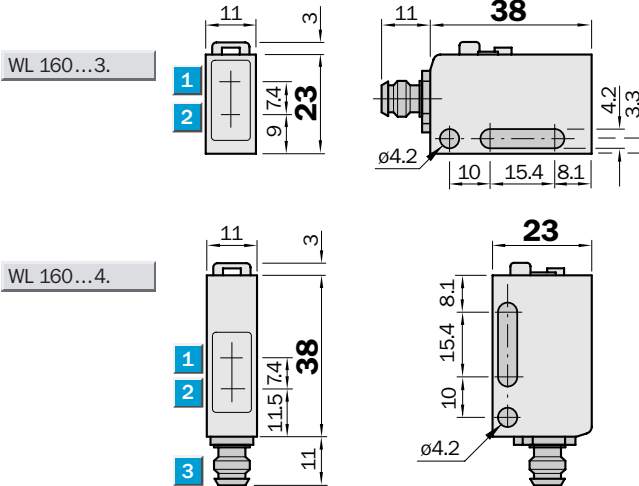


**Scanning range**  
0.01 ... 6 m

Photoelectric reflex switch

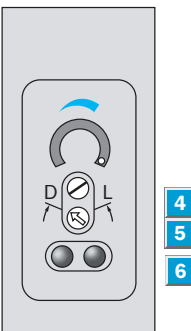
- Horizontal and vertical models
- Polarizing filter for detecting objects with reflecting surfaces
- Contamination control with green LED indicator and contamination control output

### Dimensional drawing



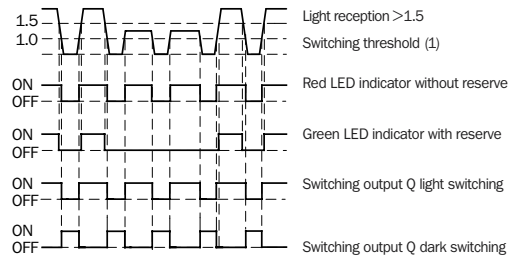
### Setting options

All types



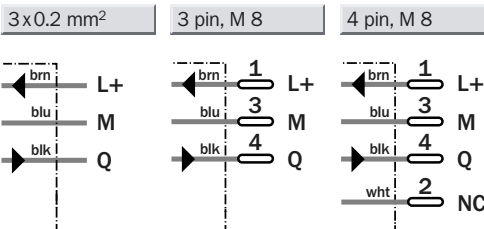
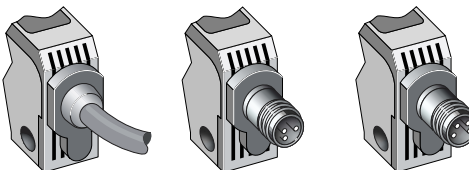
- 1** Optics center, receiver
- 2** Optics center, transmitter
- 3** Plug M 8 or connection cable
- 4** Sensitivity control
- 5** Light/dark rotary switch:  
L = light switching  
D = dark switching
- 6** Red LED signal strength indicator (Status output)
- 7** Green LED signal strength indicator (Operating reserve)

### Operating diagram



### Connection type

WL 160-E132	WL 160-E330	WL 160-E430
WL 160-E142	WL 160-E340	WL 160-E440
WL 160-F132	WL 160-F330	WL 160-F430
WL 160-F142	WL 160-F340	WL 160-F440



NC=not connected



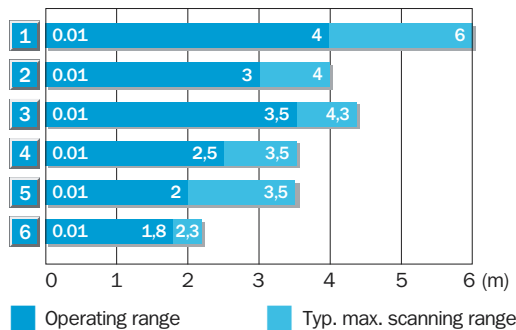
### Accessories

- Cable receptacles
- Mounting bracket (included)
- Reflectors (P250 included)

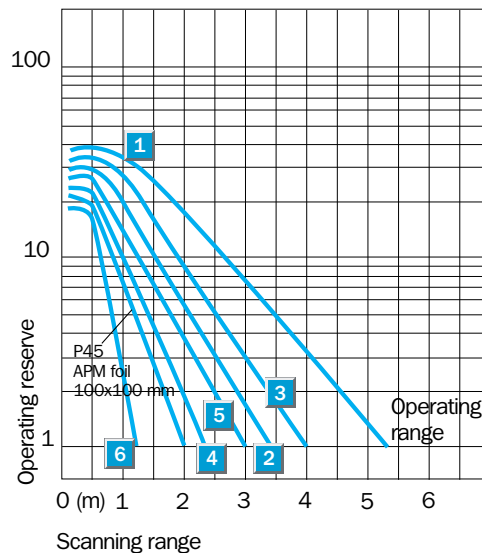
Specifications		WL 160-	F132	F330	F430	E132	E330	E430	F142	F340	F440	E142	E340	E440
Housing shape	Horizontal													
	Vertical													
<b>Scanning range</b> typ. max./on reflector	0.01 ... 6 m/PL 80 A													
	typ. max./on reflector 0.005 ... 4 m/P 250 (supplied w. equip.)													
<b>Operating range</b>	0.01 ... 3 m/P 250													
Adjustable sensitivity	Potentiometer, 2 rotations w. scaling 270°													
<b>Light source<sup>1)</sup>, light type</b>	LED, red light with polarizing filter													
Light spot diameter	Approx. 300 mm at 3 m distance													
Transmitter dispersion angle	Approx. 4.5°													
<b>Supply voltage V<sub>S</sub></b>	DC 10 ... 30 V <sup>2)</sup>													
Residual ripple <sup>3)</sup>	± 10 %													
Current consumption <sup>4)</sup>	≤ 25 mA													
<b>Switching outputs</b>	PNP, open collector: Q													
	NPN, open collector: Q													
Output current I <sub>A</sub> max.	100 mA													
Light receiver, switching type	Light/dark switching per rotary switch													
Response time <sup>5)</sup> / Max. switching frequ. <sup>6)</sup>	≤ 0.5 ms /1000/s													
<b>Connection type:</b> connection cable	PVC, 2 m <sup>7)</sup> ; 3 x 0.2 mm <sup>2</sup> , ø 4.2 mm													
	plug 3 pin, M8													
	plug 4 pin, M8													
<b>VDE protection class<sup>8)</sup></b>	□													
Protection circuits <sup>9)</sup>	A, B, C, D													
<b>Enclosure rating</b>	IP 67													
<b>Ambient temperature</b>	Operation -25 ... +55 °C													
	Storage -40 ... +70 °C													
<b>Weight</b>	With connection cable approx. 60 g													
	With plug approx. 20 g													
<b>Housing material</b>	Housing: PBT; optics: PMMA													

- 1) Average service life 100,000 h at T<sub>U</sub> = +25 °C
- 2) Limit values
- 3) May not exceed or fall short of V<sub>S</sub> tolerances
- 4) Without load
- 5) Signal operating time with ohmic load
- 6) With light/dark ratio 1:1
- 7) Do not bend connection cable below 0 °C
- 8) Rated voltage DC 50 V
- 9) A = V<sub>S</sub> connections reverse-polarity protected
- B = Inputs and outputs reverse-polarity protected
- C = Interference pulse suppression
- D = Outputs overload and short-circuit protected

**Scanning range and operating reserve**



Reflector type	Operating Range
1 PL80 A	0.01 ... 4 m
2 PL250	0.01 ... 3 m
3 PL50 A/PL40 A	0.01 ... 3.5 m
4 PL30 A/PL31 A	0.01 ... 2.5 m
5 PL20 A	0.01 ... 2 m
6 Reflector tap Diamond Grade	0.01 ... 1.8 m



**Ordering information**

Type	Order no.
WL 160-F132	6 022 767
WL 160-F330	6 022 771
WL 160-F430	6 022 772
WL 160-F142	6 022 769
WL 160-F340	6 022 773
WL 160-F440	6 022 774
WL 160-E132	6 022 759
WL 160-E330	6 022 763
WL 160-E430	6 022 764
WL 160-E142	6 022 761
WL 160-E340	6 022 765
WL 160-E440	6 022 766