

Retro-Reflex Sensor

Universal

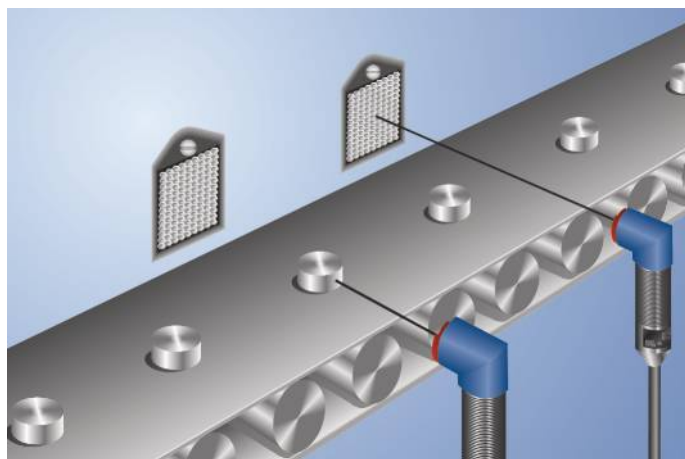
XW100PA3

Part Number



- Range: 14 m
- Smallest recognizable part: 0,1 mm
- Stainless steel housing
- 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	14000 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)	1
Max. Ambient Light	10000 Lux
Opening Angle	1 °
Beam Divergence	< 15 mrad
Light Spot Diameter	see Table 1
Focus Distance	350 mm
Two-Lens Optic	yes

Electrical Data

Supply Voltage	10...30 V DC
Current Consumption (U _b = 24 V)	< 30 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	0820385-001

Mechanical Data

Setting Method	Potentiometer
Housing Material	Plastic, PBT
Housing Material	Stainless steel, V2A (1.4305 / 303)
Full Encapsulation	yes
Degree of Protection	IP67
Connection	M12 $\times$ 1; 4-pin

Safety-relevant Data

MTTFd (EN ISO 13849-1)	1584,21 a
Scope of delivery	1 $\times$ initial start-up instructions 1 $\times$ MUTTER-M18-E003 hex nut 1 $\times$ sensor

PNP NC, PNP NO

Connection Diagram No.

101

Control Panel No.

D6

Suitable Connection Equipment No.

2

Suitable Mounting Technology No.

150

* Laser class 1 is valid for all sensors from revision F. The revision can be found in the production order number "xxxxx/F/xxxxxx," which is indicated on the product label.

Complementary Products

PNP-NPN Converter BG2V1P-N-2M

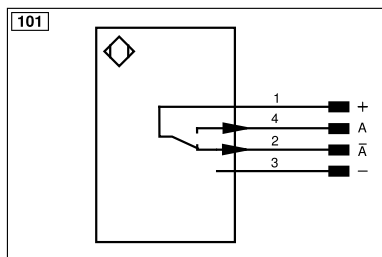
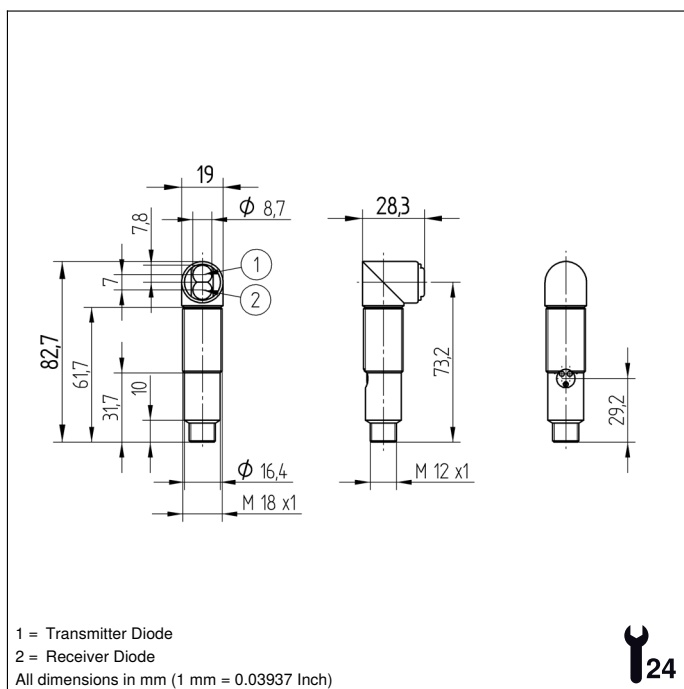
Reflector, Reflector Foil

Ctrl. Panel

D6



01 = Switching Status Indicator
02 = Contamination Warning
05 = Switching Distance Adjuster



Legend			
+	Supply Voltage +	PT	Platinum measuring resistor
-	Supply Voltage 0 V	nc	Not connected
~	Supply Voltage (AC Voltage)	U	Test Input
A	Switching Output (NO)	Ū	Test Input inverted
Ā	Switching Output (NC)	W	Trigger Input
V	Contamination/Error Output (NO)	W-	Ground for the Trigger Input
V̄	Contamination/Error Output (NC)	O	Analog Output
E	Input (analog or digital)	O-	Ground for the Analog Output
T	Teach Input	BZ	Block Discharge
R	Reset 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
BL_D+/-	Ethernet Gigabit bidirect. data line (A-D)	RES	Input confirmation
EN RS422	Encoder 0-pulse 0/0 (TTL)	EDM	Contactor Monitoring
		ENARs422	Encoder A/Ā (TTL)
		ENBRs422	Encoder B/B̄ (TTL)
		ENa	Encoder A
		ENb	Encoder B
		AMIN	Digital output MIN
		AMAX	Digital output MAX
		AOK	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	3 mm	37,5 mm	75 mm

Feasible reflector distance

Reflector type, mounting distance

RQ100BA	0,6...14 m	RE6210BM	0,45...3,5 m
RE18040BA	0,6...9,5 m	RR25_M	0,4...4,5 m
RQ84BA	0,75...11 m	RR25KP	0,3...2,5 m
RR84BA	0,55...14 m	RR21_M	0,4...3 m
RE9538BA	0,55...5 m	ZRAE02B01	0,7...4,5 m
RE6151BM	0,35...10 m	ZRME01B01	0,5...1,8 m
RE6151BA	0,5...4,5 m	ZRME03B01	0,5...5 m
RR50_A	0,65...9 m	ZRMR02K01	0,5...2 m
RE6040BA	0,5...11 m	ZRMS02_01	0,6...2,8 m
RE8222BA	0,7...5,5 m	RF508	0,4...1,1 m
RR34_M	0,6...5,5 m	RF258	0,4...1,6 m
RE3220BM	0,55...3,5 m	ZRDF_K01	0,4...7 m

