

Reflex Sensor with Background Suppression

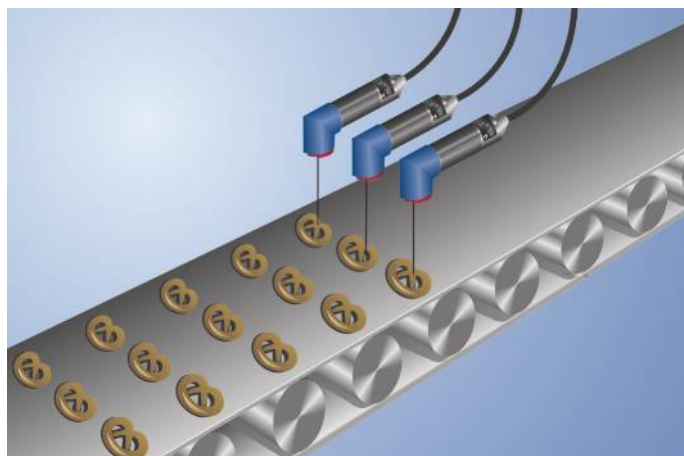
P18H003

Part Number



- IO-Link 1.1
- Red light
- Reliably detect objects against any background
- Stainless steel housing
- Teach-in, external teach-in

The reflex sensor with background suppression works with red light according to the angle measurement principle and is suitable for the detection of objects against any background. The sensor always has the same switching distance, regardless of the color, shape and surface of the objects. Minimal height differences can be detected with the sensors and, for example, various parts can be reliably differentiated from each other. The IO-Link interface can be used to configure reflex sensors (PNP/NPN, NC/NO) and to output switching statuses.



Technical Data

Optical Data	
Range	120 mm
Setting Range	35...120 mm
Switching Hysteresis	< 5 %
Light Source	Red Light
Service Life (T = +25 °C)	100000 h
Max. Ambient Light	10000 Lux
Light Spot Diameter	see Table

Electrical Data	
Supply Voltage	10...30 V DC
Supply Voltage with IO-Link	18...30 V DC
Current Consumption (U _b = 24 V)	< 20 mA
Switching Frequency	750 Hz
Switching Frequency (interference-free mode)	500 Hz
Response time (interference-free mode)	1 ms
Response Time	0,67 ms
Temperature Drift	< 5 %
Temperature Range	-25...60 °C
Switching Output Voltage Drop	< 2,5 V
PNP Switching Output/Switching Current	100 mA
Residual Current Switching Output	< 50 µA
Short Circuit Protection	yes
Reverse Polarity Protection	yes
Overload Protection	yes
Lockable	yes
Teach Mode	HT, VT
Interface	IO-Link V1.1
Protection Class	III

Mechanical Data	
Setting Method	Teach-In
Housing Material	Plastic, PBT
Housing Material	Stainless steel, V2A (1.4305 / 303)
Full Encapsulation	yes
Degree of Protection	IP67
Connection	M12 × 1; 4-pin

Safety-relevant Data	
MTTFd (EN ISO 13849-1)	1258,64 a

PNP NO	●
External teach-in input	●
IO-Link	●

Connection Diagram No.	865
Control Panel No.	D19
Suitable Connection Equipment No.	2
Suitable Mounting Technology No.	150

Complementary Products

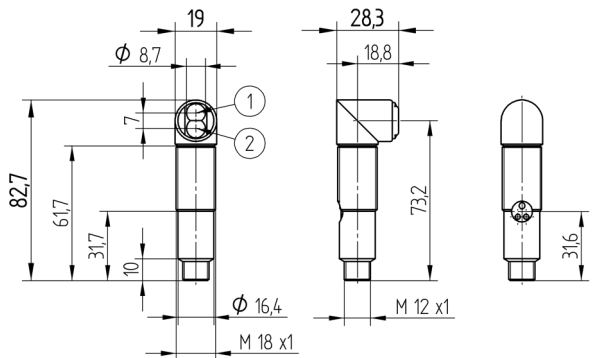
Dust Extraction Tube STAUBTUBUS-01
IO-Link Master
Software

Ctrl. Panel

D19



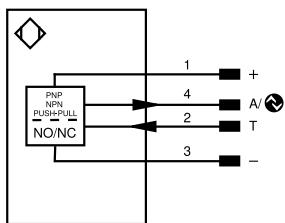
06 = Teach Button
30 = Switching Status/Contamination Warning
68 = supply voltage indicator



1 = Transmitter Diode
2 = Receiver Diode
All dimensions in mm (1 mm = 0.03937 Inch)



865



Legend			
+	Supply Voltage +	nc	Not connected
-	Supply Voltage 0 V	U	Test Input
~	Supply Voltage (AC Voltage)	Ū	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
Ȳ	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
BI_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/A (TTL)
		ENBRIS422	Encoder B/B (TTL)
		ENA	Encoder A
		ENB	Encoder B
		AMIN	Digital output MIN
		AMAX	Digital output MAX
		ACK	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

Detection Range	60 mm	120 mm
Light Spot Diameter	2 mm	4 mm

Switching Distance Deviation

Typical characteristic curve based on white, 90 % remission

