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Product data sheet



WSE280-2P2431

W280-2

COMPACT PHOTOELECTRIC SENSORS

SICK
Sensor Intelligence.

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WSE280-2P2431 | W280-2

COMPACT PHOTOELECTRIC SENSORS



Illustration may differ

Ordering information

Type	Part no.
WSE280-2P2431	6044745

Included in delivery: BEF-W280 (2)

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]
Ripple	< 5 V_{pp} [2]
Power consumption, sender	≤ 20 mA
Power consumption, receiver	≤ 20 mA [3]
Switching output	PNP
Switching mode	Light/dark switching

[1] Limit values when operated in short-circuit protected network: max. 8 A.
[2] May not exceed or fall below 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] D = outputs overcurrent and short-circuit protected.
[10] 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.

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Switching mode selector	Selectable via light/dark rotary switch
Output current $I_{max.}$	≤ 100 mA
Response time	≤ 0.5 ms [4]
Switching frequency	1,000 Hz [5]
Connection type	Male connector M12, 4-pin
Circuit protection	A [6] B [7] C [8] D [9]
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 [10]
Ambient operating temperature	–25 °C ... +55 °C
Ambient temperature, storage	–40 °C ... +70 °C
UL File No.	NRKH2.E300503 & NRKH8.E300503

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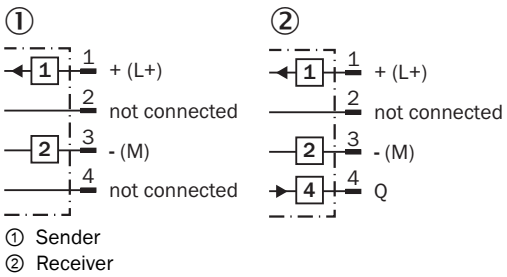
Classifications

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

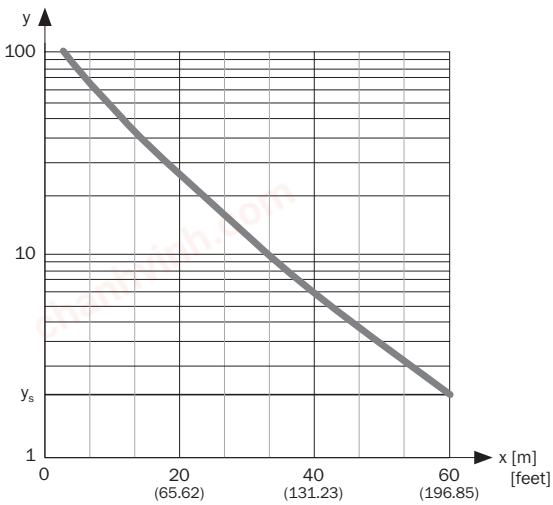
Cd-187



① Sender
② Receiver

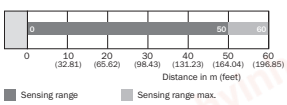
Characteristic curve

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Sensing range diagram

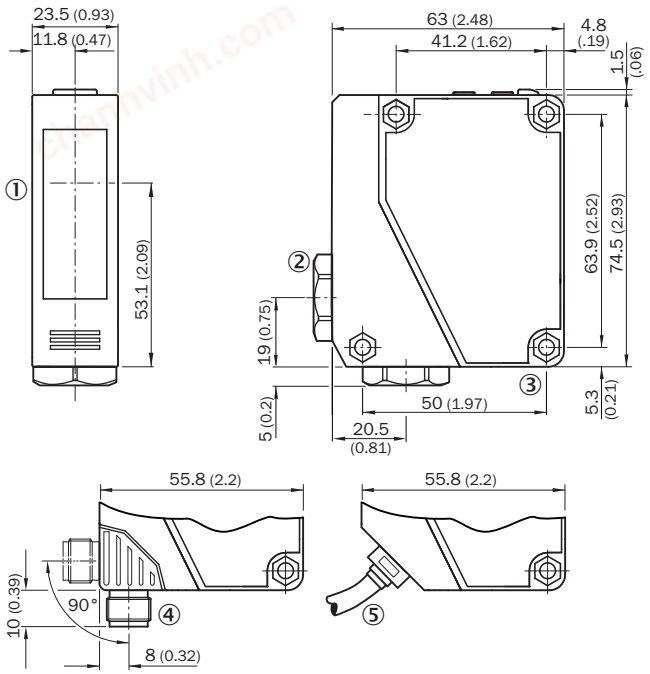
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Dimensional drawing (Dimensions in mm (inch))

WSE280-2, DC



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.
Plug connectors and cables			
	• **Connection type head A:** Female connector, M12, 4-pin, straight, A-coded • **Connection type head B:** Flying leads • **Signal type:** Sensor/actuator cable • **Cable:** 5 m, 4-wire, PVC • **Description:** Sensor/actuator cable, unshielded • **Application:** Zones with chemicals	YF2A14-050VB3XLEAX	2096235
	• **Connection type head A:** Male connector, M12, 4-pin, straight • **Description:** Unshielded • **Connection systems:** Screw-type terminals • **Permitted cross-section:** ≤ 0.75 mm²	STE-1204-G	6009932

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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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