

WS/WE24-2R230 W24

COMPACT PHOTOELECTRIC SENSORS



Ordering information

Туре	Part no.
WS/WE24-2R230	1017863

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

Illustration may differ



Detailed technical data

Features

Functional principle	Through-beam photoelectric sensor
Dimensions (W x H x D)	27 mm x 87.5 mm x 65 mm
Housing design (light emission)	Rectangular
Sensing range max.	0 m 60 m
Sensing range	0 m 50 m
Focus	Approx. 1°
Type of light	Visible red light
Light source	LED ¹⁾
Light spot size (distance)	Ø 700 mm (50 m)
Angle of dispersion	Approx. 1°
Adjustment	Potentiometer

 $^{^{1)}}$ Average service life: 100,000 h at TU = +25 °C.

Mechanics/electronics

Supply voltage \mathbf{U}_{B}	20 V AC/DC 250 V AC/DC
Power consumption, sender	50 mA ¹⁾
Power consumption, receiver	40 mA ¹⁾
Power consumption	< 2 VA
Switching output	Relay, electrically isolated ²⁾

¹⁾ Without load.

 $^{^{2)}\,\}mbox{Provide}$ suitable spark suppression for inductive or capacitive loads.

³⁾ With light/dark ratio 1:1.

 $^{^{4)}}$ A = V_S connections reverse-polarity protected.

 $^{^{5)}}$ C = interference suppression.

⁶⁾ Rated voltage: 250 V AC/DC.

Output function	Change-over contacts
Switching mode	Light/dark switching ²⁾
Switching mode selector	Selectable via light/dark selector
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 ³⁾
Angle of reception	Approx. 2.5°
Connection type	Terminal connection with M16 gland
Circuit protection	A ⁴⁾ C ⁵⁾
Protection class	II ⁶⁾
Weight	660 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
UL File No.	NRKH.E181493 & NRKH7.E181493
Part number of individual components	2021158 WS24-2U230 2021162 WE24-2R230

¹⁾ Without load.

Safety-related parameters

MTTF _D	316 years
DC _{avg}	0 %
T _M (mission time)	20 years

Classifications

ECLASS 5.0	27270901
ECLASS 5.1.4	27270901
ECLASS 6.0	27270901
ECLASS 6.2	27270901
ECLASS 7.0	27270901
ECLASS 8.0	27270901
ECLASS 8.1	27270901
ECLASS 9.0	27270901
ECLASS 10.0	27270901
ECLASS 11.0	27270901

²⁾ Provide suitable spark suppression for inductive or capacitive loads.

³⁾ With light/dark ratio 1:1.

 $^{^{4)}}$ A = V_S connections reverse-polarity protected.

⁵⁾ C = interference suppression.

⁶⁾ Rated voltage: 250 V AC/DC.

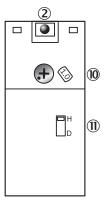
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COMPACT PHOTOELECTRIC SENSORS

ECLASS 12.0	27270901
ETIM 5.0	EC002716
ETIM 6.0	EC002716
ETIM 7.0	EC002716
ETIM 8.0	EC002716
UNSPSC 16.0901	39121528

Adjustments

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



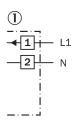
- ② LED signal strength indicator
- Majustment sensing range (WT) / sensitivity (WL, WS/WE)
- 1 Light/dark selector

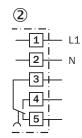
Connection type



Connection diagram

Cd-127



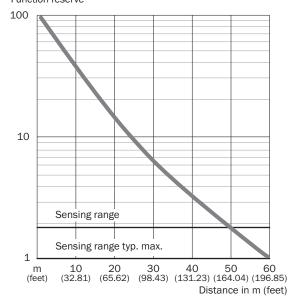


- ① Sender
- ② Receiver

Characteristic curve

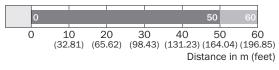
WS/WE24-2

Function reserve



Sensing range diagram

WS/WE24-2

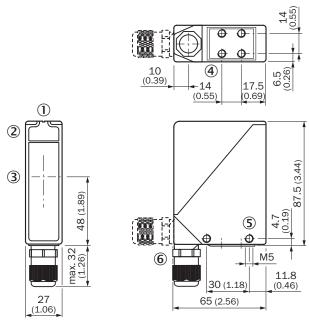


Sensing range

Sensing range max.

Dimensional drawing (Dimensions in mm (inch))

WS/WE24-2



- ① Alignment sight
- ② LED signal strength indicator
- 3 Center of optical axis
- ④ M5 threaded mounting hole, 6 mm deep
- ⑤ M5 threaded mounting hole, through-hole
- $\ \, \textbf{\textcircled{6}} \,\,$ M16 screw fixing and plug rotatable by 90 $^{\circ}$

Recommended accessories

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

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

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