chanhvinh.com

Product data sheet



WTE280-2R4331

W280-2

COMPACT PHOTOELECTRIC SENSORS

SICK
Sensor Intelligence.

chanhvinh.com

WTE280-2R4331 | W280-2

COMPACT PHOTOELECTRIC SENSORS



Illustration may differ

Ordering information

Type	Part no.
WTE280-2R4331	6044758

Included in delivery: BEF-W280 (1)

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

Detailed technical data

Features

Functional principle	Photoelectric proximity sensor
Functional principle detail	Energetic
Dimensions (W x H x D)	23.5 mm x 74.5 mm x 63 mm
Housing design (light emission)	Rectangular
Sensing range max.	10 mm ... 2,000 mm [1]
Sensing range	10 mm ... 1,500 mm
Type of light	Visible red light
Light source	LED [2]
Light spot size (distance)	Ø 45 mm (1,500 mm)
Adjustment	Potentiometer adjustable via sensing range adjustment

[1] Object with 90% remission (based on standard white, DIN 5033).

[2] 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	≤ 5 VA
Switching output	Relay, electrically isolated [2]
Output function	Change-over contacts

[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.

chanhvinh.com

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	150 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
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.
[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.

Safety-related parameters

$MTTF_D$	1,569 years
DC_{avg}	0 %

Classifications

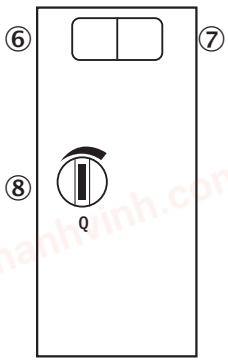
ECLASS 5.0	27270903
ECLASS 5.1.4	27270903
ECLASS 6.0	27270903
ECLASS 6.2	27270903
ECLASS 7.0	27270903
ECLASS 8.0	27270903
ECLASS 8.1	27270903
ECLASS 9.0	27270903
ECLASS 10.0	27270904

chanhvinh.com

ECLASS 11.0	27270904
ECLASS 12.0	27270903
ETIM 5.0	EC001821
ETIM 6.0	EC001821
ETIM 7.0	EC002719
ETIM 8.0	EC002719
UNSPSC 16.0901	39121528

Adjustments

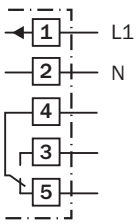
WTE280-2, AC/DC



⑥ LED indicator green: Stability indicator
⑦ LED indicator yellow: Status of received light beam
⑧ Sensing range adjustment: potentiometer

Connection diagram

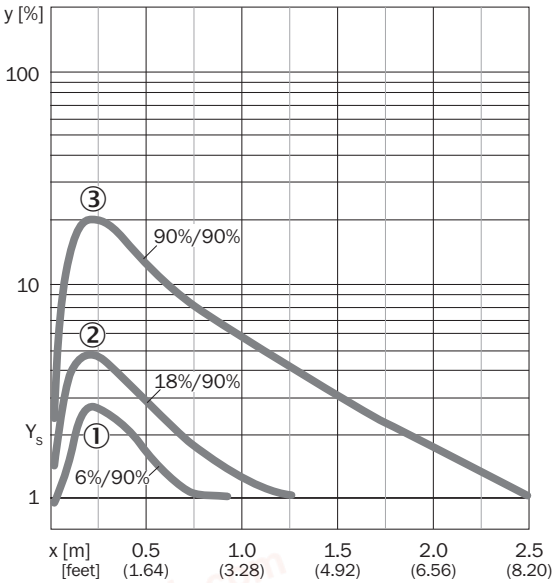
Cd-239



chanhvinh.com

Characteristic curve

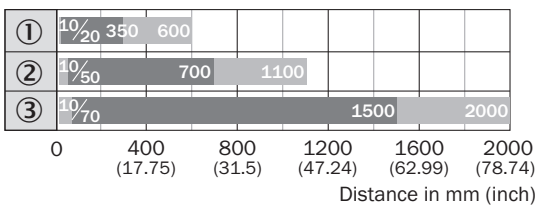
WTE280-2



① Sensing range on black, 6% remission factor
② Sensing range on gray, 18% remission factor
③ Sensing range on white, 90% remission factor

Sensing range diagram

WTE280-2

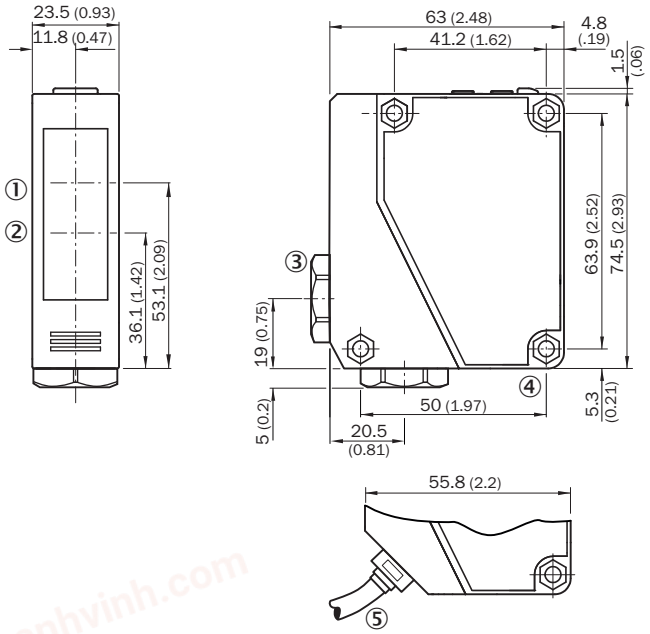


Sensing range Sensing range max.

① Sensing range on black, 6% remission factor
② Sensing range on gray, 18% remission factor
③ Sensing range on white, 90% remission factor

Dimensional drawing (Dimensions in mm (inch))

WTE280-2, WL280-2, AC/DC



① Center of optical axis, receiver
② Center of optical axis, sender
③ Cable entry gland 3/8" for cable diameter 6 to 8 mm
④ Mounting hole, Ø 4.3 mm
⑤ Cable, 2 m, 5-wire, Ø 6.3 mm

chanhvinh.com

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