

#### overview

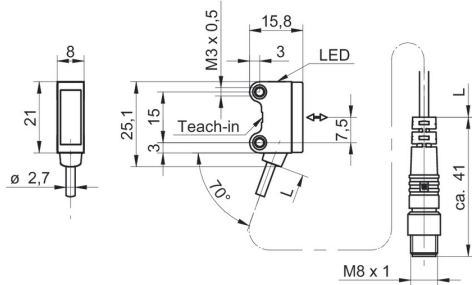
- Extended functional reserve capacities for maximum reliability
- Object detection through smallest holes and gaps without blind area thanks to single-lens optics
- Parallel laser beam for uniform detection over the measuring range
- qTeach - tamper-proof, simple teach-in with ferromagnetic tool
- Quick mounting by means of M3 threaded bushes made of stainless steel



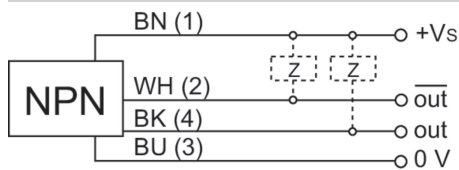
#### Technical data

| general data                        |                           | electrical data                    |                                       |
|-------------------------------------|---------------------------|------------------------------------|---------------------------------------|
| type                                | retro-reflective sensor   | voltage supply range +Vs           | 10 ... 30 VDC                         |
| version                             | single lens optics        | current consumption max. (no load) | 20 mA (@ 10 VDC)                      |
| light source                        | pulsed red laser diode    | current consumption typ.           | 10 mA (@ 24 VDC)                      |
| actual range Sb                     | 0,8 m                     | voltage drop Vd                    | < 2 VDC                               |
| nominal range Sn                    | 1,2 m                     | output function                    | light / dark operate                  |
| smallest object recognizable typ.   | 3 mm at 500 mm            | output circuit                     | NPN complementary                     |
| polarization filter                 | yes                       | output current                     | < 50 mA                               |
| alignment / soiled lens indicator   | flashing output indicator | short circuit protection           | yes                                   |
| output indicator                    | LED yellow                | reverse polarity protection        | yes                                   |
| power on indication                 | LED green                 | mechanical data                    |                                       |
| sensitivity adjustment              | qTeach                    | width / diameter                   | 8 mm                                  |
| laser class                         | 1                         | height / length                    | 25,1 mm                               |
| distance to focus                   | parallel beam             | depth                              | 15,8 mm                               |
| wave length                         | 680 nm                    | type                               | rectangular                           |
| suppression of reciprocal influence | yes                       | mechanical mounting                | threaded sleeves M3 (stainless steel) |
| alignment optical axis              | < 1,5°                    | housing material                   | plastic (ASA, PMMA)                   |
| electrical data                     |                           | front (optics)                     | PMMA                                  |
| response time / release time        | < 0,1 ms                  | connection types                   | flylead connector M8 4 pin, L=200 mm  |
| jitter                              | < 0,03 ms                 | cable characteristics              | PVC / PVC 4 x 0,08 mm²                |
|                                     |                           | ambient conditions                 |                                       |
|                                     |                           | operating temperature              | -20 ... +50 °C                        |
|                                     |                           | protection class                   | IP 67                                 |

#### dimension drawing



#### connection diagram



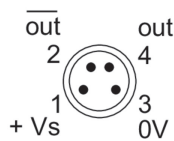
#### laser warning

**CLASS 1 LASER  
PRODUCT**

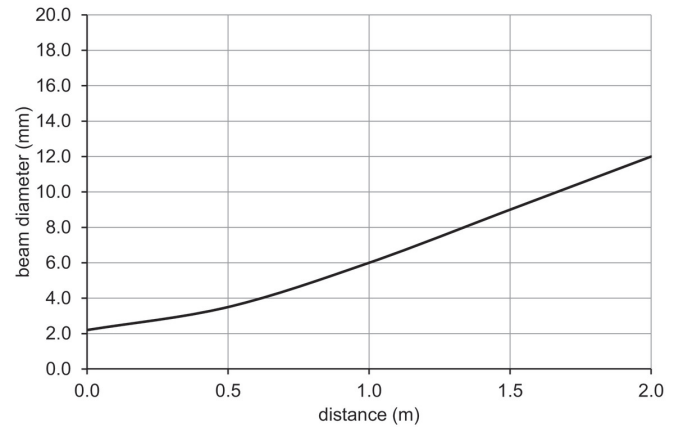
IEC 60825-1/2014

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)



#### excess gain curve

