



WTB12-3N1011S42

W12

PHOTOELECTRIC SENSORS

SICK
Sensor Intelligence.



Illustration may differ



Ordering information

Type	part no.
WTB12-3N1011S42	1044101

Other models and accessories → www.sick.com/W12

Detailed technical data

Features

Functional principle	Photoelectric proximity sensor
Functional principle detail	Background suppression
Sensing range max.	20 mm ... 150 mm ¹⁾
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Emitted beam	
Light source	LED ³⁾
Type of light	Infrared light
Light spot size (distance)	200 mm
Key LED figures	
Wave length	850 nm
Adjustment	None
Special features	Sensing range pre-set: 150 mm

¹⁾ Object with 90% remission (based on standard white, DIN 5033).

²⁾ Preset sensing range.

³⁾ Average service life: 100,000 h at T_J = +25 °C.

Electronics

Supply voltage U_B	10 V DC ... 30 V DC ¹⁾
Ripple	< 5 V _{pp} ²⁾
Current consumption	55 mA ³⁾
Protection class	III
Digital output	
Type	NPN
Switching mode	Light switching
Signal voltage NPN HIGH/LOW	Approx. $V_S / < 2.5$ V
Output current I_{max}	≤ 100 mA
Response time	≤ 330 μs ⁴⁾
Switching frequency	1,500 Hz ⁵⁾
Circuit protection	A ⁶⁾ C ⁷⁾ D ⁸⁾

¹⁾ Limit values when operated in short-circuit protected network: max. 8 A.

²⁾ May not fall below or exceed U_Y tolerances.

³⁾ Without load.

⁴⁾ Signal transit time with resistive load.

⁵⁾ With light/dark ratio 1:1.

⁶⁾ A = V_S connections reverse-polarity protected.

⁷⁾ C = interference suppression.

⁸⁾ D = outputs overcurrent and short-circuit protected.

Mechanics

Housing	Rectangular
Dimensions (W x H x D)	15.6 mm x 48.5 mm x 42 mm
Connection	Cable with AMP connector, 320 mm ¹⁾
Connection detail	
Conductor size	0.85 mm ²
Length of cable (L)	320 mm ¹⁾
Material	
Housing	Metal
Front screen	Plastic, PMMA
Cable	Plastic, PVC
Weight	200 g

¹⁾ Do not bend below 0 °C.

Ambient data

Enclosure rating	IP66 IP67 IP69K
Ambient operating temperature	-40 °C ... +60 °C
Ambient temperature, storage	-40 °C ... +75 °C
UL File No.	NRKH.E181493 & NRKH7.E181493

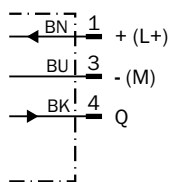
Certificates

EU declaration of conformity	✓
UK declaration of conformity	✓
ACMA declaration of conformity	✓
Moroccan declaration of conformity	✓
China RoHS	✓
ECOLAB certificate	✓
cULus certificate	✓
Photobiological safety (DIN EN 62471) certificate	✓

Classifications

ECLASS 5.0	27270904
ECLASS 5.1.4	27270904
ECLASS 6.0	27270904
ECLASS 6.2	27270904
ECLASS 7.0	27270904
ECLASS 8.0	27270904
ECLASS 8.1	27270904
ECLASS 9.0	27270904
ECLASS 10.0	27270904
ECLASS 11.0	27270904
ECLASS 12.0	27270903
ETIM 5.0	EC002719
ETIM 6.0	EC002719
ETIM 7.0	EC002719
ETIM 8.0	EC002719
UNSPSC 16.0901	39121528

Connection diagram Cd-045



Recommended accessories

Other models and accessories → www.sick.com/W12

	Brief description	Type	part no.
Mounting systems			
	<ul style="list-style-type: none">• Description: Mounting bracket, large• Material: Stainless steel• Details: Stainless steel• Items supplied: Mounting hardware included• Suitable for: W11-2, W12-3, W16	BEF-WG-W12	2013942

SICK AT A GLANCE

SICK is one of the leading manufacturers of intelligent sensors and sensor solutions for industrial applications. A unique range of products and services creates the perfect basis for controlling processes securely and efficiently, protecting individuals from accidents and preventing damage to the environment.

We have extensive experience in a wide range of industries and understand their processes and requirements. With intelligent sensors, we can deliver exactly what our customers need. In application centers in Europe, Asia and North America, system solutions are tested and optimized in accordance with customer specifications. All this makes us a reliable supplier and development partner.

Comprehensive services complete our offering: SICK LifeTime Services provide support throughout the machine life cycle and ensure safety and productivity.

For us, that is “Sensor Intelligence.”

WORLDWIDE PRESENCE:

Contacts and other locations –www.sick.com