

# Retro-Reflex Sensor for Transparent Objects

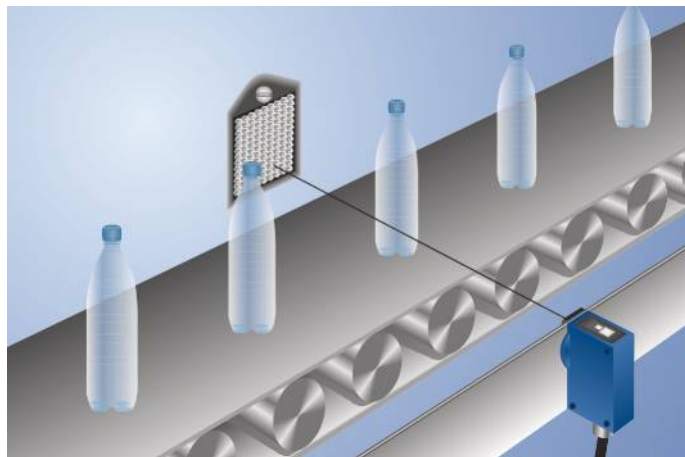
## K1R87PCT2

Part Number



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

A reflector must be used in combination with these sensors. wenglor has the right retro-reflex light barrier for every application. Even crystal-clear objects and sheet products can be reliably recognized. The sensor is easy to install with its integrated M18 threaded fixation, and can be easily protected as well. Time delay can be activated by RS-232 interface.



### Technical Data

Optical Data	
Range	4000 mm
Reference Reflector/Reflector Foil	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

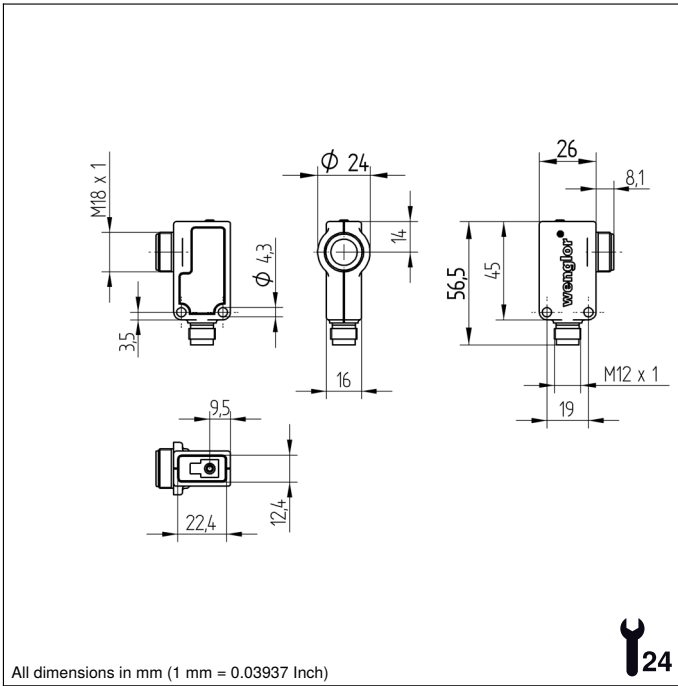
Electrical Data	
Supply Voltage	10...30 V DC
Current Consumption (U <sub>b</sub> = 24 V)	< 40 mA
Switching Frequency	1700 Hz
Response Time	250 μs
On-/Off-Delay (RS-232)	0...5 s
Temperature Drift	< 5 %
Temperature Range	-10...60 °C
Switching Output Voltage Drop	< 2,5 V
PNP Switching Output/Switching Current	200 mA
Residual Current Switching Output	< 50 μA
Short Circuit Protection	yes
Reverse Polarity Protection	yes
Overload Protection	yes
Lockable	yes
Teach Mode	MT
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	●
RS-232 with Adapterbox	●
Connection Diagram No.	152
Control Panel No.	M7
Suitable Connection Equipment No.	2
Suitable Mounting Technology No.	150 370

### Complementary Products

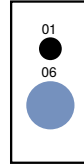
Adapterbox A232
Dust Extraction Tube STAUBTUBUS-01
PNP-NPN Converter BG2V1P-N-2M
Reflector, Reflector Foil
Software



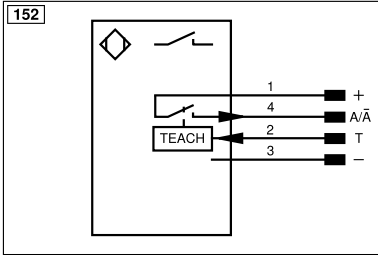
All dimensions in mm (1 mm = 0.03937 Inch)

### Ctrl. Panel

M7



01 = Switching Status Indicator  
 06 = Teach Button



Legend			
+	Supply Voltage +	nc	Not connected
-	Supply Voltage 0 V	U	Test Input
~	Supply Voltage (AC Voltage)	Ū	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	ENARs422	Encoder A/Ā (TTL)
			Encoder B/Ī (TTL)
			Encoder A
			Encoder B
			Digital output MIN
			Digital output MAX
			Digital output OK
			Synchronization In
			Synchronization OUT
			Brightness output
			Maintenance
			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...4 m	RR25_M	0...1,4 m
RE18040BA	0...3 m	RR25KP	0...1 m
RQ84BA	0...4 m	RR21_M	0...1 m
RR84BA	0...4 m	ZRAE02B01	0...2 m
RE9538BA	0...1,5 m	ZRME01B01	0...0,6 m
RE6151BM	0...3,6 m	ZRME03B01	0...2,8 m
RR50_A	0...3 m	ZRMR02K01	0...0,8 m
RE6040BA	0...3,5 m	ZRMS02_01	0...0,9 m
RE8222BA	0...2 m	RF505	0...1,2 m
RR34_M	0...1,8 m	RF508	0...1,1 m
RE3220BM	0...1,8 m	RF258	0...1 m
RE6210BM	0...1,2 m	ZRDF_K01	0...4 m

