

V. Repair and maintenance

All repairs of the BISTABLE RELAY BR 20 are performed by the manufacturer. The device does not require any maintenance.

VI. Warranty Card

The manufacturer guarantees the correct operation of the BISTABLE RELAY BR 20. The warranty period is 36 months from the date of sale. The warranty is extended by the time of repair. Warranty repairs are performed by the manufacturer free of charge after the AUTOMAT is delivered to the manufacturer. Improper use of the device or independent modifications to it will void the warranty.



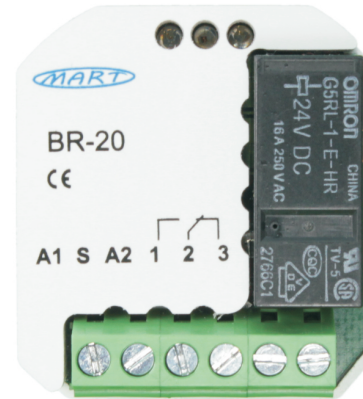
RoHS



The BISTABLE RELAY BR 20 meets the requirements of the European Union Directives
- Directive LVD 2014/35/EU - Low Voltage Directive of 26 February 2014
- Directive EMC 2014/30/EU - Electromagnetic Compatibility Directive of 26 February 2014



In order to protect the environment, do not throw away used electrical appliances and electronics together with municipal waste. Used equipment should be delivered to collection points for recycling free of charge. Any information on this can be obtained at sellers, distributors, manufacturer or on the Internet. The product's packaging is made of ecological materials. The PVC packaging tape will be used while stocks last.



MADE IN EUROPE

BISTABLE RELAY BR-20

3-YEAR
WARRANTY

User manual

I. Purpose

The BISTABLE RELAY BR-20 is designed to turn the receiver on or off with an impulse switch. Each subsequent pressing of the switch causes the change of the operational relay state. If the receiver was turned on, pressing the switch momentarily turns the receiver off and vice versa.

The BISTABLE RELAY BR-20 enables switching the receiver on and off with many parallel connected impulse switches, which means that the receiver can be turned on or off at any place. The BISTABLE RELAY BR-20 can work with an unlimited number of impulse switches without backlight and a limited number of impulse switches with backlight, connected in parallel.

The BISTABLE RELAY BR-20 is designed for mounting in a 60 mm installation box.
The BISTABLE RELAY BR-20 can be used in "intelligent" electrical installations.

II. Properties of the BR-20 BISTABLE RELAY

- >> short reaction time after switching on the impulse button < 40 ms
- >> short standby time to the next switch on > 200 ms
- >> high switching power - 16 A (4000 W), 250 VAC
- >> high inrush current - resistance to 100 A surge current
- >> small dimensions - 46 mm x 42 mm x 21 mm, ϕ 54 mm
- >> installation in a f 60 mm installation box
- >> freedom of connections:
 - > executive relay contacts (one normally open contact - NO, one normally closed contact - NC) galvanically separated, which allows connections in various configurations
- >> traffic light (LED):
 - > Green LED - indication of 230 VAC supply voltage on N-L terminals
 - > LED red - signaling of short circuit of contacts 1-2
 - > Blue LED - signaling of short-circuited contacts 2-3

The BISTABLE RELAY BR-20 uses a specialized OMRON G2RL-1-E-HR relay, designed to switch various types of lighting lamps. The special design of the relay enables effective switching of lamps with an inrush current up to 100 A.

III. Installation

The BISTABLE RELAY BR-20 may be connected only by a person authorized to operate electrical installations. Remember to choose the right protection.

On the front of the BR-20 BISTABLE RELAY, there is a terminal strip with a description of the connections and three LED indicators: green, red and blue.

On the back of the BR-20 BISTABLE RELAY, there is an exemplary connection diagram and a QR code with a detailed manual (Fig. 1).

In order to connect the BR-20 BISTABLE RELAY:

1. make sure the electrical system is turned off
2. connect the RELAY according to one of the diagrams (fig. 3, fig. 4) in the options:
 - > S1 control signal from L voltage
 - > S1 control signal from voltage N
 - > when using terminals 1-2 - after switching on the power, the receivers are turned off
 - > when using terminals 2-3 - after turning on the power, the receivers are turned on
3. switch on the supply voltage:
 - > the green LED lights up
 - > after 1 s red LED and blue LED will blink
 - > after 2 seconds, the blue LED will light up, which indicates closed contacts 2-3
4. Each pressing of the impulse switch causes the change of the operational relay state
 - > another press changes the voltage on the receiver and changes the LED lighting:
 - blue - contacts 2-3 closed
 - red - contacts 1-2 closed
5. the efficiently operating installation is ready for operation
6. The RELAY does not react if the pause between successive activations is shorter than 200 ms.
7. A schematic diagram of the operation of the BISTABLE RELAY BR-20 is shown in Fig. 1.

BISTABLE RELAY BR-20 can work with an unlimited number of non-illuminated switches and a limited number of illuminated switches:

- > neon illuminated switches (1 mA) <5 pcs
- > LED illuminated switches (0.1 mA) <50 pcs.

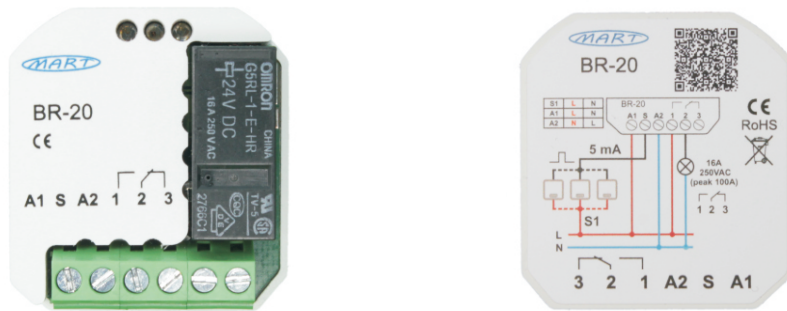


Fig. 1. View of the BR-20 BISTABLE RELAY at the front and rear.

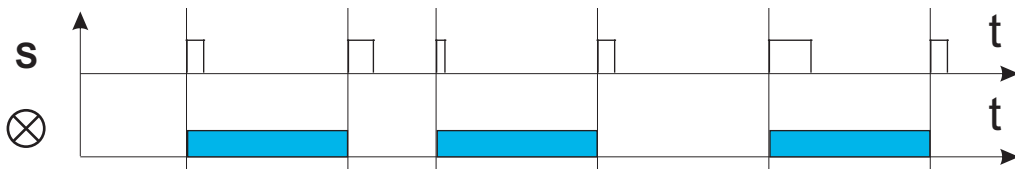


Fig. 2 .Schematic diagram of the operating principle of the BISTABLE RELAY BR 20 .

IV. Technical data

Rated supply voltage LN	230 VAC, + 10%, - 15%
Rated frequency	50 Hz
Maximum load current (power):	
> resistive load	16 A, AC1 (4 000 W)
> incandescent lamps	10 A (2500 W)
> halogen lamps	8 A (2000 W)
> fluorescent lamps	8 A (2000 W)
> energy-saving lamps and LED	8 A (2000 W)
Instantaneous inrush current	100 A
Executive contacts	1 x NO, 1 x NC
Rated power consumption	0,5 W
Short -circuit current of impulse buttons	5 mA
Response time to the impulse button	< 40 ms
Time to be ready again	> 200 ms
Mechanical durability	100 000 operations
Protection level	IP 20
Work position	Freely
Dimensions	46 mm x 42 mm x 21 mm ϕ 54 mm
Installation	In an installation box ϕ 60 mm
Cross section of connection cables	0,2+2,5 mm ²
Working temperature	-40...+70 °C
Weight	80 g

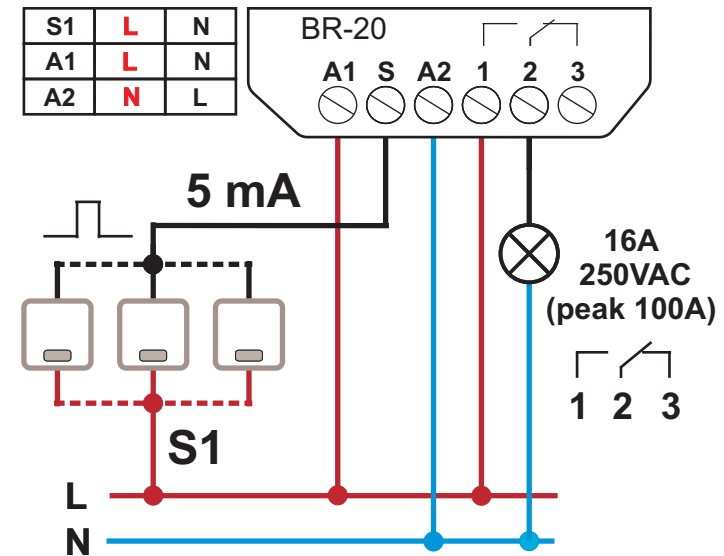


Fig .3 .An exemplary diagram of the connection of the BISTABLE RELAY BR 20 along with a table of possible connection variants .

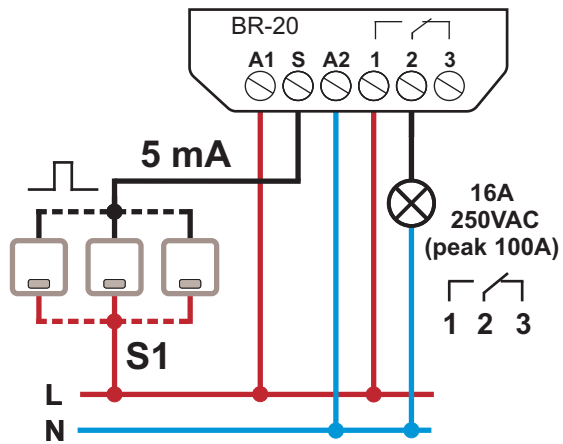


Fig. 4-1. Connection diagram of the BR-20 BISTABLE RELAY
 > L signal control on S clamp
 > after turning the power on (N-L) - the receiver is off

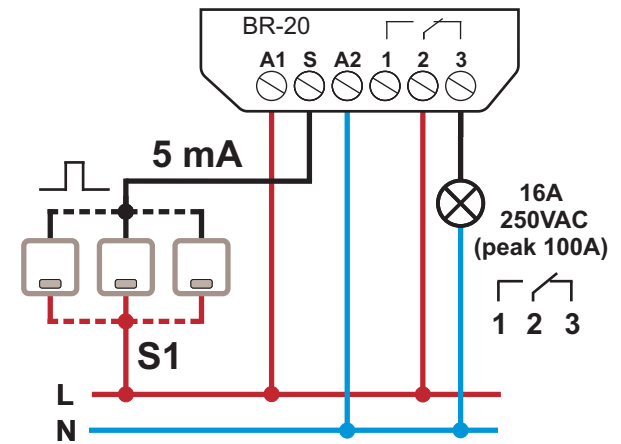


Fig. 4-2. Connection diagram of the BR-20 BISTABLE RELAY
 > L signal control on S clamp
 > after turning on the power (N-L) - the receiver is on

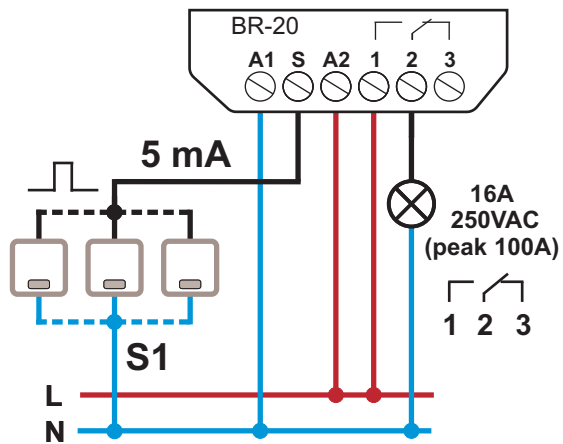


Fig. 4-3. Connection diagram of the BR-20 BISTABLE RELAY
 > N signal control on S clamp
 > after turning the power on (N-L) - the receiver is off

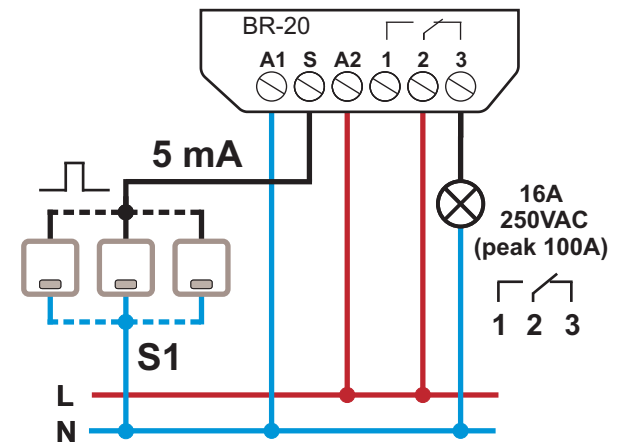


Fig. 4-4. Connection diagram of the BR-20 BISTABLE RELAY
 > N signal control on S clamp
 > after turning on the power (N-L) - the receiver is on