

Through-Beam Sensor

P1PS101

Part Number



- Condition monitoring
- High light intensity with large switching reserve
- IO-Link 1.1
- Test input for high operational reliability

Technical Data

Optical Data

Range	20000 mm
Light Source	Red Light
Service Life (T = +25 °C)	100000 h
Opening Angle	4 °
Light Spot Diameter	see Table 1

Electrical Data

Sensor Type	Emitter
Supply Voltage	10...30 V DC
Current Consumption (U _b = 24 V)	< 20 mA
Temperature Drift	< 10 %
Temperature Range	-40...60 °C
Reverse Polarity Protection	yes
Test input	yes
Protection Class	III

Mechanical Data

Housing Material	Plastic
Degree of Protection	IP67/IP68
Connection	M12 × 1; 4-pin
Optic Cover	PMMA

Safety-relevant Data

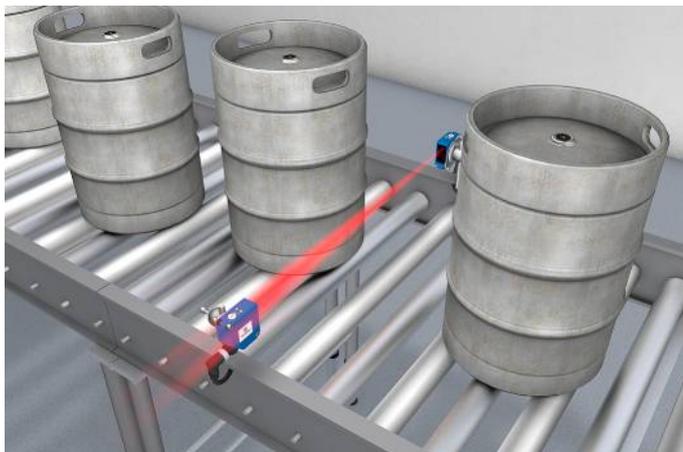
MTTFd (EN ISO 13849-1)	3751,95 a
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Connection Diagram No.	1018
Control Panel No.	A33
Suitable Connection Equipment No.	2
Suitable Mounting Technology No.	380

Suitable Receiver

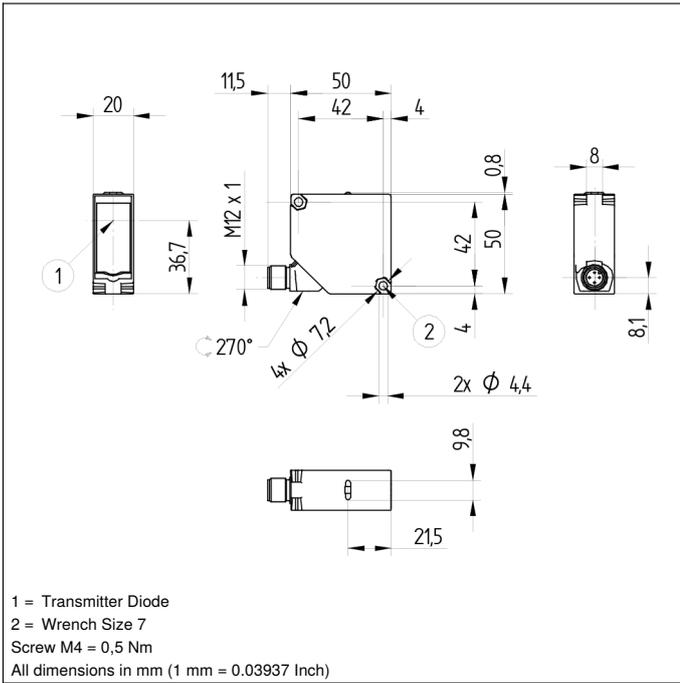
P1PE101
P1PE102

The through-beam sensor works with red light as well as a transmitter and a receiver. Thanks to their high light intensity, the sensor provides a high degree of operational reliability even with interferences like steam, fog or dust. The transmitter can be deactivated using test input in order to test the functionality of the through-beam sensor. The IO-Link interface can be used to configure the sensor (PNP/NPN, NC/NO, switching distance), as well as for reading out switching statuses and signal values.

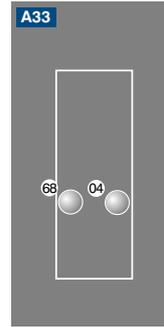


Complementary Products

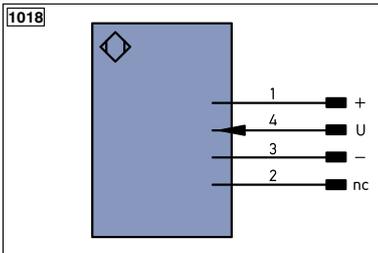
Set Protective Housing Z1PS001



Ctrl. Panel



04 = Function Indicator
 68 = Supply Voltage Indicator



Legend			
+	Supply Voltage +	PT	Platinum measuring resistor
-	Supply Voltage 0 V	nc	not connected
~	Supply Voltage (AC Voltage)	U	Test Input
A	Switching Output (NO)	Ū	Test Input inverted
Ā	Switching Output (NC)	W	Trigger Input
V	Contamination/Error Output (NO)	W-	Ground for the Trigger Input
Ṽ	Contamination/Error Output (NC)	O	Analog Output
E	Input (analog or digital)	O-	Ground for the Analog Output
T	Teach Input	BZ	Block Discharge
Z	Time Delay (activation)	AWV	Valve Output
S	Shielding	a	Valve Control Output +
RxD	Interface Receive Path	b	Valve Control Output 0 V
TxD	Interface Send Path	SY	Synchronization
RDY	Ready	SY-	Ground for the Synchronization
GND	Ground	E+	Receiver-Line
CL	Clock	S+	Emitter-Line
E/A	Output/Input programmable	⊕	Grounding
	IO-Link	SnR	Switching Distance Reduction
PoE	Power over Ethernet	Rx+/-	Ethernet Receive Path
IN	Safety Input	Tx+/-	Ethernet Send Path
OSSD	Safety Output	Bus	Interfaces-Bus A(+)/B(-)
Signal	Signal Output	La	Emitted Light disengageable
Bl..D+/-	Ethernet Gigabit bidirect. data line (A-D)	Mag	Magnet activation
EN0..5422	Encoder 0-pulse 0-0 (TTL)	RES	Input confirmation
		EDM	Contacting Monitoring
		EN1..5422	Encoder A/Ā (TTL)
		EN2..5422	Encoder B/B̄ (TTL)
		ENa	Encoder A
		ENb	Encoder B
		A _{MIN}	Digital output MIN
		A _{MAX}	Digital output MAX
		A _{OK}	Digital output OK
		SY _{in}	Synchronization In
		SY _{OUT}	Synchronization OUT
		OLt	Brightness output
		M	Maintenance
		rsv	reserved
		Wire Colors according to DIN IEC 757	
		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

Table 1

Distance transmitter/receiver	1 m	5 m	20 m
Light Spot Diameter	80 mm	200 mm	800 mm

