

Through-Beam Sensor

P1NS101

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)	< 30 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

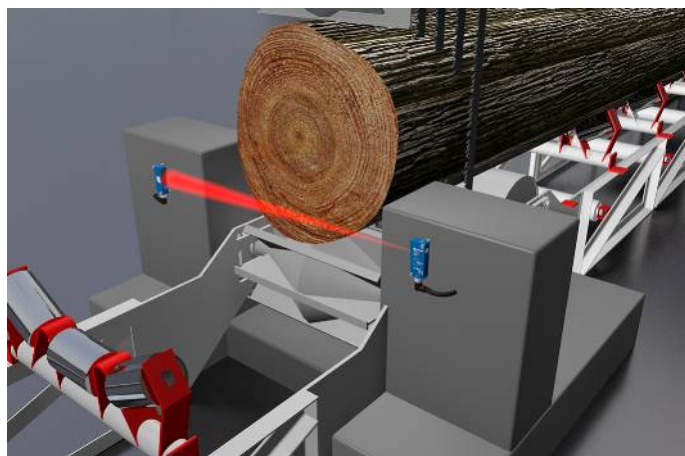
MTTFd (EN ISO 13849-1)	4534,36 a
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Connection Diagram No.	1018
Control Panel No.	A29
Suitable Connection Equipment No.	2
Suitable Mounting Technology No.	350

Suitable Receiver

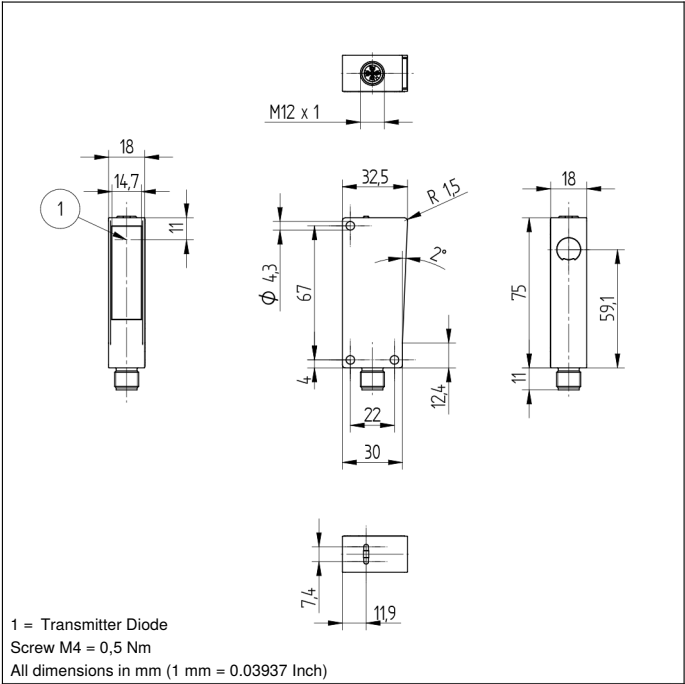
P1NE101
P1NE102

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

Dust Extraction Tube STAUBTUBUS-03
Set Protective Housing Z1NS001

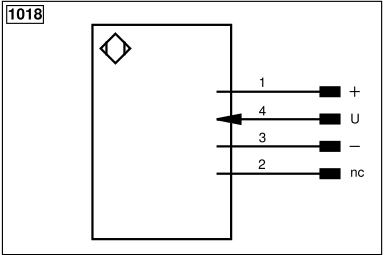


Ctrl. Panel

A 29



04 = Function Indicator
68 = supply voltage indicator



Legend					
+	Supply Voltage +	nc	Not connected	ENBRS422	Encoder B/B (TTL)
-	Supply Voltage 0 V	U	Test Input	ENA	Encoder A
~	Supply Voltage (AC Voltage)	Ů	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
Ȳ	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
BL_D+/-	Ethernet Gigabit bidirect. data line (A-D)	RES	Input confirmation	PK	Pink
ENo RS422	Encoder 0-pulse 0/0 (TTL)	EDM	Contact Monitoring	GNYE	Green/Yellow
PT	Platinum measuring resistor	ENARIS422	Encoder A/A (TTL)		

Table 1

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

