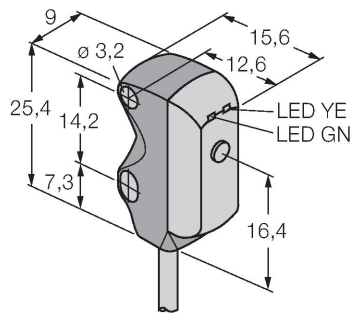


# VS3RN5XLP

## Photoelectric Sensor – Retroreflective Sensor with Polarizing Filter

### Miniature Sensor



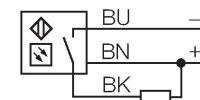
#### Technical data

|                                |                                 |
|--------------------------------|---------------------------------|
| Type                           | VS3RN5XLP                       |
| ID no.                         | 3062621                         |
| <b>Optical data</b>            |                                 |
| Function                       | Retroreflective Sensor          |
| Operating mode                 | Polarized (coaxial)             |
| Reflector included in delivery | no                              |
| Light type                     | Red polarized                   |
| Wavelength                     | 680 nm                          |
| Range                          | 0...250 mm                      |
| <b>Electrical data</b>         |                                 |
| Operating voltage              | 10...30 VDC                     |
| Residual ripple                | < 10 % U <sub>ss</sub>          |
| DC rated operational current   | ≤ 50 mA                         |
| No-load current                | ≤ 25 mA                         |
| Short-circuit protection       | yes                             |
| Reverse polarity protection    | yes                             |
| Output function                | NO contact, dark operation, NPN |
| Switching frequency            | ≤ 500 Hz                        |
| Readiness delay                | ≤ 150 ms                        |
| Response time typical          | < 1 ms                          |
| <b>Mechanical data</b>         |                                 |
| Design                         | Rectangular, VS3                |
| Dimensions                     | 16.6 x 9 x 25.4 mm              |
| Housing material               | Plastic, Thermoplastic material |

#### Features

- Cable, 2 m, 3-wire
- Coaxial optics, no blind zone
- Operating voltage: 10...30 VDC
- NPN switching output, dark operation

#### Wiring diagram



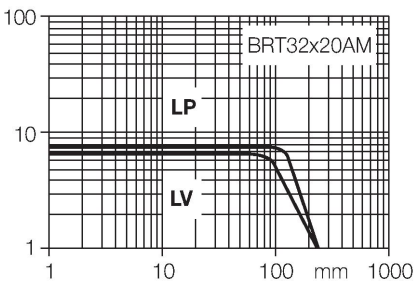
#### Functional principle

Retro-reflective sensors incorporate emitter and receiver in a single compact housing. The light beam of the emitter is directed towards a reflector which returns the light back to the receiver. An object is detected when it interrupts this beam. Retro-reflective sensors incorporate some of the advantages of opposed mode sensors (good contrast and high excess gain). Further it is merely required to install and wire a single device. Devices with polarisation filter should be used for detection of shiny targets.

Excess gain curve  
Excess gain in relation to the distance

Technical data

|                        |                      |
|------------------------|----------------------|
| Lens                   | glass, Glass         |
| Electrical connection  | Cable, 2 m, PVC      |
| Number of cores        | 3                    |
| Core cross-section     | 0.34 mm <sup>2</sup> |
| Ambient temperature    | -20...+55 °C         |
| Protection class       | IP67                 |
| Power-on indication    | LED, Green           |
| Switching state        | LED, Yellow          |
| Error indication       | LED, green           |
| Excess gain indication | LED                  |
| Tests/approvals        |                      |
| Approvals              | CE                   |



Accessories

|                                                                           |         |                                                                                      |         |
|---------------------------------------------------------------------------|---------|--------------------------------------------------------------------------------------|---------|
| SMBVS3S                                                                   | 3062618 | SMBVS3T                                                                              | 3062617 |
| Montagewinkel, 300 Edelstahl, rechtwinklig, für Sensoren der Baureihe VS3 |         | Montagewinkel, 300 Edelstahl, rechtwinklig, sehr hoch, für Sensoren der Baureihe VS3 |         |

Accessories

|                   |             |         |                                                                                                                              |
|-------------------|-------------|---------|------------------------------------------------------------------------------------------------------------------------------|
| Dimension drawing | Type        | ID no.  |                                                                                                                              |
|                   | BRT-32X20AM | 3058982 | Rectangular reflector, reflection coefficient 1.2, material acrylic, ambient temperature -20 ... +60 °C, microprism geometry |

