MICROSENS

RS-232
Mini-Transceiver

Description

and

Installation

CE

Order no. MS650121 / MS650122

General information

The MICROSENS RS-232 mini transceiver allows the transmission of standard RS-232 signals over optical fiber.

Especially for industrial use, optical fiber offers the advantage of noise and interference immunity.

Long distances (up to 10 km) can be connected without problems at high data rates up to 120 kBps.

The transceiver can be delivered with a ST* optical connector.

The transmission of data signals are entirely transparent, that means that it is not possible to reach or to influence the signals.

The handshake signals are not transmitted. To guarantee the utilisation of the functions needing a handshake, the handshake signals are crossed in the module (Nullmodem-Handshake).

Technical specifications

Type	Mini transceiver for RS-232 interface
Data rate	max. 120 kBit/s
Connections	1 x SUB-D connector (9 pins) 2 x ST*-connector 1 x energy supply jack 2,1mm
Fiber	Multimode fiber 50 or 62,5/125µm duplex with ST* connector (MS650121) Single mode fiber 9/125µm duplex with ST* connector (MS650122)
Max. fiber length	2 km multimode 10 km single mode
Wavelength	850 nm
Transmit power	-17 dBm (multimode, typ.) -19 dBm (single mode, typ.)
Sensitivity	-32,5 dBm (typ.)
LED displays	Power, Receive, Transmit
Power supply	External power supply 9 V DC / 2 VA 5 V DC / 2 VA for UK connector type
Working temp.	0°C to 55°C
Storage temp.	-20°C to 80°C
Relative humidity	5% to 80% non condensing

* ST is a registered trademark of AT&T

Connections

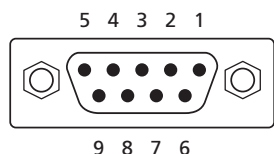Figure 1 shows the pinout of the SUB-D connector of the fiberoptical modem (RS-232, DCE).

Fig. 1: SUB-D connector (9 pins)

Pin	Signal	Direction	Description
1	DCD	out	Handshake
2	RxD	out	Receiving data
3	TxD	in	Sending data
4	DTR	in	Handshake
5	GND		Ground
6	DSR	out	Handshake
7	RTS	in	Handshake
8	CTS	out	Handshake
9	-		Free

The central contact of the power connector is for the positive voltage. The contact on the outside of the connector is ground.
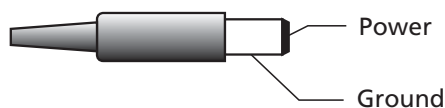

Power

Ground

Fig. 2: Connector

Installation

The pinout of the SUB-D connector of this module is the same as a RS-232 end device (DCE). In due to this the module can be connected directly to a PC (DTE). The hardware handshake signals are not trans-mitted over the fiber and therefore these signals are crossed internal (Fig. 3).
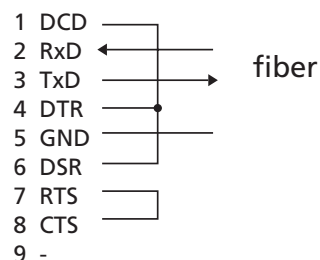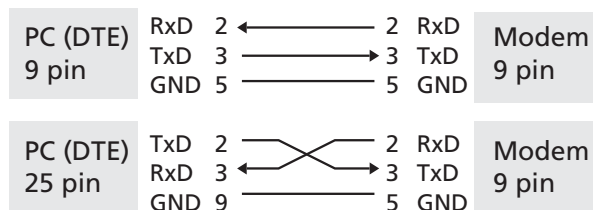

Fig. 3: Nullmodem-Handshake

The connection of the transceiver to a terminal (DTE-DCE) is done by a straight cable, so a simple three wire cable can be used.

To connect the module to an end device (DCE-DCE), TxD and RxD must be crossed.

Signalisation

Three LEDs show the status of the fibe-roptical modem. These signals can be used for fast diagnostics during installation and failure case.

The LEDs show the following information:

PWR

Power: The transceiver is now ready for operation.

RCV

Receive: Data is received over the fiber.

XMT

Transmit: Data is transmitted over the fiber.