



WSE280-2N1131

W280-2

PHOTOELECTRIC SENSORS

SICK
Sensor Intelligence.



Illustration may differ



Ordering information

Type	part no.
WSE280-2N1131	6044744

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	10 V DC ... 30 V DC ¹⁾
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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⁾ D = outputs overcurrent and short-circuit protected.
¹¹⁾ The AC/DC devices (-2Rxxx 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.

Ripple	$< 5 V_{pp}^{2)}$
Power consumption, sender	$\leq 20 \text{ mA}$
Power consumption, receiver	$\leq 20 \text{ mA}^{3)}$
Switching output	NPN
Switching mode	Light/dark switching
Switching mode selector	Selectable via light/dark rotary switch
Output current $I_{max.}$	$\leq 100 \text{ mA}$
Response time	$\leq 0.5 \text{ ms}^{4)}$
Switching frequency	$1,000 \text{ Hz}^{5)}$
Connection type	Cable, 3-wire, 2 m ⁶⁾
Cable material	Plastic, PVC
Conductor cross section	0.18 mm^2
Circuit protection	A ⁷⁾ B ⁸⁾ C ⁹⁾ D ¹⁰⁾
Protection class	III
Weight	300 g
Housing material	Plastic, ABS
Optics material	Plastic, PMMA
Enclosure rating	IP66 IP67
Items supplied	Mounting bracket BEF-W280
Electromagnetic compatibility (EMC)	EN 60947-5-2 ¹¹⁾
Ambient operating temperature	$-25 \text{ }^{\circ}\text{C} \dots +55 \text{ }^{\circ}\text{C}$
Ambient temperature, storage	$-40 \text{ }^{\circ}\text{C} \dots +70 \text{ }^{\circ}\text{C}$
UL File No.	NRKH2.E300503 & NRKH8.E300503

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Certificates

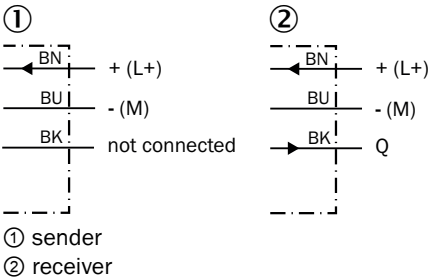
EU declaration of conformity	✓
UK declaration of conformity	✓
ACMA declaration of conformity	✓
Moroccan declaration of conformity	✓

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

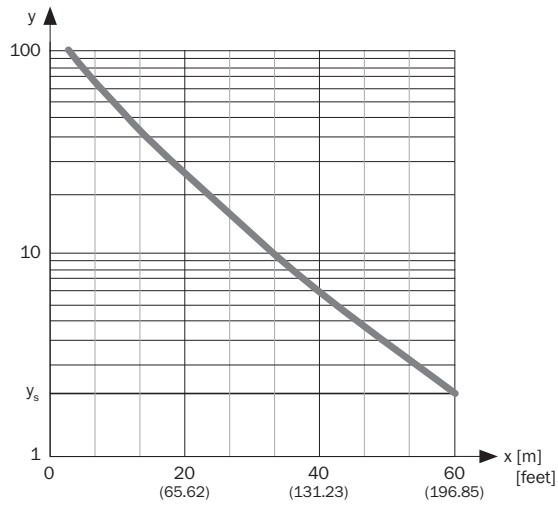
Classifications

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

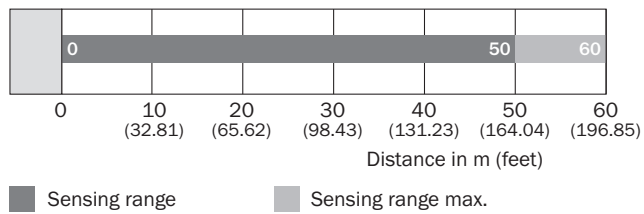
Connection diagram Cd-049



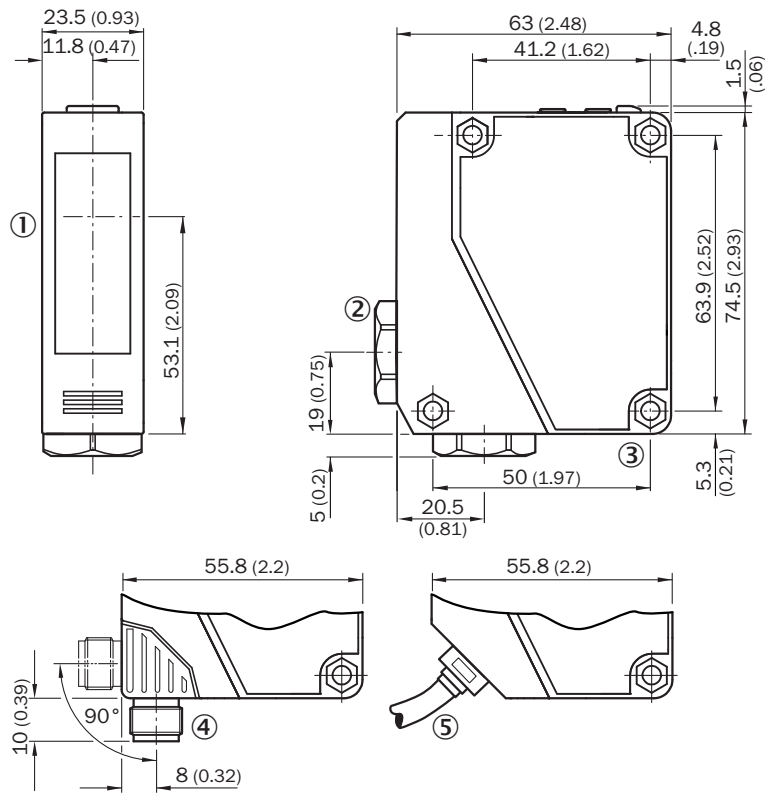
Characteristic curve WSE280-2



Sensing range diagram WSE280-2



Dimensional drawing WSE280-2, 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 M12 male connector, 4-pin, can be rotated through 90°, can be locked with slider
- ⑤ Cable, 2 m, 3-wire, Ø 3,8 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
	Description: Plate N11N for universal clamp bracket Material: Stainless steel Details: Stainless steel 1.4571 (sheet), Stainless steel 1.4408 (clamp) Items supplied: Universal clamp (5322627), mounting hardware Usable for: DeltaPac, Glare, WTD20E	BEF-KHS-N11N	2071081
connectors and cables			
	Connection type head A: Male connector, M8, 3-pin, straight, A-coded Description: Unshielded Connection systems: Screw-type terminals Permitted cross-section: 0.14 mm² ... 0.5 mm²	STE-0803-G	6037322

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.”

WORLDWIDE PRESENCE:

Contacts and other locations –www.sick.com