

## 7XV5662-0AB00 / 7XV5662-0AB01 Communication Converter



Fig. 14/40  
Communication converter for ISDN lines

### Description

The  $S_0$  communication converter is a peripheral unit connected with the protection unit, and allows serial data exchange between two protection units over ISDN switched or dedicated lines.

A private or public communication network is used for data exchange. The digital synchronous  $S_0$  bus provides access to the network. The data are changed at the opposite end by a second  $S_0$  communication converter back into a form that the second protection unit can read (Fig. 14/40). This conversion allows two protection units and serial terminals to mutually exchange data. By means of two  $S_0$  communication converters and an ISDN link you can send data from one protection unit to another, and likewise receive data from that second unit.

The converter is available in two versions:

- The variant 7XV5662-0AB00 allows connection of a maximum of two protection relays featuring a synchronous serial interface with 64 kbit/s. It is intended for communication by the differential protection relays 7SD52 / 7SD610 and for serial signal comparison by the distance protection relay 7SA52 / 7SA6.
- The variant 7XV5662-0AB01 allows connection of a maximum of two units featuring an asynchronous serial interface with max. 19.2 kbit/s. It can be used for communication by the differential protection relay 7SD51 or the binary signal transmitter 7XV5653. Asynchronous serial data can be transferred between two devices.

### Function overview

The  $S_0$  communication converter has the following features:

- Transfer speed for long-distance line-side  $S_0$  bus: 2 x 64 kbit/s
- Connection to protection unit via 62.5/125  $\mu\text{m}$  multi-mode fiber optic link with ST connectors on the  $S_0$  communication converter. Two independent optical inputs / outputs are available (for parameter assignment to other  $S_0$  communication converters in the network).
- Maximum fiber optic length for connection to protection unit = 1.5 km.
- 5-pin screw terminal ( $S_0$  bus) for data connection to ISDN communication device.
- A 9-pin SUB-D for connection to a PC with a DIGSI cable (7XV5100-4) for parameterization of the unit with the aid of the software for the  $S_0$  communication converter.
- Wide-range power supply unit for DC 24 to 250 V DC (voltage limit 19 to 300 V DC) and AC 115 to 250 V AC (range 92 to 286 V AC).
- Monitoring of auxiliary voltage, of clock signal from communication network and of internal logic circuitry, also fault signal on an alarm relay.
- Facility for using jumpers to connect communication loops, for checking data flow at the interfaces.
- Robust die cast aluminum housing of dimensions 188 mm  $\times$  120 mm  $\times$  56 mm (W  $\times$  D  $\times$  H) for rail mounting.
- Operating states indicated by LED.
- Power input < 3.5 VA.

### Application

By means of two  $S_0$  communication converters and an ISDN link, data can be sent from one protection unit to another, and likewise be received from that second unit.

The connection between the  $S_0$  communication converter and the protection unit takes the form of an interference-free 62.5/125  $\mu\text{m}$  multi-mode fiber optic link. Data transfer between the protection units comprises a point-to-point link, is bit-transparent and synchronous, and runs with 64 kbit/s via the communication network.

The communication converter  $S_0$  has two serial optical input interfaces, each with 64 kbit/s. The long-distance line-side  $S_0$  bus passes this information to other  $S_0$  communication converters in the network, which can be selected as users or are permanently connected via dedicated line.

The  $S_0$  communication converter helps simplify commissioning of the whole communication link. Parameter setting for the  $S_0$  communication converter takes place via the serial PC interface on the converter with the aid of straightforward software (downloadable from the Internet). The software allocates users and telephone numbers to the interfaces, and specifies which converter calls and which one answers.

The  $S_0$  communication converter features a relay contact for issue of a “device OK“ signal (GOK) and also a wide-range power supply unit covering the entire customary DC and AC auxiliary voltage range. All significant operating states are indicated by LEDs.

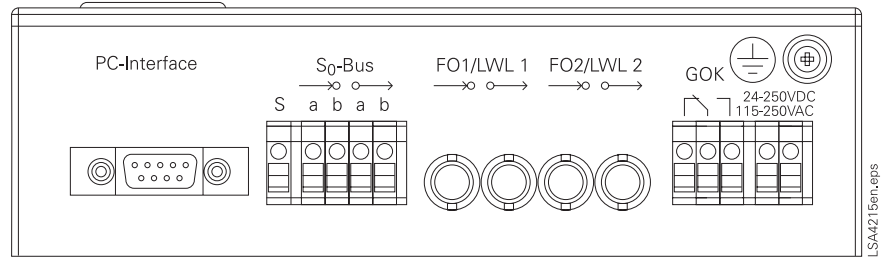


Fig. 14/41

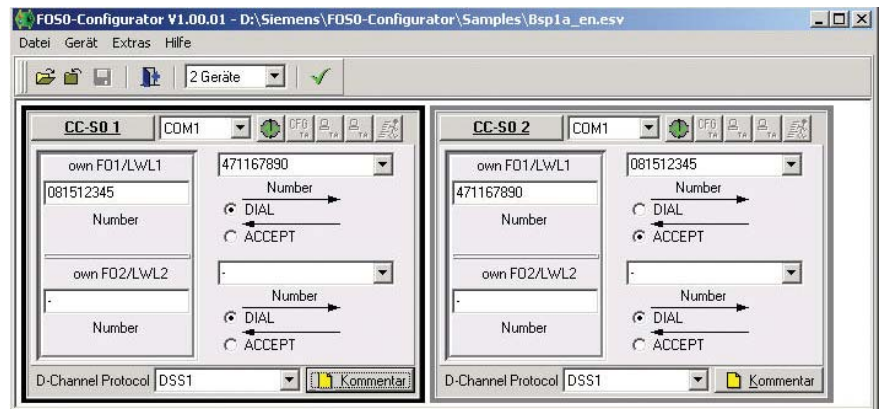


Fig. 14/42

### Selection and ordering data

#### Communication converter for ISDN switched / dedicated lines for synchronous data terminals

7XV56 62-0AB00

Converter for serial data exchange via two ISDN lines with 64 kbit/s in dedicated line mode ( $S_0$  bus)

Connection: 2 x optical 820nm / ST connectors (2 optical inputs)

Electrical: To ISDN  $S_0$  bus with 64 kbit/s or 128 kbit/s

Suitable for connection of SIPROTEC 4 relays 7SD52, 7SD610,

7SA522 and 7SA6 with synchronous interface

#### Communication converter for ISDN switched / dedicated lines for asynchronous data terminals

7XV56 62-0AB01

Converter for serial data exchange via two ISDN lines with 64 kbit/s in dedicated line mode

Connection to ISDN network with  $S_0$  bus

Connection: 2 x optical 820nm / ST connectors to

asynchronous terminal (e.g. 7SD51, 7XV5653 or DIGSI interface)

Electrical: To ISDN  $S_0$  bus with 64 kbit/s or 128 kbit/s

Dimension drawings in mm / inch

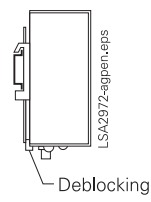
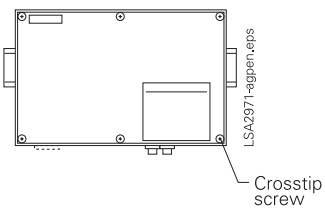
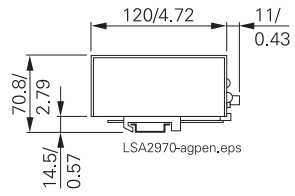
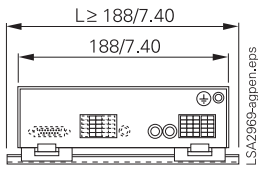


Fig. 16/41  
7XV5662 communication converter