

Fiber Optic Bridge FOB FOC signal transmission

General description

The decentrally I/O-system **FOB** transmits switching, controlling and analog signals. The I/O-modules connect sensors, actuators or measuring-/monitoring systems with a PLC over a distance up to 40km. The transmission is done unidirectional via fiber optic cable (FOC). The **FOB** ensures fast data transmission in an rough industrial environment and in open terrain without any disturbance. As a result of absolute potential isolation problems which can be caused by potential losses, disturbing voltages, etc. are generally prevented.

For customized applications the devices are available for POF, singlemode and multimode fiber.

The point to point transmission with the **FOB** does not need any software. Neither are adjustments or programming required. So the installation and startup is very simple (Plug & Play).

Features

- Unidirectional data transmission without any disturbance
- Easy mounting and commissioning (pluggable screwing clamps)
- Easy startup without adjustment or programming

Technical specifications of transmitter and receiver

Housing	Slim module case ME22.5 for rail mounting
Dimensions	LxWxH 100 x 22.5 x 127mm (without fiber connector)
Interface	serial FOC-transmission
Leistungsbudget	Fiber E9/125um 1300nm (SM): typ. 9dB Fiber G50/125um 820nm (MM): typ. 9,5dB Fiber G62,5/125um 820nm (MM): typ. 15dB Fiber G62,5/125um 1300nm (MM): typ. 11dB Fiber POF 990/1000um 660nm: typ. 15dB
Range	Depends on fiber type (100m ... 40km)
Fiber connection	F-ST or F-SMA connector
Signal delay	approx. 1 ms (cycle time) at FOB40 and FOB80 approx. 5 ms (cycle time) at FOB02/FOB04/FOB42/FOB84
Power supply	24V DC $\pm 10\%$ (option: 12V DC)
Current consumption	in standby mode: transmitter (max.): MM: 40mA, SM: 70mA, POF: 40mA recaiver (max.): MM: 25mA, SM: 55mA, POF: 25mA
MTBF (FIT)	>450 000 h (2222)
Environment	Operating temperature -20...+70°C

Technical specifications of transmitter

Input digital	4 or 8 x 24V DC (1mA)
Input analogue	4 x 0...10V DC or 0/4...20mA DC (burden at current: 120 Ω)

Technical specifications of receiver

Output digital	8 x 24V DC/0.7A, total max. 2,5A
Output analogue	4 x 0...10V DC or 0/4...20mA DC (max. burden 500 Ω)
Accuracy	+/- 0.2% of range (analogue output)

Device versions

FOB 02	2 analogue inputs resp. outputs
FOB 04	4 analogue inputs resp. outputs
FOB 40	4 digital inputs resp. outputs
FOB 42	4 digital and 2 analogue inputs resp. outputs
FOB 80	8 digital inputs resp. outputs
FOB 84	8 digital and 4 analogue inputs resp. outputs



Gerätefamilie FOB



Sender FOB-S



Empfänger FOB-E



Sender und Empfänger FOB84