

WL34-B430S03

PHOTOELECTRIC SENSORS



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Ordering information

Туре	part no.
WL34-B430S03	1027858

Other models and accessories → www.sick.com/W34

Illustration may differ



Detailed technical data

Features

Functional principle	Photoelectric retro-reflective sensor	
Functional principle detail	With minimum distance to reflector (dual lens system)	
Dimensions (W x H x D)	27 mm x 92 mm x 70 mm	
Housing design (light emission)	Rectangular	
Sensing range max.	0.03 m 22 m ¹⁾	
Sensing range	0.03 m 15 m ¹⁾	
Type of light	Visible red light	
Light source	LED ²⁾	
Light spot size (distance)	Ø 250 mm (15 m)	
Wave length	660 nm	
Adjustment	Potentiometer	
Special features	No test input TE	

¹⁾ Reflector PL80A.

Mechanics/electronics

Supply voltage U _B	10 V DC 30 V DC ¹⁾

¹⁾ Limit values.

²⁾ Average service life: 100,000 h at T_U = +25 °C.

 $^{^{2)}\,\}mbox{May}$ not fall below or exceed $\mbox{U}_{\mbox{\sc V}}$ tolerances.

 $^{^{\}rm 3)}$ Signal transit time with resistive load.

⁴⁾ With light/dark ratio 1:1.

 $^{^{5)}}$ A = V_S connections reverse-polarity protected.

⁶⁾ C = interference suppression.

⁷⁾ D = outputs overcurrent and short-circuit protected.

⁸⁾ Reference voltage: 50 V DC.

Ripple	< 5 V _{pp} ²⁾
Current consumption	50 mA
Switching output	NPN, PNP
Switching mode	Light switching, Dark switching
Switching mode selector	Selectable via PNP/NPN selector, selectable via light/dark selector
Output current I _{max.}	≤ 100 mA
Response time	≤ 500 µs ³⁾
Switching frequency	1,000 Hz ⁴⁾
Connection type	Male connector M12, 4-pin
Circuit protection	A ⁵⁾ C ⁶⁾ D ⁷⁾
Protection class	II ⁸⁾
Weight	140 g
Polarisation filter	√
Special device	✓
Housing material	Plastic, ABS
Enclosure rating	IP67
Ambient operating temperature	-40 °C +60 °C
Ambient temperature, storage	-40 °C +75 °C
UL File No.	NRKH.E181493 & NRKH7.E181493

¹⁾ Limit values.

Certificates

EU declaration of conformity	✓
UK declaration of conformity	✓
ACMA declaration of conformity	✓
Moroccan declaration of conformity	✓
China RoHS	✓
EAC certificate / DoC	✓
Photobiological safety (DIN EN 62471) certificate	✓

Classifications

ECLASS 5.0	27270902
ECLASS 5.1.4	27270902
ECLASS 6.0	27270902
ECLASS 6.2	27270902

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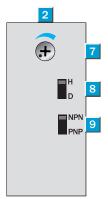
⁸⁾ Reference voltage: 50 V DC.

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ECLASS 7.0	27270902
ECLASS 8.0	27270902
ECLASS 8.1	27270902
ECLASS 9.0	27270902
ECLASS 10.0	27270902
ECLASS 11.0	27270902
ECLASS 12.0	27270902
ETIM 5.0	EC002717
ETIM 6.0	EC002717
ETIM 7.0	EC002717
ETIM 8.0	EC002717
UNSPSC 16.0901	39121528

Adjustments



- ② LED signal strength indicator
- 7 sensitivity control
- 8 Light/dark selector
- NPN/PNP changeover switch

Connection type



Connection diagram Cd-076

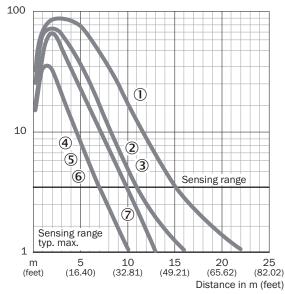
BN
$$\frac{1}{2}$$
 + (L+)

WH $\frac{1}{2}$ not connected

BU $\frac{1}{3}$ - (M)

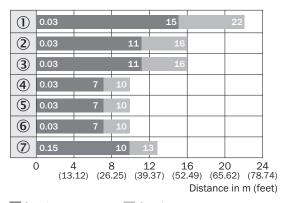
BK $\frac{4}{2}$ Q/ \overline{Q}

Characteristic curve



- ① Reflector PL80A
- 2 Reflector PL50A
- 3 Reflector PL40A
- ④ Reflector PL30A
- ⑤ Reflector PL20A
- ® Reflective tape Diamond Grade
- 7 Reflector C110A

Sensing range diagram



Sensing range

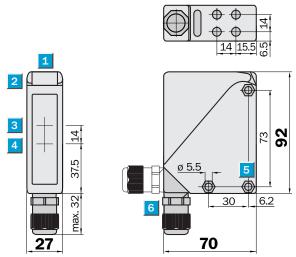
Sensing range max.

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Dimensional drawing



Dimensions in mm (inch)

- 1 Alignment sight
- ② LED signal strength indicator
- 3 Center of optical axis, sender
- 4 Center of optical axis, receiver
- ⑤ Mounting hole ø 5.5 mm, for M5 hexagon nuts on both sides
- ⑥ M16 screw fixing rotatable by 90°

Recommended accessories

Other models and accessories → www.sick.com/W34

	Brief description	Туре	part no.	
Mounting systems				
	 Description: Mounting bracket Material: Stainless steel Details: Stainless steel (1.4301) Items supplied: Mounting hardware included Suitable for: W24-2, W34 	BEF-WN-W24	2015248	
00 00	 Description: Universal mounting bracket for reflectors Dimensions (W x H x L): 85 mm x 90 mm x 35 mm Material: Steel Details: Steel, zinc coated Suitable for: C110A, P250, PL20, PL30A, PL40A, PL80A 	BEF-WN-REFX	2064574	
reflectors and	optics			
Service Constitution	 Description: Rectangular, screw connection Dimensions: 84 mm 84 mm Ambient operating temperature: -30 °C +65 °C 	PL80A	1003865	
connectors an	d 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, Uncontaminated zones	YF2A14-050VB3XLEAX	2096235	
	 Connection type head A: Male connector, M12, 4-pin, straight, A-coded Description: Unshielded Connection systems: Screw-type terminals Permitted cross-section: ≤ 0.75 mm² 	STE-1204-G	6009932	
	 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, PUR, halogen-free Description: Sensor/actuator cable, unshielded Application: Uncontaminated zones, Zones with oils and lubricants, Robot, Drag chain operation 	YF2A14-050UB3XLEAX	2095608	

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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