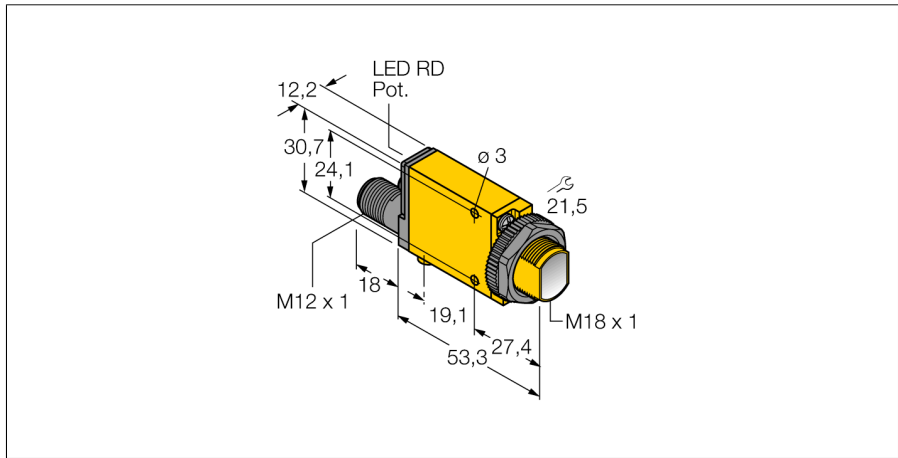
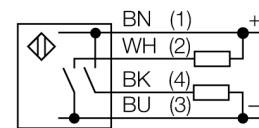


**Photoelectric sensor  
convergent mode sensor  
SM312CVBQD**



- Male M12 x 1, 4-pin
- Protection class IP67
- Sensitivity adjustable via potentiometer
- Alignment indicator
- Operating voltage: 10...30 VDC
- Switching output, bipolar
- Light/dark operation

**Wiring diagram**



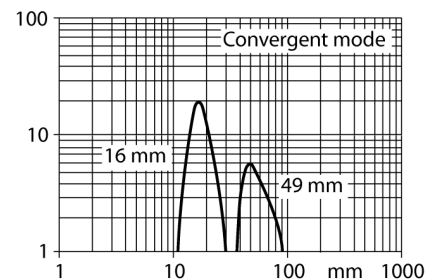
<b>Type code</b>	SM312CVBQD
Ident no.	3047277
<b>Operating mode</b>	
Light type	convergent mode sensor
Wavelength	blue
Focal distance	475 nm
Ambient temperature	16 mm
	-20...+70 °C
<b>Operating voltage</b>	
Residual ripple	10...30VDC
DC rated operational current	< 10 % U <sub>s</sub>
No-load current I <sub>0</sub>	≤ 150 mA
Output function	≤ 25 mA
Switching frequency	NO contact, PNP/NPN
Readiness delay	≤ 500 Hz
Overcurrent release	≤ 100 ms
	> 220 mA
<b>Design</b>	
Dimensions	rectangular, Mini Beam
Housing material	71.3 x 12.3 x 30.7 mm
Lens	plastic, PBT, yellow
Connection	plastic, acrylic
Protection class	male, M12 x 1
	IP67
<b>Switching state</b>	
Excess gain indication	LED red
	LED red flashing

**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





**Photoelectric sensor  
convergent mode sensor  
SM312CVBQD**

**Wiring accessories**

Type code	Ident no.	Description	Dimension drawing
RKC4.4T-2/TEL	6625013	Connection cable, female M12, straight, 4-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>	
WKC4.4T-2/TEL	6625025	Connection cable, female M12, angled, 4-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>	
WKC4.5T-2/TEL	6625028	Connection cable, female M12, angled, 5-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>	
RKC4.5T-2/TEL	6625016	Connection cable, female M12, straight, 5-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>	