

Laser Distance Sensor

Triangulation

OHP551B0003 LASER

Part Number

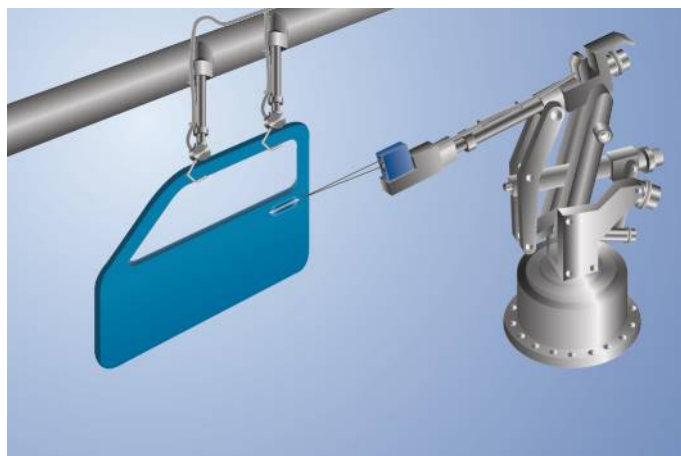


- Smallest recognizable distance difference: 100 μm
- Spot diameter: 0,3 mm

Technical Data

Optical Data	
Range	55 mm
Setting Range	45...55 mm
Switching Hysteresis	< 100 μm
Light Source	Laser (red)
Wavelength	660 nm
Service Life (T = +25 °C)	100000 h
Laser Class (EN 60825-1)	1
Max. Ambient Light	10000 Lux
Light Spot Diameter	< 0,3 mm
Focus Distance	75 mm
Electrical Data	
Supply Voltage	10...30 V DC
Current Consumption (U _b = 24 V)	< 30 mA
Switching Frequency	800 Hz
Response Time	650 μs
Temperature Drift	< 5 $\mu\text{m/K}$
Temperature Range	-25...60 °C
Switching Output Voltage Drop	< 2,5 V
PNP Switching Output/Switching Current	200 mA
PNP Contamination Output/Switching Current	50 mA
Short Circuit Protection	yes
Reverse Polarity Protection	yes
Overload Protection	yes
Protection Class	III
FDA Accession Number	1120738-000
Mechanical Data	
Setting Method	Potentiometer
Housing Material	Plastic
Full Encapsulation	yes
Degree of Protection	IP67
Connection	M12 × 1; 4-pin
Contamination Output	●
PNP NO	●
Connection Diagram No.	103
Control Panel No.	P2
Suitable Connection Equipment No.	2
Suitable Mounting Technology No.	380

These sensors detect distance by measuring angles. They are particularly good at recognizing objects in front of any background. The color, shape and surface characteristics of the object have practically no influence on sensor switching performance.

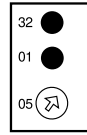


Complementary Products

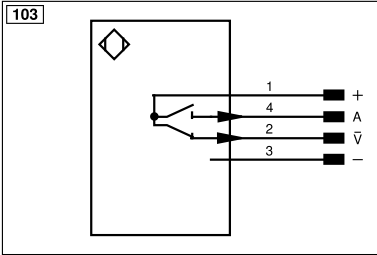
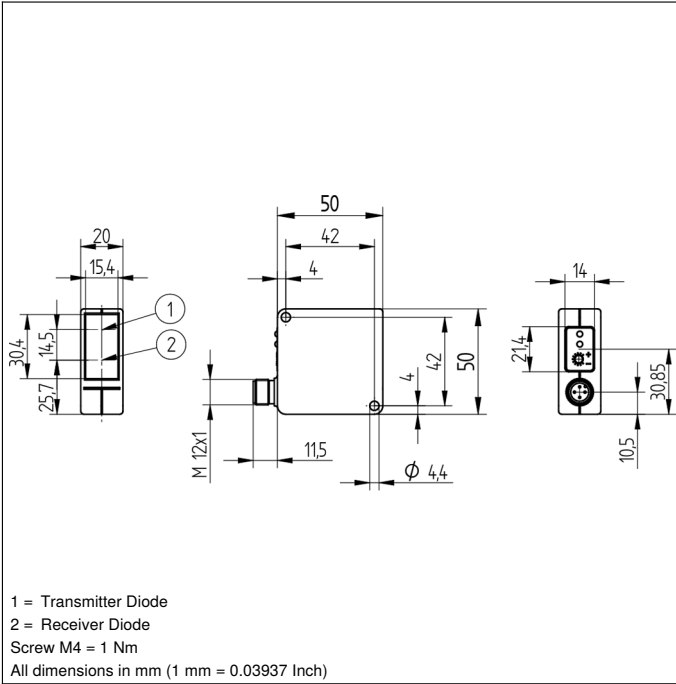
PNP-NPN Converter BG2V1P-N-2M
Protective Housing ZSV-0x-01
Set Protective Housing ZSP-NN-02

Ctrl. Panel

P2



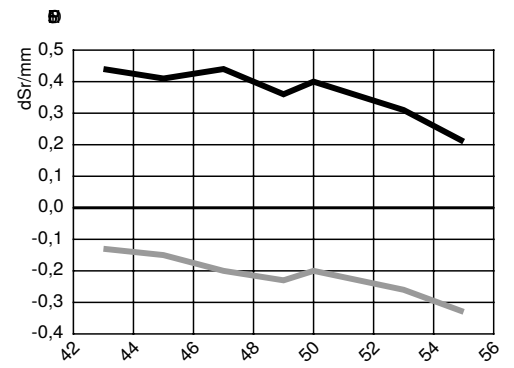
01 = Switching Status Indicator
 05 = Switching Distance Adjuster
 32 = Contamination Warning/Error Warning



Legend			
+	Supply Voltage +	nc	Not connected
-	Supply Voltage 0 V	U	Test Input
~	Supply Voltage (AC Voltage)	Ü	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/A (TTL)
			Encoder B/B (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

Switching Distance Deviation

Typical characteristic curve based on white, 90 % remission



Sr = Switching Distance
 dSr = Switching Distance Change

— black 6 % remission
 — grey 18 % remission

