

## 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 ... 100 mm              |
| Measuring range Mr    | 50 mm                      |
| Adjustment            | Teach-in: button / IO-Link |
| Power on indication   | LED green                  |
| Output indicator      | LED yellow                 |
| Repeat accuracy       | 1 ... 3 µm                 |
| Linearity error       | ± 0,08 % Mr                |
| Beam type             | Point                      |
| Temperature drift     | 0,02 % Sde/K               |

### Light Source

|                     |                        |
|---------------------|------------------------|
| Light source        | Pulsed red laser diode |
| Wave length         | 660 nm                 |
| Laser class         | 2                      |
| Maximum pulse power | 1.2 mW                 |
| Pulse duration      | 0.001 ... 1.7 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) | 100 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

|                        |                                                                                                                                                                            |
|------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| IO-Link                | Yes                                                                                                                                                                        |
| Interface              | IO-Link V1.1                                                                                                                                                               |
| Baud rate              | 230,4 kBaud (COM 3)                                                                                                                                                        |
| Cycle time             | ≥ 1 ms                                                                                                                                                                     |
| Process data length    | 48 Bit                                                                                                                                                                     |
| Process data structure | Smart Sensor Profile - DMS<br>PDI48.INT32_INT8<br>Bit 0 = SSC1 (distance)<br>Bit 2 = quality<br>Bit 3 = alarm<br>Bit 8-15 = scale factor<br>Bit 16-47 = 32 Bit measurement |
| IO-Link port type      | Class A                                                                                                                                                                    |

### Mechanical data

|                  |                         |
|------------------|-------------------------|
| Width / diameter | 40,3 mm                 |
| Height / length  | 49 mm                   |
| Depth            | 13,6 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                                                                                                          |
| Operating temperature  | -10 ... +50 °C                                                                                                      |
| Protection class       | IP 67                                                                                                               |
| Storage temperature    | -20 ... +60 °C                                                                                                      |
| Vibration (sinusoidal) | IEC 60068-2-6:2008<br>1 mm p-p at f = 10 - 55 Hz, duration 5 min per axis<br>30 min endurance at f = 55 Hz per axis |

## Technical data

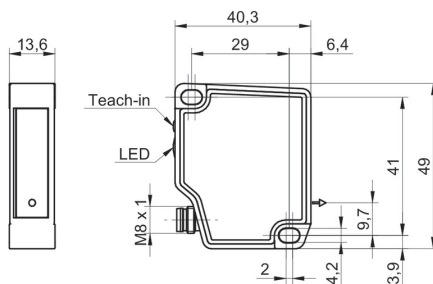
### Ambient conditions

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

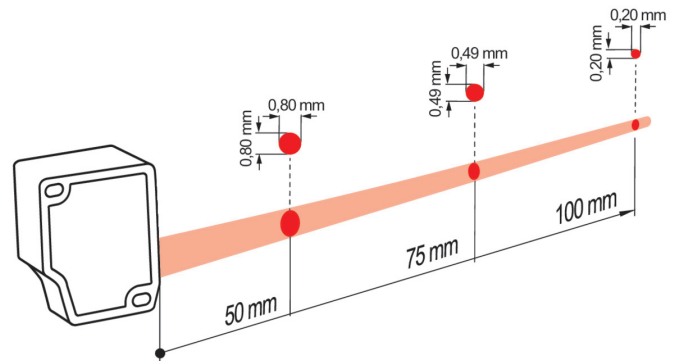
### Remarks

- 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).

### Dimension drawing



### Beam characteristic (typically)



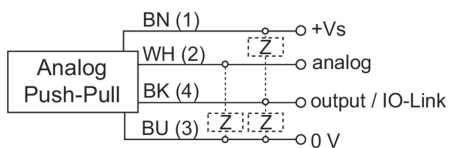
### Laser warning



**LASER RADIATION**  
**DO NOT STARE INTO BEAM**  
Wavelength: 640...670nm  
IEC 60825-1, Ed. 3, 2014  
**CLASS 2 LASER PRODUCT**

IEC 60825-1/2014 Complies with 21 CFR 1040.10 and 1040.11 except for conformance with IEC 60825-1 Ed. 3., as described in Laser Notice No. 56, dated May 8, 2019

### Connection diagram



### Pin assignment

