

Fiber-optic amplifier

P1XD121

Part Number



- Blue LED
- Intuitive setup using display
- NFC via weCon app, IO-Link
- Tool-free assembly

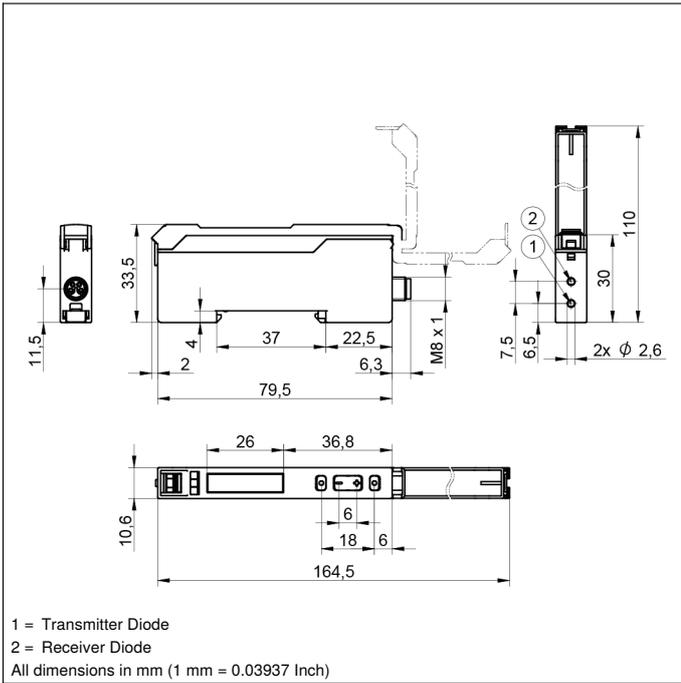
These sensors work according to the energetic principle. Light is transmitted through one fiber-optic cable and received through the other. The amplifier can be adapted to a wide range of application requirements using the various plastic fiber-optic cables or fiber-optic cables with adapter no. 4. The display shows both the switching threshold and the currently received signal. Thanks to its intuitive setup, the sensor can be quickly configured using the buttons. Complex parameterizations are also easy to do using a mobile device and the wenglor weCon app or via IO-Link. All sensor information is provided via the IO-Link process data. The fiber-optic cable and sensor are installed without the use of tools.

Technical Data

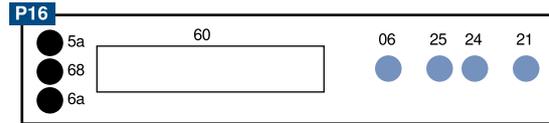
Optical Data	
Switching Hysteresis	< 15 %
Light Source	Blue Light
Service Life (T = +25 °C)	> 100000 h
Max. Ambient Light	10000 Lux
Electrical Data	
Supply Voltage	10...30 V DC
Supply Voltage with IO-Link	18...30 V DC
Current Consumption (U _b = 24 V)	< 40 mA
Switching Frequency	7 kHz
Response Time	71 μs
On-/Off-Delay	0...10000 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
Teach Mode	NT, MT, MT with dynamic readjustment, jump detection, DT, BT, WT
Baud Rate	COM3
Interface	IO-Link V1.1.3
Protection Class	III
Mechanical Data	
Setting Method	Display
Setting Method	NFC
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
IO-Link	●
PNP NC, PNP NO	●
Connection Diagram No.	215
Control Panel No.	P16
Suitable Connection Equipment No.	7

Complementary Products

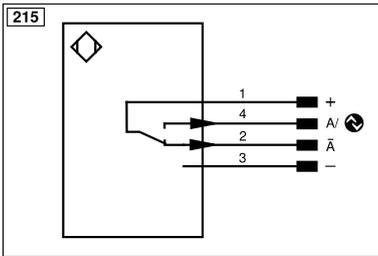
IO-Link Master
Plastic Fiber-Optic Cable



Ctrl. Panel



- 06 = Teach Button
- 21 = Mode Button
- 24 = Plus Button
- 25 = Minus Button
- 5a = Switching Status Indicator, A1
- 60 = display
- 68 = supply voltage indicator
- 6a = Switching Status Indicator, A2



Legend					
+	Supply Voltage +	nc	Not connected	ENBRS422	Encoder B/B̄ (TTL)
-	Supply Voltage 0 V	U	Test Input	ENA	Encoder A
~	Supply Voltage (AC Voltage)	Ū	Test Input inverted	ENb	Encoder B
A	Switching Output (NO)	W	Trigger Input	AMIN	Digital output MIN
Ā	Switching Output (NC)	W-	Ground for the Trigger Input	AMAX	Digital output MAX
V	Contamination/Error Output (NO)	O	Analog Output	AOK	Digital output OK
V̄	Contamination/Error Output (NC)	O-	Ground for the Analog Output	SY In	Synchronization In
E	Input (analog or digital)	BZ	Block Discharge	SY OUT	Synchronization OUT
T	Teach Input	Amv	Valve Output	OLT	Brightness output
Z	Time Delay (activation)	a	Valve Control Output +	M	Maintenance
S	Shielding	b	Valve Control Output 0 V	rsv	Reserved
RxD	Interface Receive Path	SY	Synchronization	Wire Colors according to DIN IEC 60757	
TxD	Interface Send Path	SY-	Ground for the Synchronization	BK	Black
RDY	Ready	E+	Receiver-Line	BN	Brown
GND	Ground	S+	Emitter-Line	RD	Red
CL	Clock	±	Grounding	OG	Orange
E/A	Output/Input programmable	SnR	Switching Distance Reduction	YE	Yellow
IO-Link	IO-Link	Rx+/-	Ethernet Receive Path	GN	Green
PoE	Power over Ethernet	Tx+/-	Ethernet Send Path	BU	Blue
IN	Safety Input	Bus	Interfaces-Bus A(+)/B(-)	VT	Violet
OSSD	Safety Output	La	Emitted Light disengageable	GY	Grey
Signal	Signal Output	Mag	Magnet activation	WH	White
BI_D+/-	Ethernet Gigabit bidirect. data line (A-D)	RES	Input confirmation	PK	Pink
ENo RS422	Encoder 0-pulse 0/0̄ (TTL)	EDM	Contactors Monitoring	GNYE	Green/Yellow
PT	Platinum measuring resistor	ENARS422	Encoder A/Ā (TTL)		

