

High-Performance Distance Sensor

CP24MHT80 LASER

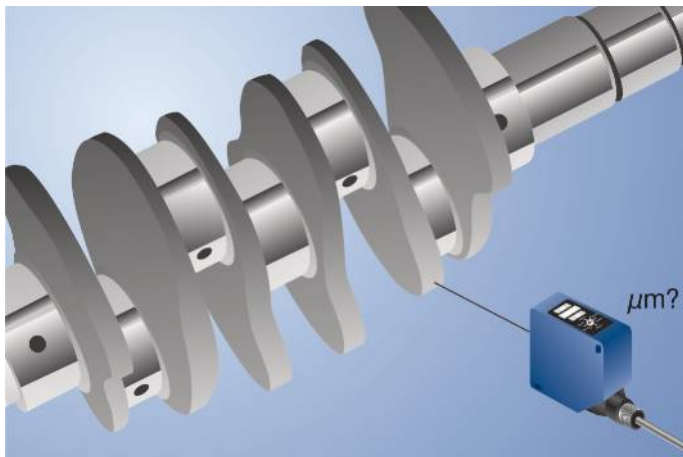
Part Number



- High resolution: 20 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).

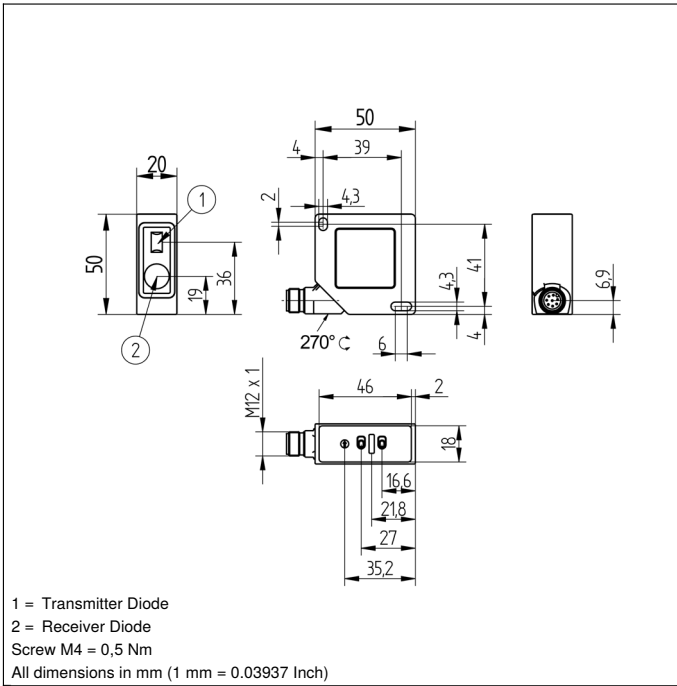


Technical Data

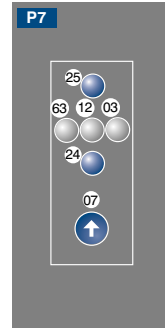
Optical Data	
Working Range	40...160 mm
Measuring Range	120 mm
Resolution	20 μm
Resolution (Speed-Mode)	30 μm
Linearity	0,1 %
Linearity (Speed-Mode)	0,2 %
Light Source	Laser (red)
Wave Length	660 nm
Service Life (T = +25 °C)	100000 h
Laser Class (EN 60825-1)	2
Max. Ambient Light	10000 Lux
Spot Diameter	see Table 1
Electrical Data	
Supply Voltage	18...30 V DC
Current Consumption (U _b = 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	< 10 $\mu\text{m}/\text{K}$
Temperature Range	-25...50 °C
Analog Output	0...10 V/4...20 mA
Current Load Voltage Output	< 1 mA
Current Output Load Resistance	< 500 Ohm
Interface	RS-232
Baud Rate	38400 Bd
Protection Class	III
FDA Accession Number	0820589-000
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 Technology No.	80
Suitable Mounting Technology No.	380

Complementary Products

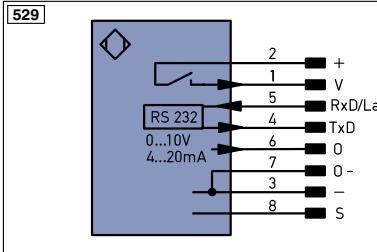
Analog Evaluation Unit AW02
Feldbus Gateways ZAGxxxN01, EPGG001
Interface Cable S232W3
Protection Housing Set ZSP-NN-02
Protection Housing ZSV-0x-01
wTeach2 software DNNF005



Ctrl. Panel



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

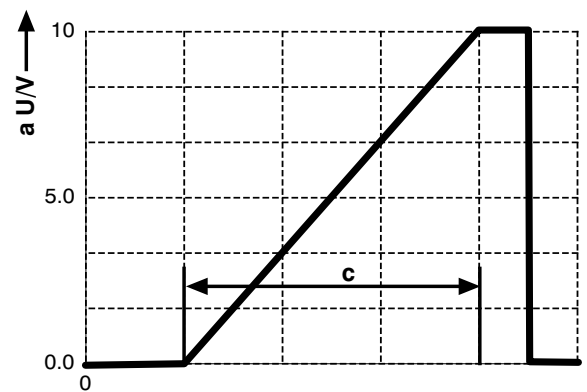


Legend		Wire Colors according to DIN IEC 757	
+	Supply Voltage +	BK	Black
-	Supply Voltage 0 V	BN	Brown
~	Supply Voltage (AC Voltage)	RD	Red
A	Switching Output (NO)	OG	Orange
Ā	Switching Output (NC)	YE	Yellow
V	Contamination/Error Output (NO)	GN	Green
ṽ	Contamination/Error Output (NC)	BU	Blue
E	Input (analog or digital)	VT	Violet
T	Teach Input	GY	Grey
Z	Time Delay (activation)	WH	White
S	Shielding	PK	Pink
RxD	Interface Receive Path	GNYE	Green/Yellow
TxD	Interface Send Path		
RDY	Ready		
GND	Ground		
CL	Clock		
E/A	Output/Input programmable		
	IO-Link		
PoE	Power over Ethernet		
IN	Safety Input		
OSSD	Safety Output		
Signal	Signal Output		
Bl..D +/-	Ethernet Gigabit bidirect. data line (A-D)		
EN0..5422	Encoder 0-pulse 0-0 (TTL)		
PT	Platinum measuring resistor		
nc	not connected		
U	Test Input		
Ū	Test Input inverted		
W	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		
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		
Mag	Magnet activation		
RES	Input confirmation		
EDM	Contactor Monitoring		
ENAR5422	Encoder A/Ā (TTL)		
ENBR5422	Encoder B/B̄ (TTL)		

Table 1

Working Distance	40 mm	160 mm
Spot Size	0,5 × 1,2 mm	1 × 2,5 mm

Output Graph



c = Measuring Range
 a = Analog Voltage Output

