

Through-Beam Sensor

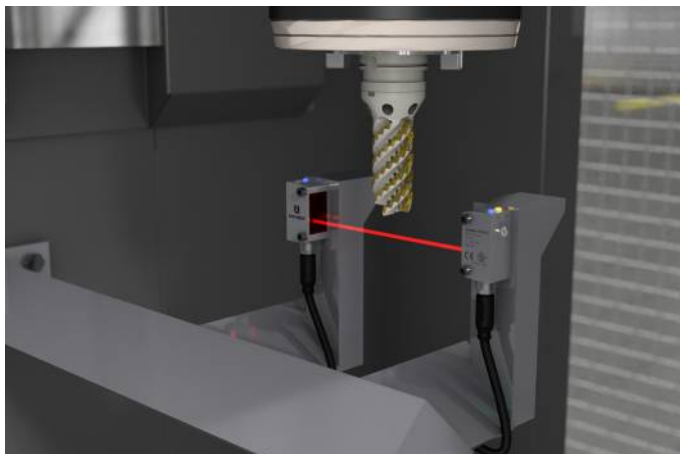
P2KS003

Part Number



- Detect extremely small parts starting at 1 mm
- Robust stainless steel housing with IP69K
- Test input for high operational reliability
- Very high switching frequency

The through-beam sensor works with a fine laser beam as well as an emitter and receiver. The collimated class 1 laser beam detects objects, e.g., when conducting installation, feed, or presence checks, starting from a size of 1.0 mm, over the entire range. The emitter 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 to read out switching statuses and signal values. The robust 316L stainless steel housing (1.4404/V4A) is resistant to oils, coolants, and cleaning agents.



Technical Data

Optical Data

Range	10000 mm
Light Source	Laser (red)
Wavelength	680 nm
Service Life (T = +25 °C)	100000 h
Laser Class (EN 60825-1)	1
Light Spot Diameter	see Table 1

Electrical Data

Sensor Type	Emitter
Supply Voltage	10...30 V DC
Current Consumption (Ub = 24 V)	< 15 mA
Temperature Drift (-10 °C < Tu < 40 °C)	10 % *
Temperature Range	-40...50 °C
Reverse Polarity Protection	yes
Test input	yes
Protection Class	III
FDA Accession Number	1710976-004

Mechanical Data

Housing Material	Stainless steel, V4A (1.4404 / 316L)
Degree of Protection	IP68
Degree of Protection	IP69K
Connection	M8 × 1; 3-pin
Optic Cover	Plastic, PMMA

Safety-relevant Data

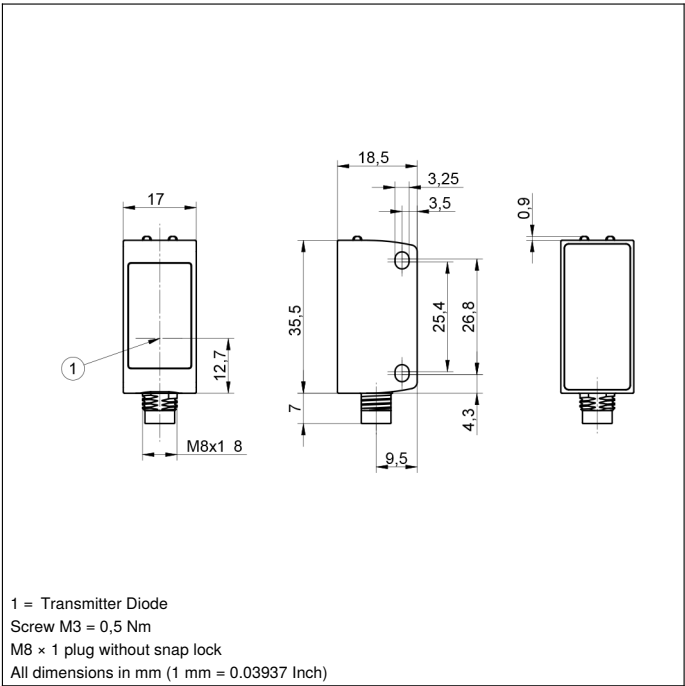
MTTFd (EN ISO 13849-1)	2920,28 a
Scope of delivery	1 × initial start-up instructions 1 × sensor
Approvals	Ecolab
Connection Diagram No.	703
Control Panel No.	1K2
Suitable Connection Equipment No.	8
Suitable Mounting Technology No.	400

Suitable Receiver

P2KE007

P2KE010

* See operating instructions for further information

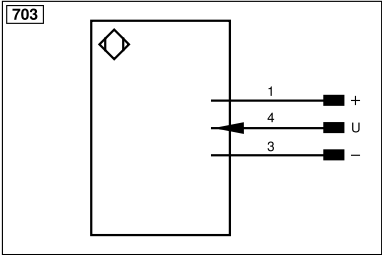


Ctrl. Panel

1K2



04 = Function Indicator
68 = Power LED



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
Ū	Contamination/Error Output (NC)	O	Analog Output
E	Input (analog or digital)	O-	Ground for the Analog Output
T	Teach Input	BZ	Block Discharge
R	Reset 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(-)
QSSD	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
		ENARs422	Encoder A/Ā (TTL)
		ENBRs422	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

Table 1

Working Distance	1 m	6 m	10 m
Light Spot Diameter	2,5 mm	25 mm	40 mm

