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DATA SHEET

WSE27-3R2631

W27
Photoelectric sensors

SICK Sensor Intelligence



Illustration may differ

PHOTOELECTRIC SENSORS

WSE27-3R2631

ORDERING INFORMATION

Type	part no.
WSE27-3R2631	1027795

Further device versions and accessories at www.sick.com/W27

DETAILED TECHNICAL DATA

FEATURES

Functional principle	Through-beam photoelectric sensor
Dimensions (W x H x D)	24.6 mm x 80.6 mm x 54 mm
Housing design (light emission)	Rectangular
Sensing range max.	0 m ... 35 m
Sensing range	0 m ... 25 m
Focus	Approx. 1.5°
Type of light	Visible red light
Light source	LED [1]
Light spot size (distance)	Ø 600 mm (25 m)
Angle of dispersion	Approx. 1.5°
Wave length	645 nm
Adjustment	Potentiometer

[1] 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 [1]
Power consumption	≤ 5.5 VA

[1] Limit values.

[2] Provide suitable arc suppression for inductive or capacitive loads. Relay contacts are separated from the supply voltage by a basic isolation of 3 mm. Depending on the application, additional isolation might have to be applied in the user's circuit.

[3] With light/dark ratio 1:1.

[4] A = V_S connections reverse-polarity protected.

[5] C = interference suppression.

[6] Reference voltage: 250 V AC, overvoltage category 2.

[7] UL: 0 °C ... +60 °C.

Switching output	Relay, electrically isolated [2]
Output function	Change-over contacts
Switching mode	Light/dark switching
Switching mode selector	Selectable via time delay selector switch
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) / 0 °C ... +60 °C
Response time	≤ 10 ms
Switching frequency	10 Hz [3]
Angle of reception	Approx. 3°
Time functions	Switch-on delay Off delay Switch on delay and time delay off
Delay time	Adjustable via time delay selector switch, 0.5 s ... 10 s
Connection type	Male connector Q6, 6-pin, AC/UC-coded
Circuit protection	A [4] C [5]
Protection class	II [6]
Weight	240 g
Housing material	Plastic, ABS
Optics material	Plastic, PMMA
Enclosure rating	IP65
Usage category	AC-15, DC-13 According to EN 60947-1
Ambient operating temperature	–40 °C ... +60 °C [7]
Ambient temperature, storage	–40 °C ... +75 °C
UL File No.	NRKH.E181493 & NRKH7.E181493
Part number of individual components	2033597 WS27-3U2630 2038939 WE27-3R2631

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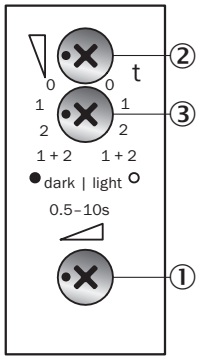
[7] UL: 0 °C ... +60 °C.

SAFETY-RELATED PARAMETERS

$MTTF_D$	443 years
DC_{avg}	0 %
B_{10D}	65,693 Switching cycles [1]

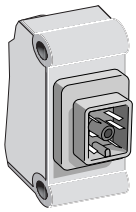
[1] Only for devices containing electro-mechanical components. In this case, the $MTTF_D$ value of the entire device must be calculated from the given B_{10D} value, the number of switching cycles and the given $MTTF_D$ value.

ADJUSTMENTS POTENTIOMETER, TIME FUNCTIONS, LIGHT-/DARK-SWITCH

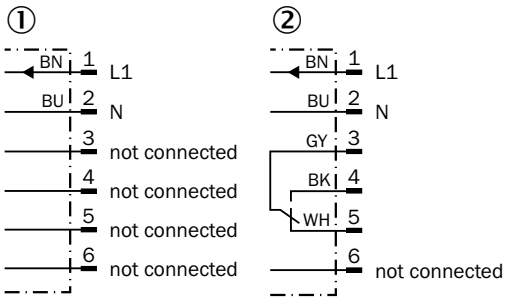


① Potentiometer
② Time control
③ time delay selector switch

CONNECTION TYPE

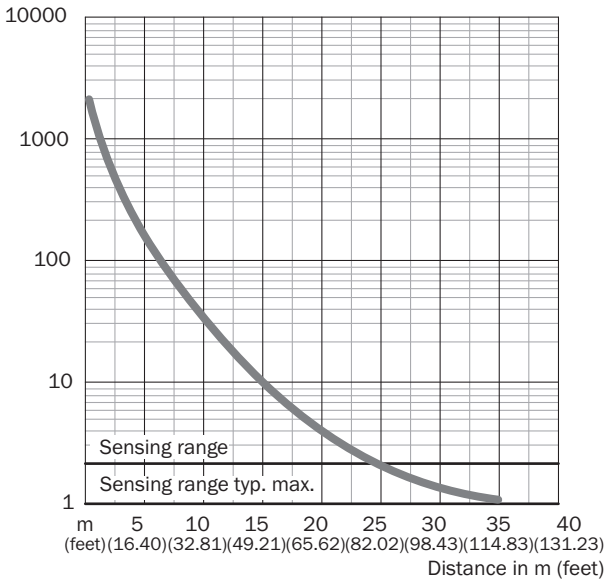


CONNECTION DIAGRAM CD-159

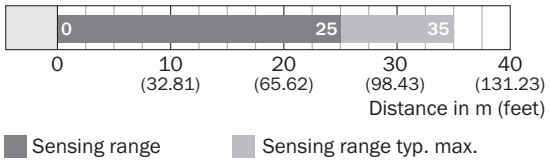


① sender
② receiver

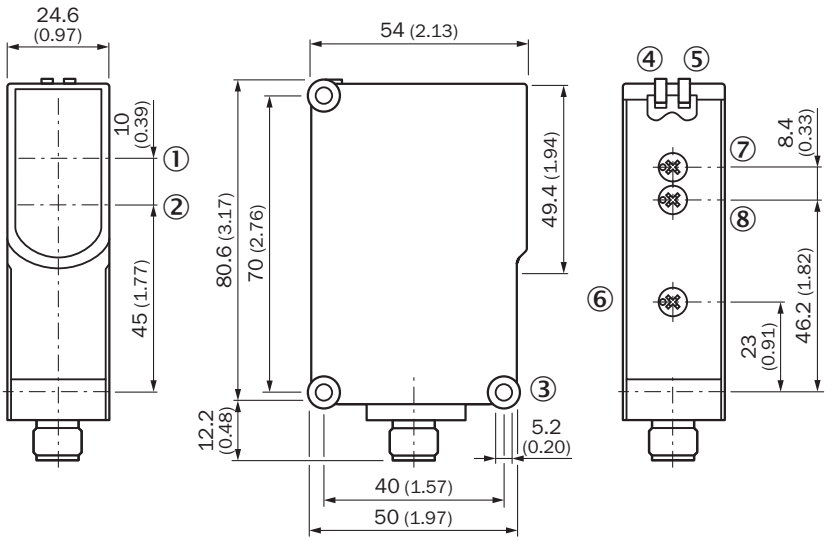
CHARACTERISTIC CURVE



SENSING RANGE DIAGRAM WSE27-3



DIMENSIONAL DRAWING WL27-3, WSE27-3, POTENTIOMETER, TIME FUNCTIONS



Dimensions in mm (inch)
① optical axis, sender
② Optical axis, receiver
③ Mounting hole ø 5.2 mm
④ LED indicator green: Supply voltage active
⑤ LED indicator yellow: Status of received light beam
⑥ Sensitivity control (10 revolutions)
⑦ Time control
⑧ time delay selector switch

Further information as well as suitable accessories, example applications and downloads such as CAD dimensional models, operating instructions and software can be found at www.sick.com/1027795

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SICK AT A GLANCE

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SICK combines sensor intelligence with industry expertise and certified consulting services. We provide the ideal foundation for scalable as well as tailor-made automation solutions and create added value along the entire value chain. Our close partnerships with our customers are more than just a promise: Together, we optimize productivity, improve quality, protect health and safety, and help build a sustainable future. All with empathy and trust.

Since 1946, we have been developing innovative technologies with passion and a pioneering spirit. With a global network in around 40 countries, SICK has a global presence and is always close by. The company's headquarters are located in Waldkirch near Freiburg, Germany. Our customers benefit from our understanding of both local and global requirements, which enables us to deliver tailor-made solutions

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