

High-Performance Distance Sensor

YP06MGVL80 LASER

Part Number



- Linearity: 0,5 %
- Measuring range: 20 mm
- Resolution up to 5 μm

Technical Data

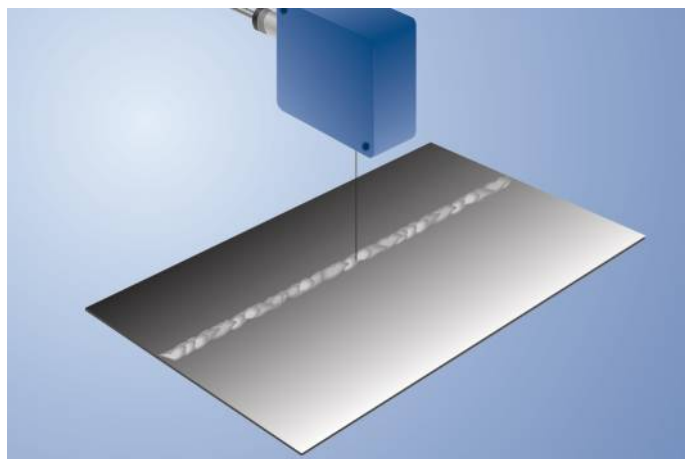
| Optical Data | |
|---------------------------|------------------|
| Working Range | 40...60 mm |
| Measuring Distance | 50 mm |
| Measuring Range | 20 mm |
| Resolution | 10 μm |
| Linearity | 0,5 % |
| Light Source | Laser (red) |
| Wavelength | 655 nm |
| Service Life (T = +25 °C) | 100000 h |
| 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) | 10 $\mu\text{m}/\text{K}$ |
| Temperature Drift (10 °C < T _u < 40 °C) | 7 $\mu\text{m}/\text{K}$ |
| 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 |

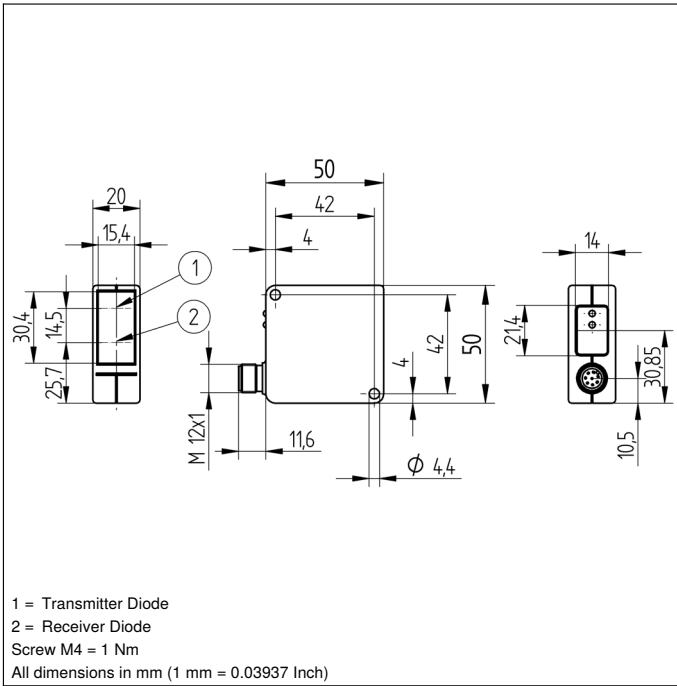
| | |
|-----------------------------------|------------|
| Error Output | ● |
| Analog Output | ● |
| Connection Diagram No. | 503 |
| Control Panel No. | P3 |
| Suitable Connection Equipment No. | 80 |
| Suitable Mounting Technology No. | 380 |

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.

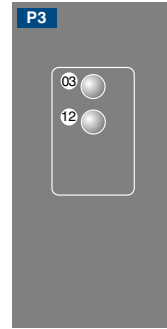


Complementary Products

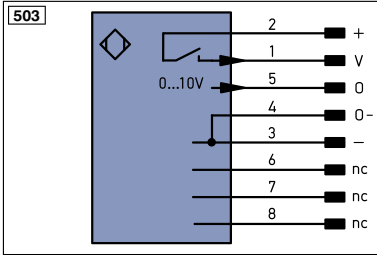
| |
|----------------------------------|
| Analog Evaluation Unit AW02 |
| Protective Housing ZSV-0x-01 |
| Set Protective Housing ZSP-NN-02 |



Ctrl. Panel



03 = Error Indicator
 12 = Analog Output Indicator



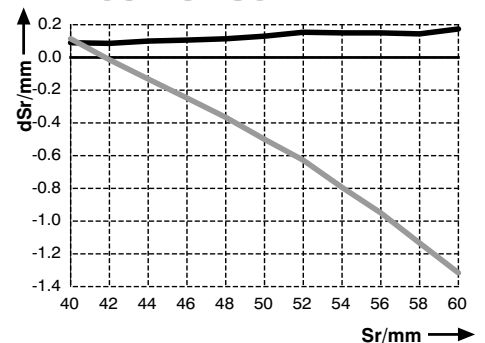
Legend

| | | | | | |
|-----------------------|--|-----------------|--------------------------------|--------------------------------------|---------------------|
| + | Supply Voltage + | PT | Platinum measuring resistor | EN ^A RS422 | Encoder A/Ā (TTL) |
| - | Supply Voltage 0 V | nc | not connected | EN ^B RS422 | Encoder B/B̄ (TTL) |
| ~ | Supply Voltage (AC Voltage) | U | Test Input | EN ^A | Encoder A |
| A | Switching Output (NO) | Ū | Test Input inverted | EN ^B | Encoder B |
| Ā | Switching Output (NC) | W | Trigger Input | A _{MIN} | Digital output MIN |
| V | Contamination/Error Output (NO) | W- | Ground for the Trigger Input | A _{MAX} | Digital output MAX |
| Ṽ | Contamination/Error Output (NC) | O | Analog Output | A _{OK} | 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 |
| Z | Time Delay (activation) | A _{WV} | Valve Output | OL _T | Brightness output |
| S | Shielding | a | Valve Control Output + | M | Maintenance |
| RxD | Interface Receive Path | b | Valve Control Output 0 V | rsv | reserved |
| TxD | Interface Send Path | SY | Synchronization | Wire Colors according to DIN IEC 757 | |
| RDY | Ready | SY- | Ground for the Synchronization | BK | Black |
| GND | Ground | E+ | Receiver-Line | BN | Brown |
| CL | Clock | S+ | Emitter-Line | RD | Red |
| E/A | Output/Input programmable | ± | Grounding | OG | Orange |
| | IO-Link | S _{nR} | Switching Distance Reduction | YE | Yellow |
| PoE | Power over Ethernet | Rx+/- | Ethernet Receive Path | GN | Green |
| IN | Safety Input | Tx+/- | Ethernet Send Path | BU | Blue |
| OSSD | Safety Output | Bus | Interfaces-Bus A(+)/B(-) | VT | Violet |
| Signal | Signal Output | L _a | Emitted Light disengageable | GY | Grey |
| Bl_D+/- | Ethernet Gigabit bidirect. data line (A-D) | Mag | Magnet activation | WH | White |
| EN ⁰ RS422 | Encoder 0-pulse 0-0̄ (TTL) | RES | Input confirmation | PK | Pink |
| | | EDM | Contactur Monitoring | GNVE | Green/Yellow |

Error of Measurement

Typical characteristic curve based on white, 90 % remission

YP06MGV80



Sr = Switching Distance

dSr = Switching Distance Change

— black 6 % remission

- - - Aluminum

