

Retro-Reflex Sensor

Universal

XO89PA3

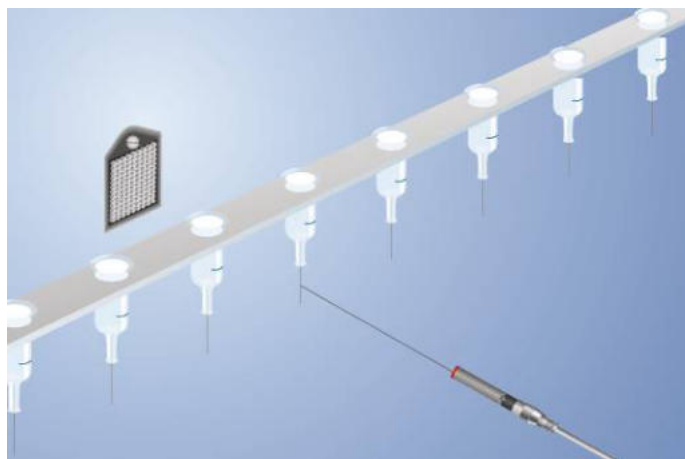
LASER

Part Number



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

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	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

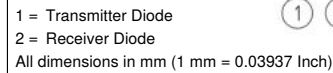
Setting Method	Potentiometer
Housing Material	CuZn, nickel-plated
Full Encapsulation	yes
Degree of Protection	IP67
Connection	M12 $\times$ 1; 4-pin

PNP NO/NC antivalent

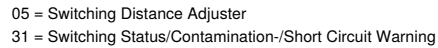
Connection Diagram No.	101
Control Panel No.	O3
Suitable Connection Equipment No.	2
Suitable Mounting Technology No.	170

Complementary Products

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



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Legend					
+	Supply Voltage +	nc	Not connected	ENBR5422	Encoder B/B̄ (TTL)
-	Supply Voltage 0 V	U	Test Input	ENa	Encoder A
~	Supply Voltage (AC Voltage)	Ů	Test Input inverted	ENb	Encoder B
A	Switching Output (NO)	W	Trigger Input	AMIN	Digital output MIN
Ā	Switching Output (NC)	W-	Ground for the Trigger Input	AMAX	Digital output MAX
V	Contamination/Error Output (NO)	O	Analog Output	AOk	Digital output OK
Ȳ	Contamination/Error Output (NC)	O-	Ground for the Analog Output	SY In	Synchronization In
E	Input (analog or digital)	BZ	Block Discharge	SY OUT	Synchronization OUT
T	Teach Input	AMv	Valve Output	OLT	Brightness output
Z	Time Delay (activation)	a	Valve Control Output +	M	Maintenance
S	Shielding	b	Valve Control Output 0 V	rsv	Reserved
RxD	Interface Receive Path	SY	Synchronization	Wire Colors according to DIN IEC 60757	
TxD	Interface Send Path	SY-	Ground for the Synchronization		
RDY	Ready	E+	Receiver-Line	BK	Black
GND	Ground	S+	Emitter-Line	BN	Brown
CL	Clock	⊕	Grounding	RD	Red
E/A	Output/Input programmable	SnR	Switching Distance Reduction	OG	Orange
	IO-Link	Rx+/-	Ethernet Receive Path	YE	Yellow
PoE	Power over Ethernet	Tx+/-	Ethernet Send Path	GN	Green
IN	Safety Input	Bus	Interfaces-Bus A(+)/B(-)	BU	Blue
QSSD	Safety Output	La	Emitted Light disengageable	VT	Violet
Signal	Signal Output	Mag	Magnet activation	GY	Grey
BI_D+/-	Ethernet Gigabit bidirect. data line (A-D)	RES	Input confirmation	WH	White
ENo RS422	Encoder 0-pulse 0/Ů (TTL)	EDM	Contact or Monitoring	PK	Pink
PT	Platinum measuring resistor	ENAR5422	Encoder A/Ā (TTL)	GNYE	Green/Yellow

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

