

# Retro-Reflex Sensors

for Clear Glass Recognition

## LM89PA

Part Number



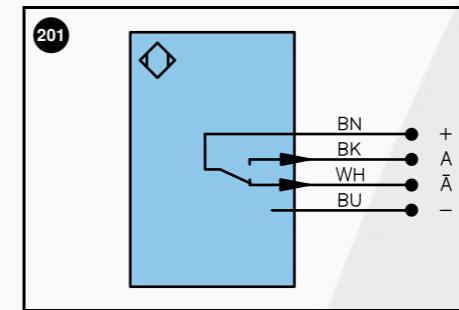
- Low-Cost
- Switching Distance Adjuster



### Technical Data

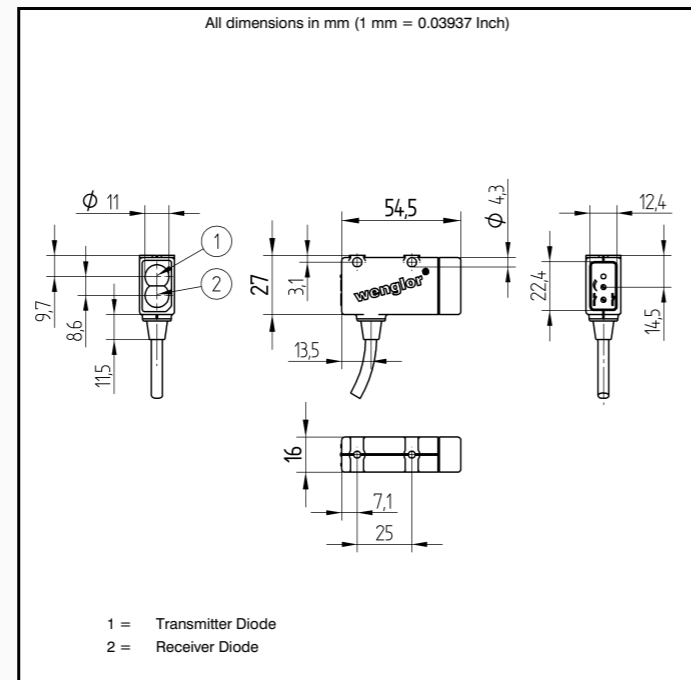
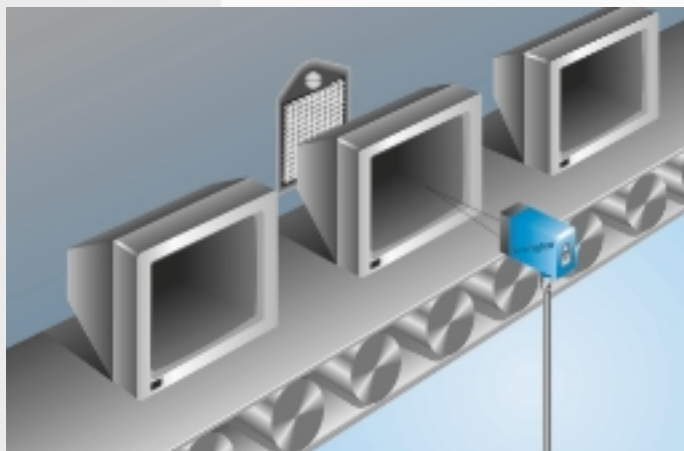
Optical Data	
Range	6500 mm
Reference Reflector	RQ100BA
Switching Hysteresis	< 15 %
Light Source	Red Light
Polarization Filter	yes
Service Life (T = +25°C)	100000 h
max. Ambient Light	10000 Lux
Opening Angle	5 °
Electrical Data	
Supply Voltage	10...30 V DC
Current Consumption (U <sub>b</sub> = 24V)	< 40 mA
Switching Frequency	1 kHz
Response Time	500 μs
Temperature Drift	< 10 %
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
Mechanical Data	
Adjustment	Potentiometer
Housing	Plastic
Full Encapsulation	yes
Protection Mode	IP 67
Connection	Prewired
Cabel Length	2 m
Protective Insulation, Rated Voltage	50 V

Prewired Version	
Part Number	LM89PA
PNP NO/NC antivalent	●
Connection Diagram No.	201
Control Panel No.	M 4



Legend				
+	Power supply "+"	U	Test input	Wire colors according to DIN IEC 757
-	Power supply "0V"	W	Trigger input	BK black
-	Power supply (AC Voltage)	O	Analog output (1,2,3,...)	BN brown
A	Switching output (1,2,3...) / NO	O-	Ground for the analog output	RD red
A-bar	Switching output (1,2,3...) / NC	BZ	Block discharge	OG orange
V	Contamination / Error output (NO)	Aw	Valve output	YE yellow
V-bar	Contamination / Error output (NC)	a	Valve control output "+"	GN green
E	Input (analog or digital)	b	Valve control output "0V"	BU blue
T	Teach input	SY	Synchronization	VT violet
Z	Time delay (activation)	E+	Receiver-Line	GY grey
S	Shielding	S+	Emitter-Line	WH white
RxD	RS-232 receive path	≡	Grounding	PK pink
TxD	RS-232 send path			GNYE green yellow

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.

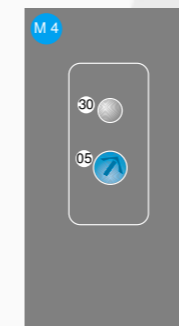


Specifications are subject to change without notice  
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### Accessories

- Mounting Bracket WM2
- Reflector, Reflector Tape

### Ctrl. Panel



- 05 = Switching Distance Adjuster
- 30 = Switching Status/Contamination Warning