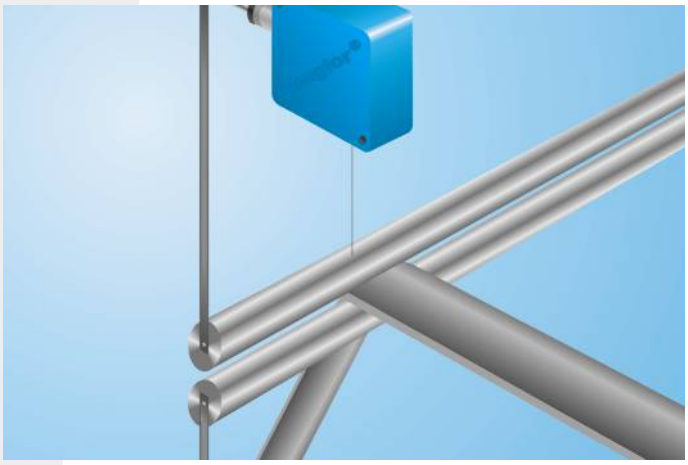
Reflex Sensor
for Measuring Tasks

YP11MGV80 LASER

Part Number

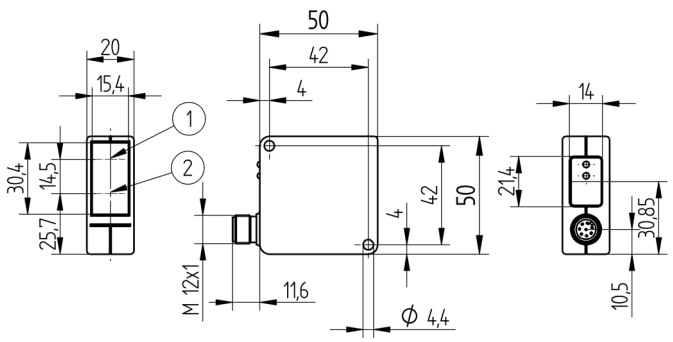
- **Cut-Off Frequency up to 1 kHz**
- **Linearity: 0,5 %**
- **Measuring Range: 50 mm**

These sensors are equipped with an analog output and can thus be utilized for measuring tasks. The output signal is practically independent of the object´s color. High resolution and a wide variety of measuring ranges allow for use in innumerable applications.

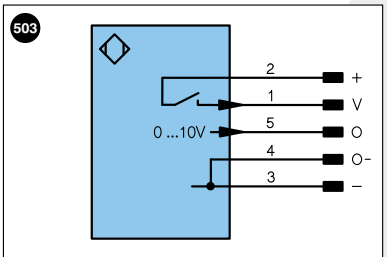


Technical Data

Optical Data	
Working Range	50...100 mm
Measuring Distance	75 mm
Measuring Range	50 mm
Resolution	< 100 µm
Linearity	0,5 %
Light Source	Laser (red)
Wave Length	655 nm
Service Life (T = +25 °C)	100000 h
Laser Class (EN 60825-1)	2
Max. Ambient Light	10000 Lux
Light Spot Diameter	1 mm
Electrical Data	
Supply Voltage	18...30 V DC
Current Consumption (Ub = 24 V)	< 30 mA
Cut-Off Frequency	1 kHz
Response Time	500 µs
Temperature Drift (Tu < 10 °C, Tu > 40 °C)	20 µm/K
Temperature Drift (10 °C < Tu < 40 °C)	10 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
Full Encapsulation	yes
Degree of Protection	IP67
Connection	M12 × 1; 8-pin
Error Output	●
Analog Output	●
Connection Diagram No.	503
Control Panel No.	P 3
Suiting Connection Technology No.	80
Suiting Mounting Technology No.	380



1 = Transmitter Diode
2 = Receiver Diode
All dimensions in mm (1 mm = 0.03937 Inch)



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	

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

PoE	Power over Ethernet

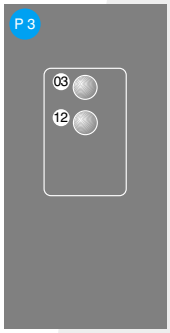
Wire Colors according to DIN IEC 757

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

Complementary Products

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

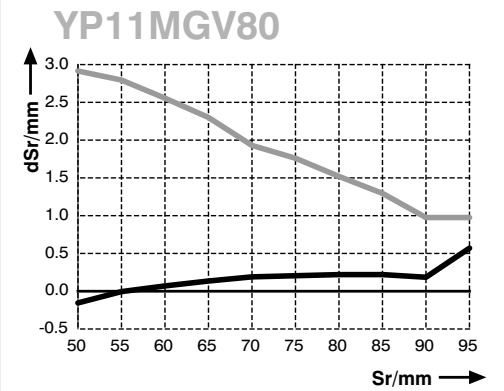
Ctrl.Panel



03 = Error Indicator
12 = Analog Output Indicator

Error of Measurement

Typical characteristic curve based on Kodak white, 90 %



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

Specifications are subject to change without notice