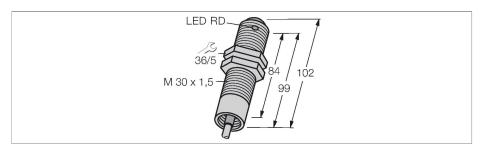
SM2A30SRLNC W/30 | 05-05-2021 21-46 | Technical modifications reserved

SM2A30SRLNC W/30 Photoelectric Sensor – Opposed Mode Sensor (Receiver)





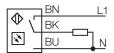
Technical data

ID no. 3027413	Туре	SM2A30SRLNC W/30
Function Opposed mode sensor Operating mode Receiver Range 0150000 mm Electrical data 240 VAC AC rated operational current ≤ 200 mA Output function Dark operation, Relay output Switching frequency ≤ 40 Hz Readiness delay ≤ 0 ms Response time typical < 10 ms	ID no.	3027413
Operating mode Receiver Range 0150000 mm Electrical data Operating voltage 24240 VAC AC rated operational current ≤ 200 mA Output function Dark operation, Relay output Switching frequency ≤ 40 Hz Readiness delay ≤ 0 ms Response time typical <10 ms Mechanical data Design Threaded barrel, SM30 Dimensions Ø 30 x 102 mm Housing material Metal, Stainless steel Lens plastic, Acrylic Electrical connection Cable, 9 m, PVC Number of cores 3 Core cross-section 0.5 mm² Ambient temperature -40+70 °C Protection class IP67 Special features Chemical-resistant Power-on indication LED, Green Switching state LED, Yellow Excess gain indication LED Tests/approvals	Optical data	
Range 0150000 mm Electrical data 24240 VAC AC rated operational current ≤ 200 mA Output function Dark operation, Relay output Switching frequency ≤ 40 Hz Readiness delay ≤ 0 ms Response time typical < 10 ms	Function	Opposed mode sensor
Electrical data Operating voltage 24240 VAC AC rated operational current ≤ 200 mA Output function Dark operation, Relay output Switching frequency ≤ 40 Hz Readiness delay ≤ 0 ms Response time typical < 10 ms Mechanical data Design Threaded barrel, SM30 Dimensions Ø 30 x 102 mm Housing material Metal, Stainless steel Lens plastic, Acrylic Electrical connection Cable, 9 m, PVC Number of cores 3 Core cross-section 0.5 mm² Ambient temperature -40+70 °C Protection class IP67 Special features Chemical-resistant Power-on indication LED, Green Switching state LED, Yellow Excess gain indication LED Tests/approvals	Operating mode	Receiver
Operating voltage 24240 VAC AC rated operational current ≤ 200 mA Output function Dark operation, Relay output Switching frequency ≤ 40 Hz Readiness delay ≤ 0 ms Response time typical < 10 ms	Range	0150000 mm
AC rated operational current Output function Dark operation, Relay output Switching frequency Switching frequency Readiness delay Sesponse time typical Call of ms Mechanical data Design Threaded barrel, SM30 Dimensions Dimensions Dimensions Dimensions Dimensions Dimensions Dimensions Dimensions Diastic, Acrylic Electrical connection Cable, 9 m, PVC Number of cores Core cross-section Ambient temperature Design Dimensions Cable, 9 m, PVC Led Cable, 9 m, PV	Electrical data	
Output function Dark operation, Relay output Switching frequency ≤ 40 Hz Readiness delay ≤ 0 ms Response time typical < 10 ms	Operating voltage	24240 VAC
Switching frequency ≤ 40 Hz Readiness delay ≤ 0 ms Response time typical < 10 ms	AC rated operational current	≤ 200 mA
Readiness delay ≤ 0 ms Response time typical < 10 ms	Output function	Dark operation, Relay output
Response time typical < 10 ms Mechanical data Design Threaded barrel, SM30 Dimensions Ø 30 x 102 mm Housing material Metal, Stainless steel Lens plastic, Acrylic Electrical connection Cable, 9 m, PVC Number of cores 3 Core cross-section 0.5 mm² Ambient temperature -40+70 °C Protection class IP67 Special features Chemical-resistant Power-on indication LED, Green Switching state LED, Yellow Excess gain indication LED Tests/approvals	Switching frequency	≤ 40 Hz
Mechanical dataDesignThreaded barrel, SM30DimensionsØ 30 x 102 mmHousing materialMetal, Stainless steelLensplastic, AcrylicElectrical connectionCable, 9 m, PVCNumber of cores3Core cross-section0.5 mm²Ambient temperature-40+70 °CProtection classIP67Special featuresChemical-resistantPower-on indicationLED, GreenSwitching stateLED, YellowExcess gain indicationLEDTests/approvals	Readiness delay	≤ 0 ms
Design Threaded barrel, SM30 Dimensions Ø 30 x 102 mm Housing material Metal, Stainless steel Lens plastic, Acrylic Electrical connection Cable, 9 m, PVC Number of cores 3 Core cross-section 0.5 mm² Ambient temperature -40+70 °C Protection class IP67 Special features Chemical-resistant Power-on indication LED, Green Switching state LED, Yellow Excess gain indication LED Tests/approvals	Response time typical	< 10 ms
Dimensions Ø 30 x 102 mm Housing material Metal, Stainless steel Lens plastic, Acrylic Electrical connection Cable, 9 m, PVC Number of cores 3 Core cross-section 0.5 mm² Ambient temperature -40+70 °C Protection class IP67 Special features Chemical-resistant Power-on indication LED, Green Switching state LED, Yellow Excess gain indication LED Tests/approvals	Mechanical data	
Housing material Lens plastic, Acrylic Electrical connection Cable, 9 m, PVC Number of cores 3 Core cross-section Ambient temperature Protection class IP67 Special features Chemical-resistant Power-on indication LED, Green Switching state Excess gain indication LED Tests/approvals	Design	Threaded barrel, SM30
Lens plastic, Acrylic Electrical connection Cable, 9 m, PVC Number of cores 3 Core cross-section 0.5 mm² Ambient temperature -40+70 °C Protection class IP67 Special features Chemical-resistant Power-on indication LED, Green Switching state LED, Yellow Excess gain indication LED Tests/approvals	Dimensions	Ø 30 x 102 mm
Electrical connection Cable, 9 m, PVC Number of cores 3 Core cross-section 0.5 mm² Ambient temperature -40+70 °C Protection class IP67 Special features Chemical-resistant Power-on indication LED, Green Switching state LED, Yellow Excess gain indication LED Tests/approvals	Housing material	Metal, Stainless steel
Number of cores Core cross-section 0.5 mm² Ambient temperature -40+70 °C Protection class IP67 Special features Chemical-resistant Power-on indication LED, Green Switching state LED, Yellow Excess gain indication LED Tests/approvals	Lens	plastic, Acrylic
Core cross-section 0.5 mm² Ambient temperature -40+70 °C Protection class IP67 Special features Chemical-resistant Power-on indication LED, Green Switching state LED, Yellow Excess gain indication LED Tests/approvals	Electrical connection	Cable, 9 m, PVC
Ambient temperature -40+70 °C Protection class IP67 Special features Chemical-resistant Power-on indication LED, Green Switching state LED, Yellow Excess gain indication LED Tests/approvals	Number of cores	3
Protection class IP67 Special features Chemical-resistant Power-on indication LED, Green Switching state LED, Yellow Excess gain indication LED Tests/approvals	Core cross-section	0.5 mm ²
Special features Chemical-resistant Power-on indication LED, Green Switching state LED, Yellow Excess gain indication LED Tests/approvals	Ambient temperature	-40+70 °C
Power-on indication LED, Green Switching state LED, Yellow Excess gain indication LED Tests/approvals	Protection class	IP67
Switching state LED, Yellow Excess gain indication LED Tests/approvals	Special features	Chemical-resistant
Excess gain indication LED Tests/approvals	Power-on indication	LED, Green
Tests/approvals	Switching state	LED, Yellow
• • • • • • • • • • • • • • • • • • • •	Excess gain indication	LED
Approvals CE, cURus, CSA	Tests/approvals	
	Approvals	CE, cURus, CSA

Features

- Cable, 9 m
- ■Protection class IP67
- Ambient temperature: -40...+70 °C
- Modulation frequency A, requires transmitters with the same frequency
- Operating voltage: 24...240 VAC
- Semiconductor relay output, SPST, dark operation

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