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Product data sheet



WT24-2R518

W24

COMPACT PHOTOELECTRIC SENSORS

SICK
Sensor Intelligence.

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WT24-2R518 | W24

COMPACT PHOTOELECTRIC SENSORS



Illustration may differ

Ordering information

Type	Part no.
WT24-2R518	1018317

Other models and accessories → www.sick.com/W24

Detailed technical data

Features

Functional principle	Photoelectric proximity sensor
Functional principle detail	Background suppression
Dimensions (W x H x D)	27 mm x 87.5 mm x 65 mm
Housing design (light emission)	Rectangular
Sensing range max.	100 mm ... 2,500 mm [1]
Sensing range	100 mm ... 2,500 mm [1]
Type of light	Infrared light
Light source	LED [2]
Light spot size (distance)	Ø 80 mm (2,500 mm)
Adjustment	Potentiometer

[1] Object with 90% remission (based on standard white, DIN 5033).
[2] Average service life: 100,000 h at T_U = +25 °C.

Mechanics/electronics

Supply voltage U_B	20 V AC/DC ... 250 V AC/DC
Power consumption	< 2 VA
Switching output	Relay, electrically isolated [1]
Output function	Change-over contacts
Switching mode	Light/dark switching [1]
Switching mode selector	Selectable via light/dark selector
Switching current (switching voltage)	2,5 A @ 250 V AC, 2,5 A @ 24 V DC, 0,125 A @ 250 V DC

[1] Provide suitable spark suppression for inductive or capacitive loads.
[2] With light/dark ratio 1:1.
[3] A = V_S connections reverse-polarity protected.
[4] C = interference suppression.
[5] Rated voltage: 250 V AC/DC.

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Response time	≤ 10 ms
Switching frequency	10 Hz [2]
Connection type	Mini connector 7/8", 5-pin
Circuit protection	A [3] C [4]
Protection class	II [5]
Weight	330 g
Housing material	Metal, zinc diecast
Optics material	Plastic, PMMA
Enclosure rating	IP67
Ambient operating temperature	–40 °C ... +60 °C
Ambient temperature, storage	–40 °C ... +75 °C

[1] Provide suitable spark suppression for inductive or capacitive loads.
[2] With light/dark ratio 1:1.
[3] A = V_S connections reverse-polarity protected.
[4] C = interference suppression.
[5] Rated voltage: 250 V AC/DC.

Safety-related parameters

$MTTF_D$	509 years
DC_{avg}	0 %
T_M (mission time)	20 years

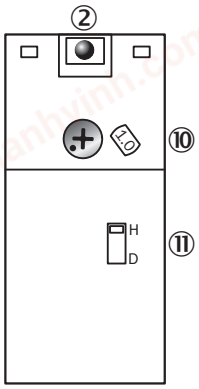
Classifications

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	27270904
ETIM 5.0	EC002719
ETIM 6.0	EC002719
ETIM 7.0	EC002719
ETIM 8.0	EC002719
UNSPSC 16.0901	39121528

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Adjustments

WT24-2, WL24-2, WS/WE24-2, AC/DC

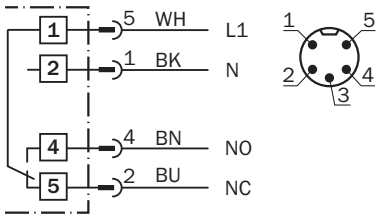


② LED signal strength indicator
⑩ Adjustment sensing range (WT) / sensitivity (WL, WS/WE)
⑪ Light/dark selector

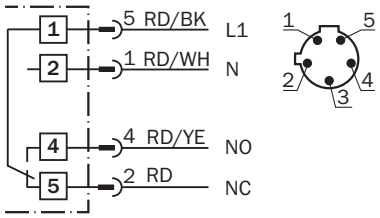
Connection diagram

Cd-194

WT24-2R518, WT24-2R548



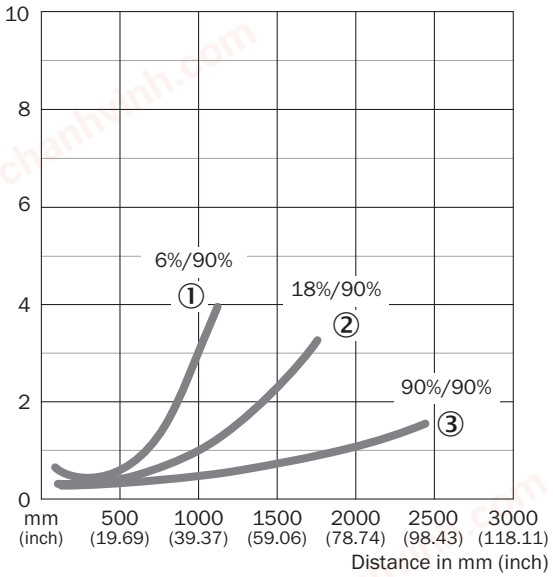
WT24-2R519, WT24-2R549



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Characteristic curve

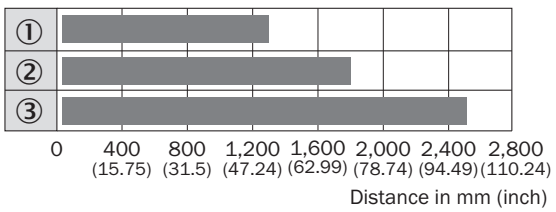
WT24-2, infrared light



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

Sensing range diagram

WT24-2, infrared light



Sensing range

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

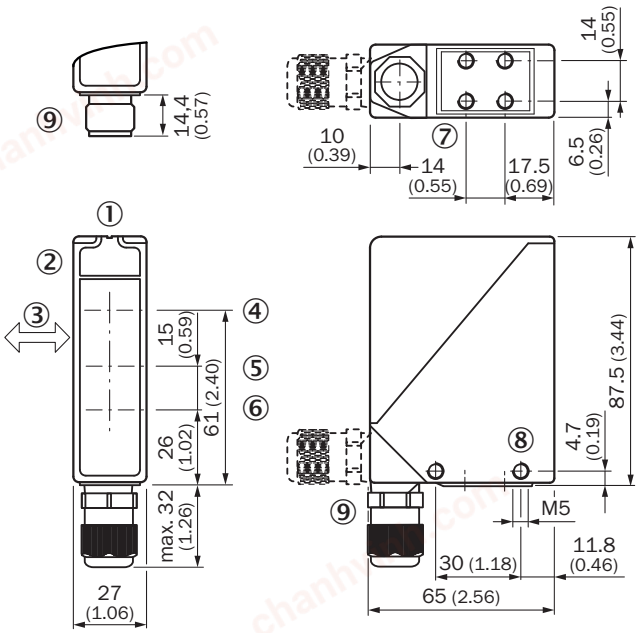
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Dimensional drawing (Dimensions in mm (inch))

WT24-2



① Alignment sight
② LED signal strength indicator
③ Standard direction of the material being detected
④ Center of optical axis, sender
⑤ Center of optical axis, receiver (close range)
⑥ Center of optical axis, receiver (far range)
⑦ M5 threaded mounting hole, 6 mm deep
⑧ M5 threaded mounting hole, through-hole
⑨ M16 screw fixing and plug rotatable by 90°

Recommended accessories

Other models and accessories ➜ www.sick.com/W24

	Brief description	Type	Part no.
Mounting brackets and plates			
	Mounting bracket, large, stainless steel, without mounting hardware for the sensor	BEF-WG-W24	4026324

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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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