

High-Performance Distance Sensor

CP08MHT80 LASER

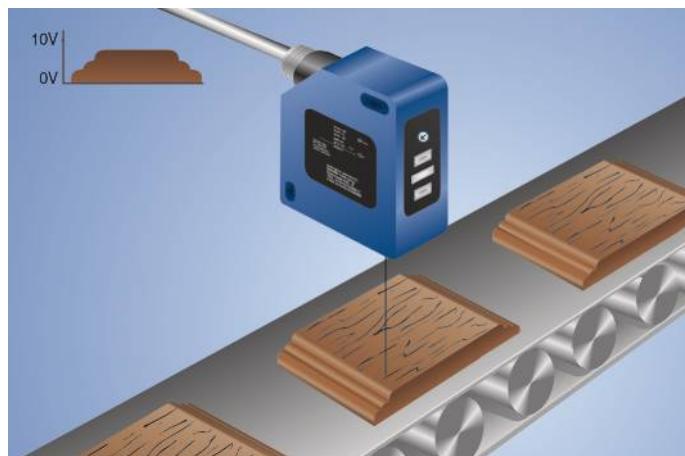
Part Number



- **High resolution: 8 µm (resolution-mode)**
- **Linearity: 0,1 % (resolution-mode)**
- **Measured value independent of material, color and brightness**
- **Response time: < 660 µs (speed-mode)**
- **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 µm
Resolution (Speed-Mode)	12 µm
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)	2
Max. Ambient Light	10000 Lux
Light Spot Diameter	see Table 1

Electrical Data

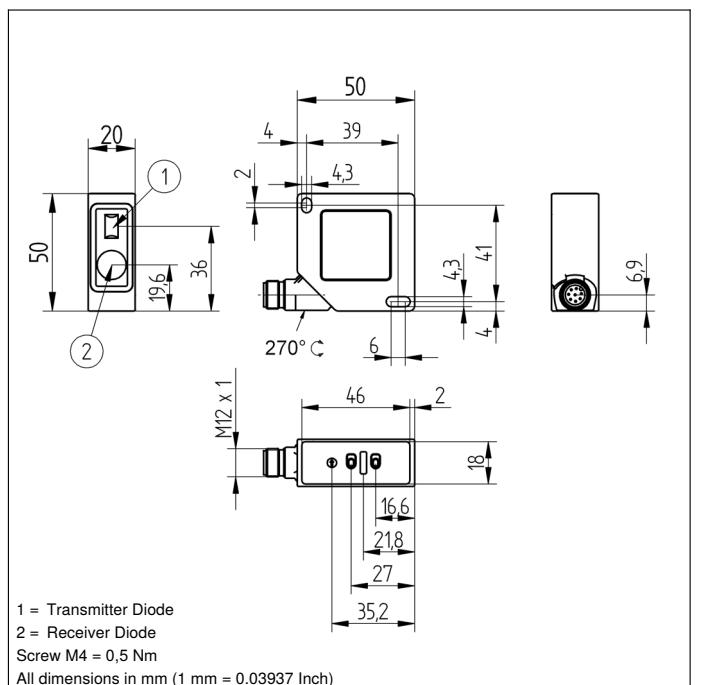
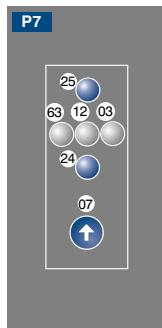
Supply Voltage	18...30 V DC
Current Consumption (Ub = 24 V)	< 80 mA
Measuring Rate	1500 /s
Measuring Rate (Resolution-Mode)	600 /s
Response Time	< 660 µs
Response Time (Resolution Mode)	< 1660 µs
Temperature Drift	< 5 µm/K
Temperature Range	-25...50 °C
Analog Output	0...10 V/4...20 mA
Load Current Voltage Output	< 1 mA
Current Output Load Resistance	< 500 Ohm
Interface	RS-232
Baud Rate	38400 Bd
Protection Class	III
FDA Accession Number	0820588-000

Mechanical Data

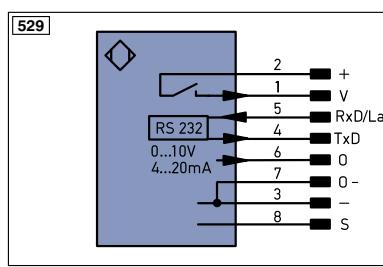
Setting Method	Teach-In
Housing Material	Plastic
Degree of Protection	IP67
Connection	M12 x 1; 8-pin
Error Output	●
Analog Output	●
RS-232 Interface	●
Connection Diagram No.	529
Control Panel No.	P7
Suitable Connection Equipment No.	80
Suitable Mounting Technology No.	380

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

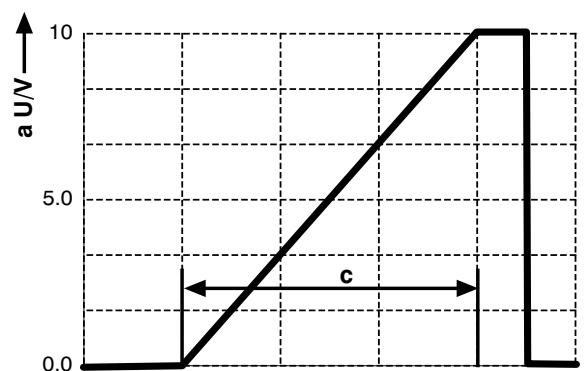
+	Supply Voltage +
-	Supply Voltage 0 V
~	Supply Voltage (AC Voltage)
A	Switching Output (NO)
Ā	Switching Output (NC)
V	Contamination/Error Output (NO)
ĀV	Contamination/Error Output (NC)
E	Input (analog or digital)
T	Teach Input
Z	Time Delay (activation)
S	Shielding
RxD	Interface Receive Path
TxD	Interface Send Path
RDY	Ready
GND	Ground
CL	Clock
E/A	Output/Input programmable
IO-Link	IO-Link
PoE	Power over Ethernet
IN	Safety Input
SSO	Safety Output
Signal	Signal Output
BL-D	Ethernet Gigabit bidirect. data line (A-D)
EN _{RS422}	Encoder 0-pulse 0-0 (TTL)

PT	Platinum measuring resistor
nc	not connected
U	Test Input
Ū	Test Input inverted
W	Trigger Input
W-	Ground for the Trigger Input
O	Analog Output
O-	Ground for the Analog Output
BZ	Block Discharge
Awv	Valve Output
a	Valve Control Output +
b	Valve Control Output 0 V
SY	Synchronization
SY-	Ground for the Synchronization
E+	Receiver-Line
S+	Emitter-Line
±	Grounding
SnR	Switching Distance Reduction
Rx+/-	Ethernet Receive Path
Tx+/-	Ethernet Send Path
Ba	Interfaces-Bus A(+)/B(-)
La	Emitted Light disengageable
Mag	Magnet activation
RES	Input confirmation
EDM	Contactor Monitoring

EN _{RS422}	Encoder A/Ā (TTL)
EN _{BR422}	Encoder B/Ā (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
GNYE	Green/Yellow

Table 1

Working Distance	30 mm	80 mm
Spot Size	0,5 x 1 mm	1 x 2 mm

Output Graph


c = Measuring Range

a = Analog Voltage Output

