



Illustration may differ



Ordering information

Model name	Part no.
WT23L-F430	1045643

Other models and accessories → www.sick.de/W23_Laser

Detailed technical data

Features

Sensor/detection principle	Photoelectric proximity sensor, Background suppression
Dimensions (W x H x D)	24,6 mm x 80 mm x 53,5 mm
Housing design (light emission)	Rectangular
Sensing range max.	50 mm ... 800 mm
Sensing range	100 mm ... 800 mm
Type of light	Visible red light
Light source	Laser ¹⁾
Laser class	11 (IEC 60825-1)
Light spot size (distance)	Ø 2 mm, 400 mm
Wave length	650 nm
Adjustment	Potentiometer

¹⁾ Average service life 50,000 h at T_A = +25 °C.

Mechanics/electronics

Supply voltage	10 V DC ... 30 V DC ¹⁾
Ripple	≤ 5 V _{pp} ²⁾
Power consumption	≤ 35 mA ³⁾
Output type	PNP

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⁾ C = interference suppression.

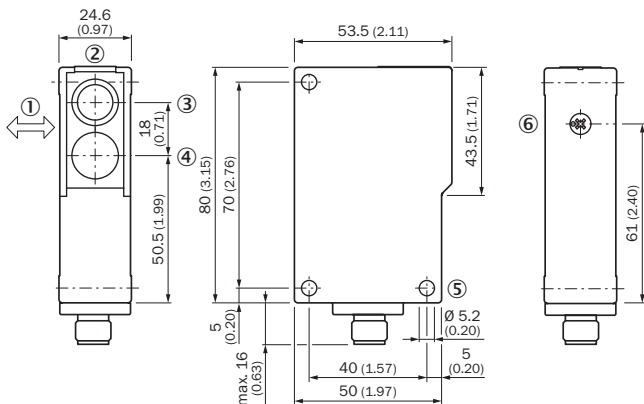
⁸⁾ D = outputs overcurrent and short-circuit protected.

⁹⁾ Reference voltage: 50 V DC.

Output function	Complementary
Switching mode	Light/dark switching
Output current I_{max}	≤ 100 mA
Response time	≤ 25 ms ⁴⁾
Switching frequency	50 Hz ⁵⁾
Connection type	Connector M12, 4-pin
Circuit protection	A ⁶⁾ C ⁷⁾ D ⁸⁾
Protection class	II ⁹⁾
Weight	100 g
Housing material	ABSplastic
Optics material	PMMA
Enclosure rating	IP 65
Ambient operating temperature	-10 °C ... +45 °C
Ambient storage temperature	-10 °C ... +75 °C
UL File No.	NRKH.E181493 & NRKH7.E181493

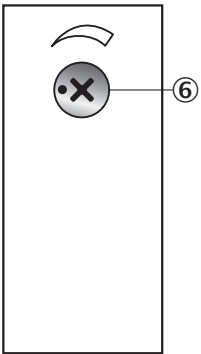
- 1) Limit values.
- 2) May not exceed or fall below U_v tolerances.
- 3) Without load.
- 4) Signal transit time with resistive load.
- 5) With light/dark ratio 1:1.
- 6) A = V_S connections reverse-polarity protected.
- 7) C = interference suppression.
- 8) D = outputs overcurrent and short-circuit protected.
- 9) Reference voltage: 50 V DC.

Dimensional drawing (Dimensions in mm (inch))



- ① Standard direction of the material being detected
- ② LED indicator, power on and status of received light beam
- ③ Optical axis, sender
- ④ Optical axis, receiver
- ⑤ Mounting hole, \varnothing 5.2 mm
- ⑥ Sensing range adjustment: potentiometer

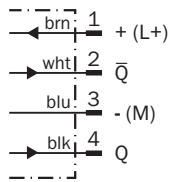
Adjustments possible



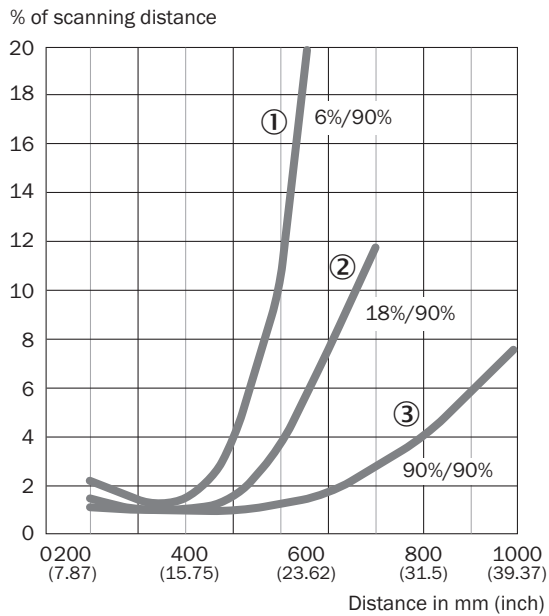
⑥ Sensing range adjustment: potentiometer

Connection diagram

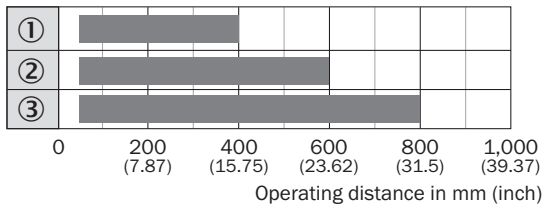
Cd-083



Characteristic curve









Sensing range diagram



- ① Scanning distance on black, 6 % remission
- ② Scanning distance on grey, 18 % remission
- ③ Scanning distance on white, 90 % remission

Recommended accessories

Other models and accessories → www.sick.de/W23_Laser

	Brief description	Model name	Part no.
Universal bar clamp systems			
	Plate N04 for universal clamp bracket, steel, Zinc plated steel (sheet), Diecast zinc (clamp), Universal clamp (5322626), mounting hardware	BEF-KHS-N04	2051610
Device protection (mechanical)			
	Protective housing for universal clamp, Zinc plated steel (protective housing), Diecast zinc (clamp), Universal clamp (5322626), mounting hardware	BEF-SG-W27	2039601
	Weather hood for universal clamp bracket, steel, zinc coated, mounting hardware included	OBW-KHS-M01	2023240
Mounting brackets and mounting plates			
	Mounting bracket with hinged arm, steel, zinc coated, mounting hardware included	BEF-WN-MULTI	2064469
	Mounting bracket, steel, zinc coated, mounting hardware included	BEF-WN-W23	2019085
	Mounting bracket with hinged arm, steel, zinc coated, mounting hardware included	BEF-WN-W27	2009122