

High-Performance Distance Sensor

YP05MGVL80 LASER

Part Number

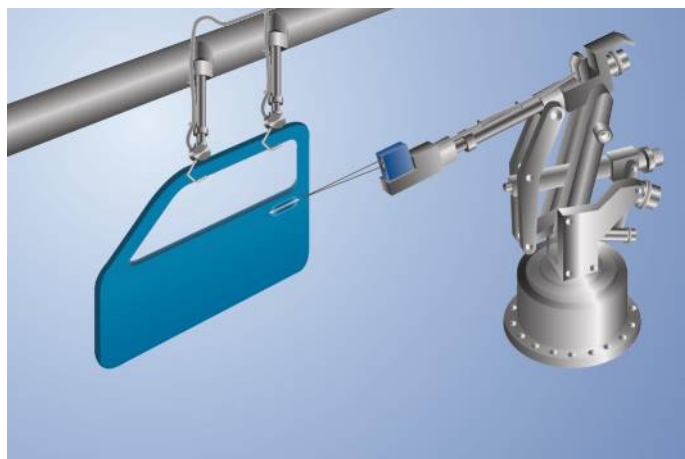


- Linearity: 0,5 %
- Measuring range: 10 mm
- Resolution up to 2 μm

Technical Data

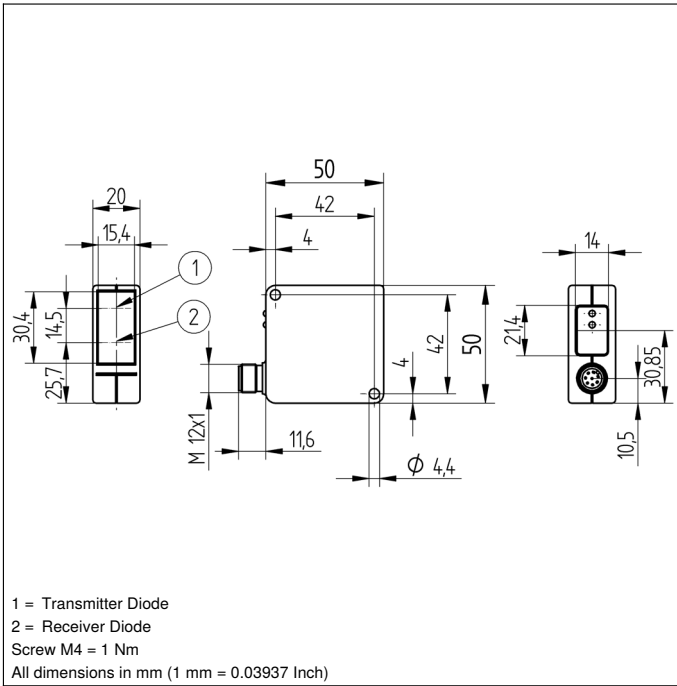
Optical Data	
Working Range	43...53 mm
Measuring Distance	48 mm
Measuring Range	10 mm
Resolution	4 μm
Linearity	0,5 %
Light Source	Laser (red)
Wavelength	655 nm
Service Life (T = +25 °C)	100000 h
Laser Class (EN 60825-1)	2
Max. Ambient Light	10000 Lux
Light Spot Diameter	0,5 mm
Electrical Data	
Supply Voltage	18...30 V DC
Current Consumption (U _b = 24 V)	< 30 mA
Cut-Off Frequency	100 Hz
Response Time	5 ms
Temperature Drift (T _u < 10 °C, T _u > 40 °C)	5 $\mu\text{m}/\text{K}$
Temperature Drift (10 °C < T _u < 40 °C)	5 $\mu\text{m}/\text{K}$
Temperature Range	-10...60 °C
Error Output Voltage Drop	< 2,5 V
PNP Error Output/Switching Current	200 mA
Analog Output	0...10 V
Short Circuit Protection	yes
Reverse Polarity Protection	yes
Overload Protection	yes
Protection Class	III
Mechanical Data	
Housing Material	Plastic
Full Encapsulation	yes
Degree of Protection	IP67
Connection	M12 × 1; 8-pin
Error Output	●
Analog Output	●
Connection Diagram No.	503
Control Panel No.	P3
Suitable Connection Equipment No.	80
Suitable Mounting Technology No.	380

These sensors can measure distances and display analog output. Their high resolution and wide variety of measuring ranges allow them to be used in innumerable applications. The output signal is practically independent of the object's color.

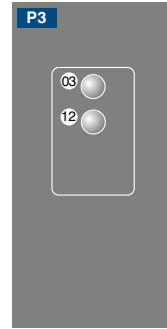


Complementary Products

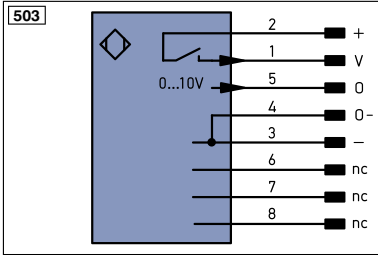
Analog Evaluation Unit AW02	
Protective Housing ZSV-0x-01	
Set Protective Housing ZSP-NN-02	



Ctrl. Panel



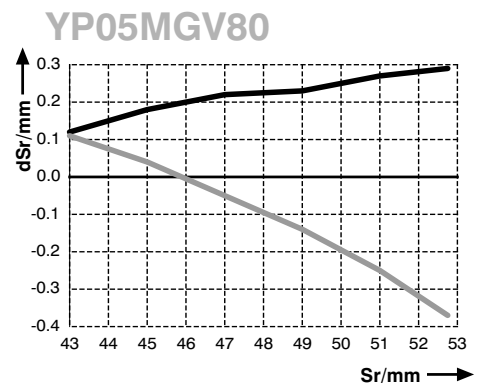
03 = Error Indicator
12 = Analog Output Indicator



Legend			
+	Supply Voltage +	PT	Platinum measuring resistor
-	Supply Voltage 0 V	nc	not connected
~	Supply Voltage (AC Voltage)	U	Test Input
A	Switching Output (NO)	Ū	Test Input inverted
Ā	Switching Output (NC)	W	Trigger Input
V	Contamination/Error Output (NO)	W-	Ground for the Trigger Input
Ṽ	Contamination/Error Output (NC)	O	Analog Output
E	Input (analog or digital)	O-	Ground for the Analog Output
T	Teach Input	BZ	Block Discharge
Z	Time Delay (activation)	AWV	Valve Output
S	Shielding	a	Valve Control Output +
RxD	Interface Receive Path	b	Valve Control Output 0 V
TxD	Interface Send Path	SY	Synchronization
RDY	Ready	SY-	Ground for the Synchronization
GND	Ground	E+	Receiver-Line
CL	Clock	S+	Emitter-Line
E/A	Output/Input programmable	±	Grounding
	IO-Link	SrR	Switching Distance Reduction
PoE	Power over Ethernet	Rx+/-	Ethernet Receive Path
IN	Safety Input	Tx+/-	Ethernet Send Path
OSSD	Safety Output	Bus	Interfaces-Bus A(+)/B(-)
Signal	Signal Output	La	Emitted Light disengageable
Bl..D+/-	Ethernet Gigabit bidirect. data line (A-D)	Mag	Magnet activation
EN0..5422	Encoder 0-pulse 0-0 (TTL)	RES	Input confirmation
		EDM	Contactur Monitoring
		EN0..5422	Encoder A/Ā (TTL)
		EN0..5422	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
		GNVE	Green/Yellow

Error of Measurement

Typical characteristic curve based on white, 90 % remission



Sr = Switching Distance
dSr = Switching Distance Change
— black 6 % remission
— Aluminum

