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DATA SHEET

WSE27-3F2631

W27
Photoelectric sensors

SICK Sensor Intelligence



Illustration may differ

PHOTOELECTRIC SENSORS

WSE27-3F2631

ORDERING INFORMATION

Type	part no.
WSE27-3F2631	1027792

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_s	10 V DC ... 30 V DC ¹⁾
Ripple	< 5 V _{pp} ²⁾
Power consumption, sender	35 mA ³⁾
Power consumption, receiver	20 mA ³⁾
Switching output	PNP
Output function	Complementary
Switching mode	Light/dark switching
Signal voltage PNP HIGH/LOW	Approx. $V_s - 2.5 \text{ V} / 0 \text{ V}$
Output current I_{max}	≤ 100 mA
Response time	≤ 500 μs ⁴⁾
Switching frequency	1,000 Hz ⁵⁾
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, 0.02 s, 0.5 s ... 0.5 s, 10 s
Connection type	Male connector, Q6, 6-pin, DC-coded
Circuit protection	A ⁶⁾ B ⁷⁾ C ⁸⁾
Protection class	II ⁹⁾
Weight	200 g
Housing material	Plastic, ABS
Optics material	Plastic, PMMA
Enclosure rating	IP65
Test input sender off	TE to 0 V
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	2033595 WS27-3D2630 2033602 WE27-3F2631

¹⁾ Limit values when operated in short-circuit protected network: max. 8 A.

²⁾ May not fall below or exceed U_v tolerances.

³⁾ Without load.

⁴⁾ Signal transit time with resistive load.

⁵⁾ With light/dark ratio 1:1.

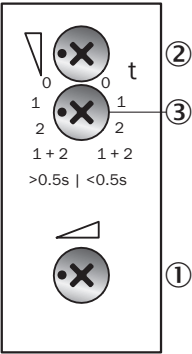
⁶⁾ A = V_s connections reverse-polarity protected.

⁷⁾ B = inputs and output reverse-polarity protected.

⁸⁾ C = interference suppression.

⁹⁾ Reference voltage: 50 V DC.

ADJUSTMENTS POTENTIOMETER, TIME FUNCTIONS

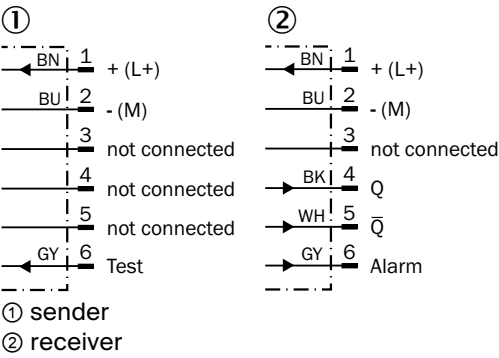


- ① Potentiometer
- ② Time control
- ③ time delay selector switch

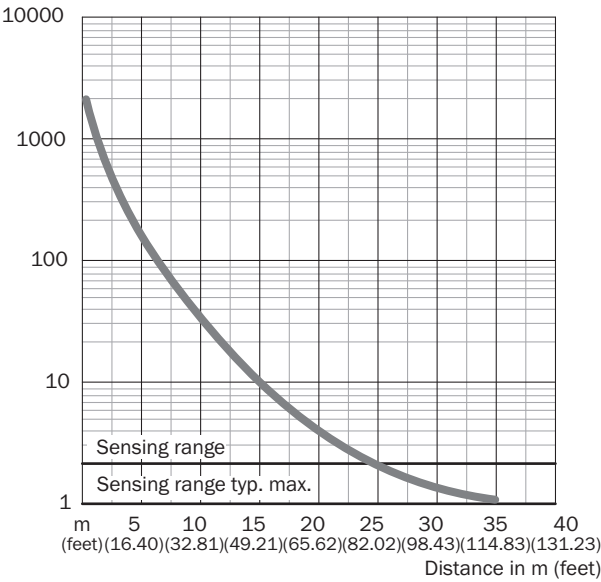
CONNECTION TYPE



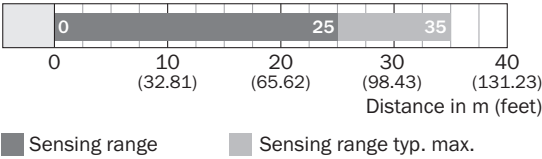
CONNECTION DIAGRAM CD-143



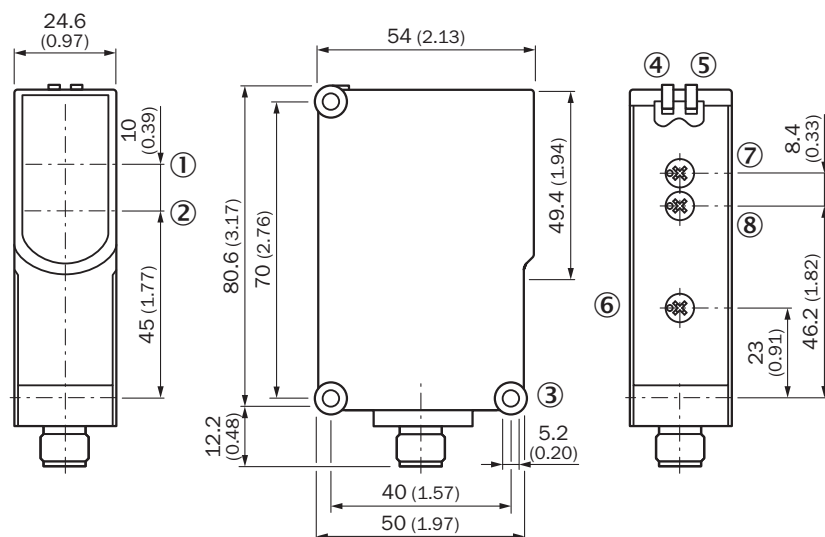
CHARACTERISTIC CURVE



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 $\varnothing$ 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/1027792



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SICK AT A GLANCE

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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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