

Fiber-optic amplifier

P1XD002

Part Number



- Can be adjusted using potentiometers
- Diverse usage options: Barrier, reflex, reflex light barrier
- IO-Link 1.1
- Tool-free assembly

Fiber-optic sensors work according to the energetic principle in which light is emitted via one fiber-optic cable and received via another. The amplifier can be adapted to a wide range of application requirements through the use of flexible plastic fiber-optic cables or glass fiber-optic cables with adapter no. 7. The switching point can be easily adjusted using the potentiometer. Both the fiber-optic cable and the sensor can be mounted without tools, which further simplifies handling.

Technical Data

Optical Data

Switching Hysteresis	< 15 %
Light Source	Red Light
Service Life (T = +25 °C)	> 100000 h
Max. Ambient Light	10000 Lux

Electrical Data

Supply Voltage	10...30 V DC
Supply Voltage with IO-Link	18...30 V DC
Current Consumption (U _b = 24 V)	< 30 mA
Switching Frequency	0,9 kHz
Switching frequency (speed mode)	1,8 kHz
Response Time	263 µs
On-/Off-Delay	0...200 ms
Temperature Drift	< 10 %
Temperature Range	-25...60 °C
Switching Output Voltage Drop	< 2 V
Switching Output/Switching Current	100 mA
Short Circuit Protection	yes
Reverse Polarity Protection	yes
Overload Protection	yes
IO-Link transmission speed	COM2
Interface	IO-Link V1.1
Protection Class	III

Mechanical Data

Setting Method	Potentiometer
Housing Material	Plastic, ABS
Housing Material	Plastic, PA
Housing Material	Plastic, PC
Degree of Protection	IP50
Connection	M8 × 1; 4-pin
DIN-Rail mounting	35 mm

Safety-relevant Data

MTTFd (EN ISO 13849-1)	640,47 a
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IO-Link

PNP NO

Connection Diagram No.

Control Panel No.

Suitable Connection Equipment No.



1027

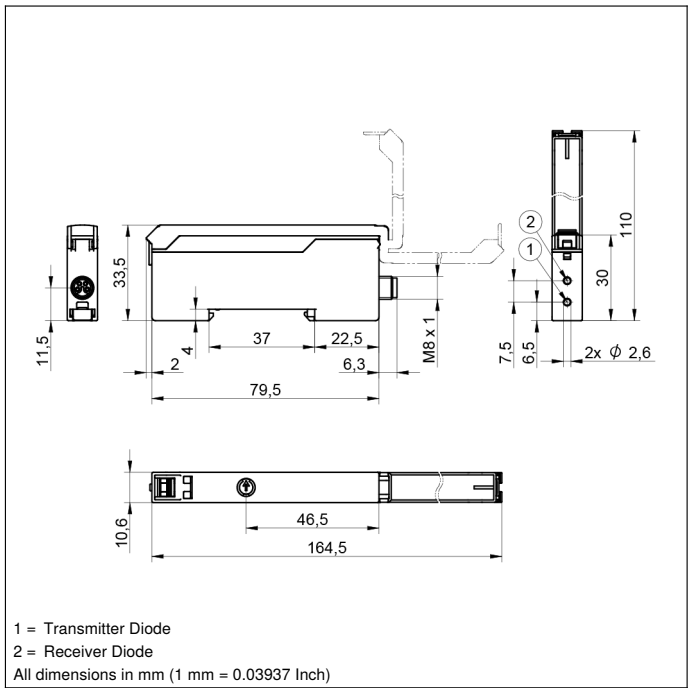
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Complementary Products

IO-Link Master

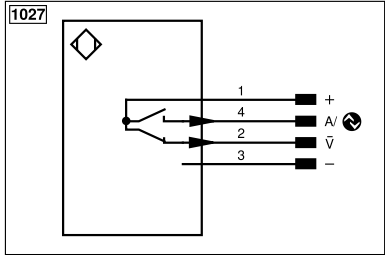
Plastic Fiber-Optic Cable



Ctrl. Panel



05 = Switching Distance Adjuster
5a = Switching Status Indicator, A1
68 = Power LED



Legend			
+	Supply Voltage +	nc	Not connected
-	Supply Voltage 0 V	U	Test Input
~	Supply Voltage (AC Voltage)	Ů	Test Input inverted
A	Switching Output (NO)	W	Trigger Input
Ā	Switching Output (NC)	W-	Ground for the Trigger Input
V	Contamination/Error Output (NO)	O	Analog Output
V̄	Contamination/Error Output (NC)	O-	Ground for the Analog Output
E	Input (analog or digital)	BZ	Block Discharge
T	Teach Input	Amv	Valve Output
Z	Time Delay (activation)	a	Valve Control Output +
S	Shielding	b	Valve Control Output 0 V
RxD	Interface Receive Path	SY	Synchronization
TxD	Interface Send Path	SY-	Ground for the Synchronization
RDY	Ready	E+	Receiver-Line
GND	Ground	S+	Emitter-Line
CL	Clock	⊕	Grounding
E/A	Output/Input programmable	SnR	Switching Distance Reduction
IO-Link	IO-Link	Rx+/-	Ethernet Receive Path
PoE	Power over Ethernet	Tx+/-	Ethernet Send Path
IN	Safety Input	Bus	Interfaces-Bus A(+)/B(-)
OSSD	Safety Output	La	Emitted Light disengageable
Signal	Signal Output	Mag	Magnet activation
BL_D+/-	Ethernet Gigabit bidirect. data line (A-D)	RES	Input confirmation
ENo RS422	Encoder 0-pulse 0/0 (TTL)	EDM	Contact Monitoring
PT	Platinum measuring resistor	ENARIS422	Encoder A/Ā (TTL)
		ENBRIS422	Encoder B/B̄ (TTL)
		ENA	Encoder A
		ENb	Encoder B
		AMIN	Digital output MIN
		AMAX	Digital output MAX
		AOK	Digital output OK
		SY In	Synchronization In
		SY OUT	Synchronization OUT
		OLt	Brightness output
		M	Maintenance
		rsv	Reserved
Wire Colors according to DIN IEC 60757			
		BK	Black
		BN	Brown
		RD	Red
		OG	Orange
		YE	Yellow
		GN	Green
		BU	Blue
		VT	Violet
		GY	Grey
		WH	White
		PK	Pink
		GNYE	Green/Yellow

