

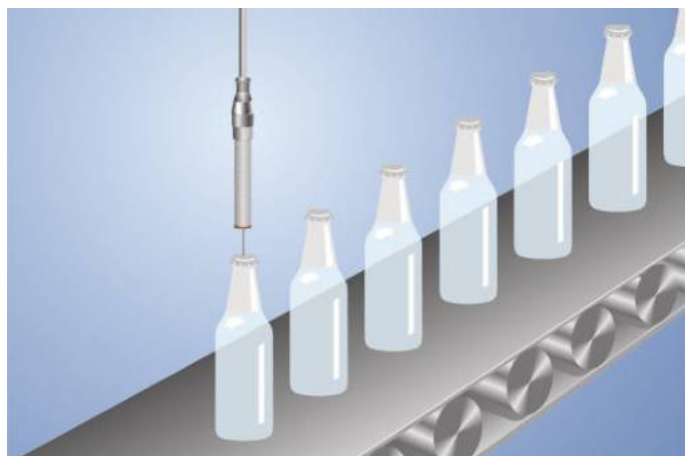


- Compact housing
- Contamination warning
- Infrared light

Technical Data

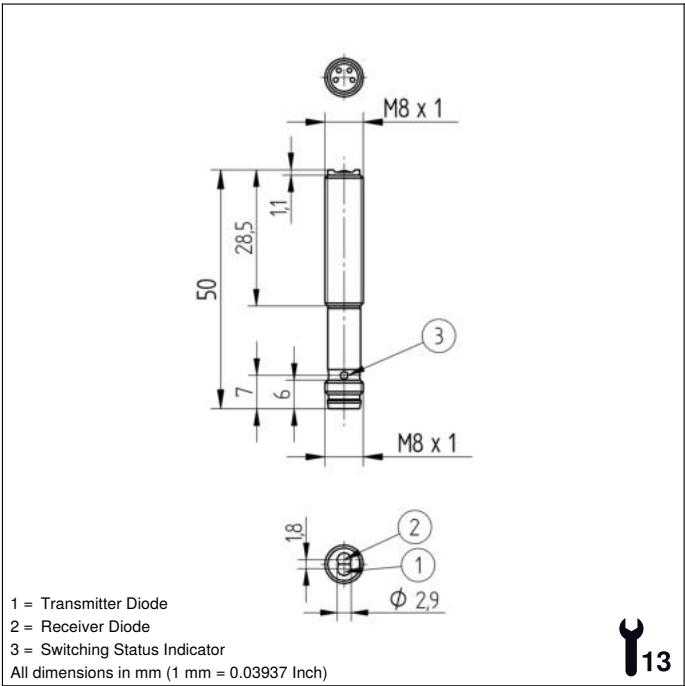
Optical Data	
Range	60 mm
Switching Hysteresis	< 15 %
Light Source	Infrared Light
Service Life (T = +25 °C)	100000 h
Max. Ambient Light	10000 Lux
Light Spot Diameter	see Table
Electrical Data	
Supply Voltage	10...30 V DC
Current Consumption (U _b = 24 V)	< 20 mA
Switching Frequency	1800 Hz
Response Time	270 μs
Temperature Drift	< 10 %
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
Protection Class	III
Mechanical Data	
Housing Material	Stainless Steel
Full Encapsulation	yes
Degree of Protection	IP67
Connection	M8 × 1; 4-pin
PNP NO/NC switchable	
Connection Diagram No.	175
Control Panel No.	B2
Suitable Connection Equipment No.	7
Suitable Mounting Technology No.	200

The transmitter and receiver in these sensors are located in a single housing. The sensor evaluates transmitted light reflected back from the object. The output is switched as soon as an object passes the selected range. Bright objects reflect more light than dark objects, and can thus be recognized from greater distances.



Complementary Products

PNP-NPN Converter BG7V1P-N-2M



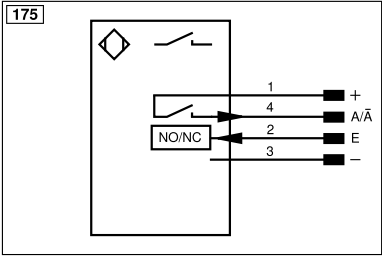
1 = Transmitter Diode
2 = Receiver Diode
3 = Switching Status Indicator
All dimensions in mm (1 mm = 0.03937 Inch)

Ctrl. Panel

B2



30 = Switching Status/Contamination Warning



Legend			
+	Supply Voltage +	nc	Not connected
-	Supply Voltage 0 V	U	Test Input
~	Supply Voltage (AC Voltage)	Ů	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
BL_D+/-	Ethernet Gigabit bidirect. data line (A-D)	RES	Input confirmation
ENo RS422	Encoder 0-pulse 0/Ů (TTL)	EDM	Contact Monitoring
PT	Platinum measuring resistor	ENARs422	Encoder A/Ā (TTL)
		ENBRs422	Encoder B/B̄ (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	20 mm	40 mm	60 mm
Light Spot Diameter	3 mm	6 mm	9 mm

