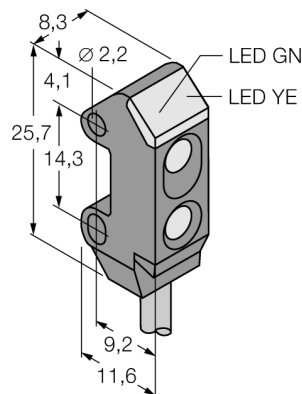
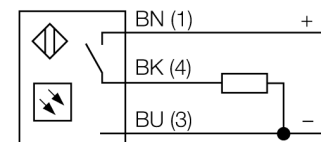


Photoelectric Sensor Convergent Mode Sensor Miniature Sensor VS1RP5C20Q



- Cable with male end, PVC, M8 × 1, 3-pin, 150 mm
- Very high excess gain
- Operating voltage: 10...30 VDC
- PNP switching output, dark operation

Wiring Diagram

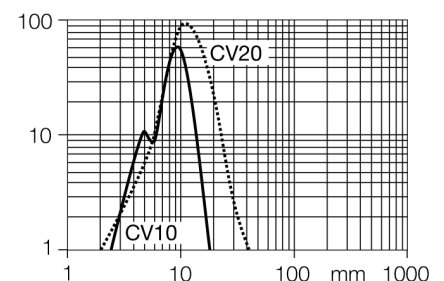


Functional principle

Convergent mode sensors are equipped with a lens in front of the emitter diode that produces a small and intense focal point at a defined distance from the sensor. Similar to diffuse mode sensors, the light reflected by the target is evaluated. Convergent mode sensors are ideal for detection of small targets or colour marks and edge guiding or positioning control of transparent materials. The targets must always be within the focal depth of the sensors. The focal depth is defined as the area in front of or behind the focal point within which the object can be detected. Based on the intense light concentration in the focal point, convergent mode sensors are capable of detecting targets with a low reflectivity.

Excess gain curve

Excess gain in relation to the distance



Type	VS1RP5C20Q
ID	3063094
Optical data	
Function	Proximity switch
Operating mode	Convergent
Light type	IR
Wavelength	865 nm
Focal distance	15 mm
Electrical data	
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, PNP
Current output	0...50 mA
Switching frequency	≤ 500 Hz
Readiness delay	≤ 0 ms
Response time typical	< 1 ms
Mechanical data	
Design	Rectangular, VS1
Housing material	Plastic, Thermoplastic material, Black
Lens	plastic, Acrylic
Electrical connection	Cable with connector, M8 × 1, 0.15 m, PVC
Number of cores	3
Ambient temperature	-20...+55 °C
Protection class	IP54
Power-on indication	
LED, Green	LED, Green
Switching state	LED, Yellow
Error indication	LED, green, Flashing
Excess gain indication	LED

Tests/approvals

Approvals

CE

Accessories

Type code	Ident no.		Dimension drawing
SMBVS1T	3055496	Mounting bracket, stainless steel, rectangular, for VS1	
SMBVS1TC	3056795	Mounting bracket, stainless steel, rectangular, for VS1	
SMBVS1S	3055554	Mounting bracket, stainless steel, rectangular, for VS1	
SMBVS1SC	3056797	Mounting bracket, stainless steel, rectangular, for VS1	