

Laser Distance Sensor

Triangulation

CP35MHT80

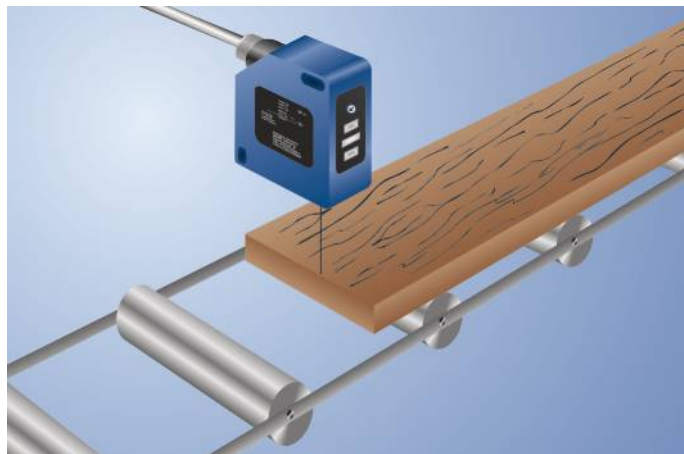
Part Number



- CMOS line array
- Laser light
- Measured value independent of material, color and brightness
- Response time: < 1250 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	50...350 mm
Measuring Range	300 mm
Reproducibility maximum	1200 µm
Reproducibility: 1 Sigma	400 µm
Linearity Deviation	1000 µm
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 (U _b = 24 V)	< 80 mA
Measuring Rate	800 /s
Measuring Rate (Resolution-Mode)	400 /s
Response Time	< 1250 µs
Response Time (Resolution Mode)	< 2500 µs
Temperature Drift	< 75 µm/K
Temperature Range	-25...50 °C
Analog Output	0...10 V
Load Current Voltage Output	< 1 mA
Current Output Load Resistance	< 500 Ohm
Interface	RS-232
Transmission rate	38400 Bd
Protection Class	III
FDA Accession Number	0820590-000

Mechanical Data

Setting Method	Teach-In
Housing Material	Plastic, ABS
Housing Material	Plastic, PC
Optic Cover	Plastic, PMMA
Degree of Protection	IP67
Connection	M12 × 1; 8-pin

Safety-relevant Data

MTTFd (EN ISO 13849-1)	713,97 a
Error Output	●
Analog Output	●
RS-232 Interface	●

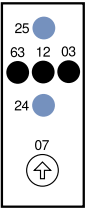
Connection Diagram No.	529
Control Panel No.	P7
Suitable Connection Equipment No.	80
Suitable Mounting Technology No.	380

Complementary Products

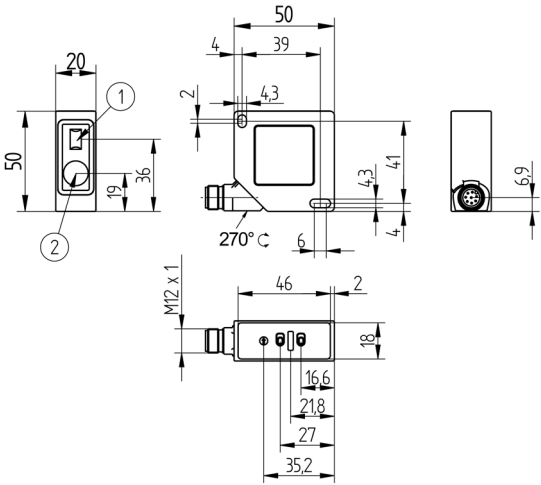
Analog Evaluation Unit AW02
Fieldbus Gateway ZAGxxxN01, EPGG001
Interface Cable S232W3
Protective Housing ZSV-0x-01
Set Protective Housing ZSP-NN-02
Software

Ctrl. Panel

P7

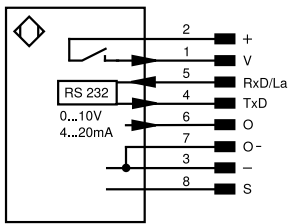


- 03 = Error Indicator
- 07 = Selector Switch
- 12 = Analog Output Indicator
- 24 = Plus Button
- 25 = Minus Button
- 63 = Analog Output Current Indicator



1 = Transmitter Diode
2 = Receiver Diode
Screw M4 = 0.5 Nm
All dimensions in mm (1 mm = 0.03937 Inch)

529



Legend

+	Supply Voltage +	nc	Not connected	ENBRS422	Encoder B/B (TTL)
-	Supply Voltage 0 V	U	Test Input	ENA	Encoder A
~	Supply Voltage (AC Voltage)	Ü	Test Input inverted	ENb	Encoder B
A	Switching Output (NO)	W	Trigger Input	AMIN	Digital output MIN
Ä	Switching Output (NC)	W-	Ground for the Trigger Input	AMAX	Digital output MAX
V	Contamination/Error Output (NO)	O	Analog Output	AOK	Digital output OK
Ȳ	Contamination/Error Output (NC)	O-	Ground for the Analog Output	SY In	Synchronization In
E	Input (analog or digital)	BZ	Block Discharge	SY OUT	Synchronization OUT
T	Teach Input	Amv	Valve Output	OLT	Brightness output
Z	Time Delay (activation)	a	Valve Control Output +	M	Maintenance
S	Shielding	b	Valve Control Output 0 V	rsv	Reserved
RxD	Interface Receive Path	SY	Synchronization	Wire Colors according to DIN IEC 60757	
TxD	Interface Send Path	SY-	Ground for the Synchronization	BK	Black
RDY	Ready	E+	Receiver-Line	BN	Brown
GND	Ground	S+	Emitter-Line	RD	Red
CL	Clock	±	Grounding	OG	Orange
E/A	Output/Input programmable	SnR	Switching Distance Reduction	YE	Yellow
IO-Link	IO-Link	Rx+/-	Ethernet Receive Path	GN	Green
PoE	Power over Ethernet	Tx+/-	Ethernet Send Path	BU	Blue
IN	Safety Input	Bus	Interfaces-Bus A(+)/B(-)	VT	Violet
OSSD	Safety Output	La	Emitted Light disengageable	GY	Grey
Signal	Signal Output	Mag	Magnet activation	WH	White
BI_D+/-	Ethernet Gigabit bidirect. data line (A-D)	RES	Input confirmation	PK	Pink
ENo RS422	Encoder 0-pulse 0/0 (TTL)	EDM	Contact Monitoring	GNYE	Green/Yellow
PT	Platinum measuring resistor	ENARIS422	Encoder A/A (TTL)		

Table 1

Working Distance	50 mm	350 mm
Spot Size	0,6 × 1,5 mm	1,5 × 4 mm

Output Graph

