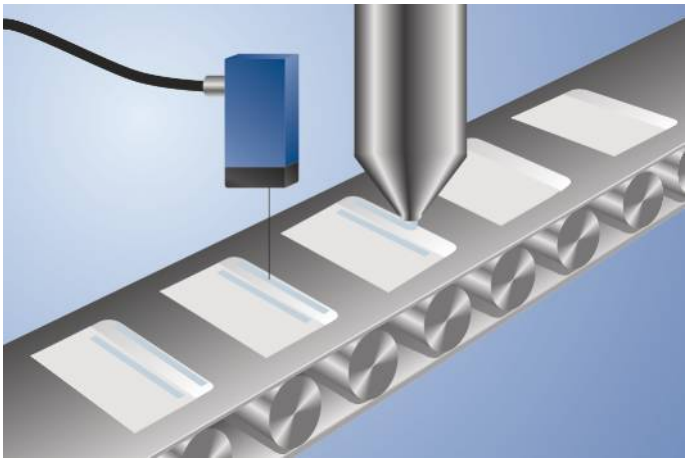
Gloss Sensor

GM04VC2 LASER

Part Number

- **Adjustable gloss level**
- **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.

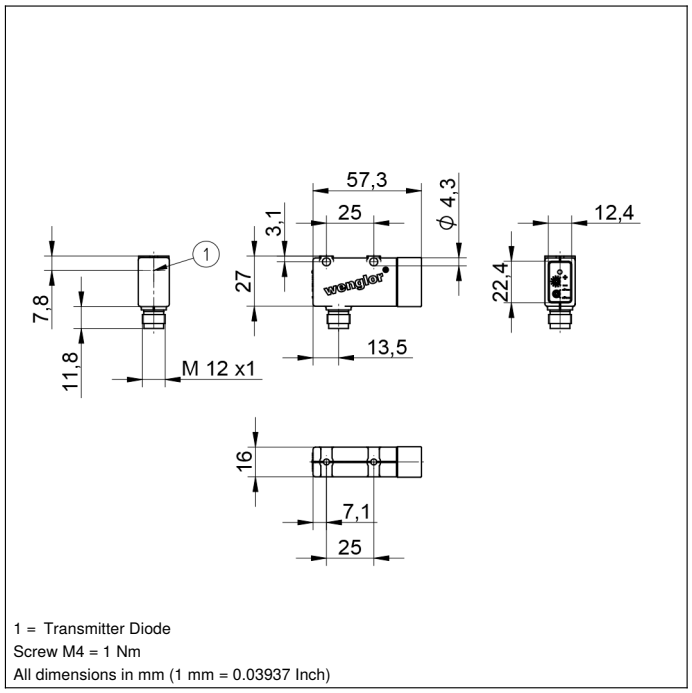


Technical Data

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)	2
Max. Ambient Light	10000 Lux
Light Spot Diameter	see Table
Electrical Data	
Supply Voltage	10...30 V DC
Current Consumption (Ub = 24 V)	< 20 mA
Switching Frequency	1900 Hz
Response Time	263 µs
Temperature Drift	< 5 %
Temperature Range	-25...60 °C
Switching Output Voltage Drop	< 2,5 V
PNP Switching Output/Switching Current	200 mA
Short Circuit Protection	yes
Reverse Polarity Protection	yes
Overload Protection	yes
Protection Class	III
FDA Accession Number	0820517-000
Mechanical Data	
Setting Method	Potentiometer
Housing Material	Plastic
Full Encapsulation	yes
Degree of Protection	IP67
Connection	M12 × 1; 4-pin
PNP NO/NC switchable	●
Connection Diagram No.	1013
Control Panel No.	M5
Suitable Connection Equipment No.	2
Suitable Mounting Technology No.	360

Complementary Products

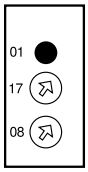
PNP-NPN Converter BG2V1P-N-2M



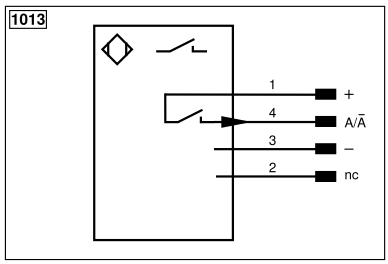
1 = Transmitter Diode
Screw M4 = 1 Nm
All dimensions in mm (1 mm = 0.03937 Inch)

Ctrl. Panel

M5



01 = Switching Status Indicator
08 = NO/NC Switch
17 = Sensitivity Adjustment

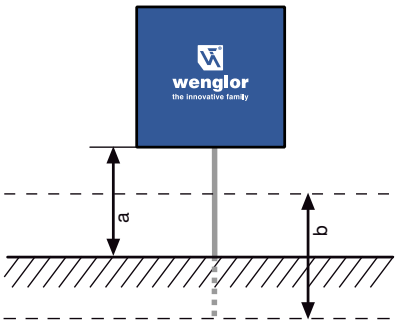


Legend					
+	Supply Voltage +	nc	Not connected	ENRS422	Encoder B/B̄ (TTL)
–	Supply Voltage 0 V	U	Test Input	ENA	Encoder A
~	Supply Voltage (AC Voltage)	Ū	Test Input inverted	ENB	Encoder B
A	Switching Output (NO)	W	Trigger Input	AMIN	Digital output MIN
Ā	Switching Output (NC)	W–	Ground for the Trigger Input	AMAX	Digital output MAX
V	Contamination/Error Output (NO)	O	Analog Output	AOK	Digital output OK
V̄	Contamination/Error Output (NC)	O–	Ground for the Analog Output	SY In	Synchronization In
E	Input (analog or digital)	BZ	Block Discharge	SY OUT	Synchronization OUT
T	Teach Input	AMV	Valve Output	OLT	Brightness output
Z	Time Delay (activation)	a	Valve Control Output +	M	Maintenance
S	Shielding	b	Valve Control Output 0 V	rsv	Reserved
RxD	Interface Receive Path	SY	Synchronization	Wire Colors according to DIN IEC 60757	
TxD	Interface Send Path	SY–	Ground for the Synchronization	BK	Black
RDY	Ready	E+	Receiver-Line	BN	Brown
GND	Ground	S+	Emitter-Line	RD	Red
CL	Clock	⏚	Grounding	OG	Orange
E/A	Output/Input programmable	SnR	Switching Distance Reduction	YE	Yellow
	IO-Link	Rx+/–	Ethernet Receive Path	GN	Green
PoE	ower over Ethernet	Tx+/–	Ethernet Send Path	BU	Blue
IN	Safety Input	Bus	Interfaces-Bus A(+)/B(–)	VT	Violet
OSSD	Safety Output	La	Emitted Light disengageable	GY	Grey
Signal	Signal Output	Mag	Magnet activation	WH	White
BI_D+/–	Ethernet Gigabit bidirect. data line (A-D)	RES	Input confirmation	PK	Pink
EN0 RS422	Encoder 0-pulse 0/0̄ (TTL)	EDM	Contactor Monitoring	GNYE	Green/Yellow
PT	Platinum measuring resistor	ENARS422	Encoder A/Ā (TTL)		

Table 1

Remission from Object	> 30 %	~ 18 %	~ 6 %
Working Distance	20 mm	15 mm	10 mm
Working Range	± 15 mm	± 10 mm	± 5 mm
Spot Size	6 × 20 mm	4,5 × 15 mm	3 × 10 mm

Ideal Working Distance



a = Working Distance
b = Working Range

Specifications are subject to change without notice