Product data sheet



WT2F-P150

W2

MINIATURE PHOTOELECTRIC SENSORS

SICK
Sensor Intelligence.



Illustration may differ

Ordering information

Type	Part no.
WT2F-P150	6030580

Other models and accessories → www.sick.com/W2

Detailed technical data

Features

Functional principle	Photoelectric proximity sensor
Functional principle detail	Energetic
Dimensions (W x H x D)	14 mm x 19.5 mm x 3.5 mm
Housing design (light emission)	Rectangular
Sensing range max.	2 mm ... 34 mm [1]
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Type of light	Visible red light
Light source	LED [2]
Wave length	660 nm
Adjustment	None

[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	12 V DC ... 24 V DC [1]
Ripple	< 5 V_{pp} [2]
Switching output	PNP
Switching mode	Light switching
Signal voltage PNP HIGH/LOW	Approx. V_S – 1.8 V / 0 V

[1] +- 10 %.
[2] May not exceed or fall below U_V tolerances.
[3] Signal transit time with resistive load.
[4] With light/dark ratio 1:1.
[5] Do not bend below 0 °C.
[6] A = V_S connections reverse-polarity protected.
[7] C = interference suppression.
[8] D = outputs overcurrent and short-circuit protected.

Signal voltage NPN HIGH/LOW	Approx. V_S / < 1.8 V
Output current $I_{max.}$	≤ 50 mA
Response time	≤ 0.5 ms [3]
Switching frequency	1,000 Hz [4]
Connection type	Cable, 3-wire, 2 m [5]
Cable material	PVC
Cable diameter	Ø 2.4 mm
Circuit protection	A [6] C [7] D [8]
Weight	20 g
Reverse polarity protection	✓
Short-circuit protection	✓
Housing material	Plastic, PC
Optics material	Plastic, PC
Enclosure rating	IP67
Ambient operating temperature	–20 °C ... +55 °C
Ambient temperature, storage	–40 °C ... +75 °C

[1] +- 10 %.
[2] May not exceed or fall below U_V tolerances.
[3] Signal transit time with resistive load.
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Safety-related parameters

$MTTF_D$	1,526 years
DC_{avg}	0 %

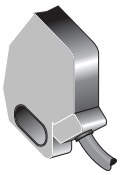
Classifications

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
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

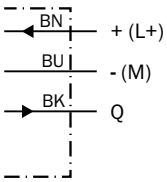
Connection type

Wx2F-x1xx



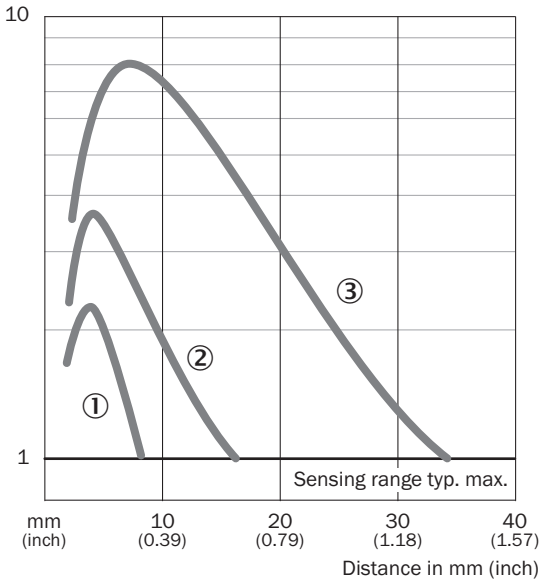
Connection diagram

Cd-043



Characteristic curve

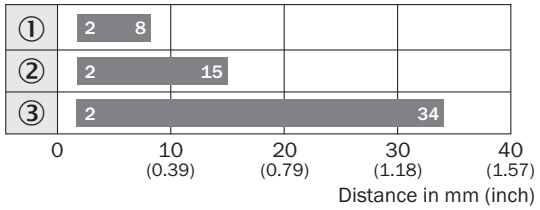
WT2F, 34 mm



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

WT2F, 34 mm

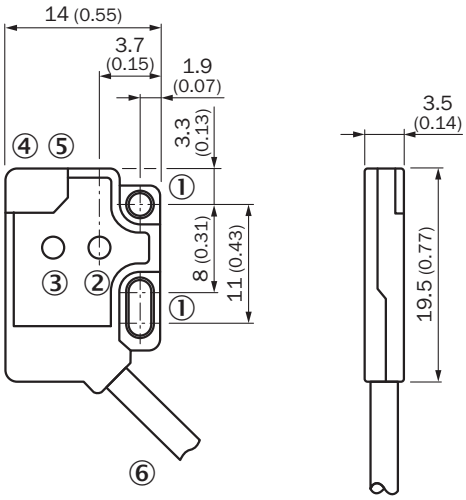


Sensing range

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))

WT2F



① Mounting holes, Ø 2.1 mm
② Optical axis, sender
③ Optical axis, receiver
④ LED indicator orange: switching output active
⑤ LED indicator green: strength indicator
⑥ Connection

Recommended accessories

Other models and accessories ➜ www.sick.com/W2

	Brief description	Type	Part no.
Others			
	• **Connection type head A:** Male connector, M8, 3-pin, straight, A-coded • **Description:** Unshielded • **Connection systems:** Screw-type terminals • **Permitted cross-section:** 0.14 mm² ... 0.5 mm²	STE-0803-G	6037322

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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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Click to view pricing, inventory, delivery, and lifecycle information:

SICK:

1040855 1213222 C4C-SA06030A10000 EN2-2EX1 / 6041096 GL6-N1112 GL6-P6211 1054695 LFP2000-A4NMB PLV14-A 1016857 C4C-EA09030A10000 GSE6-P1212 IME12-08NPSZW2K 2095780 2106256 2107717 GL6-P1111 YF8U14-020UA3XLEAX 1068252 2109288 DFS60B-BHPK10000 L41E-33MA2A SBO-02F12-SM1 WT150-P162 1040755 1040876 1041007 2095791 IME12-04BPSZW2S S30A-XXXXBA