

RS485 Repeater

Safety



**DANGER**

**Dangerous voltage**  
 Electric shock could kill or seriously injure.  
 All electrical connections must be performed by a fully qualified electrician.  
 Ensure that the mains voltage matches the voltage marked on the device.  
 Ensure that the device is provided with its own power supply line and electric fuse.



**WARNING**

Switch on the power supply only after wiring of the device has been completed.

Overview

RS485 repeater is used to connect two segments of the RS485 network, to increase the bus length and to extent the network by additional max. 32 devices. The repeater provides galvanic isolation between network segments.

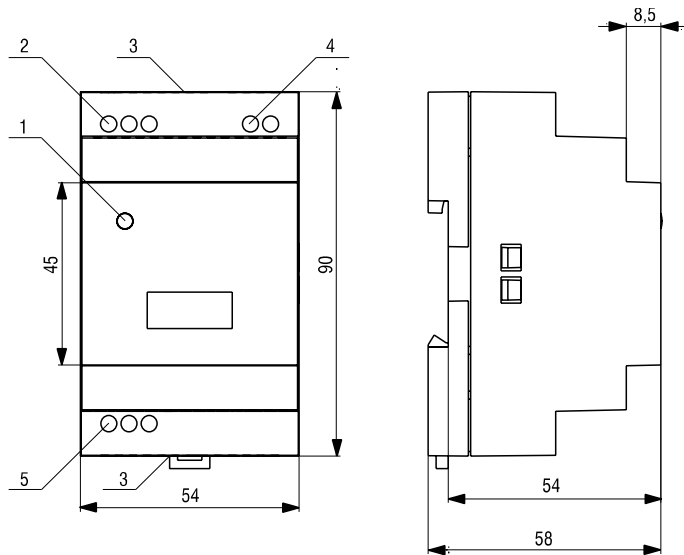


Fig. 1 Dimensions

Specification

Table 1 General specification

Power supply	230 (90...264) V AC, 50 (47...63) Hz
	24 (20...375) V DC
Power consumption, max.	2 VA
Galvanic isolation	1500 V
RS485 Interface	
Cable length, max.	1200 m
Number of devices in the network, max.	32
Terminals	D+, D-
Dimensions	54 x 90 x 58 mm
Mounting	DIN rail (35 mm)
Weight	approx. 100 g

Environmental conditions

The device is designed for natural convection cooling that should be taken into account when choosing the installation site.

The following environment conditions must be observed:

- clean, dry and controlled environment, low dust level
- closed non-hazardous areas, free of corrosive or flammable gases

Table 2 Environmental conditions

Condition	Permissible range
Ambient temperature	-20...+65°C
Storage temperature	-25...+55°C
Relative humidity	up to 80% (at +25°C, non-condensing)
Altitude	up to 2000 m above sea level
IP code	IP20
Protection class	II

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Table 3 Control elements

1	LED „RS-485 <=> RS-485“	status indicator (see Table 4)
2	Terminals RS485 IN	see Fig. 2
3	DIP switches	selection of built-in terminating resistors R <sub>T</sub> (see Table 5)
4	Power supply	see Table 1
5	Terminals RS485 OUT	see Fig. 2

Table 4 Status indicator

LED	Description
on	Power supply OK
off	Supply voltage too low or power supply failure
flashing	Data exchange

Table 5 DIP switches

Position *	Terminating resistor	Position *	Terminating resistor
	not used		120 ohm ±5%
	620 ohm ±5%		100 ohm ±5%

\* White – switch position

Installation

The device has a plastic enclosure for DIN rail mounting (see Fig. 1).  
The device should be connected according to the diagram shown in the Fig. 2:

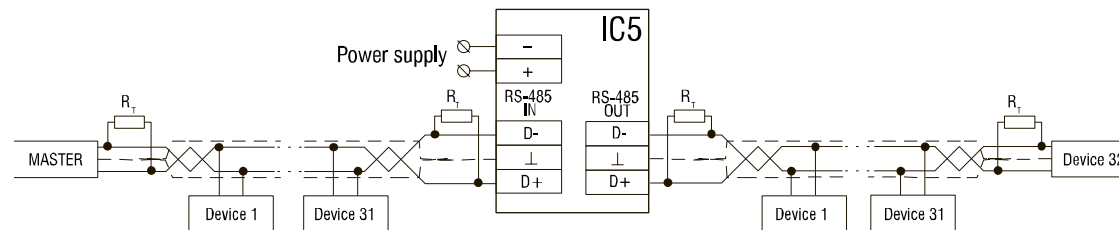


Fig. 2 Wiring

- Connect the RS485 network from the side of the network Master to the terminals RS485 IN (D+, D-)
- Connect the RS485 network from the side of the next segment (extension) to the terminals RS485 OUT (D+, D-)
- For the connection to the RS485 network the twisted pair cable should be used
- The maximum conductor cross-section is 0.75 mm<sup>2</sup>

Maintenance

The maintenance includes:

- checking the fastening of the device
- checking the wiring (connecting leads, fastenings, mechanical damage)
- cleaning of the housing and terminal blocks from dust, dirt and debris

The device should be cleaned with a damp cloth only. No abrasives or solvent-containing cleaners may be used. When carrying out maintenance the safety information must be observed.

Transport and storage

Pack the device in such a way as to protect it reliably against impact for storage and transportation. The original packaging provides optimum protection.  
If the device is not taken immediately after delivery into operation, it must be carefully stored at a protected location. The device should not be stored in an atmosphere with chemically active substances.

Scope of delivery

- IC5 1
- User guide 1