Distance sensors

OM30-P0550.HV.YIN

Performance sensor

Article number: 11231082

Overview

- Automatic adjustment of exposure time for precise measurements on changing materials
- High immunity to ambient light for reliable measurements regardless of ambient conditions
- Point beam shape for a precise measurement
- Adjustable filters for particularly stable measurement results

Picture similar

Technical data

General data	
Type	Distance measuring
Measuring distance Sd	50 … 550 mm
Measuring range Mr	500 mm
Adjustment	Teach-in: button / IO-Link
Power on indication	LED green
Output indicator	LED yellow
Repeat accuracy	2 … 86 µm
Linearity error	± 0.23 % Mr
Beam type	Point
Temperature drift	0,08 % Sde/K
Light Source	
Light source	Pulsed red laser diode
Wave length	660 nm
Laser class	2
Maximum pulse power	2 mW
Pulse duration	0.001 ... 1.2 ms
Pulse period	0.2 ... 3.4 ms
Electrical data	
Response delay	0.4 ms
Measuring frequency	5000 Hz
Voltage supply range +Vs	12 … 28 VDC
Current consumption max. (no load)	50 mA
Output circuit	Analog and digital
Output signal	4 ... 20 mA / 2 ... 10 mA
Load resistance	< (+Vs - 9 V) / 0.02 A
Output current	< 100 mA
Short circuit protection	Yes
Reverse polarity protection	Yes, Vs to GND

Communication interface	
Interface	IO-Link V1.1
IO-Link port type	Class A
Baud rate	230,4 kBaud (COM 3)
Cycle time	≥ 1 ms
Process data length	48 Bit
Process data structure	Smart Sensor Profile - DMS PDI48.INT32_INT8 Bit 0 = SSC1 (distance) Bit 2 = quality Bit 3 = alarm Bit 8-15 = scale factor Bit 16-47 = 32 Bit measurement
Mechanical data	
Width / diameter	13.6 mm
Height / length	49 mm
Depth	40.3 mm
Type	Rectangular, front view
Housing material	Die-cast zinc
Front (optics)	Glass
Connection types	Connector M8 4 pin
Weight	67 g
Ambient conditions	
Ambient light immunity	< 100 kLux
Protection class	IP 67
Operating temperature	-10 … +50 °C
Storage temperature	-20 … +60 °C
Vibration (sinusoidal)	IEC 60068-2-6:2008 1 mm p-p at f = 10 - 55 Hz, duration 5 min per axis 30 min endurance at f = 55 Hz per axis

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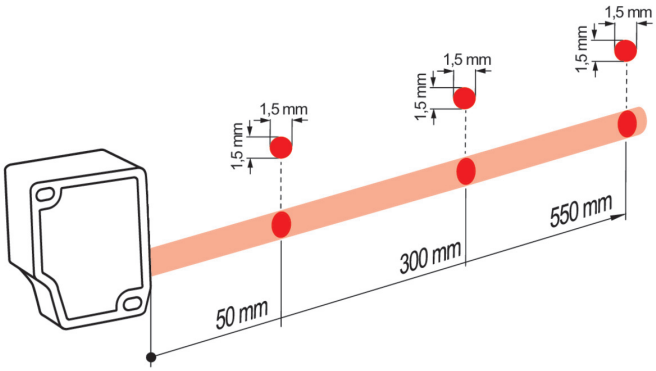
Ambient conditions

Shock (semi-sinusoidal)	IEC 60068-2-27:2009 30 g / 11 ms, 6 jolts per axis and direction

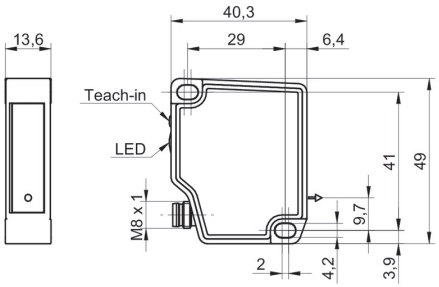
Remarks

- Measurement with Baumer standardized measuring equipment and targets (Measurement on 90% remission (white)). Values of Resolution, linearity error and repeat accuracy apply to a measurement with filter setting (Median: 9, Average: 128).

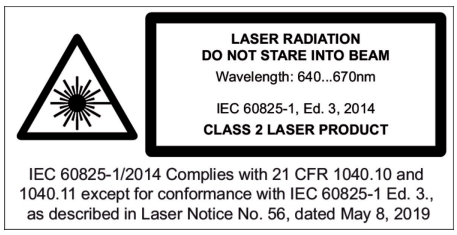
Beam characteristic (typically)



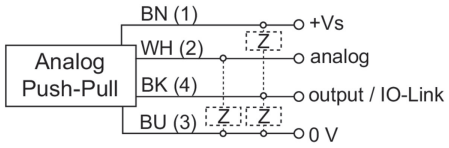
Dimension drawing



Laser warning



Connection diagram



Pin assignment