

Gloss Sensor

GM04PD2

Part Number



- Adjustable gloss level
- IO-Link 1.1
- Practically independent of distance
- Reliable differentiation between glossy and matte objects

These sensors are capable of differentiating between surfaces with glossy and matte finishes. This allows for the monitoring of paint and adhesive layers, as well as drying status.



Technical Data

Optical Data

Working Range	5...40 mm
Light Source	Laser (red)
Wavelength	650 nm
Service Life (T = +25 °C)	100000 h
Laser Class (EN 60825-1)	1
Max. Ambient Light	10000 Lux
Light Spot Diameter	see Table 2

Electrical Data

Supply Voltage	10...30 V DC
Current Consumption (U _b = 24 V)	< 20 mA
Switching Frequency	1900 Hz
Switching Frequency (interference-free mode)	1200 Hz
Response Time	0,4 ms
Response time (interference-free mode)	0,4 ms
Temperature Drift	< 5 %
Temperature Range	-25...60 °C
Switching Output Voltage Drop	< 2,5 V
PNP Switching Output/Switching Current	100 mA
Short Circuit Protection	yes
Reverse Polarity Protection	yes
Overload Protection	yes
Protection Class	III
FDA Accession Number	0820517-000
IO-Link Version	1.1
Interface	IO-Link V1.1

Mechanical Data

Setting Method	Potentiometer
Housing Material	Plastic, ABS
Housing Material	Plastic, PBT
Optic Cover	Glass
Full Encapsulation	yes
Degree of Protection	IP67
Connection	M12 × 1; 4-pin

PNP NC

IO-Link

Connection Diagram No.

Control Panel No.

Suitable Connection Equipment No.

Suitable Mounting Technology No.

1038

M5

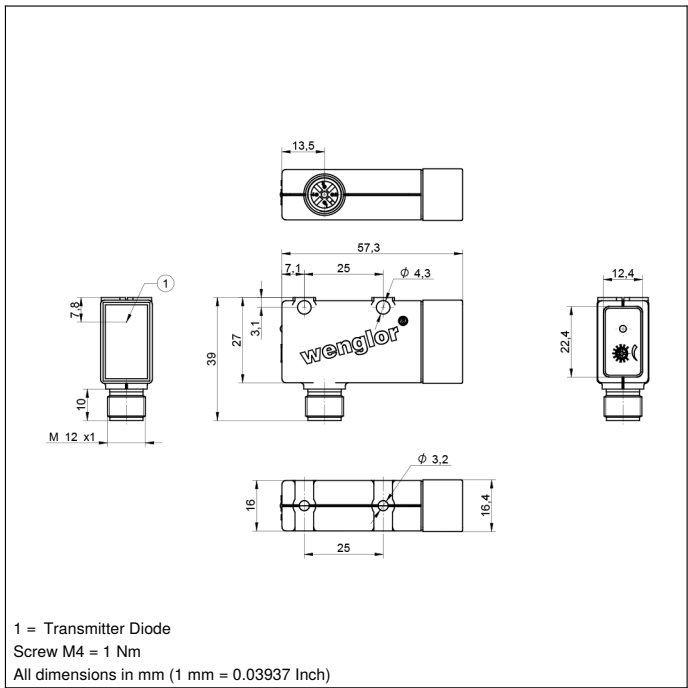
2

360

Complementary Products

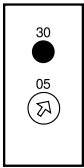
IO-Link Master

Software

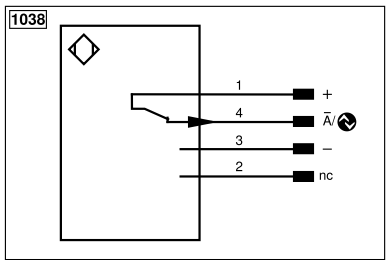


Ctrl. Panel

M4



01 = Switching Status Indicator
05 = Switching Distance Adjuster



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
BL_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	ENAR422	Encoder A/Ā (TTL)
		ENBR422	Encoder B/B̄ (TTL)
		ENA	Encoder A
		ENb	Encoder B
		AMIN	Digital output MIN
		AMAX	Digital output MAX
		ACK	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

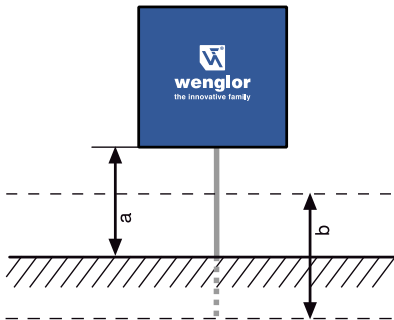
Table 1

Remission from Object	> 30 %	~ 18 %	~ 6 %
Ideal Working Distance	20 mm	15 mm	10 mm
Working Range	± 15 mm	± 10 mm	± 5 mm

Table 2

Detection Range	20 mm	15 mm	10 mm
Spot Size	6 × 20 mm	4,5 × 1,5 mm	3 × 20 mm

Ideal Working Distance



a = working distance
b = Working Range

