Retro-Reflex Sensor
for Clear Glass Recognition

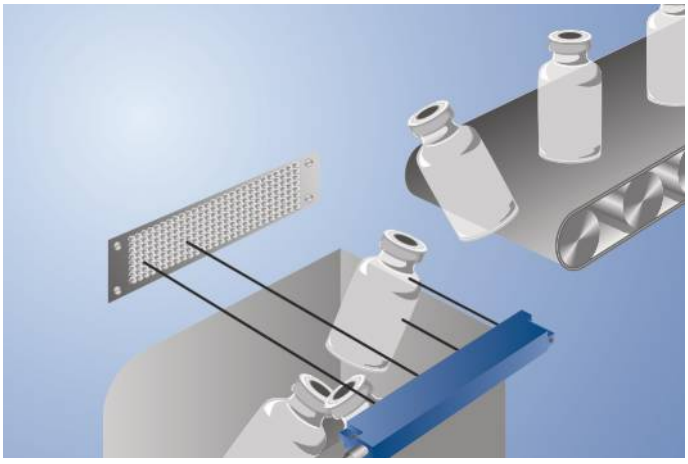
OPT282
Part Number

- **Dynamic readjustment of the switching threshold**
- **Recognition of clear glass**
- **Teach-in, external teach-in**

Technical Data

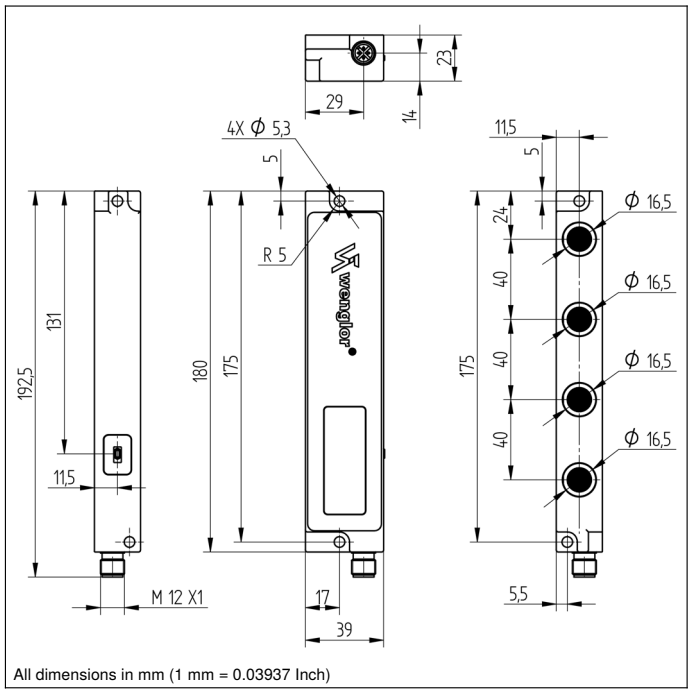
Optical Data	
Range	4000 mm
Reference Reflector/Reflector Foil	2 × RQ100BA
Clear Glass Recognition	yes
Switching Hysteresis	< 5 %
Light Source	Red Light
Polarization Filter	yes
Service Life (T = +25 °C)	100000 h
Max. Ambient Light	10000 Lux
Opening Angle	5 °
Single-Lens Optic	yes
Electrical Data	
Supply Voltage	10...30 V DC
Current Consumption (Ub = 24 V)	< 60 mA
Switching Frequency	2 kHz
Response Time	250 µs
Temperature Drift	< 5 %
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
Lockable	yes
Protection Class	III
Mechanical Data	
Setting Method	Teach-In
Housing Material	Plastic
Full Encapsulation	yes
Degree of Protection	IP67
Connection	M12 × 1; 4-pin
PNP NO/NC switchable	●
Connection Diagram No.	152
Control Panel No.	M7
Suitable Connection Equipment No.	2

A reflector must be used in combination with these sensors. A single housing contains four sensors which are linked by an OR-logic. The output switches as soon as one of the beams is interrupted. As a result, large areas are easy to monitor. Even crystal-clear objects and sheet products can be reliably recognized.



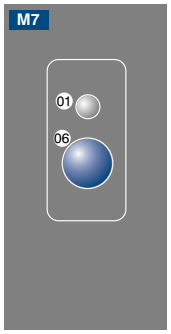
Complementary Products

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

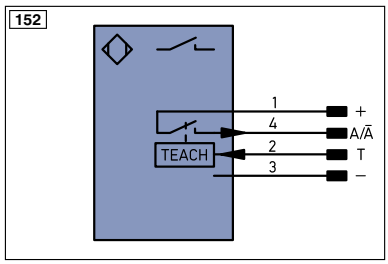


All dimensions in mm (1 mm = 0.03937 Inch)

Ctrl. Panel



01 = Switching Status Indicator
06 = Teach Button



Legend

+	Supply Voltage +	PT	Platinum measuring resistor	$EN_{A\overline{A}RS422}$	Encoder A/Ā (TTL)
–	Supply Voltage 0 V	nc	not connected	$EN_{B\overline{B}RS422}$	Encoder B/B̄ (TTL)
~	Supply Voltage (AC Voltage)	U	Test Input	EN_A	Encoder A
A	Switching Output (NO)	Ū	Test Input inverted	EN_B	Encoder B
Ā	Switching Output (NC)	W	Trigger Input	A_{MIN}	Digital output MIN
V	Contamination/Error Output (NO)	W–	Ground for the Trigger Input	A_{MAX}	Digital output MAX
V̄	Contamination/Error Output (NC)	O	Analog Output	A_{OK}	Digital output OK
E	Input (analog or digital)	O–	Ground for the Analog Output	SY In	Synchronization In
T	Teach Input	BZ	Block Discharge	SY OUT	Synchronization OUT
Z	Time Delay (activation)	A_W	Valve Output	O_{LT}	Brightness output
S	Shielding	a	Valve Control Output +	M	Maintenance
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	SnR	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	La	Emitted Light disengageable	GY	Grey
BI_D+/-	Ethernet Gigabit bidirect. data line (A-D)	Mag	Magnet activation	WH	White
EN_{0RS422}	Encoder 0-pulse 0-0̄ (TTL)	RES	Input confirmation	PK	Pink
		EDM	Contactor Monitoring	GNYE	Green/Yellow

Feasible reflector distance

Reflector type, mounting distance

RQ100BA	0...4 m	**ZRAE02B01**	0...1 m
RE18040BA	0...1,7 m	**ZRME03B01**	0...1,7 m
RQ84BA	0...3 m	**RF505**	0...0,8 m
RE9538BA	0...0,9 m	**ZRAF08K01**	0...0,8 m
RE6151BM	0...2 m	**ZRDF10K01**	0...2,5 m
RE6040BA	0...2,3 m		