

# Retro-Reflex Sensor for Clear Glass Recognition

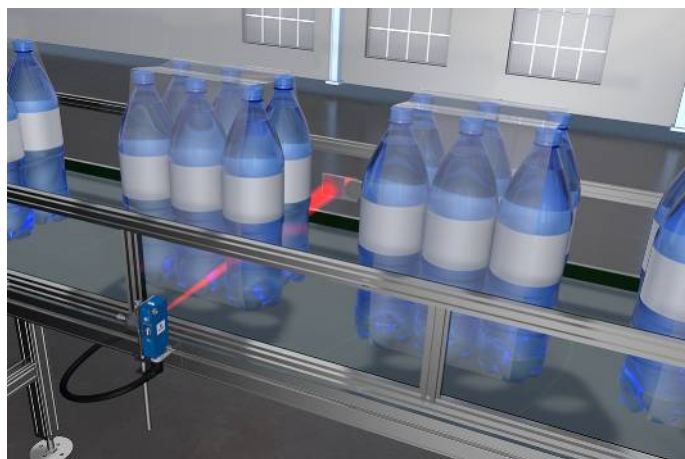
## P1NK205

Part Number



- Dynamic readjustment of the switching threshold
- High-end
- Special for glass, PET and films
- Wireless settings via NFC

The retro-reflex sensor for clear glass recognition works with red light and a reflector. It has a IO-Link interface with a data storage function as well as additional configuration and diagnostic options. The interface can also be used to configure the sensors (PNP/NPN, NC/NO, switching distance, error output), as well as for reading out switching statuses and signal values. The dynamic readjustment of the switching threshold function automatically adjusts this for contamination, aging or temperature deviations, meaning that these factors have almost no effect on functionality.

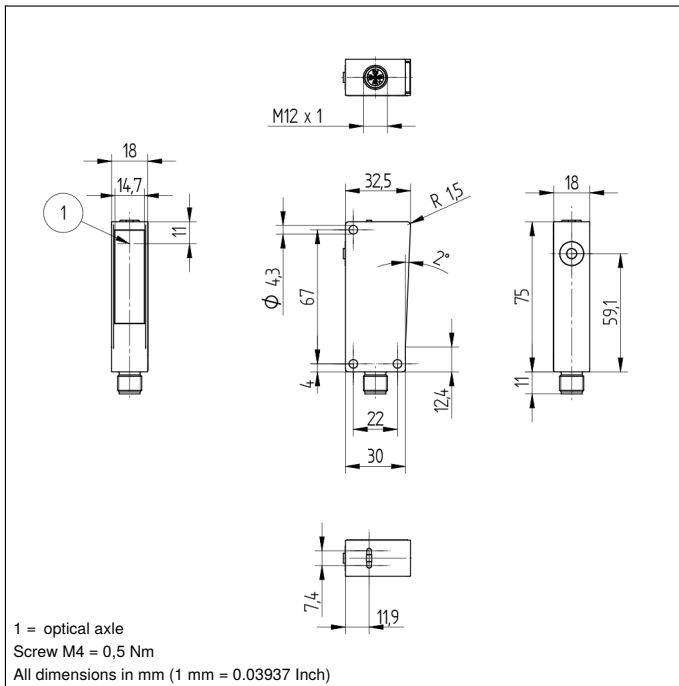


### Technical Data

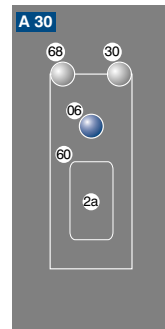
Optical Data	
Range	3500 mm
Reference Reflector/Reflector Foil	RQ100BA
Clear Glass Recognition	yes
Smallest Recognizable Part	see Table 2
Switching Hysteresis	< 5 %
Light Source	Red Light
Polarization Filter	yes
Service Life (T = +25 °C)	100000 h
Max. Ambient Light	10000 Lux
Light Spot Diameter	see Table 1
Single-Lens Optic	yes
Electrical Data	
Supply Voltage	15...30 V DC
Supply Voltage with IO-Link	18...30 V DC
Current Consumption (U <sub>b</sub> = 24 V)	< 20 mA
Switching Frequency	1000 Hz
Switching frequency (speed mode)	2000 Hz
Response Time	0,5 ms
Response time (speed mode)	0,25 ms
Temperature Drift	< 3 %
Temperature Range	-40...60 °C
Switching Output Voltage Drop	< 2 V
Switching Output/Switching Current	100 mA
Residual Current Switching Output	< 50 µA
Short Circuit Protection	yes
Reverse Polarity Protection	yes
Overload Protection	yes
Lockable	yes
Teach Mode	NT, MT
Interface	IO-Link V1.1
Data Storage	yes
Protection Class	III
Mechanical Data	
Setting Method	Teach-in/NFC
Housing Material	Plastic
Degree of Protection	IP67/IP68
Connection	M12 × 1; 4-pin
Optic Cover	PMMA
IO-Link	●
PNP NO	●
NFC interface	●
Connection Diagram No.	<b>221</b>
Control Panel No.	<b>A30</b>
Suitable Connection Equipment No.	<b>2</b>
Suitable Mounting Technology No.	<b>350</b>

### Complementary Products

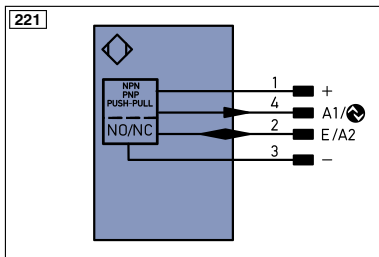
Dust Extraction Tube STAUBTUBUS-03	
IO-Link Master	
Reflector, Reflector Foil	
Set Protective Housing Z1NS001	
Software	



### Ctrl. Panel



- 06 = Teach Button
- 2a = NFC interface
- 30 = Switching Status/Contamination Warning
- 60 = Display
- 68 = Supply Voltage Indicator



Legend		Legend		Legend	
+	Supply Voltage +	PT	Platinum measuring resistor	EN <sup>A/RS422</sup>	Encoder A/ $\bar{A}$ (TTL)
-	Supply Voltage 0 V	nc	not connected	EN <sup>B/RS422</sup>	Encoder B/ $\bar{B}$ (TTL)
~	Supply Voltage (AC Voltage)	U	Test Input	EN <sup>A</sup>	Encoder A
A	Switching Output (NO)	$\bar{U}$	Test Input inverted	EN <sup>B</sup>	Encoder B
$\bar{A}$	Switching Output (NC)	W	Trigger Input	A <sup>MIN</sup>	Digital output MIN
V	Contamination/Error Output (NO)	W-	Ground for the Trigger Input	A <sup>MAX</sup>	Digital output MAX
$\bar{V}$	Contamination/Error Output (NC)	O	Analog Output	A <sup>OK</sup>	Digital output OK
E	Input (analog or digital)	O-	Ground for the Analog Output	SY <sup>In</sup>	Synchronization In
T	Teach Input	BZ	Block Discharge	SY <sup>OUT</sup>	Synchronization OUT
Z	Time Delay (activation)	AW <sup>V</sup>	Valve Output	OL <sup>T</sup>	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 IEC 60757	
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	$\pm$	Grounding	OG	Orange
	IO-Link	S <sup>nR</sup>	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 <sup>a</sup>	Emitted Light disengageable	GY	Grey
Bl <sup>-D</sup> +/-	Ethernet Gigabit bidirect. data line (A-D)	Mag	Magnet activation	WH	White
EN <sup>0/RS422</sup>	Encoder 0-pulse 0-0 (TTL)	RES	Input confirmation	PK	Pink
		EDM	Contacting Monitoring	GN <sup>YE</sup>	Green/Yellow

**Table 1**

Working Distance	0,3 m	1,7 m	3,5 m
Light Spot Diameter	20 mm	55 mm	110 mm

**Table 2**

Distance, Sensor to Reflector	0,3 m	1,7 m	3,5 m
Smallest Recognizable Part	1 mm	5 mm	10 mm

### Feasible reflector distance

Reflector type, mounting distance

RQ100BA	0...3,5 m	RR25KP	0...0,5 m
RE18040BA	0...2,5 m	RR21_M	0...0,7 m
RQ84BA	0...3 m	Z90R005	0...1,8 m
RR84BA	0...3,5 m	ZRAE02B01	0...1,5 m
RE9538BA	0...1,4 m	ZRME01B01	0...0,35 m
RE6151BM	0...2,8 m	ZRME03B01	0...1,5 m
RR50_A	0...2,5 m	ZRMR02K01	0...1,5 m
RE6040BA	0...2,8 m	ZRMS02_01	0...0,7 m
RE8222BA	0...1,6 m	RF508	0...0,7 m
RR34_M	0...1,8 m	RF258	0...0,7 m
RE3220BM	0...1,1 m	ZRDF_K01	0...2,2 m
RE6210BM	0...0,8 m	Z91R001	0...1,5 m
RR25_M	0...1 m	ZRDF10K01	0...2,4 m

