” modes, depending on the input voltage supply, and provides a stabilized 14.5 ± 0.5 VDC output.

Marking

The label on the box provides the following information:

- manufacturer’s logo or name;
- input and output voltages;

Intended Use

- device name;
- wiring description;
- manufacturing date;
- serial number.

Packaging

The set is supplied in an individual pack.

Intended Use

Operational Limitations

BR15 is designed for a long-life span in a driver's cabin or indoors.

Immersion in water or other liquids should be avoided (ingress protection — IP40), max. temperature -40 °C, +60 °C, max. power 10-32 V.

Preparation for Use

Connect the unit to the Omnicomm terminal, fleet management device, fuel level sensor, and battery according to the following connection diagrams (Appendix A and Appendix B).

Operation

BR15 will stop working when the input voltage exceeds 33 V and will not work until the moment when the input voltage falls below 32 V.

The maximal input voltage through the device that it can sustain without damage is 90 V.

Technical Service

The technical service comprises visual inspection of the connection wires and fuse.

It is recommended that technical services be carried out at intervals of 1 year.

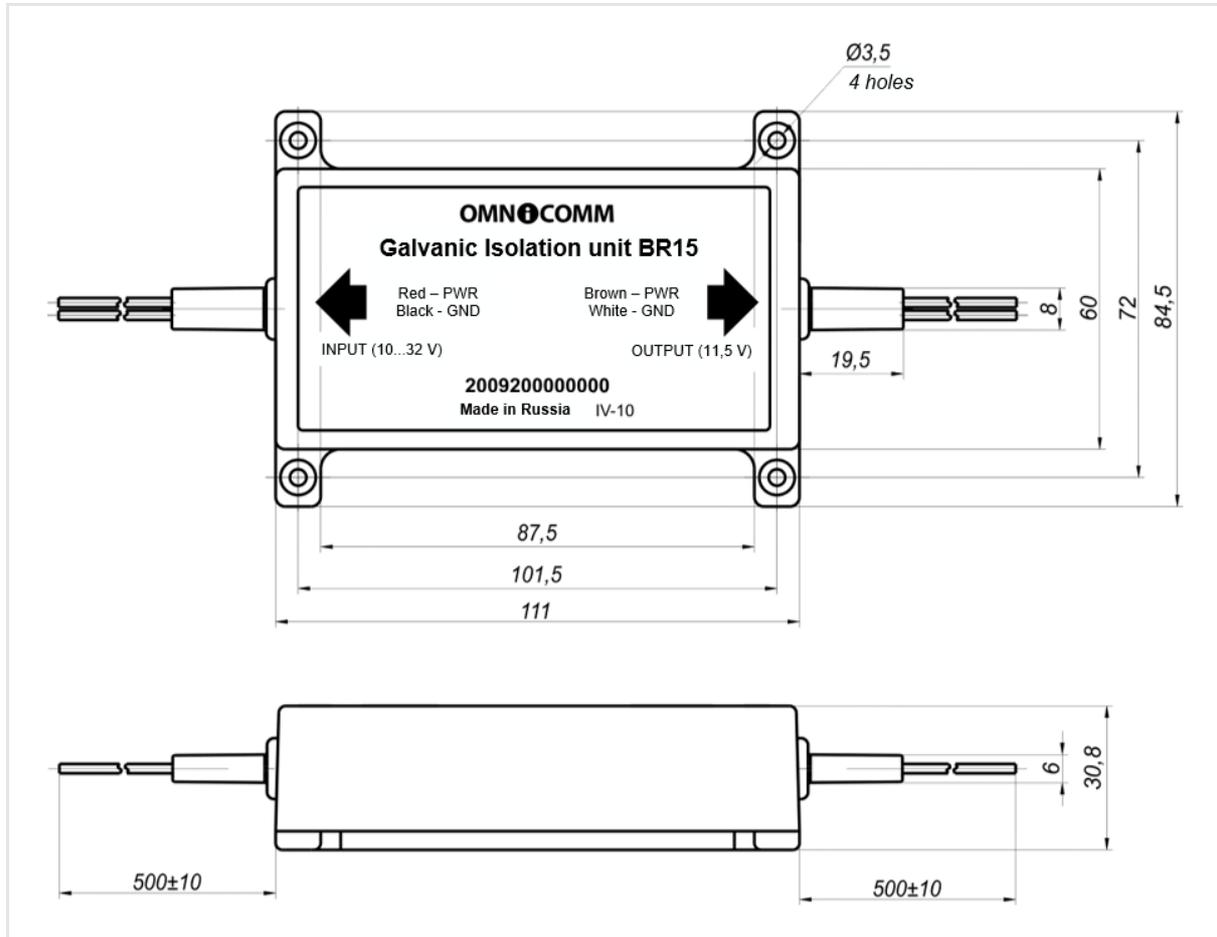
Maintenance

The manufacturer reserves the right to refuse to meet the guarantee obligations if maintenance is carried out by persons without approved certification.

Appendix. Dimensions and Pinout

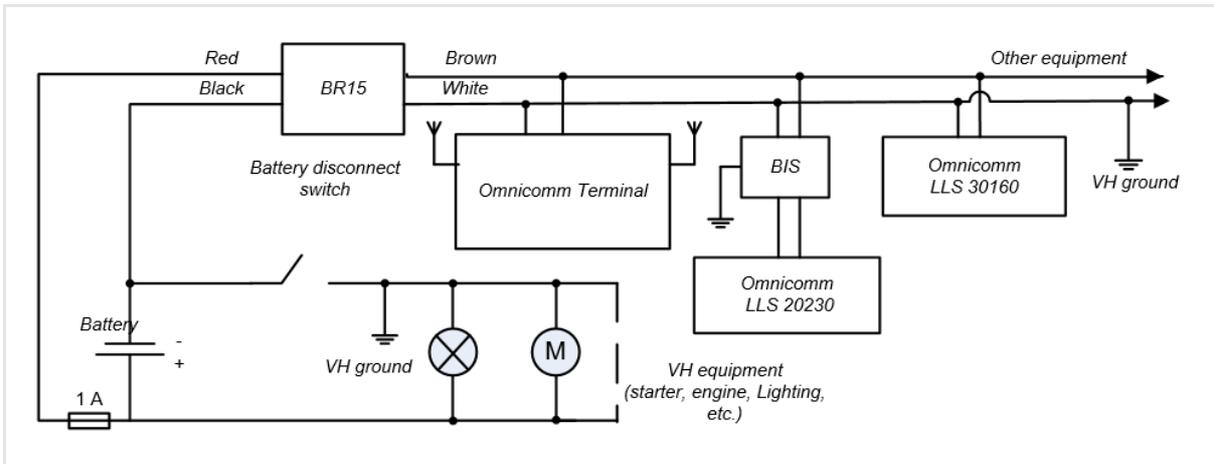
Appendix. Dimensions and Pinout

Dimension diagram of BR15:



Appendix. Dimensions and Pinout

Connection diagram of BR15:



Wire colour	Function
Brown	Output power line 14.5 V
White	Output ground GND
Red	Input power line 10 ... 32 V
Black	Input ground GND

OMNICOMM

info@omnicomm-world.com

www.omnicomm-world.com