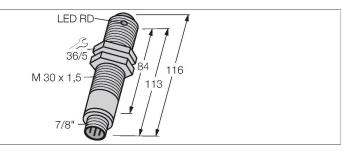


SM2A30SRLQD Photoelectric Sensor – Opposed Mode Sensor (Receiver)



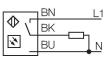
Technical data

ID3027294Optical dataFunctionOpposed mode sensorOperating modeReceiverRange0150000 mmElectrical dataOperating voltageOperating voltage24240 VACAC rated operational current≤ 200 mAOutput functionLight operation, Relay outputSwitching frequency≤ 40 HzReadiness delay≤ 0 msResponse time typical< 10 msMechanical dataDesignDuimensionsØ 30 x 116 mmHousing materialMetal, Stainless steelLensplastic, AcrylicElectrical connectionConnector, 7/8", PVCNumber of cores3Core cross-section0.5 mm²Ambient temperature-40+70 °CProtection classIP67Special featuresChemical-resistant Encapsulated Resistant to chemicalsPower-on indicationLED, GreenSwitching stateLED, YellowExcess gain indicationLEDTests/approvalsCE, cURus, CSA	Туре	SM2A30SRLQD
FunctionOpposed mode sensorOperating modeReceiverRange0150000 mmElectrical dataOperating voltage24240 VACAC rated operational current≤ 200 mAOutput functionLight operation, Relay outputSwitching frequency≤ 40 HzReadiness delay≤ 0 msResponse time typical< 10 ms	ID	3027294
Operating modeReceiverRange0150000 mmElectrical data150000 mmOperating voltage24240 VACAC rated operational current≤ 200 mAOutput functionLight operation, Relay outputSwitching frequency≤ 40 HzReadiness delay≤ 0 msResponse time typical< 10 ms	Optical data	
Range0150000 mmElectrical data150000 mmOperating voltage24240 VACAC rated operational current≤ 200 mAOutput functionLight operation, Relay outputSwitching frequency≤ 40 HzReadiness delay≤ 0 msResponse time typical< 10 ms	Function	Opposed mode sensor
Electrical data Operating voltage 24240 VAC AC rated operational current ≤ 200 mA Output function Light operation, Relay output Switching frequency ≤ 40 Hz Readiness delay ≤ 0 ms Response time typical < 10 ms	Operating mode	Receiver
Operating voltage24240 VACAC rated operational current< 200 mA	Range	0150000 mm
AC rated operational current≤ 200 mAOutput functionLight operation, Relay outputSwitching frequency≤ 40 HzReadiness delay≤ 0 msResponse time typical< 10 ms	Electrical data	
Output functionLight operation, Relay outputSwitching frequency≤ 40 HzReadiness delay≤ 0 msResponse time typical< 10 ms	Operating voltage	24240 VAC
Switching frequency≤ 40 HzReadiness delay≤ 0 msResponse time typical< 10 ms	AC rated operational current	≤ 200 mA
Readiness delay≤ 0 msResponse time typical< 10 ms	Output function	Light operation, Relay output
Response time typical< 10 msMechanical dataTube, SM30DesignTube, SM30DimensionsØ 30 x 116 mmHousing materialMetal, Stainless steelLensplastic, AcrylicElectrical connectionConnector, 7/8", PVCNumber of cores3Core cross-section0.5 mm²Ambient temperature-40+70 °CProtection classIP67Special featuresChemical-resistant Encapsulated Resistant to chemicalsPower-on indicationLED, GreenSwitching stateLED, YellowExcess gain indicationLEDTests/approvalsImage: State s	Switching frequency	≤ 40 Hz
Mechanical dataDesignTube, SM30DimensionsØ 30 x 116 mmHousing materialMetal, Stainless steelLensplastic, AcrylicElectrical connectionConnector, 7/8", PVCNumber of cores3Core cross-section0.5 mm²Ambient temperature-40+70 °CProtection classIP67Special featuresChemical-resistant Encapsulated Resistant to chemicalsPower-on indicationLED, GreenSwitching stateLED, YellowExcess gain indicationLEDTests/approvalsIP67	Readiness delay	≤ 0 ms
DesignTube, SM30DimensionsØ 30 x 116 mmHousing materialMetal, Stainless steelLensplastic, AcrylicElectrical connectionConnector, 7/8", PVCNumber of cores3Core cross-section0.5 mm²Ambient temperature-40+70 °CProtection classIP67Special featuresChemical-resistant Encapsulated Resistant to chemicalsPower-on indicationLED, GreenSwitching stateLED, YellowExcess gain indicationLEDTests/approvals	Response time typical	< 10 ms
DimensionsØ 30 x 116 mmHousing materialMetal, Stainless steelLensplastic, AcrylicElectrical connectionConnector, 7/8", PVCNumber of cores3Core cross-section0.5 mm²Ambient temperature-40+70 °CProtection classIP67Special featuresChemical-resistant Encapsulated Resistant to chemicalsPower-on indicationLED, GreenSwitching stateLED, YellowExcess gain indicationLEDTests/approvalsImage: State s	Mechanical data	
Housing materialMetal, Stainless steelLensplastic, AcrylicElectrical connectionConnector, 7/8", PVCNumber of cores3Core cross-section0.5 mm²Ambient temperature-40+70 °CProtection classIP67Special featuresChemical-resistant Encapsulated Resistant to chemicalsPower-on indicationLED, GreenSwitching stateLED, YellowExcess gain indicationLEDTests/approvalsImage: State sta	Design	Tube, SM30
Lensplastic, AcrylicElectrical connectionConnector, 7/8", PVCNumber of cores3Core cross-section0.5 mm²Ambient temperature-40+70 °CProtection classIP67Special featuresChemical-resistant Encapsulated Resistant to chemicalsPower-on indicationLED, GreenSwitching stateLED, YellowExcess gain indicationLEDTests/approvalsIP67	Dimensions	Ø 30 x 116 mm
Electrical connectionConnector, 7/8", PVCNumber of cores3Core cross-section0.5 mm²Ambient temperature-40+70 °CProtection classIP67Special featuresChemical-resistant Encapsulated Resistant to chemicalsPower-on indicationLED, GreenSwitching stateLED, YellowExcess gain indicationLEDTests/approvalsImage: Number of content of the second secon	Housing material	Metal, Stainless steel
Number of cores3Core cross-section0.5 mm²Ambient temperature-40+70 °CProtection classIP67Special featuresChemical-resistant Encapsulated Resistant to chemicalsPower-on indicationLED, GreenSwitching stateLED, YellowExcess gain indicationLEDTests/approvalsIP67	Lens	plastic, Acrylic
Core cross-section0.5 mm²Ambient temperature-40+70 °CProtection classIP67Special featuresChemical-resistant Encapsulated Resistant to chemicalsPower-on indicationLED, GreenSwitching stateLED, YellowExcess gain indicationLEDTests/approvalsImage: Constraint of the state of th	Electrical connection	Connector, 7/8", PVC
Ambient temperature-40+70 °CProtection classIP67Special featuresChemical-resistant Encapsulated Resistant to chemicalsPower-on indicationLED, GreenSwitching stateLED, YellowExcess gain indicationLEDTests/approvalsFeatures	Number of cores	3
Protection classIP67Special featuresChemical-resistant Encapsulated Resistant to chemicalsPower-on indicationLED, GreenSwitching stateLED, YellowExcess gain indicationLEDTests/approvalsImage: State	Core cross-section	0.5 mm ²
Special featuresChemical-resistant Encapsulated Resistant to chemicalsPower-on indicationLED, GreenSwitching stateLED, YellowExcess gain indicationLEDTests/approvalsImage: Comparison of the state of the	Ambient temperature	-40+70 °C
Encapsulated Resistant to chemicalsPower-on indicationLED, GreenSwitching stateLED, YellowExcess gain indicationLEDTests/approvalsImage: Comparison of the state of	Protection class	IP67
Switching state LED, Yellow Excess gain indication LED Tests/approvals	Special features	Encapsulated
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

- 7/8" connector, 3-pin
- 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, light operation

Wiring diagram



2 BN 0 0 3 BU 0 1 BK

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



Accessories

Dimension drawing

Type SM30CC-306 ID 3045133

Connecting cable, PVC jacket, 2 m, 7/8" female connector, straight, 3-pin