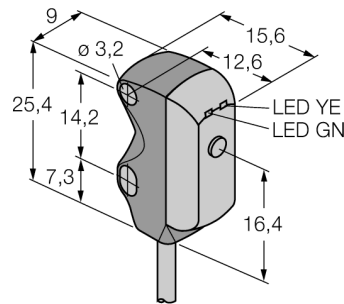


# Photoelectric Sensor

## Retroreflective Sensor with Polarizing Filter

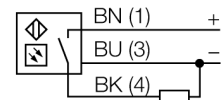
### Miniature Sensor

#### VS3AP5XLP W/30



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

#### Wiring Diagram



#### Functional principle

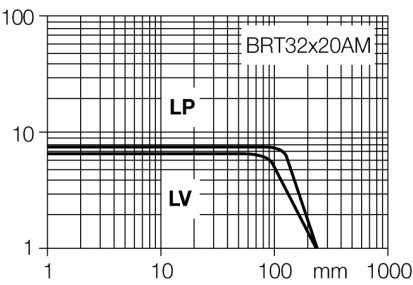
Retro-reflective sensors incorporate emitter and receiver in a single compact housing. The light beam of the emitter is directed towards a reflector which returns the light back to the receiver. An object is detected when it interrupts this beam. Retro-reflective sensors incorporate some of the advantages 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

|                                  |                                  |
|----------------------------------|----------------------------------|
| Type                             | VS3AP5XLP W/30                   |
| ID                               | 3002800                          |
| <b>Optical data</b>              |                                  |
| Function                         | Retroreflective Sensor           |
| Operating mode                   | Polarized                        |
| Reflector included in delivery   | no                               |
| Light type                       | Red polarized                    |
| Wavelength                       | 680 nm                           |
| Range                            | 0...250 mm                       |
| <b>Electrical data</b>           |                                  |
| Operating voltage $U_s$          | 10...30 VDC                      |
| Residual ripple                  | < 10 % $U_s$                     |
| DC rated operating current $I_s$ | ≤ 50 mA                          |
| No-load current $I_0$            | ≤ 25 mA                          |
| Short-circuit protection         | yes                              |
| Reverse polarity protection      | yes                              |
| Output function                  | NO contact, light operation, PNP |
| Switching frequency              | ≤ 500 Hz                         |
| Readiness delay                  | ≤ 150 ms                         |
| <b>Mechanical data</b>           |                                  |
| Design                           | Rectangular, VS3                 |
| Housing material                 | Plastic, ABS                     |
| Lens                             | 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                             |
| <b>Power-on indication</b>       |                                  |
| LED, Green                       |                                  |
| Switching state                  | LED, Yellow                      |
| Error indication                 | LED, green                       |

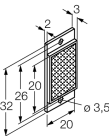
|                 |    |
|-----------------|----|
| Tests/approvals |    |
| Approvals       | CE |



Accessories

| Type code | Ident no. |                                                                                      | Dimension drawing |
|-----------|-----------|--------------------------------------------------------------------------------------|-------------------|
| SMBVS3S   | 3062618   | Montagewinkel, 300 Edelstahl, rechtwinklig, für Sensoren der Baureihe VS3            |                   |
| SMBVS3T   | 3062617   | Montagewinkel, 300 Edelstahl, rechtwinklig, sehr hoch, für Sensoren der Baureihe VS3 |                   |

Function accessories

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