

Retro-Reflex Sensor

Universal

XO89PA3

LASER

Part Number

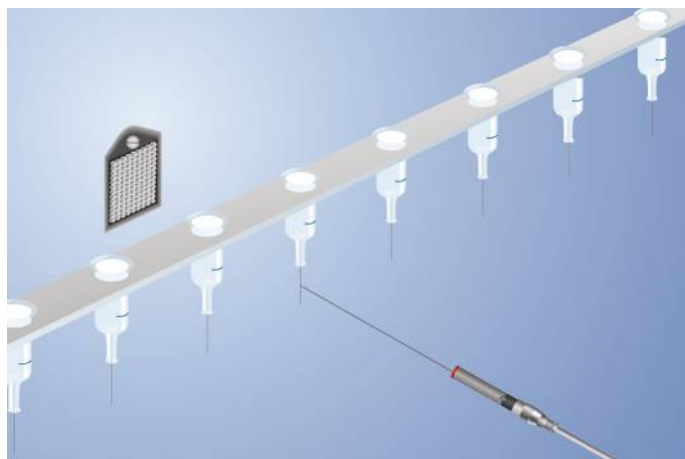


- Smallest recognizable part: 0,1 mm
- Spot diameter: 1 mm
- Switching frequency: 3 kHz

Technical Data

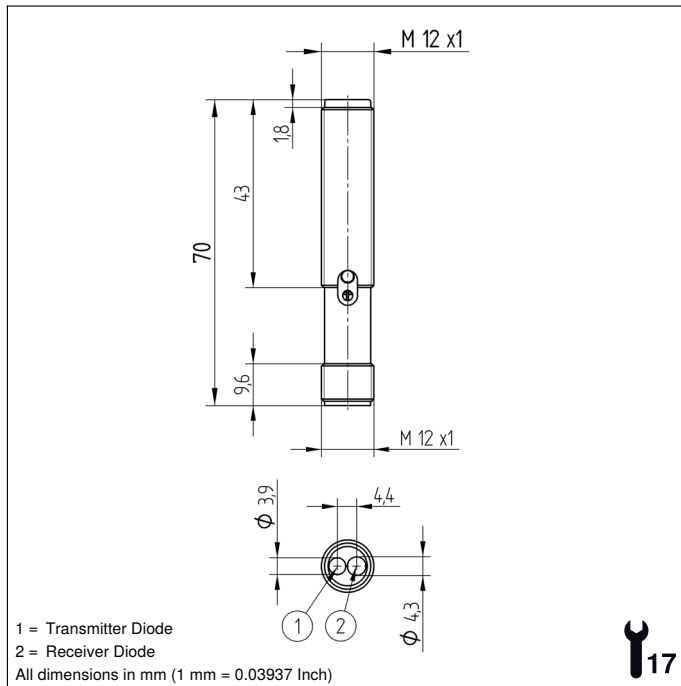
Optical Data	
Range	6000 mm
Reference Reflector/Reflector Foil	RQ100BA
Smallest Recognizable Part	100 μ m
Switching Hysteresis	< 15 %
Light Source	Laser (red)
Wavelength	655 nm
Polarization Filter	yes
Service Life (T = +25 °C)	100000 h
Laser Class (EN 60825-1)	2
Max. Ambient Light	10000 Lux
Beam Divergence	< 20 mrad
Light Spot Diameter	1 mm
Two-Lens Optic	yes
Electrical Data	
Supply Voltage	10...30 V DC
Current Consumption (U _b = 24 V)	< 20 mA
Switching Frequency	3 kHz
Response Time	167 μ s
Temperature Drift	< 10 %
Temperature Range	-25...60 °C
Switching Output Voltage Drop	< 2,5 V
PNP Switching Output/Switching Current	200 mA
Short Circuit Protection	yes
Reverse Polarity Protection	yes
Overload Protection	yes
Protection Class	III
FDA Accession Number	0820585-000
Mechanical Data	
Setting Method	Potentiometer
Housing Material	CuZn, nickel-plated
Full Encapsulation	yes
Degree of Protection	IP67
Connection	M12 $\times$ 1; 4-pin
PNP NO/NC antivalent	
Connection Diagram No.	101
Control Panel No.	O3
Suitable Connection Equipment No.	2
Suitable Mounting Technology No.	170

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.



Complementary Products

PNP-NPN Converter BG2V1P-N-2M
Reflector, Reflector Foil

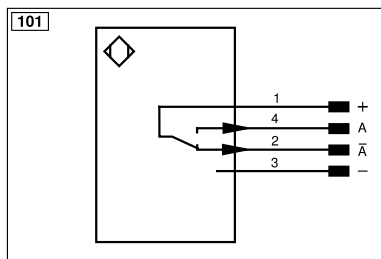


Ctrl. Panel

O3



05 = Switching Distance Adjuster
31 = Switching Status/Contamination-/Short Circuit 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
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	ENAR422	Encoder A/Ā (TTL)
		ENBR422	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

Feasible reflector distance

Reflector type, mounting distance

RQ100BA	0,15...6 m	RR25_M	0,05...2,6 m
RE18040BA	0,1...2,9 m	RR25KP	0,05...1,5 m
RQ84BA	0,25...5,4 m	RR21_M	0,05...2,5 m
RR84BA	0,05...4,9 m	ZRAE02B01	0,4...2,5 m
RE9538BA	0,05...2 m	ZRME01B01	0,4...1 m
RE6151BM	0,05...5,2 m	ZRME03B01	0,4...2,5 m
RE6151BH	0,05...3 m	ZRMR02K01	0,4...1,1 m
RR50_A	0,03...4,3 m	ZRMS02_01	0,4...1,4 m
RE6040BA	0,05...5,2 m	RF505	0,05...1,4 m
RE8222BA	0,03...2,9 m	RF255	0,05...1,3 m
RR34_M	0,05...3 m	RF508	0,05...1,3 m
RE3220BM	0,05...2,5 m	RF258	0,05...1,3 m
RE6210BM	0,05...2 m	ZRDF_K01	0,2...3,8 m

