WTV4-3P3441

W4

MINIATURE PHOTOELECTRIC SENSORS

SICK
Sensor Intelligence.

WTV4-3P3441 | W4

MINIATURE PHOTOELECTRIC SENSORS

Illustration may differ

Ordering information

Type	Part no.
WTV4-3P3441	1029582

Other models and accessories ➜ www.sick.com/W4

Detailed technical data

Features

Functional principle	Photoelectric proximity sensor
Functional principle detail	Background suppression
Sensing range max.	4 mm ... 50 mm [1]
Sensing range	15 mm ... 50 mm [1]
Emitted beam	
Light source	PinPoint LED [2]
Type of light	Visible red light
Light spot size (distance)	Ø 10 mm (40 mm)
Key LED figures	
Wave length	650 nm
Adjustment	Potentiometer, 5 turns
Special applications	Detecting uneven, shiny objects, Detecting objects wrapped in film

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

[2] Average service life: 100,000 h at T_U = +25 °C.

Safety-related parameters

$MTTF_D$	1,124 years
DC_{avg}	0 %

Electrical data

Supply voltage U_B	10 V DC ... 30 V DC [1]
Ripple	< 5 V_{pp} [2]
Current consumption	20 mA [3]
Protection class	III
Digital output	
Type	PNP
Output current $I_{max.}$	≤ 100 mA
Response time	< 0.5 ms [4]
Switching frequency	1,000 Hz [5]
Switching mode	Light/dark switching
Circuit protection	A [6]
	C [7]
	D [8]
Special feature	V-optics

[1] Limit values.

[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.

Mechanical data

Housing	Rectangular
Design detail	Flat
Dimensions (W x H x D)	16 mm x 39.5 mm x 12 mm
Connection	Cable with M12 male connector, 4-pin [1]
Connection detail	
Conductor size	0.14 mm²
Cable diameter	Ø 3.4 mm
Length of cable (L)	150 mm [1]
Material	
Housing	Plastic, ABS
Front screen	Plastic, PMMA
Cable	PVC
Weight	30 g

[1] Do not bend below 0 °C.

Ambient data

Enclosure rating	IP67
	IP66
Ambient operating temperature	–40 °C ... +60 °C
Ambient temperature, storage	–40 °C ... +75 °C

UL File No.	NRKH.E181493 & NRKH7.E181493

Classifications

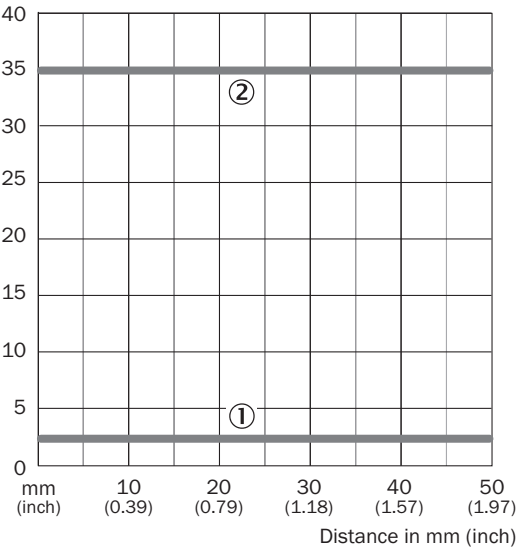|	
eCl@ss 5.0	27270904
eCl@ss 5.1.4	27270904
eCl@ss 6.0	27270904
eCl@ss 6.2	27270904
eCl@ss 7.0	27270904
eCl@ss 8.0	27270904
eCl@ss 8.1	27270904
eCl@ss 9.0	27270904
eCl@ss 10.0	27270904
eCl@ss 11.0	27270904
eCl@ss 12.0	27270903
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ETIM 6.0	EC002719
ETIM 7.0	EC002719
ETIM 8.0	EC002719
UNSPSC 16.0901	39121528

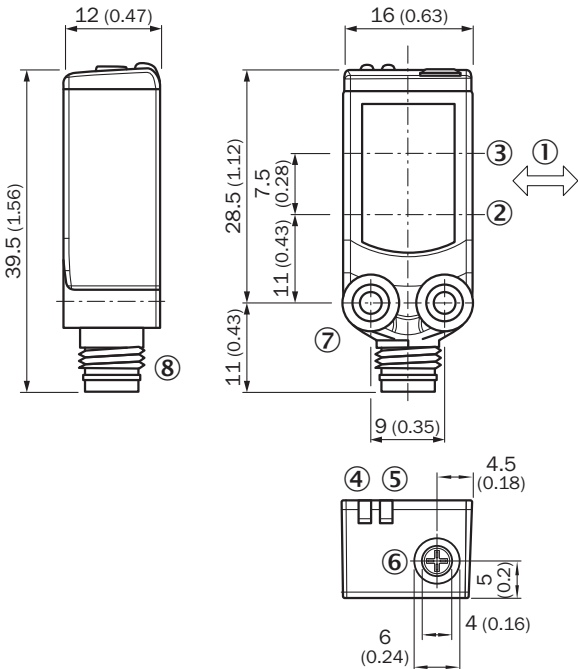## Connection type
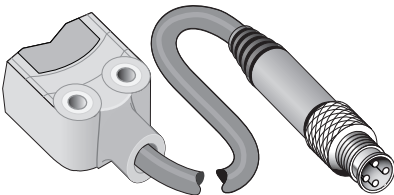
Characteristic curve

WTV4-3, V-optics

Background

① Black/white shift 90% / 6%
② Distance to the background with transparent objects

Dimensional drawing (Dimensions in mm (inch))

WTx4-3, potentiometer

① Standard direction of the material being detected
② Optical axis, sender
③ Optical axis, receiver
④ LED indicator yellow: Status of received light beam
⑤ LED indicator green: Supply voltage active
⑥ Potentiometer
⑦ Threaded mounting hole M3
⑧ Connection

Recommended accessories

Other models and accessories ➜ www.sick.com/W4

Brief description	Type	Part no.
Plug connectors and cables		
Head A: female connector, M12, 4-pin, straight, A-coded Head B: Flying leads Cable: Sensor/actuator cable, PVC, unshielded, 5 m	YF2A14-050VB3XLEAX	2096235
Head A: male connector, M12, 4-pin, straight Cable: unshielded	STE-1204-G	6009932

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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