

Laser Distance Sensor

Triangulation

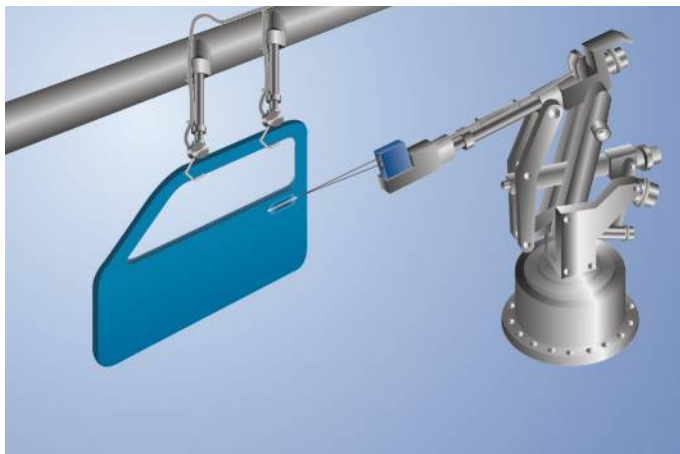
YP05MGVL-P24

Part Number



- **Linearity: 0,5 %**
- **Measuring range: 10 mm**

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.



Technical Data

Optical Data	
Working Range	43...53 mm
Measuring Distance	48 mm
Measuring Range	10 mm
Resolution	4 µm
Linearity	0,5 %
Linearity Deviation	50 µm
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	5 µm/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, PBT
Optic Cover	Glass
Full Encapsulation	yes
Degree of Protection	IP67
Connection	Cable; 6-wire
Cable length (L)	6 m
Wire cross-section	0,25 mm²
Scope of delivery	1 × initial start-up instructions
	1 × laser warning sign
	1 × sensor

Error Output	●
Analog Output	●

Connection Diagram No.	603
Control Panel No.	P3
Suitable Mounting Technology No.	380

Complementary Products

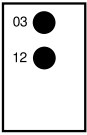
Analog Evaluation Unit AW02
IO-Link converter

Dimensioned picture
currently
not available

All dimensions in mm (1 mm = 0.03937 Inch)

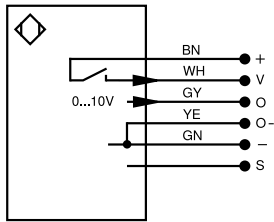
Ctrl. Panel

P3



03 = Error Indicator
12 = Analog Output Indicator

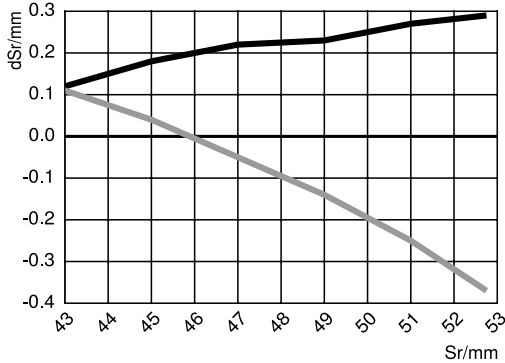
603



Legend					
+	Supply Voltage +	PT	Platinum measuring resistor	ENAR5422	Encoder A/Ä (TTL)
-	Supply Voltage 0 V	nc	Not connected	ENBR5422	Encoder B/ß (TTL)
~	Supply Voltage (AC Voltage)	U	Test Input	ENa	Encoder A
A	Switching Output (NO)	Ü	Test Input inverted	ENb	Encoder B
Ä	Switching Output (NC)	W	Trigger Input	AMIN	Digital output MIN
V	Contamination/Error Output (NO)	W-	Ground for the Trigger Input	AMAX	Digital output MAX
ÿ	Contamination/Error Output (NC)	O	Analog Output	AOK	Digital output OK
E	Input (analog or digital)	O-	Ground for the Analog Output	SY In	Synchronization In
T	Teach Input	BZ	Block Discharge	SY OUT	Synchronization OUT
R	Reset 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		
RDY	Ready	E+	Receiver-Line	BK	Black
GND	Ground	S+	Emitter-Line	BN	Brown
CL	Clock	±	Grounding	RD	Red
E/A	Output/Input programmable	SnR	Switching Distance Reduction	OG	Orange
IO-Link	IO-Link	Rx+/-	Ethernet Receive Path	YE	Yellow
PoE	Power over Ethernet	Tx+/-	Ethernet Send Path	GN	Green
IN	Safety Input	Bus	Interfaces-Bus A(+)/B(-)	BU	Blue
QSSD	Safety Output	La	Emitted Light disengageable	VT	Violet
Signal	Signal Output	Mag	Magnet activation	GY	Grey
BL_D+/-	Ethernet Gigabit bidirect. data line (A-D)	RES	Input confirmation	WH	White
ENo RS422	Encoder 0-pulse 0/0 (TTL)	EDM	Contact Monitoring	PK	Pink
				GNYE	Green/Yellow

Error of Measurement

Typical characteristic curve based on white, 90 % remission
YP05MGV80



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

