

7XV5662-0AD00 Two-Channel Serial Communication Converter G.703.6



Fig. 13/45
Communication converter

Function overview

- Interference-free protection data transfer of two independent serial data signals, selectable either in synchronous or asynchronous mode.
- PC interface for operation of devices at the remote line end.
- Network interface as E1 or T1 format for connection to multiplexer.
- Wide range power supply from 24 V to 250 V DC and 115/230 V AC with failsafe relay.
- Indication of the data exchange via LED
- Integrated commissioning aid (loop test)

Description

The CC-2M communication converter is used for serial data transmission over long distances via a communication network. It converts synchronous or asynchronous serial 820 nm optical input signals at inputs FO1 and FO2 to a network interface and again returns these signals at the remote terminal via the latter's interfaces. FO1 and FO2 may be configured independently for either synchronous or asynchronous operation, but must be set to the same operating mode at both ends. In synchronous mode, the interface should only be used for exchanging the protection data of the 7SD5/7SD6 differential protection or 7SA52/7SA6 distance protection and is preconfigured for 512 kbit/s. In asynchronous mode, the interface can be used for connection of devices with baud rates between 1.2 to 115.2 kbit/s. A further asynchronous electrical RS232 interface is provided for max. 115.2 kbit/s. It provides for the connection of a serial PC interface with DIGSI and thereby the operations interface to SIPROTEC devices at the remote end. The G.703.6 network interface is provided in the form of 4-way screw terminals and can be configured as a 2-Mbit/s interface with European E1 format or as a 1.544-Mbit/s interface in the American T1 format. All settings of the device are made with jumpers, so that no special PC software is required.

Application

Two protection devices e.g. 7SD52/7SD610 differential protection or 7SA52/7SA6 distance protection, exchange protection data via FO1. Interference-free data exchange is performed via the communication network, the devices being connected synchronously with 512 kbit/s (connection 1; see Fig. 13/46). Protection remote control with DIGSI is connected to FO2 of the converter via a 7XV5450 mini star-coupler. This port provides the serial connection to the other substation with a PC on which DIGSI is installed. In this way, the remote protection devices can be remotely interrogated via FO2 (connection 2). The baud rate is optimally set to 57.6 kbit/s for SIPROTEC 4 devices, so that there is no difference from local operation. The data of the devices on the other substation can be changed and read out during commissioning and operation. Alternatively, it is possible to connect a substation control system or additional protection data transmission to FO2. This makes for optimum use of the 1.544/2 Mbit/s transmission channel for two separate serial connections. In addition, an asynchronous serial connection is available via the RS232 interface, which can be used to temporarily operate devices of the other substation with DIGSI.

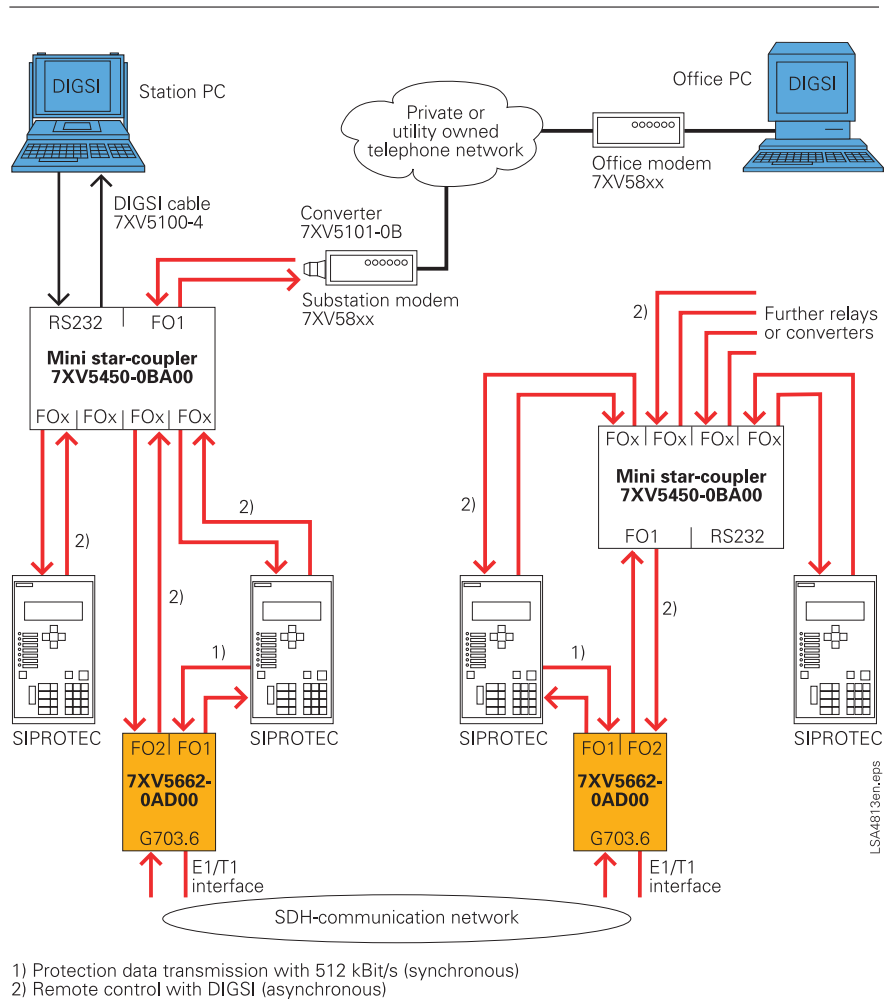


Fig. 13/46
 Protection data transmission and remote control of a substation via a communication network

Technical data

Connections	
FO 1 / 2	ST plug/ 820 nm for 50/125 µm or 62.5/125 µm multi-mode FO cable (max. 1.5 km)
RS232	For asynchronous connection from 1.2 – 115.21 kbit/s
Power supply	2-pole screw-type terminal
Fail safe relay	3-pole screw-type terminal with NC/NO contact
Network E1/T1	4-pole screw-type terminal
Housing	
Aluminium housing 188 x 56 x 120 mm for mounting on 35 mm rail mounting according to EN 50032 weight 0.8 kg. Protection class according to EN 60529: IP41	
Power supply	
Wide range 24 to 250 V DC and 115/230 V AC, 50/60 Hz	
Displays	
4 LEDs	
Green	Power supply
Red	Fault alarm
2 yellow	Data transfer

Selection and ordering data

Description	Order No.
<p><i>Two-channel serial 1.544/2 Mbit/s communication converter</i></p> <p>Conversion of 2 independent serial FO interfaces with synchronous or asynchronous data to a E1 network interface with 2 Mbit/s (G.703.6) or T1 network interface (1.544 Mbit/s). Two independent serial optical input channels with ST connectors and 820 nm for multi-mode FO cable for a max. of 512 kbit/s/115.2 kbit/s for synchronous/asynchronous data. An electrical serial RS232 interface with a max. 115.2 kbit/s constructed as a 9-pin SUB-D socket for connection with DIGSI 7XV5104 cable. Connection from multiplexer to the E1/T1 network interface via a 4-pole screw-type terminal. Wide-range power supply of 24 V to 250 V DC and 115/230 V AC. A make/break fail safe contact for power supply faults or interruption of the data connection. All settings are made with jumpers in the device (presetting for E1 and synchronous serial data input).</p>	<p><i>7XV5662 - 0A□□00</i></p> <p style="text-align: right;"><i>D</i></p>