



WS/WE2F-E010 S04 W2

PHOTOELECTRIC SENSORS

SICK
Sensor Intelligence.



Illustration may differ



Ordering information

Type	part no.
WS/WE2F-E010 S04	6048714

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

Detailed technical data

Features

Functional principle	Through-beam photoelectric sensor
Dimensions (W x H x D)	12 mm x 20 mm x 3.5 mm
Housing design (light emission)	Rectangular
Sensing range max.	0 m ... 0.5 m
Sensing range	0 m ... 0.4 m
Type of light	Visible red light
Light source	LED ¹⁾
Light spot size (distance)	Ø 10 mm (100 mm)
Wave length	660 nm
Adjustment	None

¹⁾ 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	NPN
Switching mode	Dark switching
Signal voltage PNP HIGH/LOW	Approx. V _S – 1.8 V / 0 V

¹⁾ ± 10 %.

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.

Signal voltage NPN HIGH/LOW	Approx. $V_S / < 1.8 \text{ V}$
Output current I_{\max}	$\leq 50 \text{ mA}$
Response time	$\leq 0.5 \text{ ms}$ ³⁾
Switching frequency	$1,000 \text{ Hz}$ ⁴⁾
Connection type	Cable with MOLEX-connector, 300 mm ⁵⁾
Cable material	Plastic, PVC
Cable diameter	$\varnothing 2.4 \text{ mm}$
Circuit protection	A ⁶⁾ C ⁷⁾ D ⁸⁾
Weight	35 g
Special device	✓
Reverse polarity protection	✓
Short-circuit protection	✓
Housing material	Plastic, PC
Optics material	Plastic, PC
Enclosure rating	IP67
Ambient operating temperature	$-20 \text{ °C} \dots +55 \text{ °C}$
Ambient temperature, storage	$-40 \text{ °C} \dots +75 \text{ °C}$

1) $\pm 10 \%$.

2) May not fall below or exceed U_T 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.

Safety-related parameters

MTTF_D	987 years
DC_{avg}	0 %

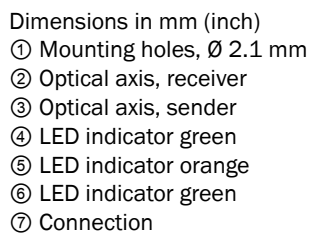
Certificates

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	27270901
ECLASS 5.1.4	27270901
ECLASS 6.0	27270901
ECLASS 6.2	27270901

Sensing range diagram WS/WE2F



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.”

WORLDWIDE PRESENCE:

Contacts and other locations –www.sick.com