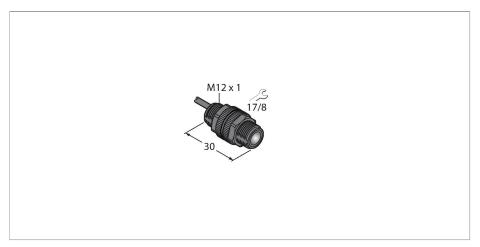


S12-2APRL-2M Photoelectric Sensor – Opposed Mode Sensor (Receiver)



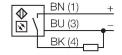
Technical data

ID 3087413	Туре	S12-2APRL-2M
Function Opposed mode sensor Operating mode Receiver Wavelength 880 nm Range 020000 mm Electrical data Operating voltage 1030 VDC No-load current ≤ 15 mA Output function NO contact, light operation, PNP Switching frequency ≤ 55 Hz Readiness delay ≤ 1 s Readiness delay ≤ 1 ms Response time typical <11 ms Mechanical data Design Tube, S12-2 Dimensions Ø 12 x 30.4 mm Housing material Plastic, Thermoplastic material Lens Lexan, Polycarbonate Electrical connection Cable, 2 m, PVC Number of cores 3 Core cross-section 0.34 mm² Ambient temperature -25+50 °C Protection class IP67 Special features Encapsulated	ID	3087413
Operating mode Receiver Wavelength 880 nm Range 020000 mm Electrical data 030 VDC No-load current ≤ 15 mA Output function NO contact, light operation, PNP Switching frequency ≤ 55 Hz Readiness delay ≤ 1 s Readiness delay ≤ 1 ms Response time typical < 11 ms	Optical data	
Wavelength 880 nm Range 020000 mm Electrical data 0perating voltage No-load current ≤ 15 mA Output function NO contact, light operation, PNP Switching frequency ≤ 55 Hz Readiness delay ≤ 1 s Readiness delay ≤ 1 ms Response time typical < 11 ms	Function	Opposed mode sensor
Range 020000 mm Electrical data Operating voltage 1030 VDC No-load current ≤ 15 mA Output function NO contact, light operation, PNP Switching frequency ≤ 55 Hz Readiness delay ≤ 1 s Readiness delay ≤ 1 ms Response time typical < 11 ms Mechanical data Design Tube, S12-2 Dimensions Ø 12 x 30.4 mm Housing material Plastic, Thermoplastic material Lens Lexan, Polycarbonate Electrical connection Cable, 2 m, PVC Number of cores 3 Core cross-section 0.34 mm² Ambient temperature -25+50 °C Protection class IP67 Special features Encapsulated	Operating mode	Receiver
Electrical data Operating voltage No-load current ≤ 15 mA Output function NO contact, light operation, PNP Switching frequency ≤ 55 Hz Readiness delay ≤ 1 s Readiness delay ≤ 1 ms Response time typical Mechanical data Design Tube, S12-2 Dimensions Ø 12 x 30.4 mm Housing material Lens Lexan, Polycarbonate Electrical connection Cable, 2 m, PVC Number of cores 3 Core cross-section Ambient temperature -25+50 °C Protection class IP67 Special features Encapsulated	Wavelength	880 nm
Operating voltage 1030 VDC No-load current ≤ 15 mA Output function NO contact, light operation, PNP Switching frequency ≤ 55 Hz Readiness delay ≤ 1 s Readiness delay ≤ 1 ms Response time typical < 11 ms	Range	020000 mm
No-load current ≤ 15 mA Output function NO contact, light operation, PNP Switching frequency ≤ 55 Hz Readiness delay ≤ 1 s Readiness delay ≤ 1 ms Response time typical < 11 ms	Electrical data	
Output function NO contact, light operation, PNP Switching frequency ≤ 55 Hz Readiness delay ≤ 1 ms Response time typical < 11 ms	Operating voltage	1030 VDC
Switching frequency ≤ 55 Hz Readiness delay ≤ 1 ms Response time typical < 11 ms	No-load current	≤ 15 mA
Readiness delay ≤ 1 ms Response time typical < 11 ms	Output function	NO contact, light operation, PNP
Readiness delay ≤ 1 ms Response time typical < 11 ms	Switching frequency	≤ 55 Hz
Response time typical < 11 ms Mechanical data Design Tube, S12-2 Dimensions Ø 12 x 30.4 mm Housing material Plastic, Thermoplastic material Lens Lexan, Polycarbonate Electrical connection Cable, 2 m, PVC Number of cores 3 Core cross-section 0.34 mm² Ambient temperature -25+50 °C Protection class IP67 Special features Encapsulated	Readiness delay	≤ 1 s
Mechanical dataDesignTube, S12-2DimensionsØ 12 x 30.4 mmHousing materialPlastic, Thermoplastic materialLensLexan, PolycarbonateElectrical connectionCable, 2 m, PVCNumber of cores3Core cross-section0.34 mm²Ambient temperature-25+50 °CProtection classIP67Special featuresEncapsulated	Readiness delay	≤ 1 ms
DesignTube, \$12-2DimensionsØ 12 x 30.4 mmHousing materialPlastic, Thermoplastic materialLensLexan, PolycarbonateElectrical connectionCable, 2 m, PVCNumber of cores3Core cross-section0.34 mm²Ambient temperature-25+50 °CProtection classIP67Special featuresEncapsulated	Response time typical	< 11 ms
Dimensions Ø 12 x 30.4 mm Housing material Plastic, Thermoplastic material Lens Lexan, Polycarbonate Electrical connection Cable, 2 m, PVC Number of cores 3 Core cross-section 0.34 mm² Ambient temperature -25+50 °C Protection class IP67 Special features Encapsulated	Mechanical data	
Housing material Lens Lexan, Polycarbonate Electrical connection Number of cores Core cross-section Ambient temperature Plastic, Thermoplastic material Lexan, Polycarbonate 3 Core cross-section 0.34 mm² -25+50 °C Protection class IP67 Special features Encapsulated	Design	Tube, S12-2
Lens Lexan, Polycarbonate Electrical connection Cable, 2 m, PVC Number of cores 3 Core cross-section 0.34 mm² Ambient temperature -25+50 °C Protection class IP67 Special features Encapsulated	Dimensions	Ø 12 x 30.4 mm
Electrical connection Cable, 2 m, PVC Number of cores 3 Core cross-section 0.34 mm² Ambient temperature -25+50 °C Protection class IP67 Special features Encapsulated	Housing material	Plastic, Thermoplastic material
Number of cores Core cross-section 0.34 mm² Ambient temperature -25+50 °C Protection class IP67 Special features Encapsulated	Lens	Lexan, Polycarbonate
Core cross-section 0.34 mm² Ambient temperature -25+50 °C Protection class IP67 Special features Encapsulated	Electrical connection	Cable, 2 m, PVC
Ambient temperature -25+50 °C Protection class IP67 Special features Encapsulated	Number of cores	3
Protection class IP67 Special features Encapsulated	Core cross-section	0.34 mm²
Special features Encapsulated	Ambient temperature	-25+50 °C
	Protection class	IP67
Power-on indication LED, Green	Special features	Encapsulated
	Power-on indication	LED, Green

Features

- Cable, PVC, 2 m
- ■20 m range
- Range: 20 m
- ■PNP switching output, light operation
- Operating voltage: 10...30 VDC

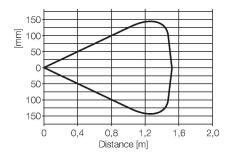
Wiring diagram



Functional principle

Opposed mode sensors consist of an emitter and 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 targets. The excellent light/dark contrast and the high excess gain allow operation over larger distances and under difficult conditions.

Excess Gain Curve





Technical data

Switching state	LED, Yellow
Error indication	LED, green, Flashing
Excess gain indication	LED
Tests/approvals	