

# Retro-Reflex Sensor

## RO88PB3

Part Number

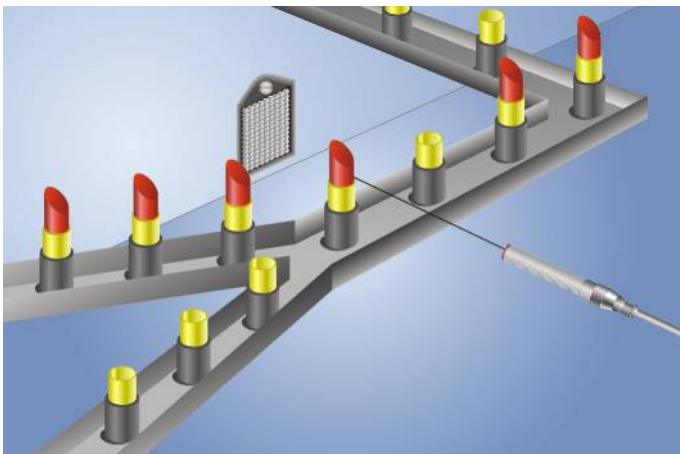


- Compact housing
- Red light

### Technical Data

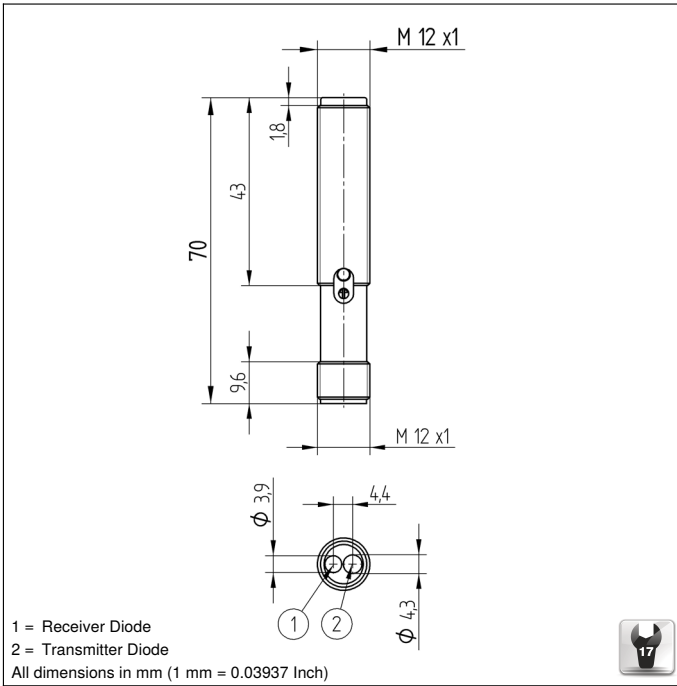
Optical Data	
Range	2500 mm
Reference Reflector/Reflector Foil	RQ100BA
Switching Hysteresis	< 15 %
Light Source	Red Light
Polarization Filter	yes
Service Life (T = +25 °C)	100000 h
Max. Ambient Light	10000 Lux
Opening Angle	8 °
Two-Lens Optic	yes
Electrical Data	
Supply Voltage	10...30 V DC
Current Consumption (U <sub>b</sub> = 24 V)	< 40 mA
Switching Frequency	500 Hz
Response Time	1 ms
Temperature Drift	< 10 %
Temperature Range	-10...60 °C
Switching Output Voltage Drop	< 2,5 V
PNP Switching Output/Switching Current	200 mA
Residual Current Switching Output	< 50 μA
Short Circuit Protection	yes
Reverse Polarity Protection	yes
Overload Protection	yes
Protection Class	III
Mechanical Data	
Setting Method	Potentiometer
Housing Material	CuZn, nickel-plated
Full Encapsulation	yes
Degree of Protection	IP65
Connection	M12 × 1; 4-pin
PNP NO	●
Connection Diagram No.	<b>1021</b>
Control Panel No.	<b>O2</b>
Suitable Connection Equipment No.	<b>2</b>
Suitable Mounting Technology No.	<b>170</b>

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.

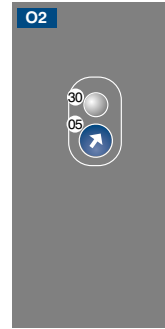


### Complementary Products

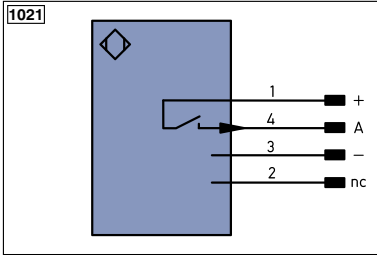
Path-Folding Mirror LA9	
PNP-NPN Converter BG2V1P-N-2M	
Reflector, Reflector Foil	



### Ctrl. Panel



05 = Switching Distance Adjuster  
 30 = Switching Status/Contamination Warning



### Legend

+	Supply Voltage +	PT	Platinum measuring resistor	EN <sup>A/RS422</sup>	Encoder A/Ā (TTL)
-	Supply Voltage 0 V	nc	not connected	EN <sup>B/RS422</sup>	Encoder B/B̄ (TTL)
~	Supply Voltage (AC Voltage)	U	Test Input	EN <sup>A</sup>	Encoder A
A	Switching Output (NO)	Ū	Test Input inverted	EN <sup>B</sup>	Encoder B
Ā	Switching Output (NC)	W	Trigger Input	A <sub>MIN</sub>	Digital output MIN
V	Contamination/Error Output (NO)	W-	Ground for the Trigger Input	A <sub>MAX</sub>	Digital output MAX
Ṽ	Contamination/Error Output (NC)	O	Analog Output	A <sub>OK</sub>	Digital output OK
E	Input (analog or digital)	O-	Ground for the Analog Output	SY <sub>in</sub>	Synchronization In
T	Teach Input	BZ	Block Discharge	SY <sub>OUT</sub>	Synchronization OUT
Z	Time Delay (activation)	A <sub>WV</sub>	Valve Output	OL <sub>T</sub>	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 <sub>nR</sub>	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 <sub>a</sub>	Emitted Light disengageable	GY	Grey
Bl_D+/-	Ethernet Gigabit bidirect. data line (A-D)	Mag	Magnet activation	WH	White
EN <sup>0/RS422</sup>	Encoder 0-pulse 0-0̄ (TTL)	RES	Input confirmation	PK	Pink
		EDM	Contactur Monitoring	GNVE	Green/Yellow

### Feasible reflector distance

Reflector type, mounting distance

RQ100BA	0,02...2,5 m	RR25_M	0,05...0,7 m
RE18040BA	0,02...1,8 m	RR25KP	0,05...0,3 m
RQ84BA	0,02...2,2 m	RR21_M	0,05...0,6 m
RR84BA	0,02...2 m	ZRAE02B01	0,02...1 m
RE9538BA	0,02...0,9 m	ZRME01B01	0,05...0,3 m
RE6151BM	0,05...2 m	ZRME03B01	0,02...0,8 m
RR50_A	0,02...1,5 m	ZRMR02K01	0,02...0,4 m
RE6040BA	0,02...1,5 m	ZRMS02_01	0,02...0,4 m
RE8222BA	0,02...1 m	RF505	0,06...0,8 m
RR34_M	0,05...1 m	RF508	0,06...0,8 m
RE3220BM	0,05...0,7 m	RF258	0,06...0,6 m
RE6210BM	0,05...0,6 m	ZRDF_K01	0,06...1 m

