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TECHNOLOGY GROUP

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Product data sheet



WL150-N430

W150

MINIATURE PHOTOELECTRIC SENSORS

SICK
Sensor Intelligence.



Illustration may differ

Ordering information

Type	Part no.
WL150-N430	6011035

Included in delivery: PL20A (1), BEF-W150-A (1)

Other models and accessories → www.sick.com/W150

Detailed technical data

Features

Sensor/ detection principle	Photoelectric retro-reflective sensor, Dual lens
Dimensions (W x H x D)	10 mm x 28 mm x 17.5 mm
Housing design (light emission)	Rectangular
Sensing range max.	0 m ... 2.4 m [1]
Sensing range	0.01 m ... 2 m [1]
Focus	Approx. 6°
Type of light	Visible red light
Light source	LED [2]
Angle of dispersion	Approx. 6°
Adjustment	Potentiometer, 270°

[1] Reflector PL80A.
[2] Average service life: 100,000 h at T_U = +25 °C.

Mechanics/electronics

Supply voltage	10 V DC ... 30 V DC [1]
Ripple	± 10 % [2]
Current consumption	20 mA [3]
Switching output	NPN

[1] Limit values.
[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.

Switching mode	Light/dark switching
Switching mode selector	Selectable via L/D control cable
Output current $I_{max.}$	≤ 100 mA
Response time	≤ 0.5 ms [4]
Switching frequency	1,000 Hz [5]
Connection type	Male connector M8, 4-pin
Circuit protection	A [6] B [7] C [8] D [9]
Protection class	II
Weight	7 g
Polarisation filter	✓
Housing material	Plastic, ABS
Optics material	Plastic, PMMA
Enclosure rating	IP67
Items supplied	BEF-W150-A mounting bracket, Reflector PL20A
Ambient operating temperature	–25 °C ... +55 °C
Ambient temperature, storage	–40 °C ... +75 °C
UL File No.	NRNT2.E128350 & NRNT8.E128350

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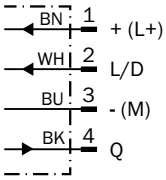
Classifications

ECl@ss 5.0	27270902
ECl@ss 5.1.4	27270902
ECl@ss 6.0	27270902
ECl@ss 6.2	27270902
ECl@ss 7.0	27270902
ECl@ss 8.0	27270902
ECl@ss 8.1	27270902
ECl@ss 9.0	27270902
ECl@ss 10.0	27270902
ECl@ss 11.0	27270902
ETIM 5.0	EC002717
ETIM 6.0	EC002717
ETIM 7.0	EC002717

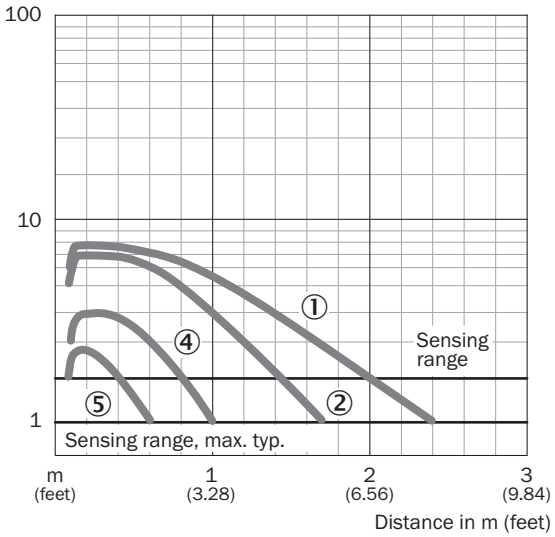
ETIM 8.0	EC002717
UNSPSC 16.0901	39121528

Connection diagram

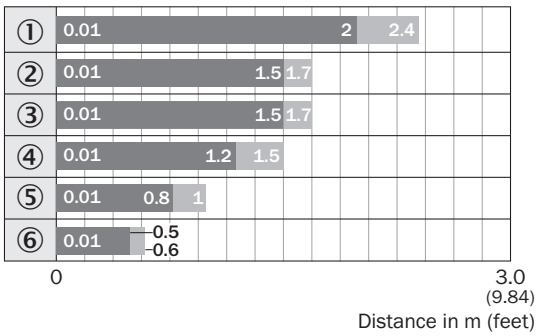
Cd-087



Characteristic curve



Sensing range diagram

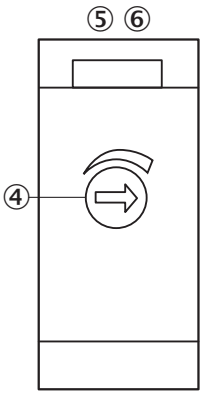


Sensing range Sensing range typ. max.

Reflector type

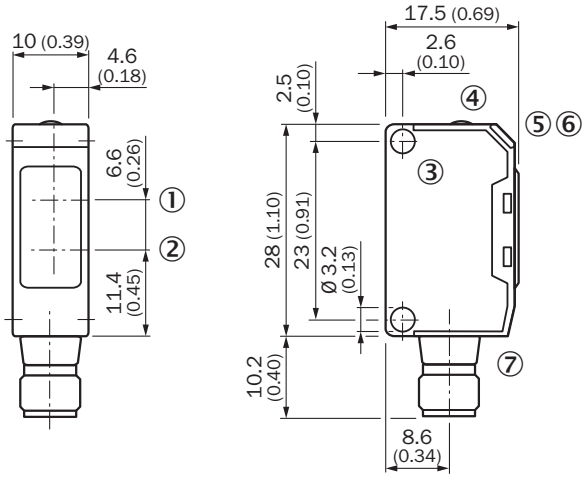
① PL80A
② PL250
③ PL50A or PL40A
④ PL30A or PL31A
⑤ PL20A
⑥ Reflective tape Diamond Grade

Adjustments



⑤ Sensing range adjustment: potentiometer, 5 turns
⑥ LED indicator green: stability indicator
⑦ LED indicator orange: output active

Dimensional drawing (Dimensions in mm (inch))



① Standard direction of the material being detected
② Center of optical axis, receiver
③ Center of optical axis, sender
④ Mounting hole, Ø 3.2 mm
⑤ Sensing range adjustment: potentiometer, 5 turns
⑥ LED indicator green: stability indicator
⑦ LED indicator orange: output active
⑧ Connection

Recommended accessories

Other models and accessories ➜ www.sick.com/W150

	Brief description	Type	Part no.
Mounting brackets and plates			
	Universal mounting bracket for reflectors, steel, zinc coated	BEF-WN-REFX	2064574
Plug connectors and cables			
	Head A: female connector, M8, 4-pin, straight, A-coded Head B: Flying leads Cable: Sensor/actuator cable, PVC, unshielded, 5 m	YF8U14-050VA3XLEAX	2095889
	Head A: male connector, M8, 4-pin, straight Head B: - Cable: unshielded	STE-0804-G	6037323
Reflectors			
	Rectangular, screw connection, 51 mm x 61 mm, PMMA/ABS, Screw-on, 2 hole mounting	P250	5304812

SICK AT A GLANCE

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