



Fig. 13/50 Active mini star-coupler

### Function overview

One optical input and 4 optical outputs or one RS485 input and 5 optical outputs

- RS232 interface for local access
- RS485 interface for bus structure
- Baud rate and data format can be set independently for each port
- Baud rate 1200 baud – 115 kbaud
- Data format 8N1, 8N2, 8E1
- Max. distance: 1.5 km with 62.5/125  $\mu$ m multi-mode FO cable
- Light idle state: Light ON/light OFF selectable
- Wide-range power supply with self-supervision function and alarm contact
- Optical ST connectors

### Description

Five optical ports allow the active mini star-coupler to centrally or remotely communicate with devices with serial interfaces using different baud rates and data formats. Using a simple ASCII sequence, only one of the available output channels is switched to a transparent full duplex operation. The active mini star-coupler can be used with any terminal program or for SIPROTEC protection relays with the DIGSI operating program. Each of the input and output channels can be parameterized independently to the device attached by adjustable baud rates and data formats or as input or output ports. For communication with more than 5 devices, the active mini star-coupler can be cascaded together with an RS485 bus in half-duplex mode with further devices.

Please note:

The 7XV5450 passive mini star-coupler is recommended for controlling several SIPROTEC 3 or SIPROTEC 4 devices with DIGSI or for communication by a remote control system.

## Application, construction

### Application

Using the integrated optical interfaces of the active mini star-coupler, data transmission for the protection relays V1/2, SIPROTEC 3 or 4 can be performed centrally or remotely with DIGSI. When using the RS485 bus structure each active mini star-coupler provides five optical outputs. An RS232 interface is available for local operation with a notebook. The control PC (directly or via modem) always operates with the same data format, while the interfaces to the different protection relays using other formats are adapted accordingly. For V1/2 protection relays, a 7XV5101-0A plug-in connector module is required for each relay and each relay must be connected to a separate port.

### Construction

The active mini star-coupler is provided with a snap-on mounting housing for a 35 mm EN 50022 rail. Auxiliary power supplies can be connected via screw-type terminals. The fiber-optic cables are connected by ST connectors. The unit is free of silicone and halogen as well as flame-retardant.

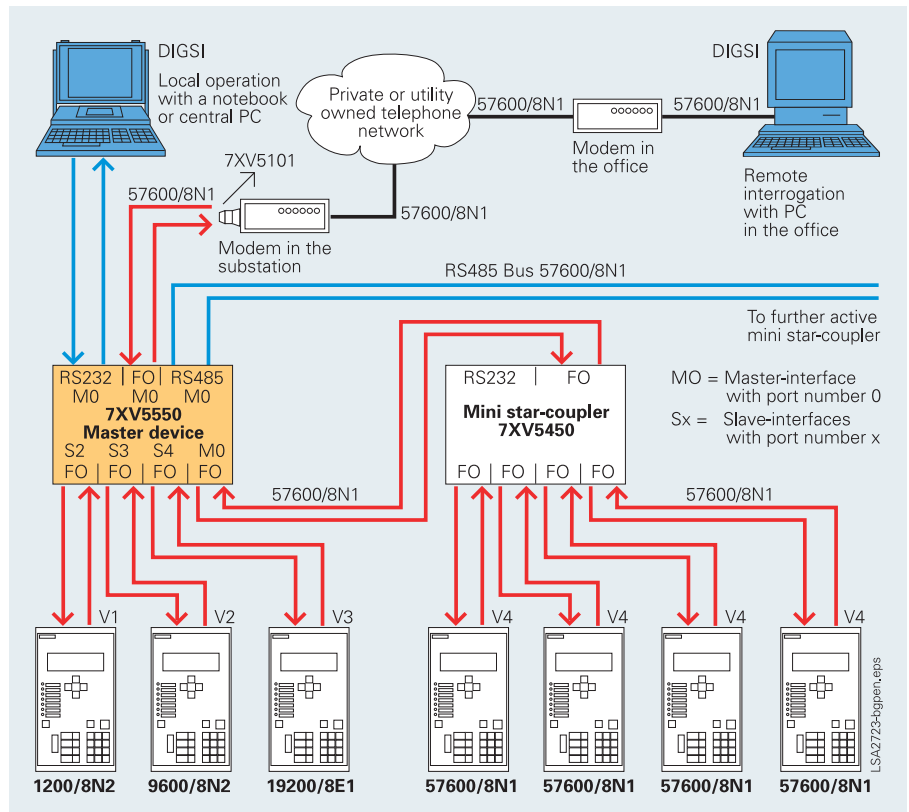


Fig. 13/51 Data transmission via using the integrated optical interfaces of the mini star-coupler

### Technical data

#### Rated auxiliary voltage

DC 24 to 250 V and AC 60 to 230 V ± 20 % without switchover

#### LEDs

|        |                        |
|--------|------------------------|
| 3 LEDs |                        |
| Green  | Operating voltage o.k. |
| Yellow | Receiving data         |
| Yellow | Sending data           |

#### Connectors

|                |                                    |
|----------------|------------------------------------|
| Power supply   | 2-pole Phoenix screw-type terminal |
| FO connections | 820 nm ST connectors               |
| RS232          | 9-pin SUB-D socket                 |
| RS485          | 2-pole Phoenix screw-type terminal |
| Alarm contact  | 2-pole Phoenix screw-type terminal |

#### Light idle state

Light ON/OFF selectable By jumpers

#### Housing

Plastic housing, EG90, charcoal grey; 90 × 75 × 105 mm (W × H × D)  
for snap-on mounting on 35 mm EN 50022 rail

### Selection and ordering data

| Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | Order No.            |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------|
| <b>7XV5550 active mini star-coupler</b><br><br>Optical active mini star-coupler with plastic housing for snap-on mounting onto 35 mm rail.<br>Rated auxiliary voltage DC 24 – 250 V and AC 110 – 230 V with alarm relay.<br>Connection of up to 4 protection units to an active mini star-coupler via FO cable for 62.5/125 µm and 850 nm wavelength, max. distance 1.5 km.<br>Connection of PC or modem to an active mini star-coupler via FO cable for 62.5/125 µm and 850 nm wavelength, max. distance 1.5 km.<br>Connection also by 9-pin RS232 connector.<br>Cascadable<br>Fiber-optic connectors with ST connector | <b>7XV5550-0BA00</b> |