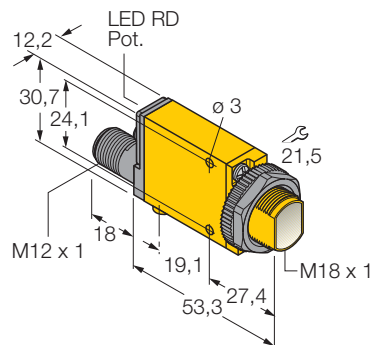


photoelectric sensor
convergent mode sensor
SM312CVBQD

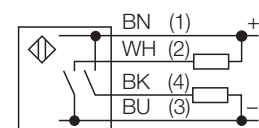
TURCK

Industrial
Automation



- compact housing style
- reverse polarity and short-circuit protection
- connector M12 x 1
- Light/dark operation
- sensitivity adjustable via potentiometer
- alignment indication

Wiring diagram

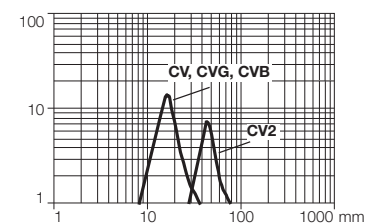


Functional principle

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	SM312CVBQD
Ident-No.	3047277
Operating mode	convergent mode sensor
Light type	blue
Wavelength	475 nm
Focal distance	16 mm
Ambient temperature	-20...+ 70°C
Operating voltage	10... 30 VDC
DC rated operational current	≤ 150 mA
No-load current I ₀	≤ 25 mA
Output function	NO contact, pnp/npn
Switching frequency	≤ 500Hz
Readiness delay	≤ 100 ms
Overcurrent release	>220 mA
Housing	rectangular, Mini Beam
Dimensions	71.3x 12.3x 30.7mm
Housing material	Plastic, PBT
Lens	plastic, acrylic
Electrical connection	Connectors, M12 x 1
Protection class	IP67
Switching state	LED red
Excess gain indication	LED red flashing