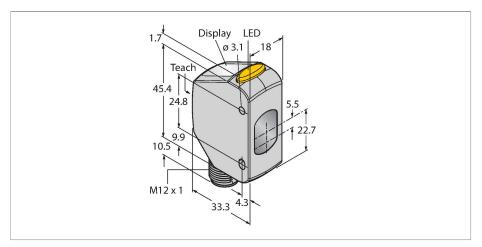


Q4XFPCOD310-Q8 Photoelectric Sensor – For Clear Object Detection





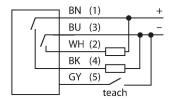
Technical data

ID 3097544 Optical data Function Proximity switch Operating mode Background/foreground suppression Light type Red Wavelength 655 nm Laser class ▲ 1 Optical resolution 1 mm Repeatability 0.5 mm Range 35310 mm Ambient light immunity 5000 lux Electrical data Operating voltage 1030 VDC DC rated operational current ≤ 28 mA Short-circuit protection yes Reverse polarity protection yes Reverse polarity protection yes Response time typical <1.5 ms Mechanical data Design Rectangular, Q4X Dimensions 33.5 x 18 x 57.5 mm Housing material Metal, Stainless steel Lens acrylic, PMMA Electrical connection Connector, M12 × 1, PVC Number of cores 4	Туре	Q4XFPCOD310-Q8		
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Ambient light immunity Electrical data Operating voltage 1030 VDC DC rated operational current ≤ 28 mA Short-circuit protection Reverse polarity protection Output function NO/NC, PNP Readiness delay ₹ 750 ms Response time typical Ambient light immunity ≤ 28 mA Short-circuit protection yes NO/NC, PNP Readiness delay ₹ 750 ms Response time typical ★ 1.5 ms Mechanical data Design Rectangular, Q4X Dimensions 33.5 x 18 x 57.5 mm Housing material Lens acrylic, PMMA Electrical connection Connector, M12 × 1, PVC	Repeatability	0.5 mm		
Electrical data Operating voltage 1030 VDC DC rated operational current ≤ 28 mA Short-circuit protection yes Reverse polarity protection yes Output function NO/NC, PNP Readiness delay ≤ 750 ms Response time typical < 1.5 ms	Range	35310 mm		
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Short-circuit protection yes Reverse polarity protection yes Output function NO/NC, PNP Readiness delay ≤ 750 ms Response time typical < 1.5 ms	Operating voltage	1030 VDC		
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Readiness delay ≤ 750 ms Response time typical < 1.5 ms	Reverse polarity protection	yes		
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Housing material Metal, Stainless steel Lens acrylic, PMMA Electrical connection Connector, M12 × 1, PVC	Design	Rectangular, Q4X		
Lens acrylic, PMMA Electrical connection Connector, M12 × 1, PVC	Dimensions	33.5 x 18 x 57.5 mm		
Electrical connection Connector, M12 × 1, PVC	Housing material	Metal, Stainless steel		
	Lens	acrylic, PMMA		
Number of cores 4	Electrical connection	Connector, M12 × 1, PVC		
	Number of cores	4		

Features

- ■4-digit 7-segment LED display
- ■3 buttons
- ■Output indicator (yellow)
- ■IP67/69K
- ECOLAB-certified
- Range: 35...310 mm
- ■Laser class 1, red, 655 nm, acc. to IEC
- 60825-1:2007
- Operating voltage: 12...30 VDC
- ■1 × PNP switching output
- Rectangular design
- Stainless steel housing (1.4404)
- Laser sensor for clear object detection

Wiring diagram



Functional principle

The Q4XFPCOD310-Q8 is a laser sensor specially designed to detect transparent objects, with 310 mm range and a PNP laser class 1 switching output.

In this sensor, clear object detection (COD) is preconfigured to allow transparent objects to be detected using a simple device configuration.

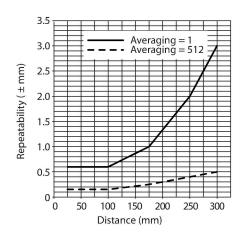
With the dual mode functionality, the Q4X captures not only distances but also the light intensity that is reflected by an object. This unique feature allows lasers to be used for applications that would have been inconceivable before this.

Technical data

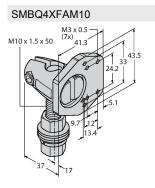
Ambient temperature	-10+50 °C		
Storage temperature	-25+75 °C		
Relative humidity	3595 %		
Protection class	IP67 IP68 IP69		
Special features	Chemical-resistant Clear object detection keep/defer Wash down Resistant to chemicals		
Switching state	LED, Yellow		
Display	4-digit 7-segment LED display		
Tests/approvals			
Vibration resistance	MIL-STD-202G, Method 201A (10 to 60 Hz, 1.52 mm peak to peak amplitude, for 2 hours along the x, y and z-axis), sensor operating		
Shock test	MIL-STD-202G, Method 213B Condition I (100G 6x along the XYZ-axis, 18 impacts), sensor in operation		
Approvals	CE, cULus, ECOLAB		

In RUN mode, you can change the switchpoint, adjust light and dark-switching and teach the sensor accordingly. In SETUP mode, you can select teach, all standard operating parameters and also return to the factory defaults.

Excess Gain Curve



Accessories



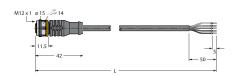
3091513

Mounting bracket, rotatable, stainless steel, for sensors of the Q4X/Q3X series, M10 x 1.5 thread

Accessories

 Dimension drawing
 Type
 ID

 RKC4.5T-2/TEL
 6625016

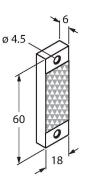


Connection cable, female M12, straight, 5-pin, cable length: 2 m, sheath material: PVC, black; cULus approval; other cable lengths and qualities available, see www.turck.com

Dimension drawing	Туре	ID	
M12x1 2514	RKH4.5-2/TFG	6933455	Connection cable, M12 female, straight, 5-pin, stainless steel coupling nut, cable length: 2 m, jacket material: TPE, gray, temperature range -40+105 °C; other cable lengths and designs available, see www.turck.com
M12x1	RKS4.5T-2/TEL	6626361	Connection cable, M12 female connector, straight, 5-pin, cable length: 2 m, sheath material: PVC, black; shielded; cULus approval; other cable lengths and qualities available, see www.turck.com
28.5 14 28.5 14	WKS4.5T-2/TEL	6626364	Connection cable, M12 female connector, angled, 5-pin, cable length: 2 m, sheath material: PVC, black; shielded; cULus approval; other cable lengths and qualities available, see www.turck.com
015 M12x1 265 32 32 50	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 www.turck.com

Accessories

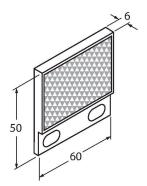
Dimension drawing	Туре	ID	
~ 6	BRT-Q4X-60X18	3095776	Reflector for Q4X laser sensors for clear object detection or dual-mode applications, rectangular housing: 60 mm x 18 mm





Dimension drawing Type ID

BRT-Q4X-60X50 3095777 Reflector for Q4X laser sen



Reflector for Q4X laser sensors, for clear object detection or dual-mode applications, rectangular housing: 60 mm x 50 mm