

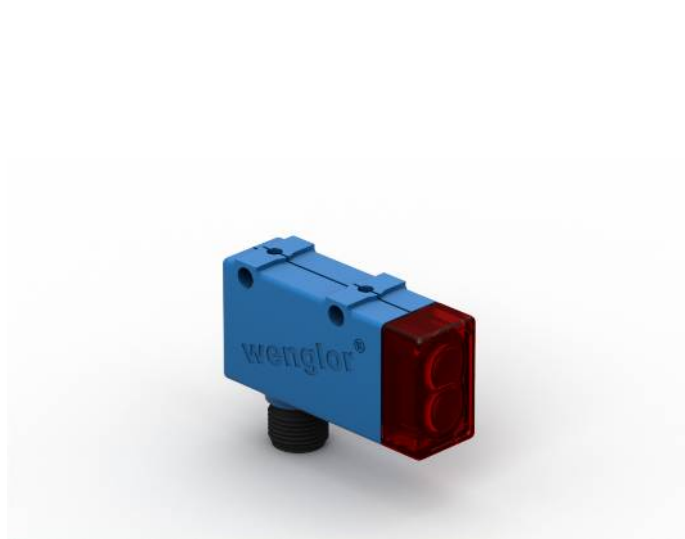
Retro-Reflex Sensor

Universal

OLM104A0002

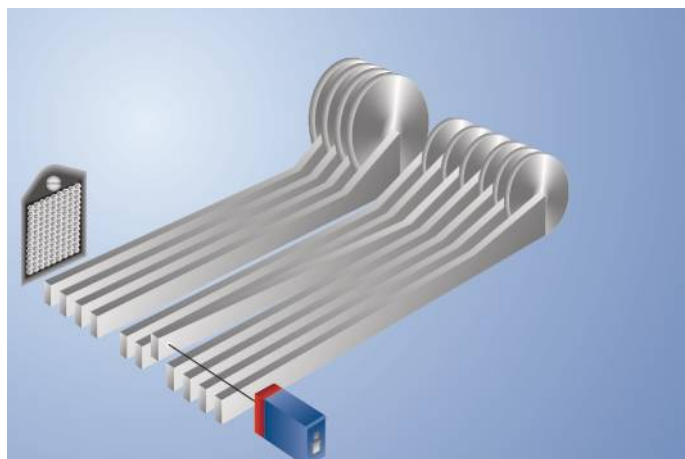
LASER

Part Number



- Smallest recognizable part: 2,5 mm
- Special coated optics
- Switching frequency: 500 Hz
- Time delay

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	10000 mm
Reference Reflector/Reflector Foil	RQ100BA
Min. Distance to Reflector	100 mm
Smallest Recognizable Part	> 2500 μ m
Switching Hysteresis	< 15 %
Light Source	Laser (red)
Wavelength	670 nm
Polarization Filter	yes
Service Life (T = +25 °C)	100000 h
Laser Class (EN 60825-1)	1
Max. Ambient Light	10000 Lux
Opening Angle	0,6 °
Light Spot Diameter	see Table
Two-Lens Optic	yes

Electrical Data

Supply Voltage	10...30 V DC
Current Consumption (U _b = 24 V)	< 30 mA
Switching Frequency	500 Hz
Response Time	1 ms
Off-Delay	20 ms
Temperature Drift	< 10 %
Temperature Range	-10...60 °C
Switching Output Voltage Drop	< 2,5 V
PNP Switching Output/Switching Current	200 mA
Short Circuit Protection	yes
Reverse Polarity Protection	yes
Protection Class	III
FDA Accession Number	1120740-000

Mechanical Data

Setting Method	Potentiometer
Housing Material	Plastic
Coated Optics	yes
Full Encapsulation	yes
Degree of Protection	IP67
Connection	M12 × 1; 4-pin

PNP NO/NC antivalent

Connection Diagram No.

101

Control Panel No.

M6

Suitable Connection Equipment No.

2

Suitable Mounting Technology No.

360

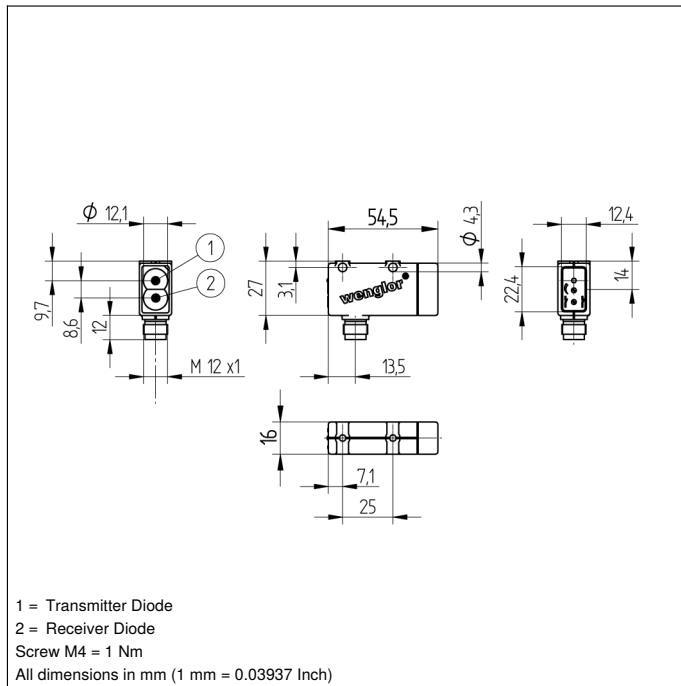
Complementary Products

PNP-NPN Converter BG2V1P-N-2M

Protective Housing ZSV-0x-01

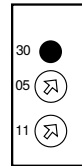
Reflector, Reflector Foil

Set Protective Housing ZSM-NN-02

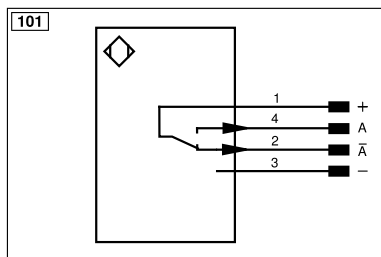


Ctrl. Panel

M6



05 = Switching Distance Adjuster
11 = ON-Delay/OFF-Delay Adjuster
30 = Switching Status/Contamination Warning



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	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

Working Distance	0,2 m	5 m	10 m
Light Spot Diameter	5 mm	35 mm	70 mm

Feasible reflector distance

Reflector type, mounting distance

RQ100BA	0,1...10 m	RR25KP	0,15...2 m
RE18040BA	0,15...8 m	RR21_M	0,2...3 m
RQ84BA	0,1...9 m	ZRAE02B01	0,1...2,5 m
RR84BA	0,1...9 m	ZRME01B01	0,1...1,5 m
RE9538BA	0,1...4 m	ZRME03B01	0,15...5,5 m
RE6151BM	0,15...9 m	ZRMR02K01	0,15...2 m
RE6151BH	0,1...3,5 m	ZRMS02_01	0,2...2,5 m
RR50_A	0,1...9 m	RF505	0,2...1,7 m
RE6040BA	0,1...10 m	RF255	0,2...1,5 m
RE8222BA	0,1...6 m	RF508	0,2...1,7 m
RR34_M	0,2...6 m	RF258	0,2...1,5 m
RE3220BM	0,2...4 m	ZRAF07K01	0,2...1,5 m
RE6210BM	0,25...3 m	ZRAF08K01	0,2...1,7 m
RR25_M	0,2...5 m	ZRDF_K01	0,15...8 m

