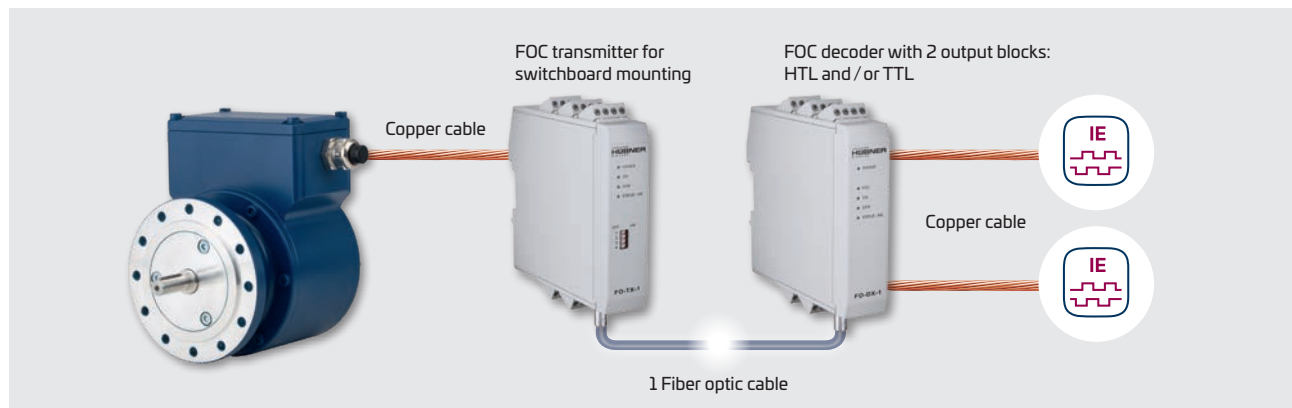




FOC transmitter and decoder FO-TX / DX-1

For interference-free signal transmission over long distances

Encoder with external fiber optic transmitter



If the encoder does not have an integrated fiber optic transmitter, it is connected via a copper cable to the external fiber optic transmitter module in the switchboard. This application is possible for all incremental encoders.

Image	System (Series)	FO-TX-1 → FO-DX-1(i)
	Encoder signals	Incremental
	Signal input (transmitter)	1x HTL/TTL
	Signal output (decoder)	2x HTL/TTL
	Signal level	HTL/TTL (adjustable): HTL differential, HTL single-ended, RS 422, TTL single-ended
	Transmitted data	0°, 90°, N, STATUS; each inverted
	Max. frequency range	HTL/TTL: 400 kHz, RS 422: 1 MHz
	Required fiber optic cable	1x 62,5/125 µm or 50/125 µm (ST connectors)
	Options	Potential-separated output blocks
	Cable break monitoring	Integrated

Selection table and order codes

FO Transmitter					
Module name	Input	Cable type	Including cable break monitoring	Casing for outdoor use	Order number
FO-TX-1	HTL or TTL	50/125 µm or 62,5/125 µm	x	x	25046

FO Decoder				
Module name	Input	Including cable break monitoring	Galvanically isolated	Order number
FO-DX-1	HTL/HTL	x		25047
FO-DX-1i	HTL/HTL	x	x	25051
FO-DX-1	HTL/TTL	x		25048
FO-DX-1i	HTL/TTL	x	x	25052
FO-DX-1	TTL/TTL	x		25049
FO-DX-1i	TTL/TTL	x	x	25053

Design and functionality



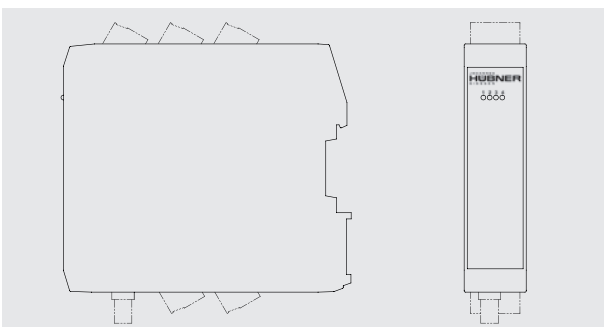
FOC signal transmission

- Newly developed fiber optic technology
- Long transmission distances up to 1000 m
- All data via only one fiber optic cable
- Constantly fast signal processing time <math><1 \mu\text{s}</math> (transmitter input to decoder output)
- Very high sampling rate; very high signal quality (jitter <math><15 \text{ ns}</math>)
- Galvanic isolation (encoder to decoder)
- High transmission reliability (EMC insensitivity)



Connections

- Supply voltage 12 – 30 VDC
- Terminal strips and FOC connector on the outside of the module



Casing

- Electronic housing for standard mounting rails
- Degree of protection IP20 (Switchboard)
- Device temperature range -20 ... +70 °C