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Product data sheet



WT34-R250

W34

COMPACT PHOTOELECTRIC SENSORS

SICK
Sensor Intelligence.

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WT34-R250 | W34

COMPACT PHOTOELECTRIC SENSORS



Illustration may differ

Ordering information

Type	Part no.
WT34-R250	1019240

Other models and accessories ➜ www.sick.com/W34

Detailed technical data

Features

Functional principle	Photoelectric proximity sensor
Functional principle detail	Background suppression
Dimensions (W x H x D)	27 mm x 92 mm x 70 mm
Housing design (light emission)	Rectangular
Sensing range max.	100 mm ... 1,200 mm [1]
Sensing range	100 mm ... 1,200 mm
Type of light	Visible red light
Light source	LED [2]
Light spot size (distance)	Ø 40 mm (1,200 mm)
Wave length	660 nm
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	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 switching [1] Dark switching
Switching mode selector	Selectable via light/dark selector

[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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Switching current (switching voltage)	4 A @ 250 V AC, 4 A @ 24 V DC, 0.125 A @ 250 V DC UL: 4 A @ 250 V AC, general use / 4 A @ 250 V AC, resistive (NO) / 3 A @ 250 V AC, resistive (NC) / 4 A @ 24 V DC, NO, general use / 3 A @ 24 V DC, NC, general use / R300 / B300 (NO contacts only)
Response time	≤ 10 ms
Switching frequency	10 Hz [2]
Time functions	On delay Off delay Adjustable
Delay time	Adjustable via time delay selector switch, 0.5 s ... 10 s
Connection type	Terminal connection with M16 gland
Circuit protection	A [3] C [4]
Protection class	II [5]
Weight	140 g
Housing material	Plastic, ABS
Enclosure rating	IP67
Ambient operating temperature	–40 °C ... +60 °C
Ambient temperature, storage	–40 °C ... +75 °C
UL File No.	NRKH.E181493 & NRKH7.E181493

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[2] With light/dark ratio 1:1.
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Safety-related parameters

$MTTF_D$	487 years
DC_{avg}	0 %
T_M (mission time)	20 years
B_{10d}	59,123 Switching cycles [1]

[1] Only for devices containing electro-mechanical components. In this case, the $MTTF_D$ value of the entire device must be calculated from the given B_{10D} value, the number of switching cycles and the given $MTTF_D$ value.

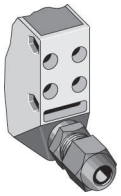
Classifications

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

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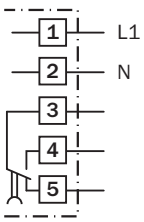
eCl@ss 12.0	27270903
ETIM 5.0	EC002719
ETIM 6.0	EC002719
ETIM 7.0	EC002719
ETIM 8.0	EC002719
UNSPSC 16.0901	39121528

Connection type

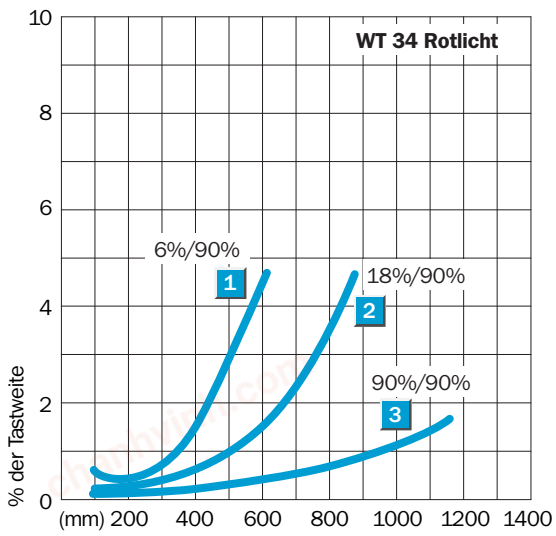


Connection diagram

Cd-167



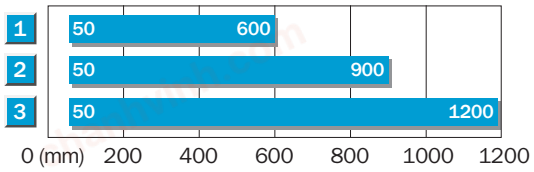
Characteristic curve



Subject to change without notice

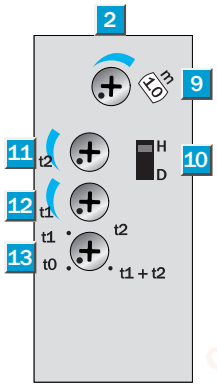
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Sensing range diagram



1	Scanning distance on black [9]
2	Scanning distance on grey [9]
3	Scanning distance on white [9]

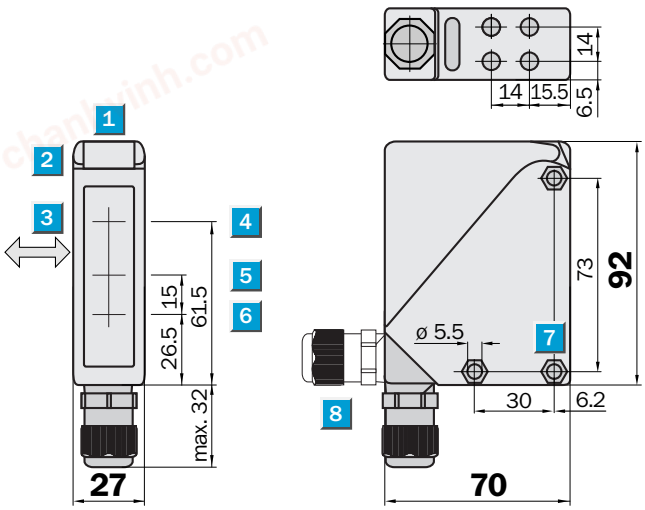
Adjustments



② LED signal strength indicator
⑨ Adjustment of sensing range
⑩ Light/dark selector
⑪ Time control t_2= OFF delay
⑫ Time control t_1= ON delay
⑬ Time delay selector switch

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Dimensional drawing (Dimensions in mm (inch))



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 Mounting hole ø 5.5 mm, for M5 hexagon nuts on both sides

Recommended accessories

Other models and accessories → www.sick.com/W34

	Brief description	Type	Part no.
Mounting brackets and plates			
	Mounting bracket, Stainless steel (1.4301), mounting hardware included	BEF-WN-W24	2015248

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