Gloss Sensor

GM04VC2 LASER

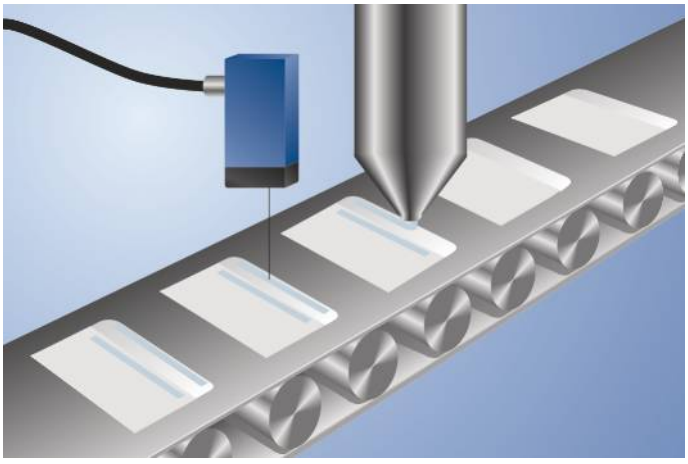
Part Number

- **Adjustable gloss level**
- **Practically independent of distance**
- **Reliable differentiation between glossy and matte objects**

Technical Data

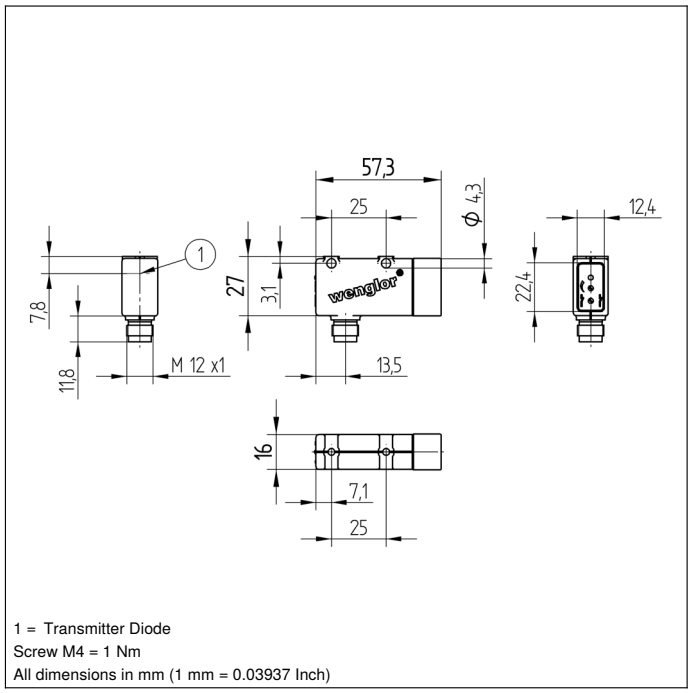
Optical Data	
Working Range	5...40 mm
Light Source	Laser (red)
Wavelength	650 nm
Service Life (T = +25 °C)	100000 h
Laser Class (EN 60825-1)	2
Max. Ambient Light	10000 Lux
Light Spot Diameter	see Table 1
Electrical Data	
Supply Voltage	10...30 V DC
Current Consumption (Ub = 24 V)	< 20 mA
Switching Frequency	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

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.



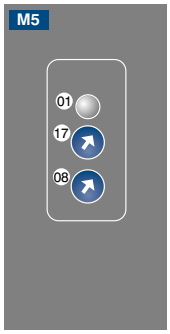
Complementary Products

PNP-NPN Converter BG2V1P-N-2M

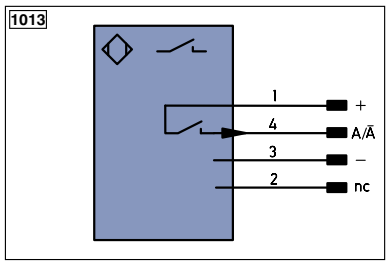


1 = Transmitter Diode
Screw M4 = 1 Nm
All dimensions in mm (1 mm = 0.03937 Inch)

Ctrl. Panel



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



Legend

+	Supply Voltage +
–	Supply Voltage 0 V
~	Supply Voltage (AC Voltage)
A	Switching Output (NO)
Ā	Switching Output (NC)
V	Contamination/Error Output (NO)
V̄	Contamination/Error Output (NC)
E	Input (analog or digital)
T	Teach Input
Z	Time Delay (activation)
S	Shielding
RxD	Interface Receive Path
TxD	Interface Send Path
RDY	Ready
GND	Ground
CL	Clock
E/A	Output/Input programmable
	IO-Link
PoE	Power over Ethernet
IN	Safety Input
OSSD	Safety Output
Signal	Signal Output
BI_D+/-	Ethernet Gigabit bidirect. data line (A-D)
EN0 RS422	Encoder 0-pulse 0-0̄ (TTL)
PT	Platinum measuring resistor
nc	not connected
U	Test Input
Ū	Test Input inverted
W	Trigger Input
O	Analog Output
O–	Ground for the Analog Output
BZ	Block Discharge
AMV	Valve Output
a	Valve Control Output +
b	Valve Control Output 0 V
SY	Synchronization
E+	Receiver-Line
S+	Emitter-Line
⏚	Grounding
SnR	Switching Distance Reduction
Rx+/–	Ethernet Receive Path
Tx+/–	Ethernet Send Path
Bus	Interfaces-Bus A(+)/B(–)
La	Emitted Light disengageable
Mag	Magnet activation
RES	Input confirmation
EDM	Contactor Monitoring
ENA RS422	Encoder A/Ā (TTL)
ENB RS422	Encoder B/B̄ (TTL)
ENA	Encoder A
ENB	Encoder B
AMIN	Digital output MIN
AMAX	Digital output MAX
AOK	Digital output OK
SY In	Synchronization In
SY OUT	Synchronization OUT
OLT	Brightness output
M	Maintenance
rsv	reserved

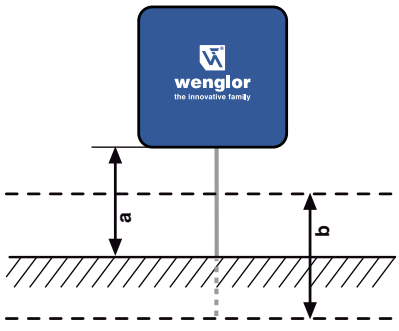
Wire Colors according to DIN IEC 757

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 %
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