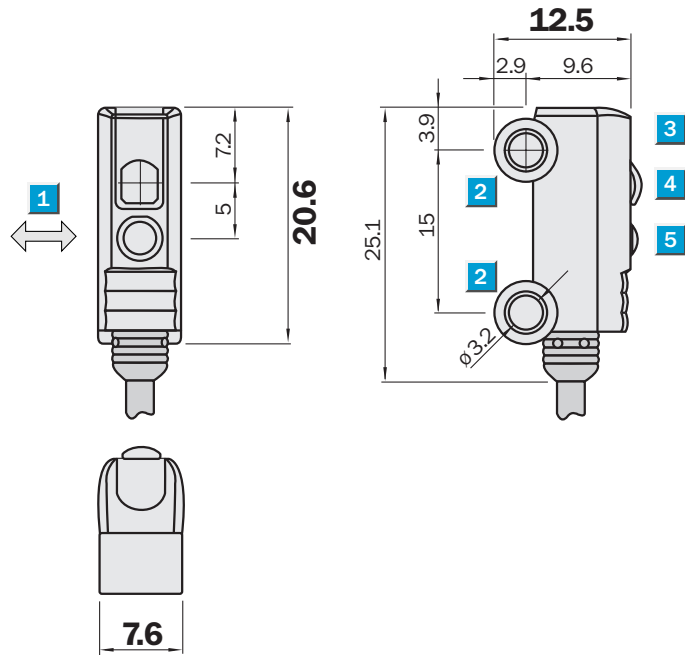


	Scanning distance 1 ... 15 mm
	Scanning distance 1 ... 30 mm
Photoelectric proximity switch	

- A focused, laser-like light spot makes the most precise detection jobs possible
- Insensitive to interference from critical backgrounds
- Sturdy housing with metal sleeves for M 3 bolts

Dimensional drawing



- 1 Standard direction of material being scanned
- 2 Mounting hole Ø 3.2 mm
- 3 LED signal strength indicator
- 4 Optical axis, receiver
- 5 Optical axis, sender

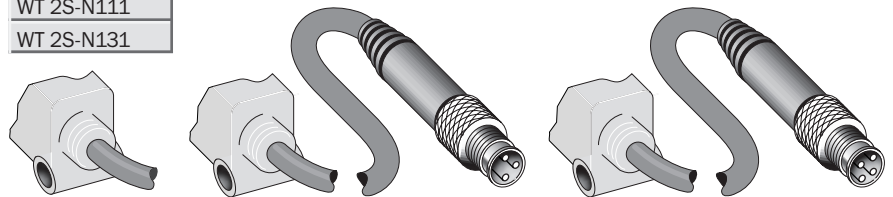


Connection types

WT 2S-P111
WT 2S-P131
WT 2S-N111
WT 2S-N131

WT 2S-P211
WT 2S-P231

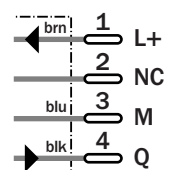
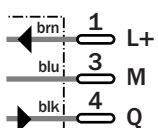
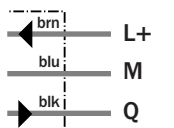
WT 2S-P431
WT 2S-P411



3 x 0.09 mm ² Ø 2.4 mm

3-pin, M 8, 200 mm

4-pin, M 8, 200 mm



Accessories

Connectors

Mounting systems

Mounting set of screws ¹⁾
¹⁾ included with delivery

Technical data		WT 2S-	P 111	P 211	N 111	P 131	P 231	N 131	P 431	P 411	F 211	
Scanning distance(fix), typ.	1 ... 15 mm ¹⁾											
	1 ... 30 mm ¹⁾											
Background suppression from	18 mm											
	35 mm											
Light source ²⁾ , light type	Pin-Point LED, red light											
Light spot diameter	Approx. 1.0 mm at 15 mm											
	Approx. 4.5 mm at 30 mm											
	Approx. 1.2 mm at 8 mm											
	Approx. 2.5 mm at 15 mm											
Supply voltage V_s	10 ... 30 V DC ³⁾											
Ripple ⁴⁾	< 5 V _{PP}											
Current consumption ⁵⁾	< 20 mA											
Switching outputs	PNP, Q											
	NPN, Q											
	light-switching											
	dark-switching											
Output current I_A max.	< 50 mA											
Response time ⁶⁾	< 0.6 ms											
Max. switching frequency ⁷⁾	800/s											
Connection types	Cable ⁸⁾ , 2 m											
	Cable ⁸⁾ , 200 mm with plug											
VDE protection class ⁹⁾	III											
Circuit protection ¹⁰⁾	A, B, C											
Enclosure rating	IP 67											
Ambient temperature	Operation - 20 °C ... + 50 °C											
	Storage - 40 °C ... + 75 °C											
Weight	With cable 18 g											
	With plug 20 g											
Housing material	ABS, PMMA											

¹⁾ Tolerance ± 13 %

²⁾ Average service life 75,000 h at $T_A = + 25 °C$

³⁾ Limit values

⁴⁾ May not exceed or fall short of V_s tolerances

⁵⁾ Without load

⁶⁾ Signal transit time with resistive load

⁷⁾ With light/dark ratio 1:1

⁸⁾ PVC, 2.4 mm Ø, do not bend below 0 °C

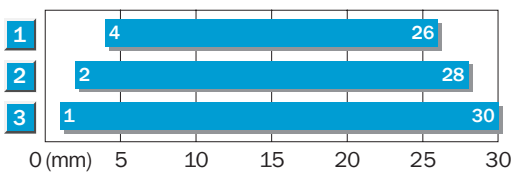
⁹⁾ Reference voltage 50 V

¹⁰⁾ A = V_s -connections reverse-polarity protected

B = Output Q and $\bar{Q}$ reverse-polarity protected

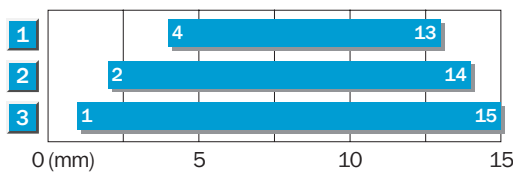
C = Interference pulse suppression

Scanning distance, 30 mm background suppression



- 1 Scanning distance on black, 6 % remission
- 2 Scanning distance on grey, 18 % Remission
- 3 Scanning distance on white, 90 % Remission

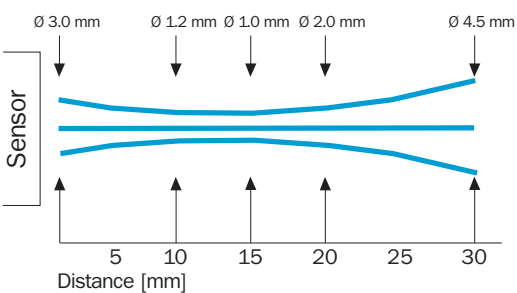
Scanning distance, 15 mm background suppression



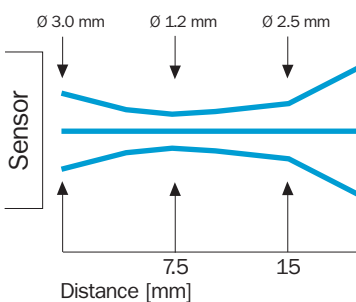
Order information

Type	Part no.
WT 2S-P111	1 022 660
WT 2S-P131	1 022 661
WT 2S-P211	1 022 658
WT 2S-P231	1 022 659
WT 2S-N111	1 022 662
WT 2S-N131	1 022 663
WT 2S-P411	1 023 631
WT 2S-P431	1 023 632
WT 2S-F211	1 024 171

Light spot diameter WT 2S 30 mm BGS



Light spot diameter WT 2S 15 mm BGS

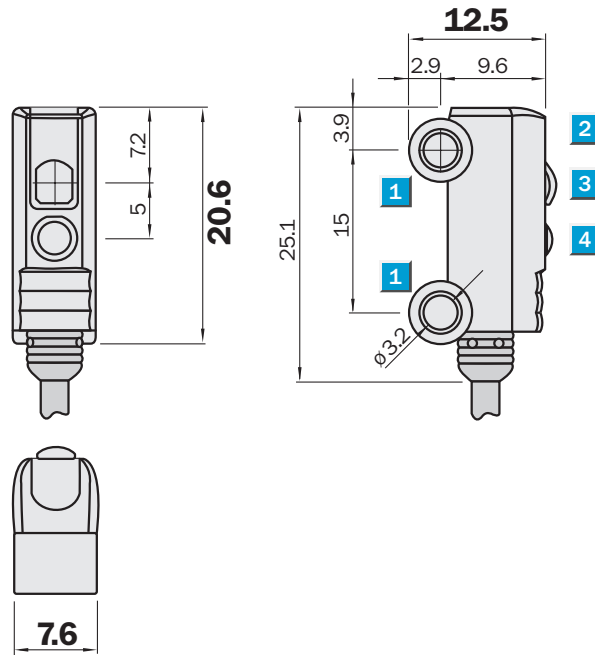



Scanning distance
1 ... 50 mm

Photoelectric proximity switch

- Precise, small light spot
- Extremely good size/performance ratio
- Sturdy housing with metal sleeves for M 3 bolts

Dimensional drawing



- 1 Mounting hole $\varnothing$ 3.2 mm
- 2 LED signal strength indicator
- 3 Optical axis, receiver
- 4 Optical axis, sender

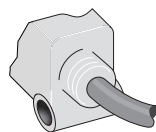


Connection types

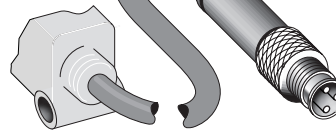
WT 2S-P161
WT 2S-N161

WT 2S-P261

WT 2S-P461



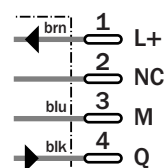
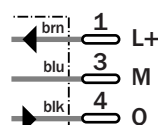
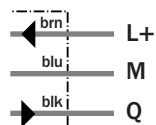
3 x 0.09 mm²
 $\varnothing$ 2.4 mm



3-pin, M 8,
200 mm



4-pin, M 8,
200 mm



Accessories

Connectors

Mounting systems

Mounting set of screws ¹⁾

¹⁾ included with delivery

Technical data		WT 2S-	P 161	N 161	P 261	P 461						
Scanning distance (fix), typ.	1 ... 55 mm											
Light source ⁴⁾ , light type	Pin-Point LED, red light											
Light spot diameter	Approx. 3.5 mm at 50 mm											
Supply voltage V_s	10 ... 30 V DC ²⁾											
Ripple ³⁾	< 5 V _{PP}											
Current consumption ⁴⁾	< 20 mA											
Switching outputs	PNP, Q											
	NPN, Q											
	Light-switching											
Output current I_A max.	< 50 mA											
Response time ⁵⁾	< 0.6 ms											
Max. switching frequency ⁶⁾	800/s											
Connection types	Cable ⁷⁾ , 2 m											
	Cable ⁷⁾ , 200 mm with plug											
VDE protection class ⁸⁾	III											
Circuit protection ⁹⁾	A, B, C											
Enclosure rating	IP 67											
Ambient temperature	Operation – 20 °C ... + 50 °C											
	Storage – 40 °C ... + 75 °C											
Weight	With cable 18 g											
	With plug 20 g											
Housing material	ABS, PMMA											

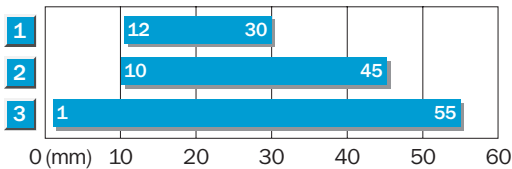
- ¹⁾ Average service life 75.000 h at $T_A = + 25\text{ °C}$
²⁾ Limit values
³⁾ May not exceed or fall short of V_s tolerances

- ⁴⁾ Without load
⁵⁾ Signal transit time with resistive load
⁶⁾ With light/dark ratio 1:1

- ⁷⁾ 2 m, PVC, 2.4 mm Ø, do not bend below 0 °C
⁸⁾ Reference voltage 50 V

- ⁹⁾ A = V_s -connections reverse-polarity protected
B = Output Q and $\bar{Q}$ reverse-polarity protected
C = Interference pulse suppression

Scanning distance, typical, 50 mm



- 1** Scanning distance on black, 6 % remission
2 Scanning distance on grey, 18 % remission
3 Scanning distance on white, 90 % remission

Order information

Type	Part no.
WT 2S-P161	1 022 664
WT 2S-N161	1 022 665
WT 2S-P261	1 023 640
WT 2S-P461	1 023 641

Light spot diameter WT 2S 50 mm, energetic, V optics

