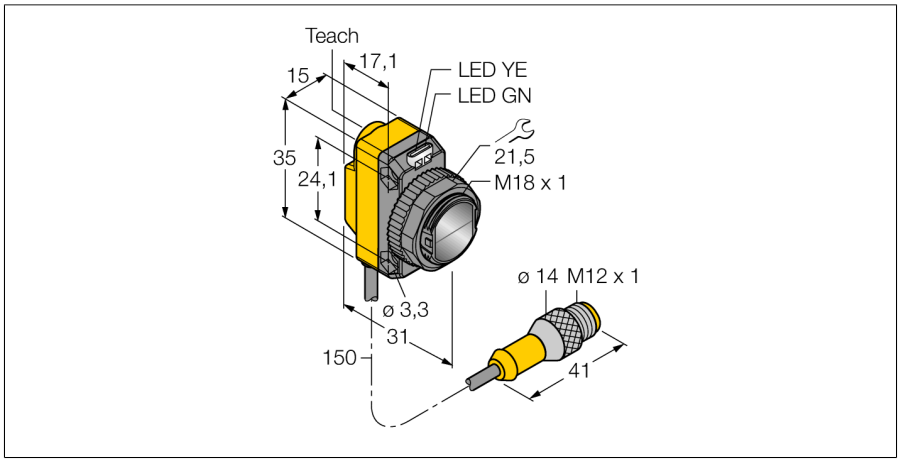
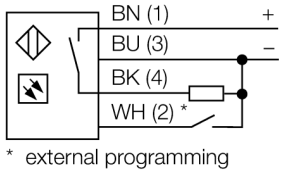
Photoelectric Sensor
Convergent Mode Sensor
QS18EP6CV15QPMA

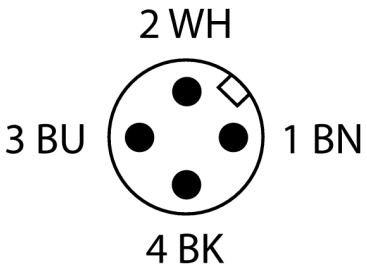


- Cable with male end, M12 × 1, 4-pin, PVC, 150 mm
- Protection class IP67
- LED all-round visible
- Sensitivity adjusted via teach button
- Operating voltage: 10…30 VDC
- PNP switching output
- Light or dark operation

Type	QS18EP6CV15QPMA
ID	3080845
Optical data	
Function	Proximity switch
Operating mode	Convergent
Light type	Red
Wavelength	630 nm
Focal distance	16 mm
Electrical data	
Operating voltage U_B	10…30 VDC
DC rated operating current I_e	≤ 100 mA
No-load current I_0	≤ 35 mA
Reverse polarity protection	yes
Output function	NO contact, PNP
Switching frequency	≤ 833 Hz
Readiness delay	≤ 100 ms
Response time typical	< 0.6 ms
Setting option	Push Button Remote Teach
Mechanical data	
Design	Rectangular with thread, QS18
Dimensions	Ø 18 x 31 x 15 x 35 mm
Housing material	Plastic, ABS
Lens	plastic, PMMA
Electrical connection	Cable with connector, M12 × 1, 0.15 m, PUR
Number of cores	4
Ambient temperature	-20…+70 °C
Protection class	IP67
Special features	keep/defer
Power-on indication	LED, Green
Switching state	LED, Yellow
Error indication	LED, green, Flashing
Excess gain indication	LED
Alarm display	LED yellow Flashing

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

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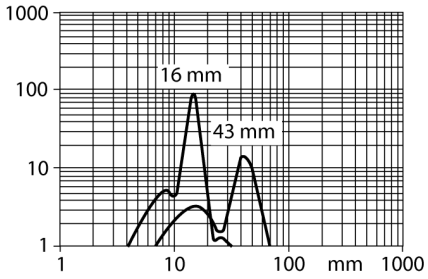
Tests/approvals	
Approvals	CE, cURus

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



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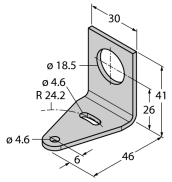
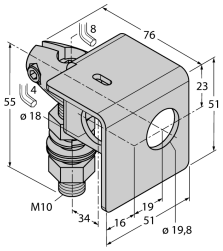
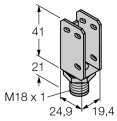
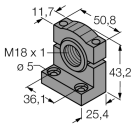
Accessories

Type code	Ident no.		Dimension drawing
SMB18A	3033200	Mounting bracket, rectangular, stainless steel, for sensors with 18 mm thread	
SMB18AFAM10	3012558	Mounting bracket, material VA 1.4401, for M10 x 1.5 thread, thread length 18 mm	
SMBQS18A	3069721	Mounting bracket, stainless steel, for 18 mm thread	
SMB18SF	3052519	Mounting bracket, PBT black, for sensors with 18 mm thread, rotatable	

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