



Photoelectric sensors  
W2 Slim, Photoelectric proximity sensor,  
Background suppression

WT2S-P211



**Model Name** > WT2S-P211  
**Part No.** > 1022658



*Illustration may differ*

**At a glance**

- Very small, focused laser-like light spot with diameter <math>< \varnothing 1.5 \text{ mm}</math>
- Two background suppression variants with a fixed sensing range of 15 mm and 30 mm
- Energetic proximity sensor with a fixed sensing range of 55 mm
- Fast response time of 0.6 ms

**Your benefits**

- Precise recognition of all objects regardless of color or composition
- Laser-like light spot enables precise detection with a high level of accuracy
- V-optics reliably detects transparent and glossy objects
- Highly immunity to reflective and critical backgrounds, enabling use in the most restricted machine environments



**Features**

Sensor/detection principle:	Photoelectric proximity sensor, Background suppression
Dimensions (W x H x D):	7.6 mm x 25.1 mm x 12.5 mm
Housing design (light emission):	Rectangular, Slim
Sensing range max.:	1 mm ... 15 mm <sup>1)</sup>
Sensing range:	1 mm ... 15 mm <sup>2)</sup>
Type of light:	Visible red light
Light source:	PinPoint LED <sup>3)</sup>
Wave length:	660 nm
Focus adjustable:	-
Focus:	7 mm
Light spot size (distance):	$\varnothing 1.5 \text{ mm}$ (7 mm)

<sup>1) 2)</sup> Object with 90 % reflectance (referred to standard white DIN 5033) <sup>3)</sup> Average service life 75,000 h at  $T_A = +25 \text{ }^\circ\text{C}$

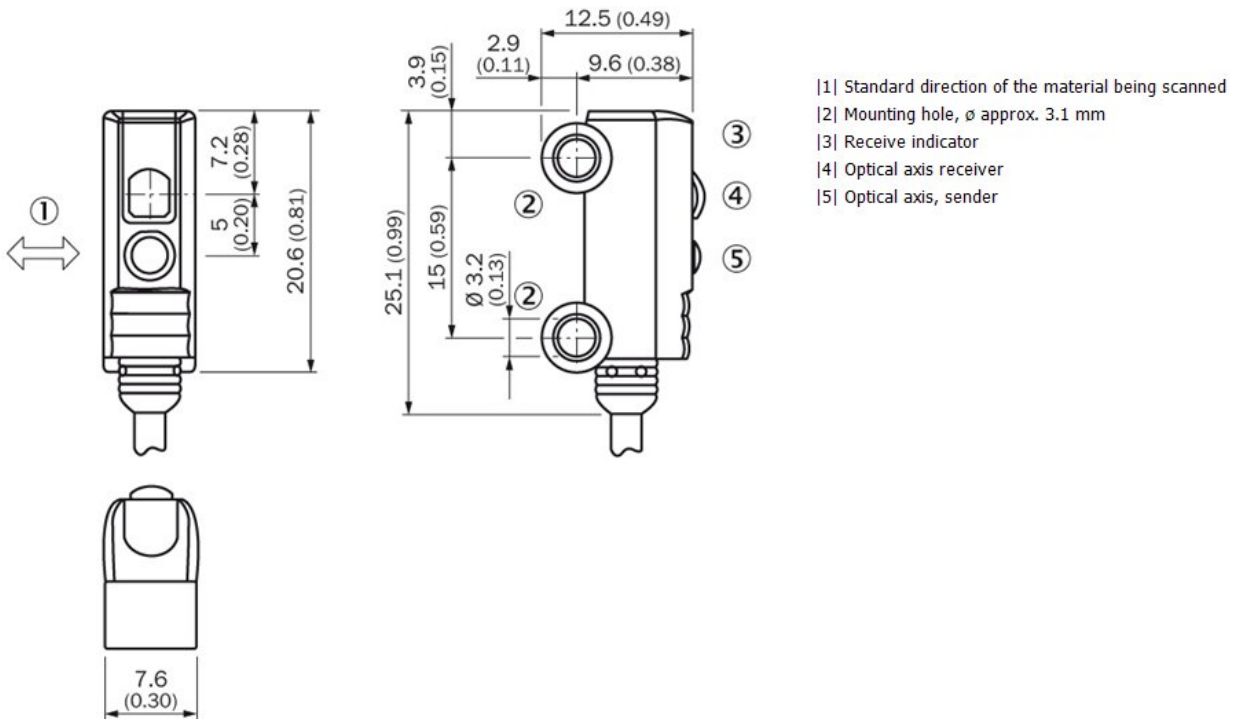
**Mechanics/electronics**

Supply voltage:	10 V DC ... 30 V DC <sup>1)</sup>
Ripple:	$\leq 5 \text{ Vpp}$ <sup>2)</sup>
Output type:	PNP
Switching mode:	Light switching
Output current I <sub>max.</sub> :	$\leq 50 \text{ mA}$
Response time:	$< 0.6 \text{ ms}$ <sup>3)</sup>

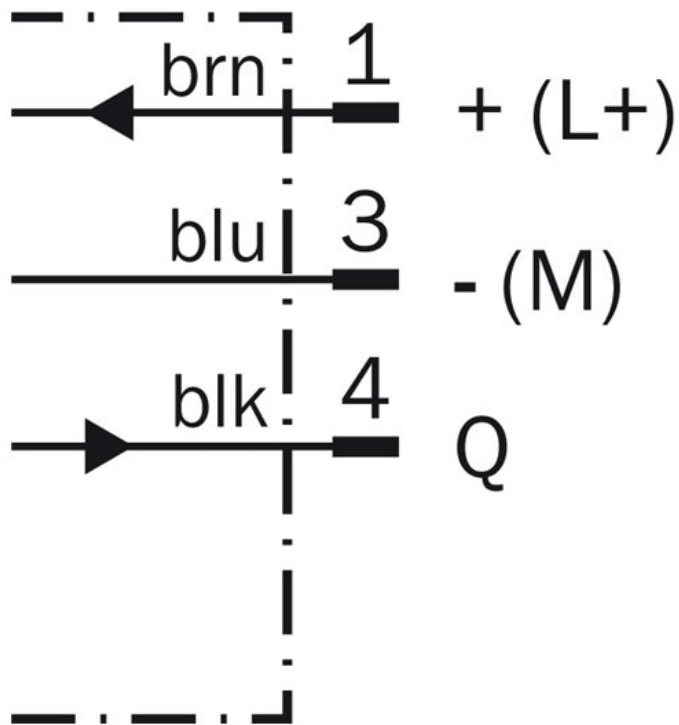
Switching frequency:	800 Hz <sup>4)</sup>
Connection type:	Cable with connector M8, 3-pin, 200 mm <sup>5)</sup>
Cable material:	PVC
Cable diameter:	Ø 2.4 mm
Circuit protection:::	A, C, D <sup>6)</sup> <sup>7)</sup> <sup>8)</sup>
Weight:	20 g
Polarisation filter:	-
Reverse polarity protection:	✓
Short-circuit protection:	✓
Housing material:	ABS, Plastic
Optics material:	PMMA
Enclosure rating:	IP 67 IP 69K
Ambient operating temperature:	-20 °C ... 50 °C
Ambient storage temperature:	-40 °C ... 75 °C

<sup>1)</sup> Limit values    <sup>2)</sup> May not exceed or fall short of  $V_S$  tolerances    <sup>3)</sup> Signal transit time with resistive load    <sup>4)</sup> With light/dark ratio 1:1    <sup>5)</sup> Do not bend below 0 °C    <sup>6)</sup> A = V  
<sup>7)</sup> S connections reverse-polarity protected    <sup>8)</sup> C = interference suppression    <sup>8)</sup> D = outputs overcurrent and short-circuit protected

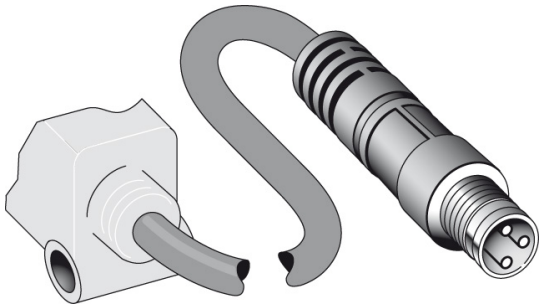
## Dimensional drawing



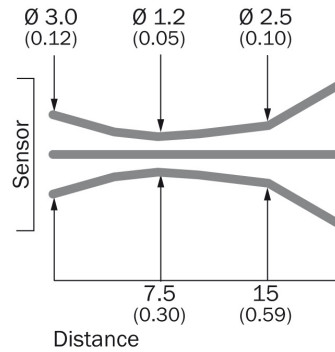
## Connection diagram



## Connection type

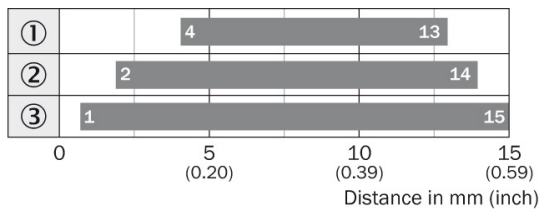


## Light spot size



All dimensions in mm (inch)

## Sensing range diagram



■ Sensing range

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

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