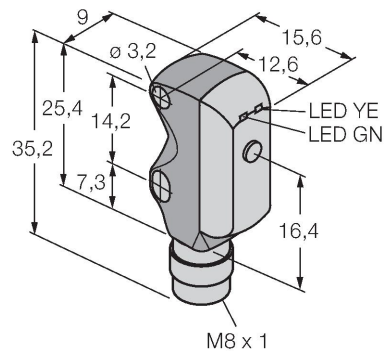


# VS3RP5XLVQ

## Photoelectric Sensor – Retroreflective Sensor Miniature Sensor



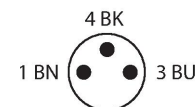
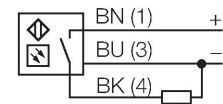
### Technical data

|                                |                                 |
|--------------------------------|---------------------------------|
| Type                           | VS3RP5XLVQ                      |
| ID                             | 3063718                         |
| <b>Optical data</b>            |                                 |
| Function                       | Retroreflective Sensor          |
| Operating mode                 | Unpolarized                     |
| Reflector included in delivery | no                              |
| Light type                     | Red                             |
| 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, PNP |
| 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 |
| Lens                           | plastic, Acrylic                |

### Features

- Male M8 × 1; 3-pin
- Coaxial optics, no blind zone
- Operating voltage: 10...30 VDC
- PNP switching output, dark operation

### Wiring diagram



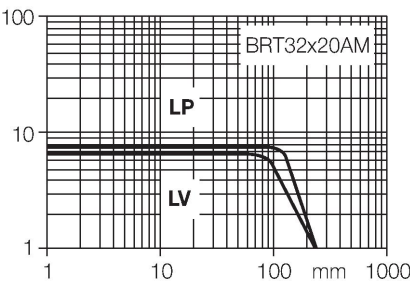
### Functional principle

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

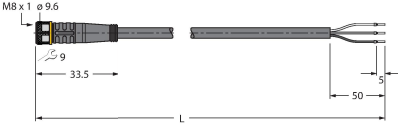
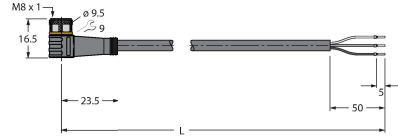
|                        |                                           |
|------------------------|-------------------------------------------|
| Electrical connection  | Cable with connector, M8 × 1, 0.15 m, PVC |
| Number of cores        | 3                                         |
| Ambient temperature    | -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      |                                                                                                                                                                                                                 |
|  | PKG3M-2/TEL | 6625058 | Connection cable, female M8, straight, 3-pin, cable length: 2 m, sheath material: PVC, black; cULus approval; other cable lengths and qualities available, see <a href="http://www.turck.com">www.turck.com</a> |
|  | PKW3M-2/TEL | 6625064 | Connection cable, female M8, angled, 3-pin, cable length: 2 m, sheath material: PVC, black; cULus approval; other cable lengths and qualities available, see <a href="http://www.turck.com">www.turck.com</a>   |

Accessories

| Dimension drawing | Type        | ID      |                                                                                                                              |
|-------------------|-------------|---------|------------------------------------------------------------------------------------------------------------------------------|
|                   | BRT-32X20AM | 3058982 | Rectangular reflector, reflection coefficient 1.2, material acrylic, ambient temperature -20 ... +60 °C, microprism geometry |

