

WT2F-N180 W2

PHOTOELECTRIC SENSORS

SICKSensor Intelligence.

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Ordering information

Туре	part no.
WT2F-N180	6030572

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

Illustration may differ



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.	4 mm 115 mm ¹⁾
Sensing range	4 mm 115 mm ¹⁾
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).

Mechanics/electronics

Supply voltage U _B	12 V DC 24 V DC ¹⁾
Ripple	< 5 V _{pp} ²⁾
Switching output	NPN

¹⁾ +- 10 %.

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

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

 $^{^{}m 3)}$ 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.

Switching mode	Light switching
Signal voltage PNP HIGH/LOW	Approx. V _S – 1.8 V / 0 V
Signal voltage NPN HIGH/LOW	Approx. V_S / < 1.8 V
Output current I _{max.}	≤ 50 mA
Response time	\leq 0.5 ms $^{3)}$
Switching frequency	1,000 Hz ⁴⁾
Connection type	Cable, 3-wire, 2 m ⁵⁾
Cable material	Plastic, 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 %.

Safety-related parameters

MTTF _D	1,526 years
DC _{avg}	0 %

Certificates

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

Classifications

ECLASS 5.0	27270903
ECLASS 5.1.4	27270903
ECLASS 6.0	27270903

²⁾ May not fall below or exceed 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.

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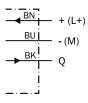
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ECLASS 6.2	27270903
ECLASS 7.0	27270903
ECLASS 8.0	27270903
ECLASS 8.1	27270903
ECLASS 9.0	27270903
ECLASS 10.0	27270904
ECLASS 11.0	27270904
ECLASS 12.0	27270903
ETIM 5.0	EC001821
ETIM 6.0	EC001821
ETIM 7.0	EC002719
ETIM 8.0	EC002719
UNSPSC 16.0901	39121528

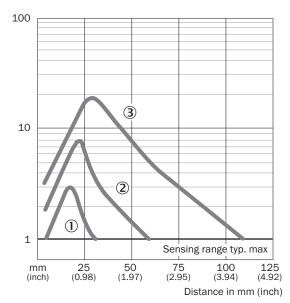
Connection type Wx2F-x1xx



Connection diagram Cd-043

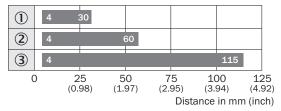


Characteristic curve WT2F, 115 mm



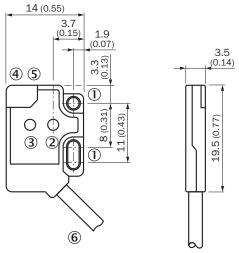
- ① Sensing range on black, 6% remission factor
- ② Sensing range on gray, 18% remission factor
- 3 Sensing range on white, 90% remission factor

Sensing range diagram WT2F, 115 mm



Sensing range

Dimensional drawing WT2F



Dimensions in mm (inch)

- 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	Туре	part no.
connectors an	nd cables		
	 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
Mounting syst	ems		
6	 Description: Plate N11N for universal clamp bracket Material: Stainless steel Details: Stainless steel 1.4571 (sheet), Stainless steel 1.4408 (clamp) Items supplied: Universal clamp (5322627), mounting hardware Usable for: DeltaPac, Glare, WTD20E 	BEF-KHS-N11N	2071081

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