Data sheet

WSE280-2R4331

W280-2

PHOTOELECTRIC SENSORS

SICK
Sensor Intelligence.

Illustration may differ

Ordering information

Type	part no.
WSE280-2R4331	6044762

Included in delivery: BEF-W280 (1)

Other models and accessories ➜ www.sick.com/W280-2

Detailed technical data

Features

Functional principle	Through-beam photoelectric sensor
Dimensions (W x H x D)	23.5 mm x 74.5 mm x 63 mm
Housing design (light emission)	Rectangular
Sensing range max.	0 m ... 60 m
Sensing range	0 m ... 50 m
Type of light	Visible red light
Light source	LED [1]
Light spot size (distance)	Ø 0.6 m (20 m)
Adjustment	Potentiometer

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

Mechanics/electronics

Supply voltage U_B	24 V DC ... 240 V DC [1] 24 V AC ... 240 V AC [1]
Power consumption, sender	≤ 3.5 VA
Power consumption, receiver	≤ 3.5 VA
Switching output	Relay, electrically isolated [2]

[1] +- 10%.

[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.

[7] In the case of a DC supply (relating to EN 61000-6-3) the length of cable between the supply source and the sensor must be < 30 m.

[8] The AC/DC devices (-2Rxxxx only) comply with the Radio Safety Requirements for the industrial sector (Radio Safety Class A). They may cause radio interference if used in a residential area.

Output function	Change-over contacts
Switching mode	Light switching [2]
Switching current (switching voltage)	3 A (240 V AC) 3 A (30 V DC)
Response time	≤ 15 ms
Switching frequency	33 Hz [3]
Connection type	Cable gland
Circuit protection	A [4] C [5]
Protection class	II [6]
Overvoltage category	3
Weight	300 g
Interference emission	EN 61000-6-3 (only –2Hxxxx) [7]
Housing material	Plastic, ABS
Optics material	Plastic, PMMA
Enclosure rating	IP66 IP67
Items supplied	Mounting bracket BEF-W280
Usage category	AC-15, DC-13 According to EN 60947-1
Electromagnetic compatibility (EMC)	EN 60947-5-2 EN 61000-6-3 (only –2Hxxxx) [8] [8]
Ambient operating temperature	–25 °C ... +55 °C
Ambient temperature, storage	–40 °C ... +70 °C
UL File No.	NRKH2.E300503 & NRKH8.E300503

[1] +- 10%.

[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.

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Safety-related parameters

$MTTF_D$	446 years
DC_{avg}	0 %

Certificates

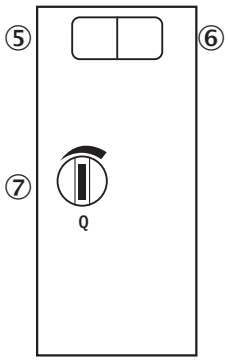
EU declaration of conformity	✓
UK declaration of conformity	✓
ACMA declaration of conformity	✓
Moroccan declaration of conformity	✓
China RoHS	✓
CCC certificate	✓

cRUus certificate	✓
Photobiological safety (DIN EN 62471) certificate	✓

Classifications

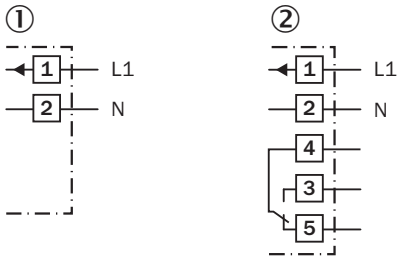
ECLASS 5.0	27270901
ECLASS 5.1.4	27270901
ECLASS 6.0	27270901
ECLASS 6.2	27270901
ECLASS 7.0	27270901
ECLASS 8.0	27270901
ECLASS 8.1	27270901
ECLASS 9.0	27270901
ECLASS 10.0	27270901
ECLASS 11.0	27270901
ECLASS 12.0	27270901
ETIM 5.0	EC002716
ETIM 6.0	EC002716
ETIM 7.0	EC002716
ETIM 8.0	EC002716
UNSPSC 16.0901	39121528

Adjustments WSE280-2H/-2R



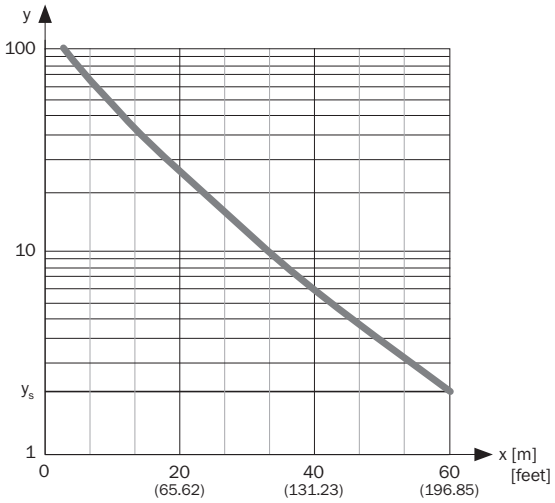
⑤ LED indicator green: Stability indicator
⑥ Status indicator LED, yellow: Status of received light beam (only receiver WE)
⑦ Sensitivity adjustment: Potentiometer (only receiver WE)

Connection diagram Cd-227

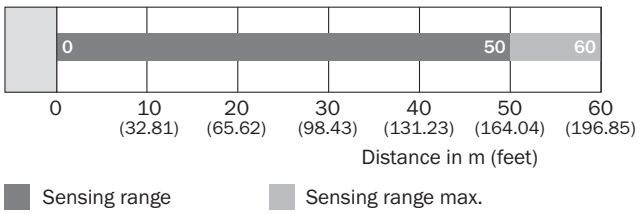


① sender
② receiver

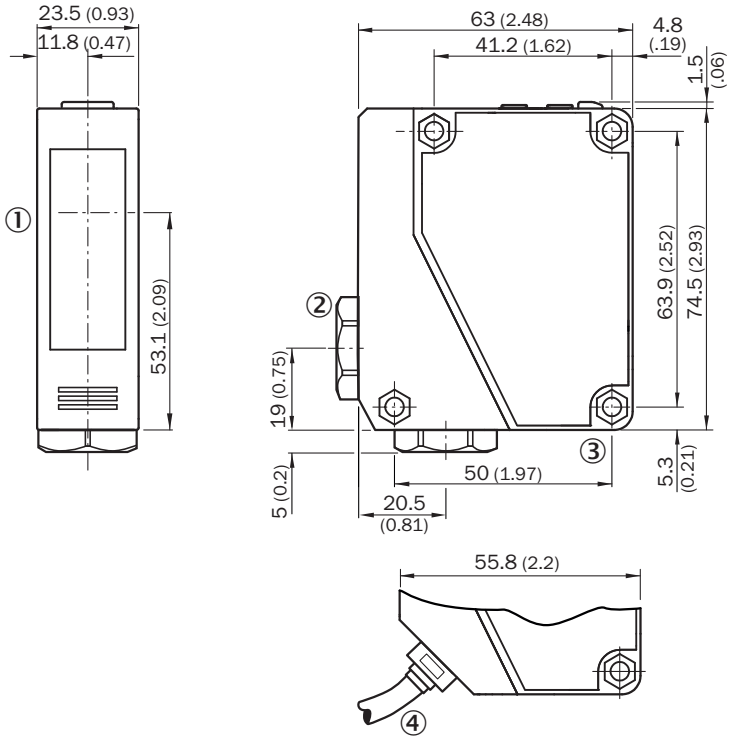
Characteristic curve WSE280-2



Sensing range diagram WSE280-2



Dimensional drawing WSE280-2, AC/DC



Dimensions in mm (inch)
① Sender and receiver optical axis center
② Cable entry gland 3/8" for cable diameter 6 to 8 mm
③ Mounting hole, Ø 4.3 mm
④ Cable, 2 m, 5-wire, Ø 6.3 mm

Recommended accessories

Other models and accessories ➜ www.sick.com/W280-2

	Brief description	Type	part no.
Mounting systems			
	• **Description:** Mounting bracket • **Material:** Stainless steel • **Details:** Stainless steel V2A (1.4301) • **Items supplied:** 2 screws, 2 nuts, 2 circlips, 2 washers for mounting the sensor • **Suitable for:** W280-2, G20	BEF-W280	5313885

SICK AT A GLANCE

SICK is one of the leading manufacturers of intelligent sensors and sensor solutions for industrial applications. A unique range of products and services creates the perfect basis for controlling processes securely and efficiently, protecting individuals from accidents and preventing damage to the environment.

We have extensive experience in a wide range of industries and understand their processes and requirements. With intelligent sensors, we can deliver exactly what our customers need. In application centers in Europe, Asia and North America, system solutions are tested and optimized in accordance with customer specifications. All this makes us a reliable supplier and development partner.

Comprehensive services complete our offering: SICK LifeTime Services provide support throughout the machine life cycle and ensure safety and productivity.

For us, that is “Sensor Intelligence.”

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