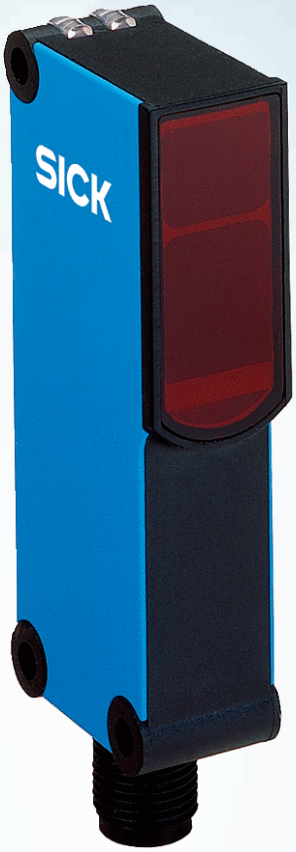
Product data sheet



WT18-3P431

W18-3

SMALL PHOTOELECTRIC SENSORS

SICK
Sensor Intelligence.

Illustration may differ

Ordering information

Type	Part no.
WT18-3P431	1026032

Other models and accessories → www.sick.com/W18-3

Detailed technical data

Features

Dimensions (W x H x D)	17.6 mm x 75.5 mm x 33.5 mm
Housing design (light emission)	Rectangular
Sensing range max.	10 mm ... 600 mm [1]
Sensing range	50 mm ... 600 mm [1]
Type of light	Visible red light
Light source	LED [2]
Light spot size (distance)	Ø 15 mm (300 mm)
Wave length	675 nm
Adjustment	Double teach-in button

[1] Object with 90 % reflectance (referred to standard white, DIN 5033).
[2] 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]

[1] Limit values when operated in short-circuit protected network: max. 8 A.
[2] May not exceed or fall below U_V tolerances.
[3] Signal transit time with resistive load.
[4] With light/dark ratio 1:1.
[5] A = V_S connections reverse-polarity protected.
[6] C = interference suppression.
[7] D = outputs overcurrent and short-circuit protected.

Switching output	PNP
Output function	Complementary
Switching mode	Light/dark switching
Output current $I_{max.}$	≤ 100 mA
Response time	< 700 µs [3]
Switching frequency	700 Hz [4]
Circuit protection	A [5] C [6] D [7]
Weight	40 g
Housing material	Plastic, ABS
Optics material	Plastic, PMMA
Enclosure rating	IP67
Ambient operating temperature	–40 °C ... +60 °C
Ambient storage temperature	–40 °C ... +75 °C

[1] Limit values when operated in short-circuit protected network: max. 8 A.
[2] May not exceed or fall below U_V tolerances.
[3] Signal transit time with resistive load.
[4] With light/dark ratio 1:1.
[5] A = V_S connections reverse-polarity protected.
[6] C = interference suppression.
[7] D = outputs overcurrent and short-circuit protected.

Safety-related parameters

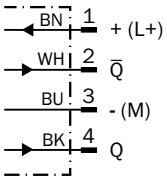
$MTTF_D$	615 years
DC_{avg}	0%

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
ETIM 5.0	EC002719
ETIM 6.0	EC002719
ETIM 7.0	EC002719
UNSPSC 16.0901	39121528

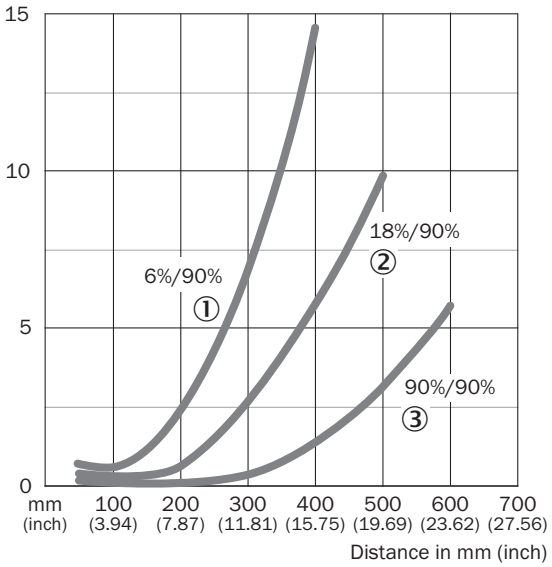
Connection diagram

Cd-083



Characteristic curve

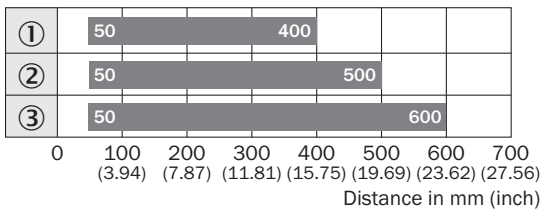
WT18-3, red light



① Sensing range on black, 6% remission
② Sensing range on gray, 18 % remission
③ Sensing range on white, 90% remission

Sensing range diagram

WT18-3, red light

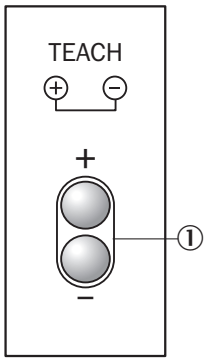


Sensing range

① Sensing range on black, 6% remission
② Sensing range on gray, 18 % remission
③ Sensing range on white, 90% remission

Adjustments

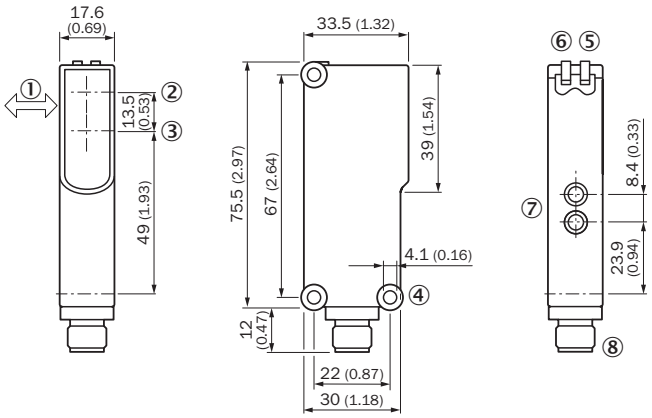
Double teach-in button



① Sensing range adjustment: double teach-in button

Dimensional drawing (Dimensions in mm (inch))

WTB18-3, double teach-in button



① Standard direction of the material being detected
② Center of optical axis, sender
③ Center of optical axis, receiver
④ Mounting hole ø 4.1 mm
⑤ LED indicator yellow: Status of received light beam
⑥ LED indicator green: Supply voltage active
⑦ Sensing range adjustment: double teach-in button
⑧ M12 male connector, 4-pin or 2 m cable

Recommended accessories

Plug connectors and cables

Plug connectors and cables

Connecting cables

Field-attachable connectors

Other models and accessories ➜ www.sick.com/W18-3

Brief description	Type	Part no.
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

Brief description	Type	Part no.
Head A: male connector, M12, 4-pin, straight Head B: - 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.”

WORLDWIDE PRESENCE:

Contacts and other locations –www.sick.com