

Retroreflective Sensor with Polarizing Filter

Miniature Sensor

VS3AN5XLPQ5

Type	VS3AN5XLPQ5
ID	3070075

Optical data	
Function	Retroreflective Sensor
Operating mode	Polarized (coaxial)
Reflector included in delivery	no
Light type	Red polarized
Wavelength	680 nm
Range	0...250 mm

Electrical data	
Operating voltage U_n	10...30 VDC
Residual ripple	< 10 % U_n
DC rated operating current I_n	≤ 50 mA
No-load current I_o	≤ 25 mA
Short-circuit protection	yes
Reverse polarity protection	yes
Output function	NO contact, light operation, NPN
Switching frequency	≤ 500 Hz
Readiness delay	≤ 150 ms
Response time typical	< 1 ms

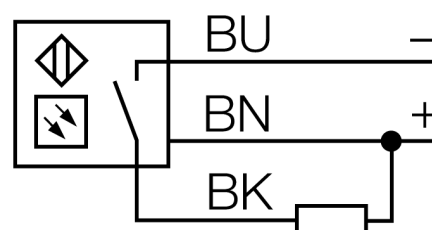
Design	
Housing material	Plastic, Thermoplastic material
Lens	glass, Glass
Electrical connection	Cable with connector, M12 × 1, 0.15 m, PVC
Number of cores	4
Ambient temperature	-20...+55 °C
Protection class	IP67

Excess gain indication	LED
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Tests/approvals	
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- Coaxial optics, no blind zone
- Operating voltage: 10...30 VDC
- NPN switching output, light operation

Wiring Diagram

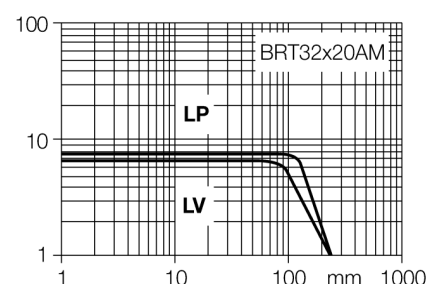


Functional principle

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



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	