

Retro-Reflex Sensor

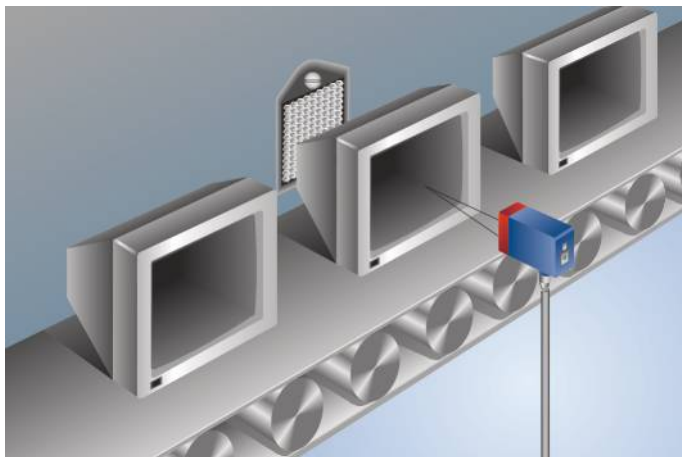
OLM653C0102

Part Number



- IO-Link interface
- Low-cost
- Teach-in, external teach-in

A reflector must be used in combination with these sensors. They can be installed in all kinds of industrial environments thanks to ample functional reserve. Even reflective objects can be reliably recognized through the use of polarized light.

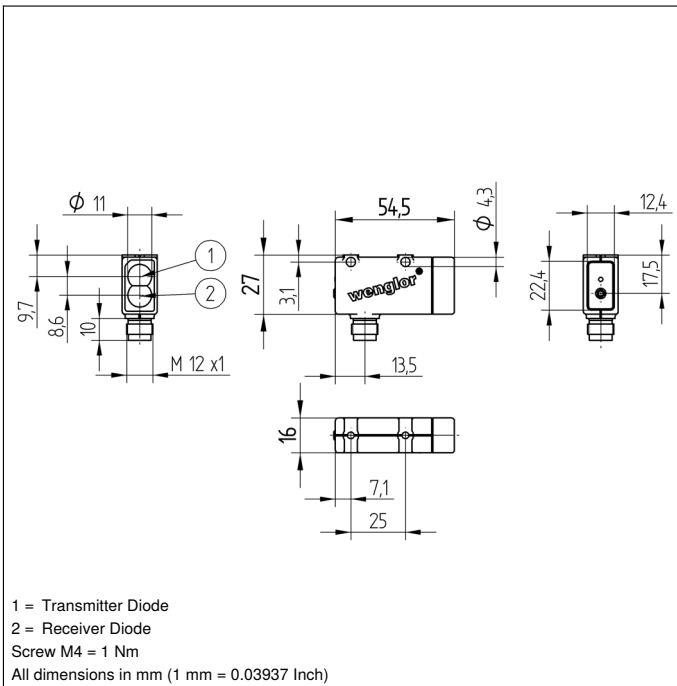


Technical Data

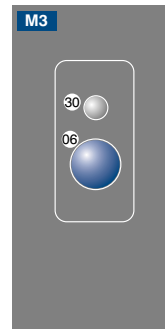
Optical Data	
Range	6500 mm
Reference Reflector/Reflector Foil	RQ100BA
Switching Hysteresis	< 5 %
Light Source	Red Light
Wavelength	660 nm
Polarization Filter	yes
Service Life (T = +25 °C)	100000 h
Max. Ambient Light	10000 Lux
Opening Angle	5 °
Two-Lens Optic	yes
Electrical Data	
Supply Voltage	18...30 V DC
Current Consumption (U _b = 24 V)	< 30 mA
Switching Frequency	2500 Hz
Response Time	200 μs
On-/Off-Delay	0...60 s
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	NT, MT
Interface	IO-Link V1.0
IO-Link Parameter	12
Protection Class	III
Mechanical Data	
Setting Method	Teach-In
Housing Material	Plastic
Full Encapsulation	yes
Degree of Protection	IP67
Connection	M12 × 1; 4-pin
IO-Link	●
PNP NO/NC switchable	●
Connection Diagram No.	179
Control Panel No.	M3
Suitable Connection Equipment No.	2
Suitable Mounting Technology No.	360

Complementary Products

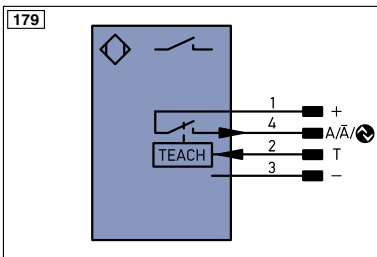
IO-Link Master	
PNP-NPN Converter BG2V1P-N-2M	
Protective Housing ZSV-0x-01	
Reflector, Reflector Foil	
Set Protective Housing ZSM-NN-02	
Software	



Ctrl. Panel



06 = Teach Button
 30 = Switching Status/Contamination Warning



Legend		Legend		Legend	
+	Supply Voltage +	PT	Platinum measuring resistor	EN ^A RS422	Encoder A/Ā (TTL)
-	Supply Voltage 0 V	nc	not connected	EN ^B RS422	Encoder B/B̄ (TTL)
~	Supply Voltage (AC Voltage)	U	Test Input	EN ^A	Encoder A
A	Switching Output (NO)	Ū	Test Input inverted	EN ^B	Encoder B
Ā	Switching Output (NC)	W	Trigger Input	A _{MIN}	Digital output MIN
V	Contamination/Error Output (NO)	W-	Ground for the Trigger Input	A _{MAX}	Digital output MAX
V̄	Contamination/Error Output (NC)	O	Analog Output	A _{OK}	Digital output OK
E	Input (analog or digital)	O-	Ground for the Analog Output	SY _{in}	Synchronization In
T	Teach Input	BZ	Block Discharge	SY _{OUT}	Synchronization OUT
Z	Time Delay (activation)	A _{WV}	Valve Output	OL _T	Brightness output
S	Shielding	a	Valve Control Output +	M	Maintenance reserved
RxD	Interface Receive Path	b	Valve Control Output 0 V	rsv	reserved
TxD	Interface Send Path	SY	Synchronization	Wire Colors according to DIN IEC 757	
RDY	Ready	SY-	Ground for the Synchronization	BK	Black
GND	Ground	E+	Receiver-Line	BN	Brown
CL	Clock	S+	Emitter-Line	RD	Red
E/A	Output/Input programmable	⊕	Grounding	OG	Orange
	IO-Link	S _{nR}	Switching Distance Reduction	YE	Yellow
PoE	Power over Ethernet	Rx+/-	Ethernet Receive Path	GN	Green
IN	Safety Input	Tx+/-	Ethernet Send Path	BU	Blue
OSSD	Safety Output	Bus	Interfaces-Bus A(+)/B(-)	VT	Violet
Signal	Signal Output	L _a	Emitted Light disengageable	GY	Grey
Bl_D+/-	Ethernet Gigabit bidirect. data line (A-D)	Mag	Magnet activation	WH	White
EN ⁰ RS422	Encoder 0-pulse 0-0̄ (TTL)	RES	Input confirmation	PK	Pink
		EDM	Contactor Monitoring	GNVE	Green/Yellow

Feasible reflector distance

Reflector type, mounting distance

RQ100BA	0,02...6,5 m	RR25KP	0,01...1,2 m
RE18040BA	0,02...5 m	RR21_M	0,04...1,9 m
RQ84BA	0,02...5,5 m	ZRAE02B01	0,02...2,9 m
RR84BA	0,02...6,5 m	ZRME01B01	0,04...0,9 m
RE9538BA	0,03...3 m	ZRME03B01	0,02...3 m
RE6151BM	0,04...5 m	ZRMR02K01	0,04...1,3 m
RR50_A	0,02...4,3 m	ZRMS02_01	0,03...1,5 m
RE6040BA	0,02...4,8 m	RF505	0,05...2,3 m
RE8222BA	0,03...3,2 m	RF508	0,21...1,4 m
RR34_M	0,06...2,6 m	RF258	0,06...1,7 m
RE3220BM	0,05...2 m	ZRDF03K01	0,05...4 m
RE6210BM	0,05...1,7 m	ZRDF10K01	0,05...5,5 m
RR25_M	0,05...1,8 m		

