

Connection technology

Optical fibre signal transmission

Optical fibre module

The solution for tough signal transmission.

The system is made up of an optical fibre transmitter and an optical fibre receiver. The optical fibre transmitter converts the electrical signals of an usual incremental encoder into a light signal for transmission by means of an optical fibre.

The receiving module converts the optical signal back into electrical signals. Up to 4 channels may be transmitted safely.

Innovative:

- Signal transmission thanks to a simple glass fibre
- Safe signal transmission up to 1000 m
- Input frequency up to 400 kHz
- Input level 10 – 30 V or RS 422
- Inverted input signals
- Resists extremely strong electro-magnetical fields



Compact:

- Only 22 mm wide
- DIN rail mounting, small size

Versatile:

- Process control technology and automation technology
- Interference-sensitive applications
- High voltage plants
- Plants with long transmission distances
- Potential separation
- Explosive areas

Technical data:

Supply voltage:	10 ... 30 V or 5 V ± 5%
Power consumption per module:	< 2 W
Operating voltage reverse connection protection:	available
Encoder inputs - optical fibre transmitter:	Channels A, A\, B, B\, 0, 0\
Max. input frequency - optical fibre transmitter: and output frequency - optical fibre receiver:	400 kHz
Input level - optical fibre transmitter:	10 ... 30 V or RS 422
Optical wavelength:	820 nm
Optical transmission rate:	120 Mbit/s
Optical fibre connection:	ST connector, 13 mm, ø 9 mm, on the bottom side of the housing
Glass fibre:	Multimode fibre, 50/125 µm, 62,5/125 µm
Optical fibre synchronisation display:	LED on the receiver
Input signals sampling rate:	10 MSamples/s
Max. optical fibre transmission distance:	1000 m
Dimensions:	22,5 x 110,8 x 88,4 mm (B x L x H)
Protection:	IP 40, terminals IP 20
Terminals:	Protected against contact, max. conductor diameter: 2,5 mm ²
Temperature range	-10 °C ... +60 °C
Standards:	EN 55 011 Class B1 EN 61 000 - 6 - 2: 2006

LED function:

Green LED ON when the supply voltage and the optical fibre cable are connected correctly.

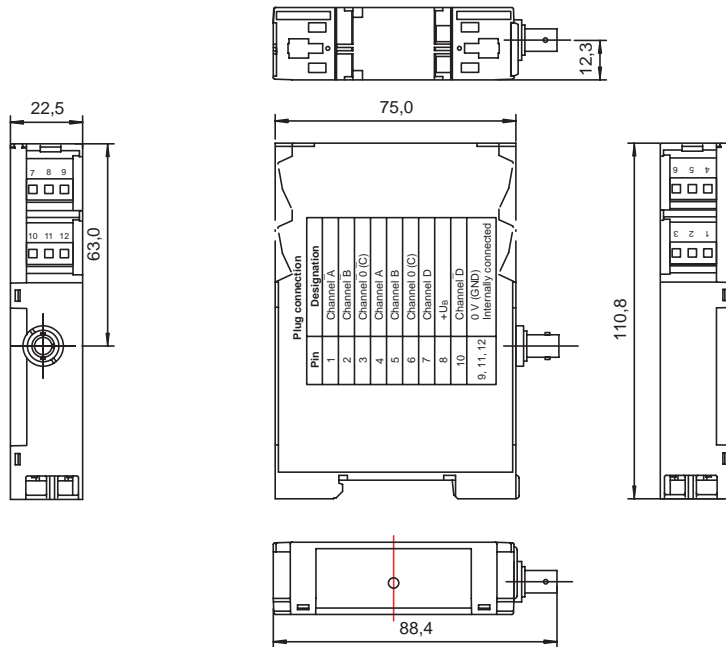
The LED in the receiver module (LWLE) blinks when the optical fibre cable is not connected correctly or is broken.

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Dimensions:



Connecting diagram of the optical fibre transmitter and receiver:

Pin	Description
1	Channel \bar{A}
2	Channel \bar{B}
3	Channel $\bar{0}$ (\bar{C})
4	Channel A
5	Channel B
6	Channel 0 (C)
7	Channel \bar{D}
8	+ U _B
10	Channel D
9, 11, 12	0 V, GND, internally connected

Order code:

Optical fibre transmitter

UB = 10 ... 30 V DC, input RS 422:	6. LWLS.1
UB = 10 ... 30 V DC, input HTL, without inversions:	6. LWLS.2
UB = 5 V DC, input RS 422:	6. LWLS.4
UB = 10 ... 30 V DC, input HTL:	6. LWLS.5

Optical fibre receiver

UB = 10 ... 30 V DC, output RS 422:	6. LWLE.1
UB = 5 V DC, output RS 422:	6. LWLE.4
UB = 10 ... 30 VDC, output HTL:	6. LWLE.5

Scope of delivery:

- Optical fibre module
- Multilingual operating manual

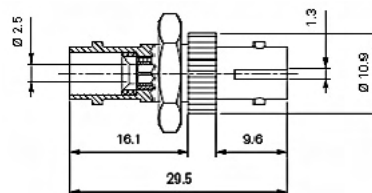
Accessories:

Simplex Patch cable ST-ST - Multimode

Connector: 2xST/PC, fibre: 1x50/125
Standard lengths: 2 m, 5m, 8m, 10m, 15m, 20m, ... (in 5m steps)

Order code:

05.B09-B09-821-LXXX
Length in m



ST Multimode coupling

Barrel: ceramic, slotted
Order code: 05.LWLK.001

