WTF12G-3P2432T01

TranspaTect

PHOTOELECTRIC SENSORS

SICK
Sensor Intelligence.

WTF12G-3P2432T01 | TranspaTect

PHOTOELECTRIC SENSORS

Illustration may differ

Ordering information

Type	Part no.
WTF12G-3P2432T01	1071804

Other models and accessories ➜ www.sick.com/TranspaTect

Detailed technical data

Features

Sensor/ detection principle	Photoelectric proximity sensor, Foreground suppression
Dimensions (W x H x D)	15.6 mm x 48.5 mm x 42 mm
Housing design (light emission)	Rectangular
Sensing range max.	150 mm ... 700 mm [1]
Sensing range	0 mm ... 450 mm [2]
Type of light	Visible red light
Light source	PinPoint LED [3]
Light spot size (distance)	Ø 8 mm (300 mm)
Wave length	660 nm
Adjustment	Single teach-in button
Special features	Teflon coated housing

[1] Adjustable background; referring to the background with 90 % remission (based on glass-bead blasted stainless steel, equivalent to standard white DIN 5033).
[2] Detection range transparent objects.
[3] Average service life: 100,000 h at T_U = +25 °C.

Mechanics/electronics

Supply voltage	10 V DC ... 30 V DC [1]
Ripple	≤ 5 V_{pp} [2]
Power consumption	≤ 55 mA [3]
Output type	PNP
Output function	Complementary
Switching mode	Light/dark switching
Signal voltage PNP HIGH/LOW	> Uv - 2,5 V / ca. 0 V
Output current $I_{max.}$	100 mA
Response time	2 ms [4]
Switching frequency	250 Hz [5]
Connection type	Male connector M12, 4-pin
Circuit protection	A [6] C [7] D [8]
Protection class	II
Weight	120 g
Housing material	PTFE coating
Enclosure rating	IP66 IP67
Special feature	Detecting transparent objects
Ambient operating temperature	–40 °C ... +60 °C
Ambient storage temperature	–40 °C ... +75 °C
UL File No.	NRKH.E181493 & NRKH7.E181493

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

[2] May not exceed or fall below U_v 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.
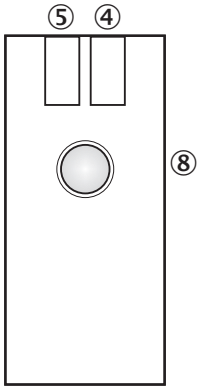
[8] D = outputs overcurrent and short-circuit protected.

Classifications

ECl@ss 5.0	27270904
ECl@ss 5.1.4	27270904
ECl@ss 6.0	27270904
ECl@ss 6.2	27270904
ECl@ss 7.0	27270904
ECl@ss 8.0	27270904
ECl@ss 8.1	27270904
ECl@ss 9.0	27270904
ETIM 5.0	EC002719
ETIM 6.0	EC002719

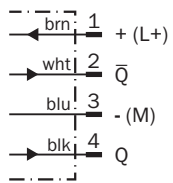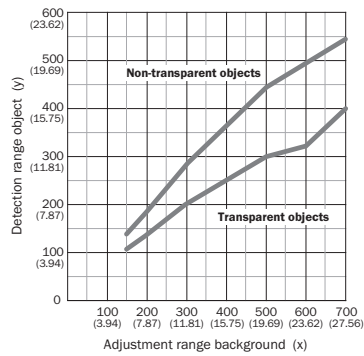| UNSPSC 16.0901	39121528

Adjustments possible

④ LED indicator green: Supply voltage active
⑤ LED indicator yellow: Status of received light beam
⑧ Adjustment sensing range: single teach-in button

Connection diagram

Cd-084

brn	1	+ (L+)
wht	2	$\overline{Q}$
blu	3	- (M)
blk	4	Q

Characteristic curve

Legend:

x: Sensing range max. in mm (adjustment range background)
  = Distance sensor / background

y: Sensing range in mm (detection range object)
  = Maximum distance sensor / front edge of the object

Minimum distance sensor / background : 150 mm*

*) Referring to the background with 90 % remission equivalent to standard white DIN 5033 (i.e. glass-bead blasted stainless steel).
The use of a shiny background can increase the minimum distance to the background (i.e. brushed and pickled stainless steel,
minimum distance sensor to background: 300 mm).

How to use this diagram:
Measure the distance from the sensor to the metal surface in the background.
This is the value for x (adjustment range background). If this is 500 mm for example,
the maximum distance between the sensor and the leading edge of a transparent object is 300 mm.

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."

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