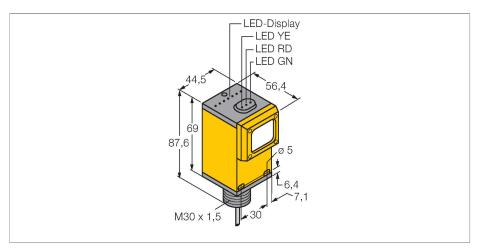


Q45BW22DX Photoelectric Sensor – Diffuse Mode Sensor





ID 3047140	Туре	Q45BW22DX
Function Proximity switch Operating mode Diffuse Light type IR Wavelength 880 nm Range 03000 mm Electrical data Operating voltage 90250 VAC No-load current ≤ 50 mA Output function NO contact, Relay output Readiness delay ≤ 100 ms Response time typical < 2 ms Setting option Potentiometer Mechanical data Design Rectangular, Q45 Dimensions Ø 30 x 56.4 x 44.5 x 87.6 mm Housing material Plastic, Thermoplastic material Lens plastic, Acrylic Electrical connection Cable, 2 m, PVC Number of cores 3 Core cross-section 0.34 mm² Ambient temperature -40+70 °C Protection class IP67	ID	3047140
Operating mode Diffuse Light type IR Wavelength 880 nm Range 03000 mm Electrical data 0250 VAC No-load current ≤ 50 mA Output function NO contact, Relay output Readiness delay ≤ 100 ms Response time typical < 2 ms	Optical data	
Light type Wavelength Range 03000 mm Electrical data Operating voltage No-load current ≤ 50 mA Output function Readiness delay Response time typical Setting option Mechanical data Design Rectangular, Q45 Dimensions Ø 30 x 56.4 x 44.5 x 87.6 mm Housing material Lens plastic, Acrylic Electrical connection Number of cores 3 Core cross-section Ambient temperature Protection class IR 880 nm 880 nm 880 nm 880 nm Reston 880 nm 88	Function	Proximity switch
Wavelength 880 nm Range 03000 mm Electrical data 0 perating voltage No-load current ≤ 50 mA Output function NO contact, Relay output Readiness delay ≤ 100 ms Response time typical < 2 ms	Operating mode	Diffuse
Range 03000 mm Electrical data Operating voltage 90250 VAC No-load current ≤ 50 mA Output function NO contact, Relay output Readiness delay ≤ 100 ms Response time typical < 2 ms Setting option Potentiometer Mechanical data Design Rectangular, Q45 Dimensions Ø 30 x 56.4 x 44.5 x 87.6 mm Housing material Plastic, Thermoplastic material Lens plastic, Acrylic Electrical connection Cable, 2 m, PVC Number of cores 3 Core cross-section 0.34 mm² Ambient temperature -40+70 °C Protection class IP67	Light type	IR
Electrical data Operating voltage 90250 VAC No-load current ≤ 50 mA Output function NO contact, Relay output Readiness delay ≤ 100 ms Response time typical <2 ms Setting option Potentiometer Mechanical data Design Rectangular, Q45 Dimensions Ø 30 x 56.4 x 44.5 x 87.6 mm Housing material Plastic, Thermoplastic material Lens plastic, Acrylic Electrical connection Cable, 2 m, PVC Number of cores 3 Core cross-section 0.34 mm² Ambient temperature -40+70 °C Protection class IP67	Wavelength	880 nm
Operating voltage 90250 VAC No-load current ≤ 50 mA Output function NO contact, Relay output Readiness delay ≤ 100 ms Response time typical < 2 ms	Range	03000 mm
No-load current ≤ 50 mA Output function NO contact, Relay output Readiness delay ≤ 100 ms Response time typical < 2 ms	Electrical data	
Output function NO contact, Relay output Readiness delay ≤ 100 ms Response time typical < 2 ms	Operating voltage	90250 VAC
Readiness delay ≤ 100 ms Response time typical < 2 ms	No-load current	≤ 50 mA
Response time typical <2 ms Setting option Potentiometer Mechanical data Design Rectangular, Q45 Dimensions Ø 30 x 56.4 x 44.5 x 87.6 mm Housing material Plastic, Thermoplastic material Lens plastic, Acrylic Electrical connection Cable, 2 m, PVC Number of cores 3 Core cross-section 0.34 mm² Ambient temperature -40+70 °C Protection class IP67	Output function	NO contact, Relay output
Setting option Potentiometer Mechanical data Design Rectangular, Q45 Dimensions Ø 30 x 56.4 x 44.5 x 87.6 mm Housing material Lens plastic, Thermoplastic material plastic, Acrylic Electrical connection Cable, 2 m, PVC Number of cores 3 Core cross-section 0.34 mm² Ambient temperature -40+70 °C Protection class IP67	Readiness delay	≤ 100 ms
Mechanical dataDesignRectangular, Q45DimensionsØ 30 x 56.4 x 44.5 x 87.6 mmHousing materialPlastic, Thermoplastic materialLensplastic, AcrylicElectrical connectionCable, 2 m, PVCNumber of cores3Core cross-section0.34 mm²Ambient temperature-40+70 °CProtection classIP67	Response time typical	< 2 ms
DesignRectangular, Q45DimensionsØ 30 x 56.4 x 44.5 x 87.6 mmHousing materialPlastic, Thermoplastic materialLensplastic, AcrylicElectrical connectionCable, 2 m, PVCNumber of cores3Core cross-section0.34 mm²Ambient temperature-40+70 °CProtection classIP67	Setting option	Potentiometer
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Housing material Lens plastic, Thermoplastic material plastic, Acrylic Electrical connection Cable, 2 m, PVC Number of cores 3 Core cross-section 0.34 mm² Ambient temperature -40+70 °C Protection class IP67	Design	Rectangular, Q45
Lens plastic, Acrylic Electrical connection Cable, 2 m, PVC Number of cores 3 Core cross-section 0.34 mm² Ambient temperature -40+70 °C Protection class IP67	Dimensions	Ø 30 x 56.4 x 44.5 x 87.6 mm
Electrical connection Cable, 2 m, PVC Number of cores 3 Core cross-section 0.34 mm² Ambient temperature -40+70 °C Protection class IP67	Housing material	Plastic, Thermoplastic material
Number of cores 3 Core cross-section 0.34 mm² Ambient temperature -40+70 °C Protection class IP67	Lens	plastic, Acrylic
Core cross-section 0.34 mm² Ambient temperature -40+70 °C Protection class IP67	Electrical connection	Cable, 2 m, PVC
Ambient temperature -40+70 °C Protection class IP67	Number of cores	3
Protection class IP67	Core cross-section	0.34 mm ²
	Ambient temperature	-40+70 °C
Special features keep/defer	Protection class	IP67
	Special features	keep/defer
Power-on indication LED, Green	Power-on indication	LED, Green



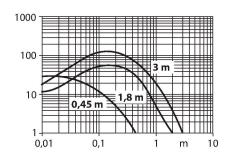
Features

- Cable, PVC, 2 m
- ■Protection class IP67
- Sensitivity adjusted via potentiometer
- Operating voltage: 90...250 VAC
- Relay output, NO (SPST)
- Light or dark operation, adjusted via selector switch

Functional principle

Like retroreflective sensors, diffuse mode sensors also contain emitter and receiver circuitry in the same housing. However, diffuse mode sensors do not detect the interruption of the light beam but the reflection of the object. An object is detected if it reflects sufficient light back to the receiver. The switching distance of diffuse mode sensors thus largely depends on the object's reflectivity. This type of sensor is especially suited for detection of transparent objects (diffuse mode sensor with or without background suppression or convergent mode sensors).

Excess gain curve
Excess gain in relation to distance

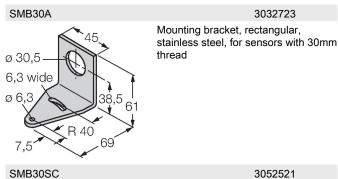


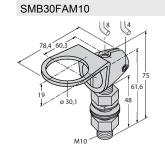


Technical data

Switching state	LED, Yellow
Error indication	LED, green
Excess gain indication	LED, red
Tests/approvals	
MTTF	67 years acc. to SN 29500 (Ed. 99) 40 °C
Approvals	CE, cURus, CSA

Accessories





Mounting bracket, stainless steel, for M10 x 1.5 thread, thread length 30 mm

3011185



Mounting bracket, PBT black, for sensors with 30 mm thread, rotatable