
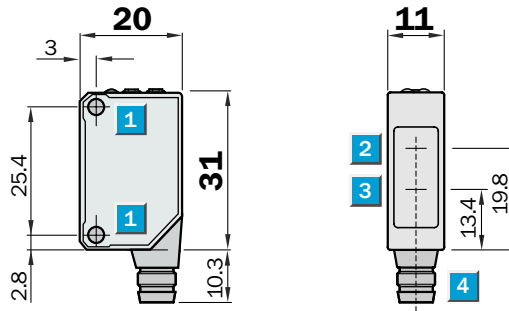


# Photoelectric proximity switch, WT100 Laser, energetic

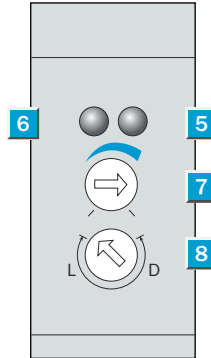

**Scanning distance**  
**0 ... 450 mm**  
**Photoelectric proximity switch**

- Laser sensor in mini-format
- Easy alignment by Class 2 red light laser
- Switching frequency 2000 Hz

## Dimensional drawing



## Adjustments possible

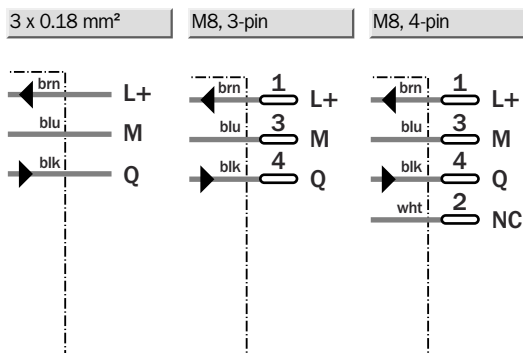
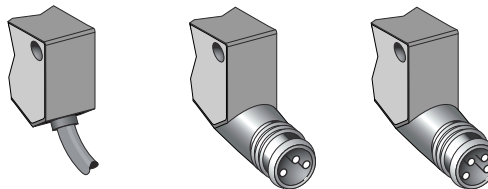


- 1 Mounting hole M3
- 2 Centre of optical axis, receiver
- 3 Centre of optical axis, sender
- 4 Connector
- 5 LED signal strength indicator orange: switching output active
- 6 LED signal strength indicator green: power on
- 7 Sensitivity adjustment (270°)
- 8 Light/dark rotary switch :  
L = light-switching, D = dark-switching



## Connection type

WT100L-E1141	WT100L-E2141	WT100L-E2241
WT100L-F1141	WT100L-F2141	WT100L-F2241

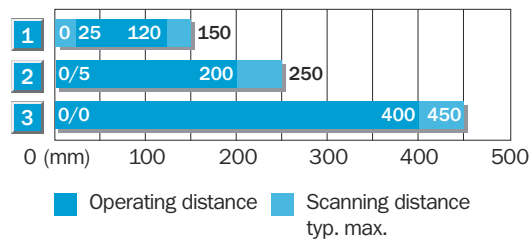


Accessories
Connector, M8, 3-pin
Connector, M8, 4-pin
Mounting systems

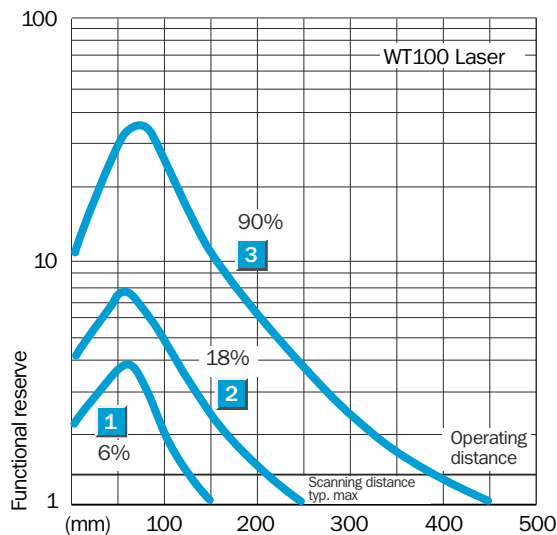
Technical specifications		WT100L-	E1141	E2141	E2241	F1141	F2141	F2241				
Scanning distance typ. max.	0 ... 450 mm <sup>1)</sup>											
Operating distance	0 ... 400 mm <sup>1)</sup>											
Adjustment of operating distance	Potentiometer											
Light source, light type	Laser diode, Laser, 650 nm <sup>2)</sup>											
Laser protection class	2 (IEC 60 825-1/C.D.R.H)											
Light spot diameter	2 mm at 400 mm distance											
Supply voltage V <sub>s</sub>	DC 10 ... 30 V <sup>3)</sup>											
Ripple	± 10 % <sup>4)</sup>											
Power consumption	≤ 30 mA <sup>5)</sup>											
Switching outputs	NPN, Q											
	PNP, Q											
Switching mode	Light-/dark-switching via rotary switch											
Output current I <sub>a,max</sub>	≤ 100 mA											
Response time	< 0.25 ms <sup>6)</sup>											
Switching frequency	2,000 Hz <sup>7)</sup>											
Connection type	Cable, PVC, 2 m <sup>8)</sup>											
	Connector, M8, 3-pin											
	Connector, M8, 4-pin											
Circuit protection	V <sub>s</sub> connections reverse-polarity protected / In-/outputs short-circuit protected / Outputs overcurrent and short-circuit protected											
Enclosure rating	IP 65											
Ambient temperature operation	-10 °C ... +50 °C											
Ambient temperature storage	-40 °C ... +70 °C											
Weight	Ca. 50 g											
	Ca. 10 g											
Housing material	ABS, PMMA											
Included with delivery	Mounting bracket											

<sup>1)</sup> Object with 90 % remission (based on standard white to DIN 5033) at T<sub>a</sub> = +25 °C  
<sup>2)</sup> Average service life 50,000 h  
<sup>3)</sup> Limit values  
<sup>4)</sup> May not exceed or fall short of  
<sup>5)</sup> Without load  
<sup>6)</sup> Signal transit time with resistive load  
<sup>7)</sup> With light/dark ratio 1:1  
<sup>8)</sup> Do not bend below 0 °C

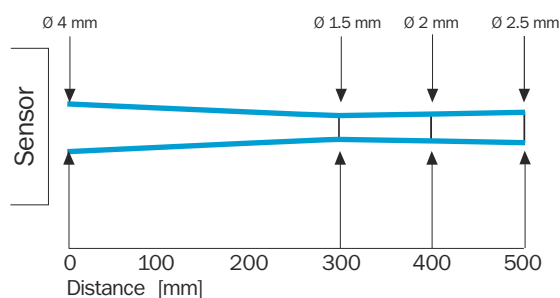
**Scanning distance**



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



**Light spot diameter**



**Ordering information**

Type	Order No.
WT100L-E1141	6 030 705
WT100L-E2141	6 030 706
WT100L-E2241	6 030 707
WT100L-F1141	6 030 702
WT100L-F2141	6 030 703
WT100L-F2241	6 030 704

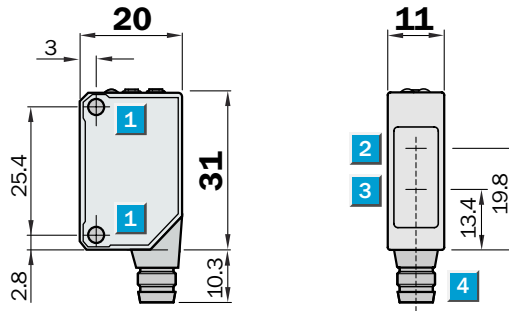
# Photoelectric reflex switch, WL 100Laser

**Scanning range**  
0.08 ... 12 m

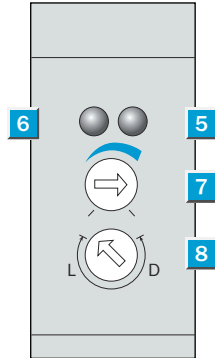
Photoelectric reflex switch

- Laser sensor in mini-format
- Easy alignment by Class 2 red light laser
- Switching frequency 2000 Hz
- Polarisation filter for secure detection of reflective objects

## Dimensional drawing



## Adjustments possible

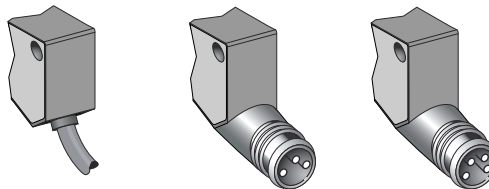


- 1 Mounting hole M3
- 2 Centre of optical axis, receiver
- 3 Centre of optical axis, sender
- 4 Connector
- 5 LED signal strength indicator orange: switching output active
- 6 LED signal strength indicator green: power on
- 7 Sensitivity adjustment (270°)
- 8 Light/dark rotary switch :  
L = light-switching, D = dark-switching



## Connection type

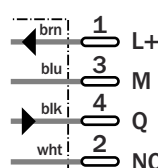
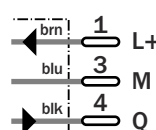
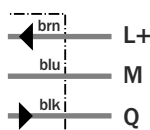
WL100L-E1131	WL100L-E2131	WL100L-E2231
WL100L-F2241	WL100L-F2131	WL100L-F2231



3 x 0.18 mm<sup>2</sup>

M8, 3-pin

M8, 4-pin



## Accessories

- Connector, M8, 3-pin
- Connector, M8, 4-pin
- Mounting systems
- Reflectors

Technical specifications		WL100L-	E1131	E2131	E2231	F2241	F2131	F2231				
Scanning range typ. max.	0.08 ... 12 m											
Scanning range, recommended	0.08 ... 10 m											
Relating to	Reflector P250 F											
Sensitivity adjustment	Potentiometer											
Light source, light type	Laser diode, Laser, 650 nm <sup>1)</sup>											
Laser protection class	2 (IEC 60 825-1/C.D.R.H)											
Light spot diameter	12 mm at 10 m distance											
Supply voltage V <sub>s</sub>	DC 10 ... 30 V <sup>2)</sup>											
Ripple	± 10 % <sup>3)</sup>											
Power consumption	≤ 30 mA <sup>4)</sup>											
Switching outputs	NPN, Q											
	PNP, Q											
Switching mode	Light-/dark-switching via rotary switch											
Output current I <sub>a</sub> max	≤ 100 mA											
Response time	< 0.25 ms <sup>5)</sup>											
Switching frequency	2,000 Hz <sup>6)</sup>											
Connection type	Cable, PVC, 2 m <sup>7)</sup>											
	Connector, M8, 3-pin											
	Connector, M8, 4-pin											
Circuit protection	V <sub>s</sub> connections reverse-polarity protected / In-/outputs short-circuit protected / Outputs overcurrent and short-circuit protected											
Enclosure rating	IP 65											
Ambient temperature operation	-10 °C ... +50 °C											
Ambient temperature storage	-40 °C ... +70 °C											
Weight	Ca. 50 g											
	Ca. 10 g											
Housing material	ABS, PMMA											
Included with delivery	Reflector P250F + mounting brackets											

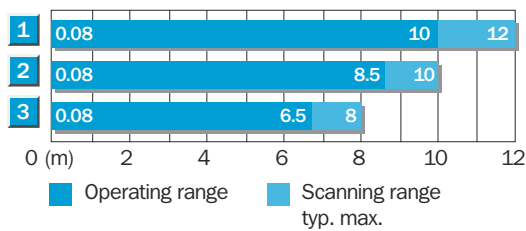
<sup>1)</sup> Average service life 50,000 h at T<sub>a</sub> = +25 °C

<sup>2)</sup> Limit values  
<sup>3)</sup> May not exceed or fall short of

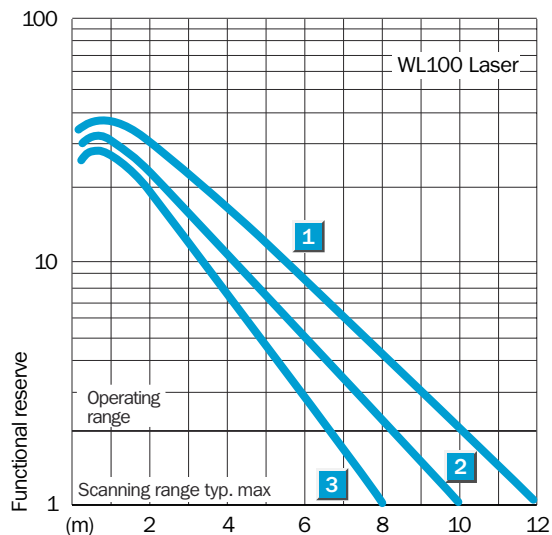
V<sub>s</sub> tolerances  
<sup>4)</sup> Without load

<sup>5)</sup> Signal transit time with resistive load  
<sup>6)</sup> With light/dark ratio 1:1  
<sup>7)</sup> Do not bend below 0 °C

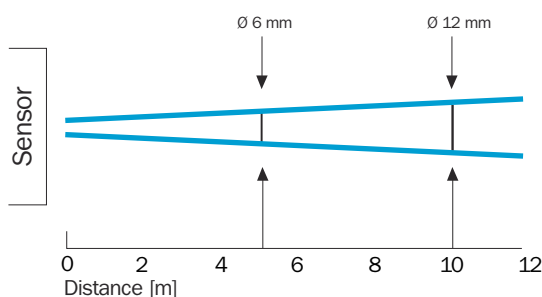
**Scanning range and functional reserve**



Reflector type	Operating range
1 P250F	0.08 ... 10 m
2 PL20F	0.08 ... 8.5 m
3 PL10F	0.08 ... 6.5 m



**Light spot diameter**



**Ordering information**

Type	Order No.
WL100L-E1131	6 030 711
WL100L-E2131	6 030 712
WL100L-E2231	6 030 713
WL100L-F2241	6 030 708
WL100L-F2131	6 030 709
WL100L-F2231	6 030 710

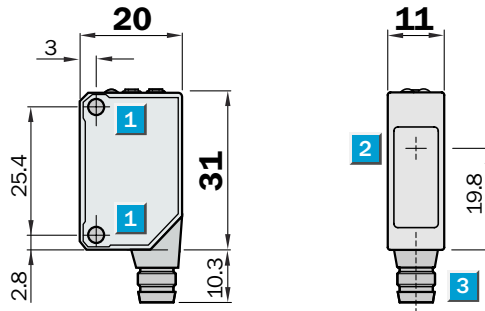
# Through-beam photoelectric switch, WS/WE100 Laser

**Scanning range**  
0 ... 35 m

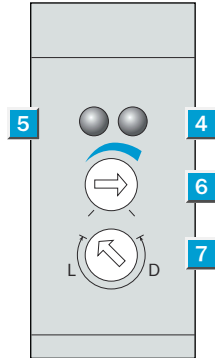
Through-beam photoelectric switch

- Laser sensor in mini-format
- High degree of eye protection by Class 1 red light laser
- Switching frequency 2000 Hz

## Dimensional drawing



## Adjustments possible



- 1 Mounting hole M3
- 2 Centre of optical axis
- 3 Connector
- 4 LED signal strength indicator orange: switching output active
- 5 LED signal strength indicator green: power on
- 6 Sensitivity adjustment (270 °)
- 7 Light/dark rotary switch:  
L = light-switching, D = dark-switching

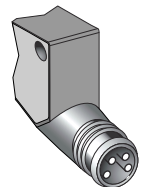
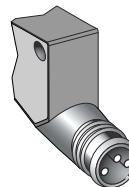
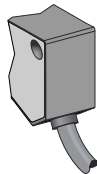


## Connection type

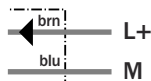
WS/WE100L-E1131  
WS/WE100L-F1131

WS/WE100L-E2131  
WS/WE100L-F2131

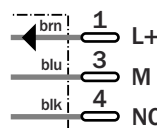
WS/WE100L-E2231  
WS/WE100L-F2231



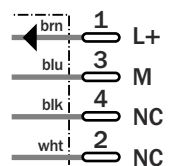
Sender 2 x 0.18 mm<sup>2</sup>



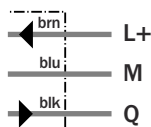
M8, 3-pin



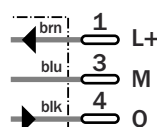
M8, 4-pin



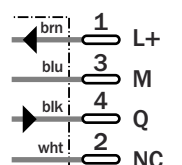
Receiver 3 x 0.18 mm<sup>2</sup>



M8, 3-pin



M8, 4-pin



Accessories
Connector, M8, 3-pin
Connector, M8, 4-pin
Mounting systems

Technical specifications		WS/WE100L-	E1131	E2131	E2231	F1131	F2131	F2231				
Scanning range typ. max.	0 ... 35 m											
Scanning range, recommended	0 ... 30 m											
Sensitivity adjustment	Potentiometer											
Light source, light type	Laser diode, Laser, 650 nm <sup>1)</sup>											
Laser protection class	1 (EN 60 825-1)											
Light spot diameter	30 mm at 30 m distance											
Supply voltage V <sub>s</sub>	DC 10 ... 30 V <sup>2)</sup>											
Ripple	± 10 % <sup>3)</sup>											
Power consumption	≤ 30 mA <sup>4)</sup>											
Switching outputs	NPN, Q											
	PNP, Q											
Switching mode	Light-/dark-switching via rotary switch											
Output current I <sub>a,max</sub>	≤ 100 mA											
Response time	< 0.25 ms <sup>5)</sup>											
Switching frequency	2,000 Hz <sup>6)</sup>											
Connection type	Cable, PVC, 2 m <sup>7)</sup>											
	Connector, M8, 3-pin											
	Connector, M8, 4-pin											
Circuit protection	V <sub>s</sub> connections reverse-polarity protected / In-/outputs short-circuit protected / Outputs overcurrent and short-circuit protected											
Enclosure rating	IP 65											
Ambient temperature operation	-10 °C ... +50 °C											
Ambient temperature storage	-40 °C ... +70 °C											
Weight	Ca. 50 g											
	Ca. 10 g											
Housing material	ABS, PMMA											
Included with delivery	Mounting bracket											

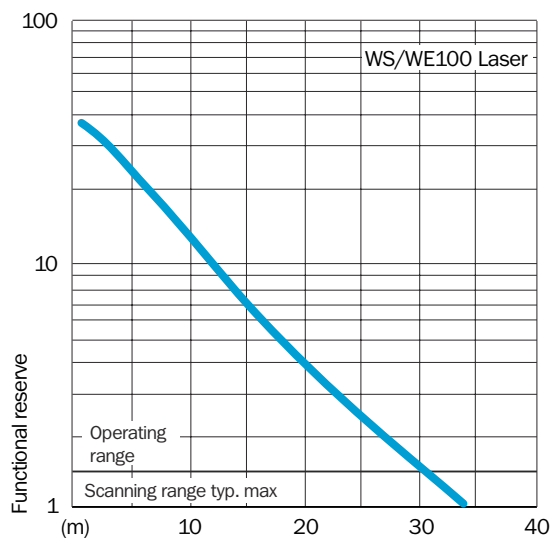
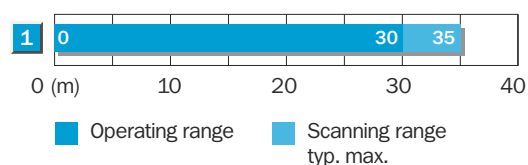
<sup>1)</sup> Average service life 50,000 h at T<sub>a</sub> = +25 °C

<sup>2)</sup> Limit values  
<sup>3)</sup> May not exceed or fall short of

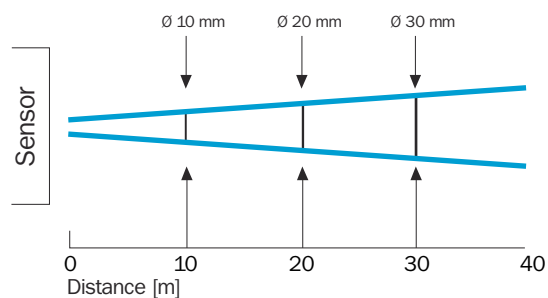
V<sub>s</sub> tolerances  
<sup>4)</sup> Without load

<sup>5)</sup> Signal transit time with resistive load  
<sup>6)</sup> With light/dark ratio 1:1  
<sup>7)</sup> Do not bend below 0 °C

Scanning range and functional reserve



Light spot diameter



Ordering information

Type	Order No.
WS/WE100L-E1131	6 030 717
WS/WE100L-E2131	6 030 718
WS/WE100L-E2231	6 030 719
WS/WE100L-F1131	6 030 714
WS/WE100L-F2131	6 030 715
WS/WE100L-F2231	6 030 716