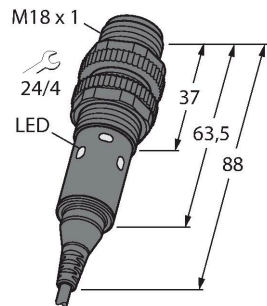


# S18-2VNRL-2M

## Photoelectric Sensor – Opposed Mode Sensor (Receiver)



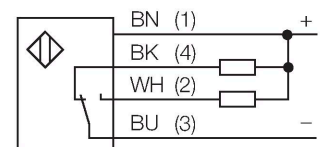
### Technical data

Type	S18-2VNRL-2M
ID no.	3042180
<b>Optical data</b>	
Function	Opposed mode sensor
Operating mode	Receiver
Light type	Red
Wavelength	624 nm
Range	0...25000 mm
<b>Electrical data</b>	
Operating voltage	10...30 VDC
Residual ripple	< 10 % U <sub>ss</sub>
No-load current	≤ 8 mA
Short-circuit protection	yes / Cyclic
Reverse polarity protection	yes
Output function	Complementary contact, NPN
Readiness delay	≤ 100 ms
Response time typical	< 1.5 ms
<b>Mechanical data</b>	
Design	Threaded barrel, S18
Dimensions	Ø 18 x 88 mm
Housing material	Plastic, Thermoplastic material
Lens	Acrylic
Electrical connection	Cable, 2 m, PVC
Number of cores	4
Core cross-section	0.5 mm <sup>2</sup>
Ambient temperature	-40...+70 °C
Protection class	IP67

### Features

- Cable, 2 m
- Protection class IP67
- Ambient temperature: -40...+70 °C
- Visible red LED light
- Operating voltage: 10...30 VDC
- NPN switching output, changeover

### Wiring diagram



### Functional principle

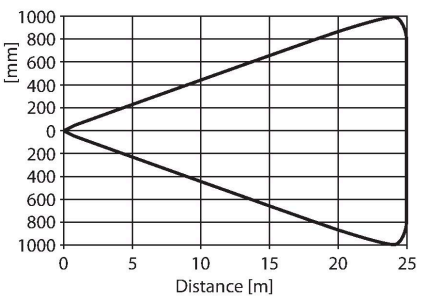
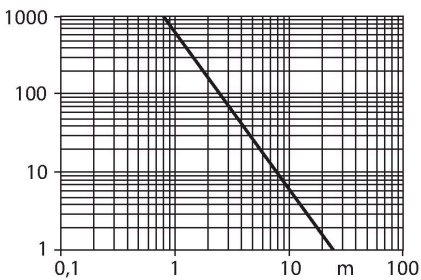
Opposed mode sensors consist of an emitter and a receiver. They are installed opposite to each other whereby the emitted light aims directly at the receiver. When an object interrupts or weakens the light beam, the sensor switches. Opposed mode sensors are the most reliable photoelectric sensors for detection of opaque objects. The excellent light/dark contrast and the very high excess gain are typical for this function mode and enable operation over large distances and under difficult conditions.

Excess gain curve  
Excess gain in relation to distance

Technical data

Power-on indication	LED, Green
Switching state	2 × LEDs, Yellow
Error indication	Flashing
Excess gain indication	LED
Alarm display	Flashing
Tests/approvals	
Approvals	CE

Excess Gain Curve



Accessories

MW-186945004

Mounting bracket for threaded barrel sensors; material: Stainless steel A2 1.4301 (AISI 304)

BST-18N6947215

Mounting clamp for threaded barrel sensors, without dead-stop; material: PA6

Accessories

Dimension drawing	Type	ID no.	
<p>Dimension drawing of the RKC4.5T-2/TEL connection cable. The drawing shows a female M12 connector with a 5-pin configuration. The cable length is labeled as L. The connector dimensions are: 11.5 mm for the connector body, 42 mm for the cable length, and 50 mm for the total length.</p>	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>
<p>Dimension drawing of the WKC4.5T-2/TEL connection cable. The drawing shows a female M12 connector with a 5-pin configuration. The cable length is labeled as L. The connector dimensions are: 26.5 mm for the connector body, 32 mm for the cable length, and 50 mm for the total length.</p>	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>