

# High-Performance Distance Sensor

## OCP801H0180 LASER

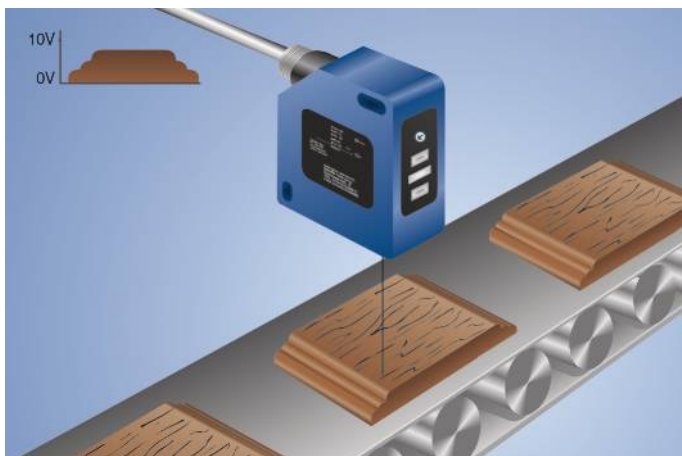
Part Number



- High resolution: 8  $\mu\text{m}$  (resolution-mode)
- Linearity: 0,1 % (resolution-mode)
- Measured value independent of material, color and brightness
- Zoom function

These sensors work with a high-resolution CMOS line and DSP technology and determine distance using angular measurement. As a result, material, color and brightness related measurement differences are virtually eliminated.

Integrated analogue output can be configured for voltage 0...10 V (10...0 V) or current 4...20 mA (20...4 mA).

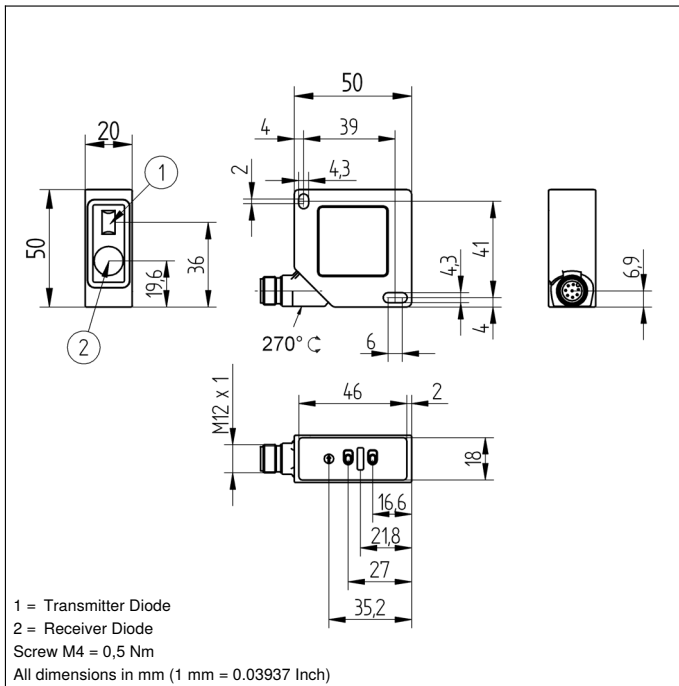


### Technical Data

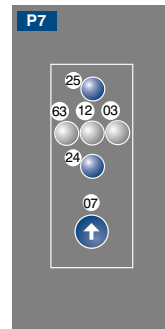
Optical Data	
Working Range	30...80 mm
Measuring Range	50 mm
Resolution	8 $\mu\text{m}$
Resolution (Speed-Mode)	12 $\mu\text{m}$
Linearity	0,1 %
Linearity (Speed-Mode)	0,2 %
Light Source	Laser (red)
Wavelength	660 nm
Service Life (T = +25 °C)	100000 h
Laser Class (EN 60825-1)	1
Max. Ambient Light	10000 Lux
Light Spot Diameter	see Table 1
Electrical Data	
Supply Voltage	18...30 V DC
Current Consumption (U <sub>b</sub> = 24 V)	< 80 mA
Measuring Rate	1000 /s
Measuring Rate (Resolution-Mode)	500 /s
Response Time	< 1000 $\mu\text{s}$
Response Time (Resolution Mode)	< 2000 $\mu\text{s}$
Temperature Drift	< 5 $\mu\text{m}/\text{K}$
Temperature Range	-25...50 °C
Analog Output	0...10 V/4...20 mA
Load Current Voltage Output	< 1 mA
Current Output Load Resistance	< 500 Ohm
Interface	RS-232
Baud Rate	38400 Bd
Protection Class	III
FDA Accession Number	1120734-000
Mechanical Data	
Setting Method	Teach-In
Housing Material	Plastic
Degree of Protection	IP67
Connection	M12 $\times$ 1; 8-pin
Error Output	●
Analog Output	●
RS-232 Interface	●
Connection Diagram No.	529
Control Panel No.	P7
Suitable Connection Equipment No.	80
Suitable Mounting Technology No.	380

### Complementary Products

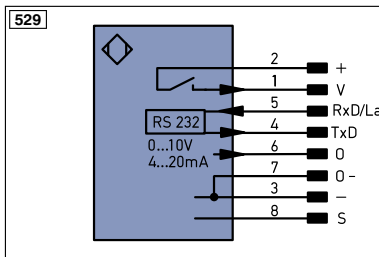
Analog Evaluation Unit AW02
Fieldbus Gateway ZAGxxxN01, EPGG001
Interface Cable S232W3
Protective Housing ZSV-0x-01
Set Protective Housing ZSP-NN-02
Software



### Ctrl. Panel



- 03 = Error Indicator
- 07 = Selector Switch
- 12 = Analog Output Indicator
- 24 = Plus Button
- 25 = Minus Button
- 63 = Analog Output Current Indicator

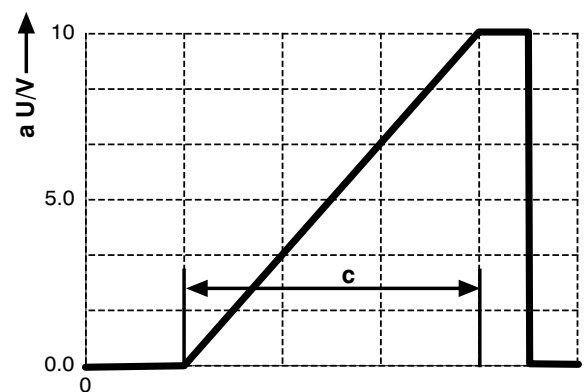


Legend		Legend		Legend	
+	Supply Voltage +	PT	Platinum measuring resistor	EN <sup>A</sup> RS422	Encoder A/A (TTL)
-	Supply Voltage 0 V	nc	not connected	EN <sup>B</sup> RS422	Encoder B/B (TTL)
~	Supply Voltage (AC Voltage)	U	Test Input	EN <sup>A</sup>	Encoder A
A	Switching Output (NO)	U	Test Input inverted	EN <sup>B</sup>	Encoder B
Ā	Switching Output (NC)	W	Trigger Input	A <sub>MIN</sub>	Digital output MIN
V	Contamination/Error Output (NO)	W-	Ground for the Trigger Input	A <sub>MAX</sub>	Digital output MAX
ṽ	Contamination/Error Output (NC)	O	Analog Output	A <sub>OK</sub>	Digital output OK
E	Input (analog or digital)	O-	Ground for the Analog Output	SY <sub>in</sub>	Synchronization In
T	Teach Input	BZ	Block Discharge	SY <sub>OUT</sub>	Synchronization OUT
Z	Time Delay (activation)	AWV	Valve Output	OLT	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 <sub>n</sub> R	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 <sub>a</sub>	Emitted Light disengageable	GY	Grey
Bl_D+/-	Ethernet Gigabit bidirect. data line (A-D)	Mag	Magnet activation	WH	White
EN <sup>0</sup> RS422	Encoder 0-pulse 0-0 (TTL)	RES	Input confirmation	PK	Pink
		EDM	Contacting Monitoring	GNVE	Green/Yellow

Table 1

Working Distance	30 mm	80 mm
Spot Size	0,4 × 0,8 mm	0,7 × 1,4 mm

### Output Graph



c = Measuring Range

a = Analog Voltage Output

