

overview

- Outstanding reliability and unrivalled immunity against ambient light
- Focused laser beam for small objects or gaps
- qTeach - tamper-proof, simple teach-in with ferromagnetic tool
- Robust housing with stainless steel spacer sleeves



Technical data

general data

|                                     |                           |
|-------------------------------------|---------------------------|
| type                                | background suppression    |
| light source                        | pulsed red laser diode    |
| sensing distance Tw                 | 20 ... 120 mm             |
| sensing range Tb                    | 3 ... 132 mm              |
| smallest object recognizable typ.   | 0,05 mm at 40 mm          |
| alignment / soiled lens indicator   | flashing output indicator |
| power on indication                 | LED green                 |
| output indicator                    | LED yellow                |
| sensing distance adjustment         | qTeach                    |
| laser class                         | 1                         |
| distance to focus                   | 40 mm                     |
| wave length                         | 680 nm                    |
| suppression of reciprocal influence | yes                       |
| beam type                           | point                     |
| alignment optical axis              | < 1,5°                    |

electrical data

|                              |           |
|------------------------------|-----------|
| response time / release time | ≤ 0,5 ms  |
| jitter                       | ≤ 0,12 ms |

electrical data

|                                    |                      |
|------------------------------------|----------------------|
| voltage supply range +Vs           | 10 ... 30 VDC        |
| current consumption max. (no load) | 20 mA (@ 10 VDC)     |
| current consumption typ.           | 10 mA (@ 24 VDC)     |
| voltage drop Vd                    | < 2 VDC              |
| output function                    | light / dark operate |
| output circuit                     | PNP complementary    |
| output current                     | < 50 mA              |
| short circuit protection           | yes                  |
| reverse polarity protection        | yes                  |

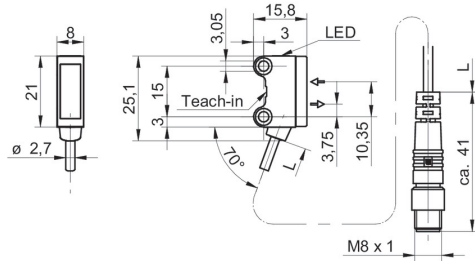
mechanical data

|                       |                                      |
|-----------------------|--------------------------------------|
| width / diameter      | 8 mm                                 |
| height / length       | 25,1 mm                              |
| depth                 | 15,8 mm                              |
| type                  | rectangular                          |
| mechanical mounting   | sleeve smooth (stainless steel)      |
| housing material      | plastic (ASA, PMMA)                  |
| front (optics)        | PMMA                                 |
| connection types      | flylead connector M8 4 pin, L=200 mm |
| cable characteristics | PVC / PVC 4 x 0,08 mm <sup>2</sup>   |

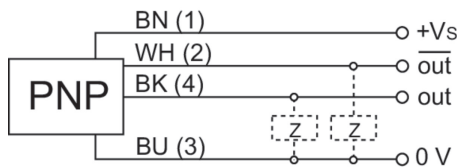
ambient conditions

|                       |                |
|-----------------------|----------------|
| operating temperature | -20 ... +50 °C |
| protection class      | IP 67          |

#### dimension drawing



#### connection diagram



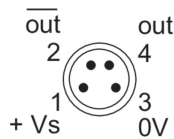
#### laser warning

**CLASS 1 LASER  
PRODUCT**

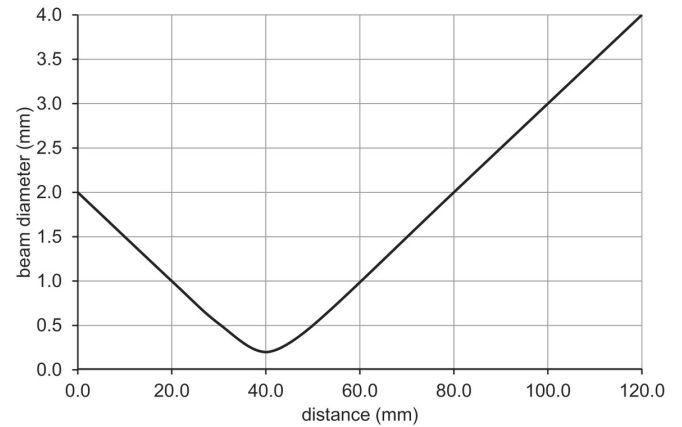
IEC 60825-1/2014

Complies with 21 CFR 1040.10 and 1040.11  
except for deviations pursuant to laser  
notice No. 50, dated June 24, 2007

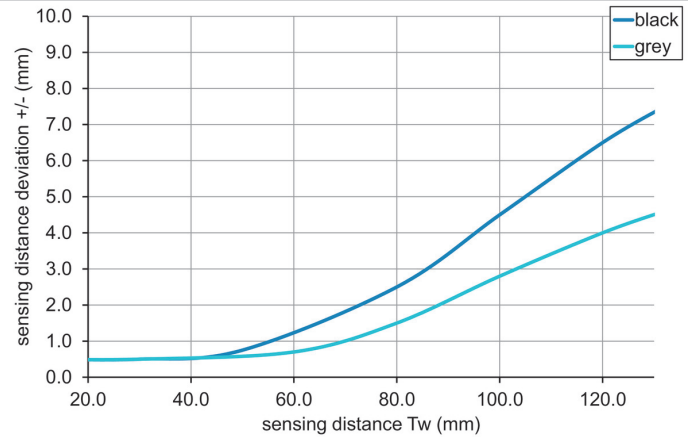
#### pin assignment



#### beam characteristic (typically)



#### sensing distance diagram



#### hysteresis curve

