

RS232 - RS485 converter 7XV57

Application

The RS232 - RS485 converter allows the connection of up to 31 SIEMENS protection devices with electrical busable RS485 interface to a PC for office control.

General data

The converter is housed in an expanded plug chassis. The interfaces are connected to 25pin female connectors. The RS485 interface is terminated with a termination resistor. The auxiliary voltage is supplied from a plug-in power supply unit attached to the side. Auxiliary voltages of AC 110V or 220V AC allow operation with all common AC networks.

Data transfer

The converter works according to the master/slave principle. In the idle state, the RS232 interface is inactive while the RS485 interface is switched to the receiving mode. During communication the PC (master) sends data to the RS232 interface, which are transmitted to the protection device (slave) by the converter at the RS485 interface. After data transmission, the RS485 interface is once again switched to the receiving mode. Vice versa, data



Fig 1: RS232 - RS485 converter

supplied by the protection device are sent back by the converter to the RS232 interface and on to the PC.

No handshake signals are being processed during communication. This means that data sent by the PC are mirrored, which may cause

problems in special applications.

Connections

The PC is connected to the converter by means of a DIGSI cable e.g. 7XV5100-2.

A twisted and screened cable with three cores is required for the RS485-bus.

The conductor cross section must be suitable for connection of ring cable lugs. The individual wires protruding from the screen should be kept as short as possible. The screen is connected at both ends to the housing earth. The protection devices are connected to the bus in series (neither point-to-point nor ring connection). The screen between the converter and the protection devices, or between the protection devices, is connected at both sides. Whenever substantial cable lengths or high baud rates are involved, a terminal resistor of 220 Ohm should be applied between signal lines A and B at the last protection device. Data transmission at a speed of 19.2 kbaud with a bus-length of up to approx. 1000m is possible.

Delivery includes

- RS232 - RS485 converter
- plug-in PSU
- 25pin adaptor socket / socket
- connecting cable to the first protection device 7XV5100-7

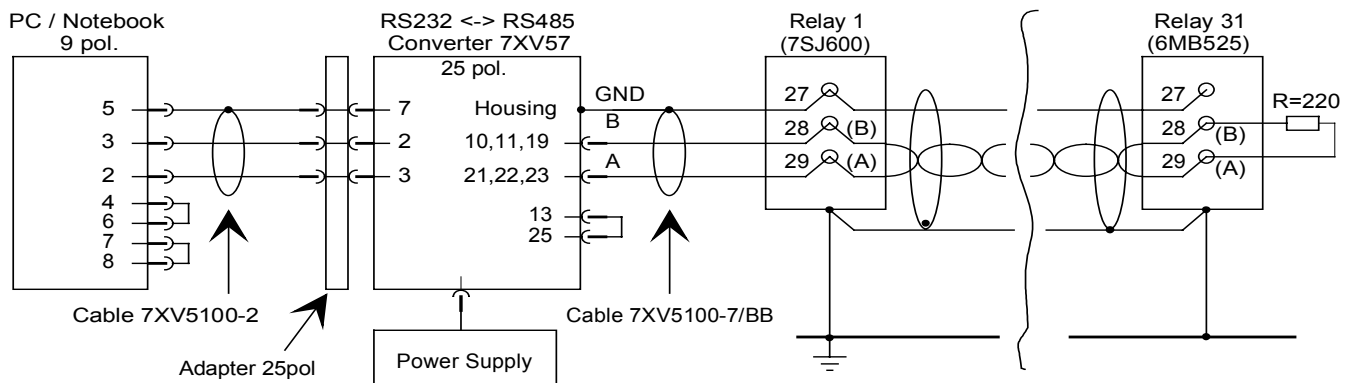


fig. 2. Protection devices connected to the RS485 bus

Technical data / ordering data / conditions of sale and delivery

Technical data

| | | |
|---------------------------------|---|---|
| Design | plug chassis dimensions degree of protection | plastics 63 x 54 x 16 mm (L x B x H) IP 20 |
| Power supply | power supply via | 110 or 220 V AC plug-in PSU |
| Electrical interfaces | type assignment | RS 232 to RS 485 see fig. 2 |
| CE conformity, standards | This product is in conformity with the directive of the Council of the European Communities on the approximation of the laws of the Member States relating to the electromagnetic compatibility (EMC Council Directive 89/336/EEC). | Conformity is proved by tests performed by Siemens AG in accordance with the generic standards EN 50081-1 and EN 50082-2. |

Selection and ordering data

| Item | Order No.: | | | |
|--|---|---|---|---|
| RS232 <-> RS485 Converter plug-in auxiliary PSU 220 V / 50 Hz AC plug-in auxiliary PSU 110 V / 60 Hz AC | 7XV570 0 - <table border="1" style="display: inline-table; vertical-align: middle;"><tr><td style="width: 15px; height: 15px;">0</td></tr><tr><td style="width: 15px; height: 15px;">1</td></tr></table> 0 0 | 0 | 1 | |
| 0 | | | | |
| 1 | | | | |
| With RS485 connecting cable for 7SJ6, 7RW6, 7SD6, 7SV6 | <table border="1" style="display: inline-table;"><tr><td style="width: 15px; height: 15px;">A</td></tr><tr><td style="width: 15px; height: 15px;">B</td></tr><tr><td style="width: 15px; height: 15px;">C</td></tr></table> | A | B | C |
| A | | | | |
| B | | | | |
| C | | | | |
| With RS485 connecting cable for SIMEAS Q | | | | |
| With RS485 connecting cable for SIMEAS T | | | | |
| Without RS232 connecting cable | <table border="1" style="display: inline-table;"><tr><td style="width: 15px; height: 15px;">A</td></tr><tr><td style="width: 15px; height: 15px;">B</td></tr></table> | A | B | |
| A | | | | |
| B | | | | |
| With RS232 connecting cable 7XV5100-2 for PC/Notebook | | | | |

Conditions of Sale and Delivery

Domestic trade:

Subject to the General Conditions of Supply and Delivery for Products and Services of the Electrical and Electronic Industry.

The ex works prices are quoted in DM and do not include packing which is billed as cost price.

Prices do not include VAT (value added tax) which is calculated as a separate item in accordance with the applicable regulations and quotas.

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In accordance with present German and US export regulations export licences (dated 02.96) are not required for the products listed in this catalog.

Export trade:

Subject to the General Conditions of Supply and Delivery for Products and Services of the Electrical and Electronic Industry and to any other conditions agreed upon with the recipients of catalogs

Export and re-export are therefore permissible without the approval of the relevant authorities except where current German export regulations contain country-specific restrictions.

Embargo data:
AG: N, AL: N, EC: N, ECCN: N

The technical data, dimensions and weights are subject to change unless otherwise stated on the individual pages of this catalog.

The illustrations are for reference only.

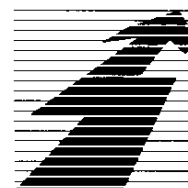
We reserve the right to adjust the prices and shall charge the price applying on the date of delivery.

Subject to change. Relevant are the criteria stated in the delivery note and in the invoice. An export licence may be required due to country-specific application of the product.

Responsible for

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