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DATA SHEET

WSE27X-3P1830

W27
Photoelectric sensors

SICK Sensor Intelligence

Illustration may differ

PHOTOELECTRIC SENSORS

WSE27X-3P1830

ORDERING INFORMATION

Type	part no.
WSE27X-3P1830	1027991

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)	31.4 mm x 112.3 mm x 70.4 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	None
Special applications	Explosive areas

[1] Average service life: 100,000 h at T_U = +25 °C.

MECHANICS/ELECTRONICS

Supply voltage U_B	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 V / 0 V
Output current $I_{max.}$	≤ 100 mA
Response time	≤ 500 µs [4]
Switching frequency	1,000 Hz [5]
Angle of reception	Approx. 3°
Connection type	Cable, 4-wire, 10 m [6]
Cable material	Plastic, PVC
Circuit protection	A [7] B [8] C [9]
Protection class	II [10]
Weight	1,500 g
Housing material	Metal, Stainless steel V2A (1.4301) Plastic, ABS
Optics material	Plastic, PMMA
Enclosure rating	IP67
ATEX marking	ATEX II 3G Ex nA op is IIB T4 Gc X ATEX II 3D Ex tc IIIB T135°C Dc X In accordance with directive 2014/34 / EU
Ex area category	3D, 3G
Ambient operating temperature	–20 °C ... +50 °C
Ambient temperature, storage	–40 °C ... +75 °C
Part number of individual components	2033627 WE27X-3P1830 2033628 WS27X-3D1830

[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] Do not bend below 0 °C.

[7] A = V_s connections reverse-polarity protected.

[8] B = inputs and output reverse-polarity protected.

[9] C = interference suppression.

[10] Reference voltage: 50 V DC.

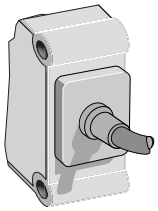
SAFETY-RELATED PARAMETERS

$MTTF_D$	996 years
DC_{avg}	0 %

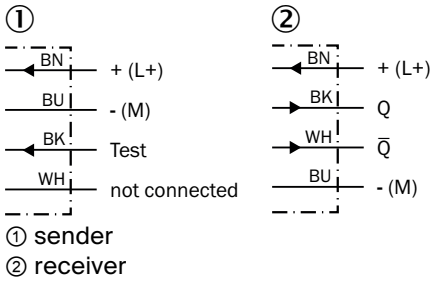
CERTIFICATES

EU declaration of conformity	✓
UK declaration of conformity	✓
ACMA declaration of conformity	✓
Moroccan declaration of conformity	✓
China RoHS	✓
cULus certificate	✓
Photobiological safety (DIN EN 62471) certificate	✓

CONNECTION TYPE

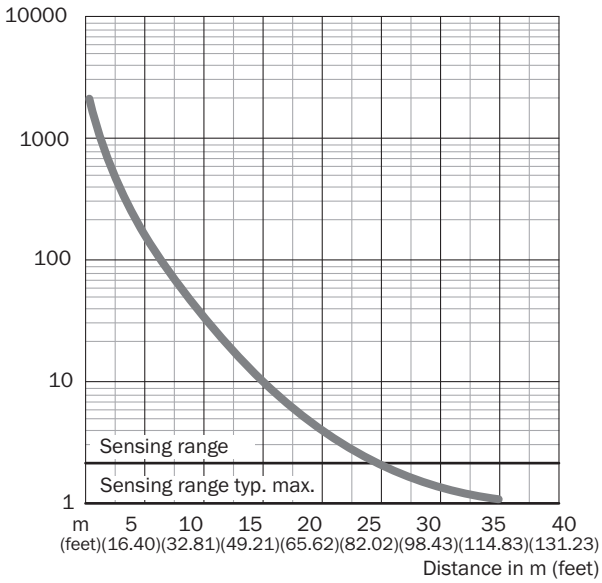


CONNECTION DIAGRAM CD-088

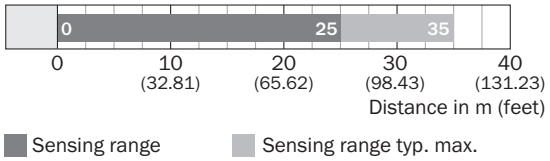


① sender
② receiver

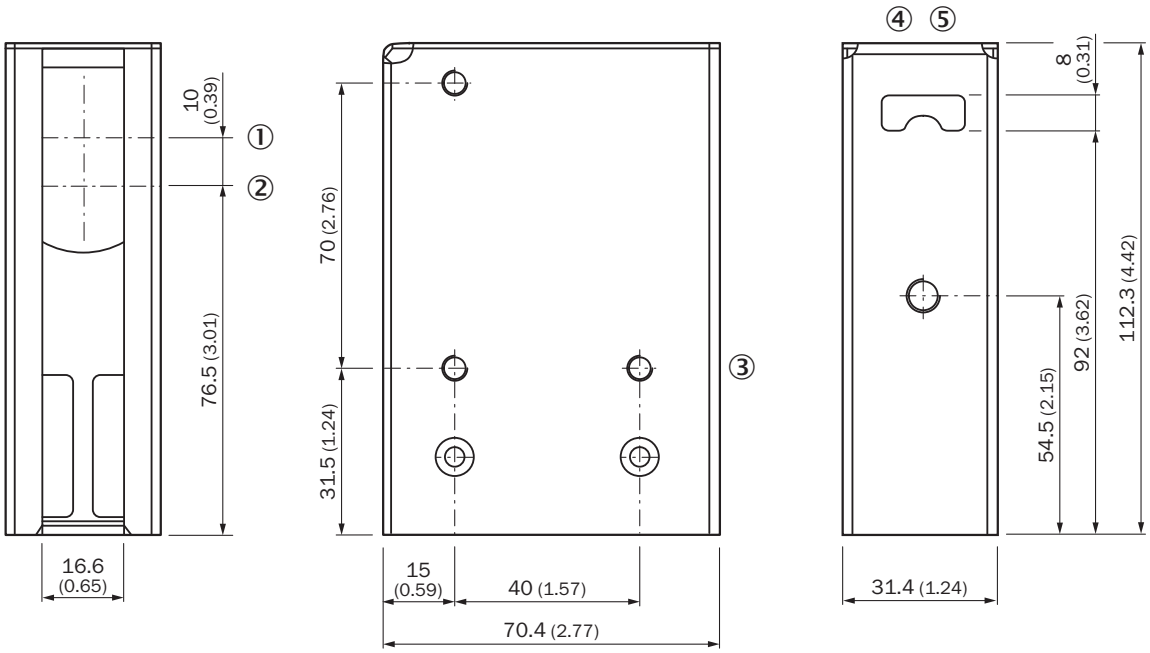
CHARACTERISTIC CURVE WSE27-3 EX



SENSING RANGE DIAGRAM



DIMENSIONAL DRAWING WSE27-3 EX



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

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/1027991

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SICK AT A GLANCE

SICK is a leading global technology company for intelligent sensors and integrated solutions in industrial automation. Our technologies set benchmarks, making your industrial processes more efficient, safer and more sustainable – both in logistics and manufacturing operations.

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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