# WTT2SL-2P3492S01

WTT2 PowerProx

**TIME-OF-FLIGHT SENSORS**

**SICK**
Sensor Intelligence.

# WTT2SL-2P3492S01 | WTT2 PowerProx

## TIME-OF-FLIGHT SENSORS



Illustration may differ

## Ordering information

| Type | part no. |
|------|----------|
| WTT2SL-2P3492S01 | 1088393 |

Other models and accessories ➜ www.sick.com/WTT2_PowerProx

## Detailed technical data

### Features

| | |
|---|---|
| **Functional principle** | Photoelectric proximity sensor |
| **Functional principle detail** | Background suppression, Optical time-of-flight |
| **Housing design (light emission)** | Rectangular |
| **Sensing range max.** | 50 mm ... 800 mm [1] |
| **Sensing range** | 50 mm ... 800 mm [1] |
| **Type of light** | Infrared light |
| **Light source** | Laser [2] |
| **Light spot size (distance)** | Ø 10 mm (300 mm) |
| **Wave length** | 940 nm |
| **Laser class** | 1 |
| **Adjustment** | Single teach-in button [3] |
| **Special applications** | Detecting small objects |
| **Safety-related parameters** | |
| $MTTF_D$ | 925 years |
| $DC_{avg}$ | 0 % |

[1] Object with 6 ... 90% remission (based on standard white, DIN 5033).

[2] Average service life: 50,000 h at $T_U$ = +25 °C.

[3] Teach-Offset 15 mm.

## Electronics

| | |
|---|---|
| **Supply voltage $U_B$** | 10 V DC … 30 V DC [1] |
| **Ripple** | < 5 $V_{pp}$ [2] |
| **Current consumption** | 20 mA [3] |
| **Switching output** | PNP |
| **Switching mode** | Light/dark switching |
| **Output current $I_{max.}$** | ≤ 50 mA |
| **Response time** | Typ. 90 ms [4] |
| **Switching frequency** | 5 Hz [5] |
| **Analog output** | - |
| **Circuit protection** | A [6] <br> B [7] <br> D [8] |
| **Protection class** | III |
| **Enclosure rating** | IP67 |

[1] Limit values. Operated in short-circuit protected network: max. 8 A.

[2] May not fall below or exceed $U_V$ tolerances.

[3] Without load.

[4] Jitter +- 20 ms.

[5] With light/dark ratio 1:1.

[6] A = $V_S$ connections reverse-polarity protected.

[7] B = output reverse-polarity protected.

[8] D = outputs overcurrent and short-circuit protected.

## Mechanics

| | |
|---|---|
| **Dimensions (W x H x D)** | 7.7 mm x 27.5 mm x 13.5 mm |
| **Housing material** | Plastic, MABS <br> ABS |
| **Optics material** | Plastic, PMMA |
| **Connection type** | Cable with M12 male connector, 4-pin, 300 mm |
| **Connection type Detail** | |
| Cable diameter | Ø 3 mm |
| Cable material | Plastic, PVC |

## Ambient data

| | |
|---|---|
| **Ambient operating temperature** | –25 °C … +50 °C |
| **Ambient temperature, storage** | –40 °C … +75 °C |

## Classifications

| | |
|---|---|
| **ECLASS 5.0** | 27270904 |
| **ECLASS 5.1.4** | 27270904 |
| **ECLASS 6.0** | 27270904 |
| **ECLASS 6.2** | 27270904 |
| **ECLASS 7.0** | 27270904 |
| **ECLASS 8.0** | 27270904 |

| | |
|---|---|
| **ECLASS 8.1** | 27270904 |
| **ECLASS 9.0** | 27270904 |
| **ECLASS 10.0** | 27270904 |
| **ECLASS 11.0** | 27270904 |
| **ECLASS 12.0** | 27270903 |
| **ETIM 5.0** | EC002719 |
| **ETIM 6.0** | EC002719 |
| **ETIM 7.0** | EC002719 |
| **ETIM 8.0** | EC002719 |
| **UNSPSC 16.0901** | 39121528 |

## Certificates

| | |
|---|---|
| **EU declaration of conformity** | ✓ |
| **UK declaration of conformity** | ✓ |
| **ACMA declaration of conformity** | ✓ |
| **Moroccan declaration of conformity** | ✓ |
| **China RoHS** | ✓ |
| **cULus certificate** | ✓ |
| **Laser safety (IEC 60825-1) certificate** | ✓ |

## Dimensional drawing
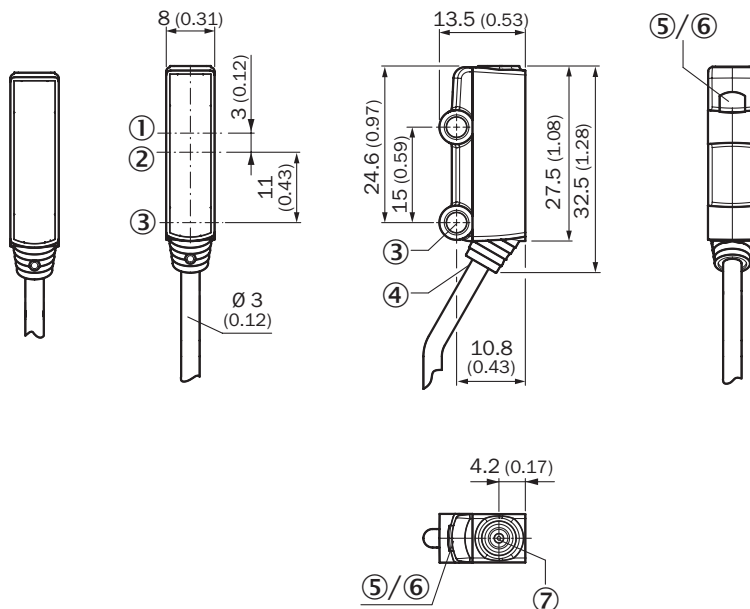

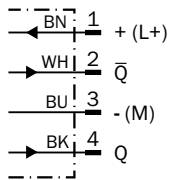
Dimensions in mm (inch)
① optical axis, receiver
② optical axis, sender
③ Mounting hole, Ø 3.2 mm
④ Connection
⑤ LED indicator green: Supply voltage active
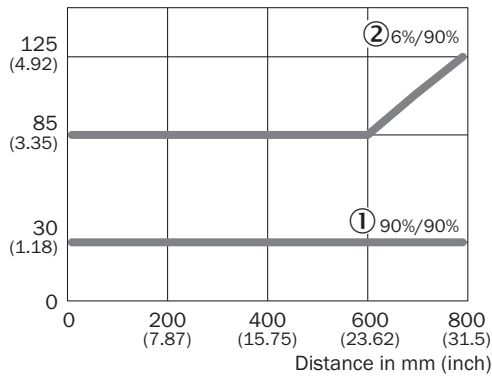⑥ LED indicator yellow: Status of received light beam
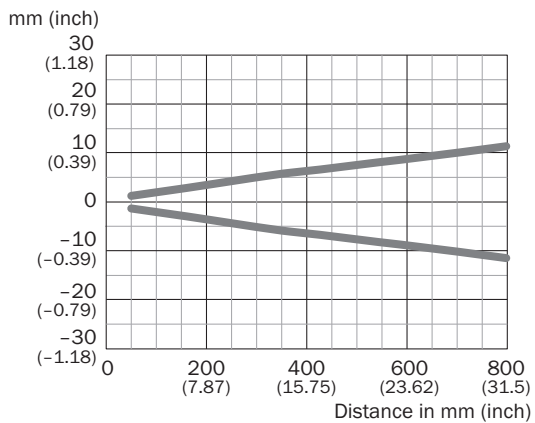
⑦ single teach-in button

## Connection diagram Cd-083

```
  BN   1   + (L+)
  WH   2   Q̄
  BU   3   - (M)
  BK   4   Q
```

## Characteristic curve

Min. distance from object to background in mm (inch)

```
125
(4.92)                        ②6%/90%

 85
(3.35)

 30
(1.18)                        ① 90%/90%

  0
     0    200    400    600    800
        (7.87) (15.75)(23.62)(31.5)
              Distance in mm (inch)
```

① Sensing range on white, 90% remission factor
② Sensing range on black, 6% remission factor

## Light spot size

mm (inch)

```
 30
(1.18)
 20
(0.79)
 10
(0.39)
  0
-10
(-0.39)
-20
(-0.79)
-30
(-1.18)
      0    200    400    600    800
         (7.87)(15.75)(23.62)(31.5)
              Distance in mm (inch)
```

## Recommended accessories

Other models and accessories ➜ www.sick.com/WTT2_PowerProx

| | Brief description | Type | part no. |
|---|---|---|---|
| **connectors and cables** | | | |
| | • **Connection type head A:** Female connector, M12, 4-pin, straight, A-coded<br>• **Connection type head B:** Flying leads<br>• **Signal type:** Sensor/actuator cable<br>• **Cable:** 5 m, 4-wire, PVC<br>• **Description:** Sensor/actuator cable, unshielded<br>• **Application:** Zones with chemicals, Uncontaminated zones | YF2A14-050VB3XLEAX | 2096235 |
| | • **Connection type head A:** Male connector, M12, 4-pin, straight, A-coded<br>• **Description:** Unshielded<br>• **Connection systems:** Screw-type terminals<br>• **Permitted cross-section:** ≤ 0.75 mm² | STE-1204-G | 6009932 |
| **Mounting systems** | | | |
| | • **Description:** Mounting bracket for wall mounting<br>• **Material:** Steel<br>• **Details:** Steel, zinc coated<br>• **Items supplied:** Without mounting hardware<br>• **Suitable for:** W2S-2 | BEF-W2S-B | 4034749 |

# 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**

SICK AG  |  Waldkirch  |  Germany  |  www.sick.com

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