

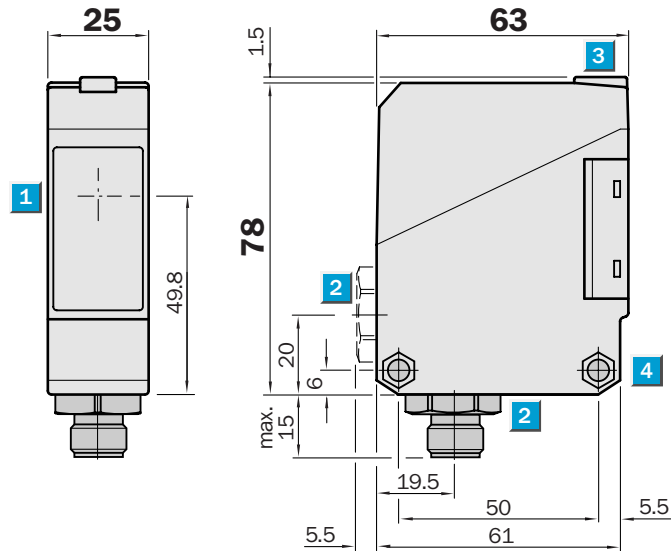


Scanning range
35 m

Through-beam photoelectric switch

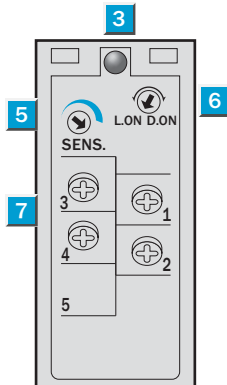
- Sensitivity, adjustable
- Terminal chamber or plug
M 12, 4 pin
- Test input

Dimension illustration



Setting options

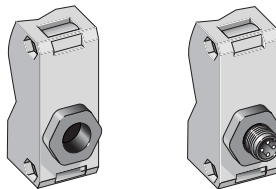
WS/WE 260-F 270
WS/WE 260-F 470
WS/WE 260-E 270
WS/WE 260-E 470



- 1 Middle of optic axis, sender/receiver
- 2 Cable entry gland 1/2" PF thread for cable diameters from 6 to 10 mm optionally at bottom or rear; or M 12 equipment plug, bottom
- 3 LED signal indicator orange
WE 260: switching output active
WS 260: sender active
- 4 Through hole Ø 5.2 mm on both sides for M 5 hex nut
- 5 Sensitivity control (WE 260)
- 6 Light/dark rotary switch (WE 260)
L.ON = light-switching, D.ON = dark-switching
- 7 Terminals
Terminal 3: WS 260 only
Terminal 4: WE 260 only

Connection type

WS/WE 260-F 270	WS/WE 260-F 470
WS/WE 260-E 270	WS/WE 260-E 470



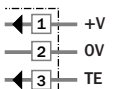
Accessories

Mounting bracket, included
M 12 cable receptacle
Slotted masks BL-260-SK, 5 308 773

Sender

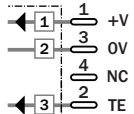
Terminals

WS 260-G 270



4 pin, M 12

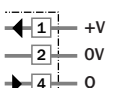
WS 260-G 470



Receiver

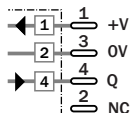
WE 260-E 270

WE 260-F 270



WE 260-F 470

WE 260-E 470



Technical data		WS/WE 260-	F 270	F 470	E 270	E 470						
Scanning range, typ. max.	35 m											
Operating range	30 m											
Sensitivity	Adjustable, potentiometer 270°											
Light source¹⁾	LED, visible red light											
Light spot diameter	Approx. 700 mm at a distance of 30 m											
Aperture angle sender	Approx. 1.4°											
Angle of reception receiver	Approx. 20°											
Supply voltage V_s	10 to 30 V DC ²⁾											
Ripple³⁾	$\leq 5 V_{pp}$											
Current consumption⁴⁾												
sender	$\leq 20 \text{ mA}$											
receiver	$\leq 35 \text{ mA}$											
Switching outputs	PNP, open collector: Q											
	NPN, open collector: Q											
Output current I_A max.	100 mA											
Light receiver, switching mode	Light/dark-switching by rotary switch											
Response time⁵⁾	$\leq 1.5 \text{ ms}$											
Switching frequency max.⁶⁾	333/s											
Test input »TE« sender off	PNP, NPN: TE to 0 V											
Type of connection	Terminal chamber											
	M 12 equipment plug, 4 pin											
VDE protection class⁷⁾	□											
Circuit protection⁸⁾												
sender	A, B											
receiver	A, B, C, D											
Enclosure rating	IP 67											
Ambient temperature	Operation -25°C to $+55^\circ\text{C}$											
	Storage -40°C to $+70^\circ\text{C}$											
Weight	Approx. 120 g											
Material	Housing: ABS; Optics: PC											

¹⁾ Average service life 100 000 h
at $T_U = +25^\circ\text{C}$

²⁾ Limit values

³⁾ Must be within V_s tolerances

⁴⁾ Without load

⁵⁾ With resistive load

⁶⁾ With light/dark ratio 1:1

⁷⁾ Withstand voltage 50 V DC

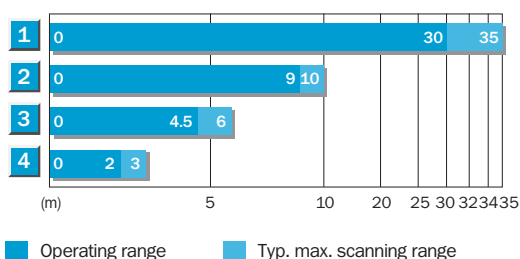
⁸⁾ A = V_s connections reverse-polarity protected

B = Inputs/outputs reverse-polarity protected

C = Interference suppression

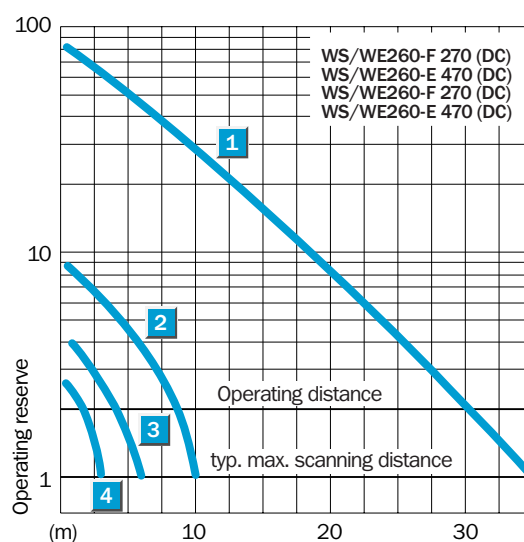
D = Outputs overcurrent and short-circuit protected

Operating range and operating reserve



Scanning range reduction when using slotted masks

- 1 Without slotted mask
- 2 Orifice width 5 mm
- 3 Orifice width 2 mm
- 4 Orifice width 1 mm



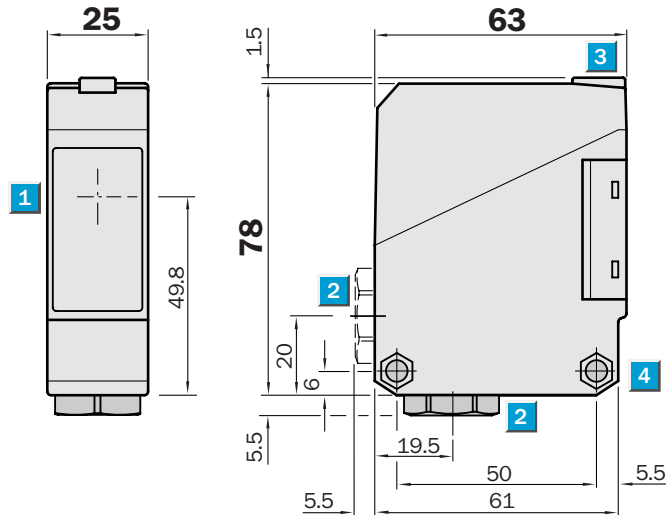
Ordering information

Type	Order no.
WS/WE 260-F 270	6 020 973
WS/WE 260-F 470	6 020 974
WS/WE 260-E 270	6 020 975
WS/WE 260-E 470	6 021 817

	Scanning range 45 m
Through-beam photoelectric switch	

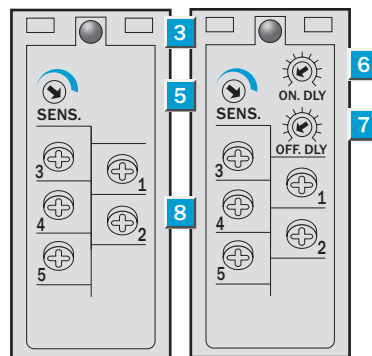
- Sensitivity, adjustable
- Terminal chamber
- Universal voltage supply, Relay output, SPDT, timer optional, t_{ON} and t_{OFF} can be connected separately
- Enclosure rating IP 67
- CE noise radiation EN 50081-1 ("Household standard")

Dimension illustration



Setting options

WS/WE 260-S 270 WS/WE 260-R 270



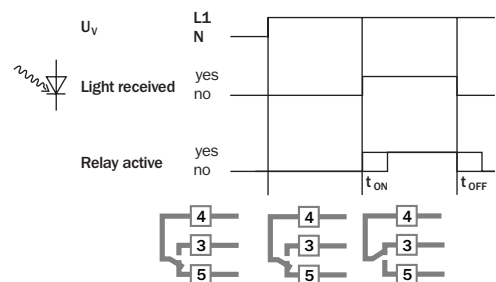
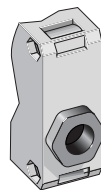
- 1 Middle of optic axis, sender resp. receiver
- 2 Cable entry gland 1/2" PF thread for cable diameters from 6 to 10 mm optionally at bottom or rear
- 3 LED signal indicator orange; WE 260: switching output active WS 260: sender active
- 4 Through hole Ø 5.2 mm on both sides for M 5 hex nut
- 5 Sensitivity control (WE 260)
- 6 Time control ON delay t_{ON} (WE 260)
- 7 Time control OFF delay t_{OFF} (WE 260)
- 8 Terminals 3, 4, 5: WE 260 only

Connection type

WS/WE 260-S 270
WS/WE 260-R 270

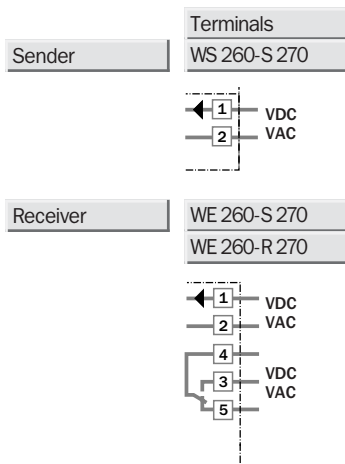
Time delays

$t = 0.1-10 \text{ s}$



Accessories

Mounting bracket, included
cable receptacle
Slotted masks, BL-260-SK, 5 308 773



Technical data		WS/WE 260-	S 270	R 270								
Scanning range , typ. max.	45 m											
Operating range	40 m											
Sensitivity	Adjustable, potentiometer 270°											
Light source ¹⁾	LED, visible red light											
Light spot diameter	Approx. 700 mm at a distance of 40 m											
Aperture angle sender	Approx. 1°											
Angle of reception receiver	Approx. 20°											
Supply voltage V _s ²⁾	12 to 240 V DC											
	24 to 240 V AC											
Power consumption												
Sender	≤ 4 VA											
Receiver	≤ 5 VA											
Switching output	Relay, SPDT, electrically isolated											
Switching current I max. ³⁾	3 A/240 V AC; 3 A/30 V DC											
Light receiver, switching mode	Light-switching											
Response time	≤ 20 ms											
Switching frequency max. ⁴⁾	25/s											
Time delays												
ON delay t _{ON}	0.1 to 10 s, can be connected separately											
OFF delay t _{OFF}	0.1 to 10 s, can be connected separately											
Type of connection	Terminal chamber											
CE noise radiation	Level EN 50081-1 ("Household standard")											
VDE protection class ⁵⁾	□											
Circuit protection ⁶⁾	A, C											
Enclosure rating	IP 67											
Ambient temperature	Operation -25 °C to +55 °C											
	Storage -40 °C to +70 °C											
Weight	Approx. 120 g											
Material	Housing: ABS; Optics: PC											

¹⁾ Average service life 100 000 h
at T_U = +25 °C

²⁾ ± 10 %

³⁾ Provide suitable spark suppression for
inductive or capacitive loads

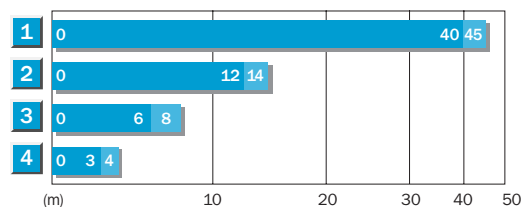
⁴⁾ With light/dark ratio 1:1

⁵⁾ Withstand voltage 250 V UC

⁶⁾ A = V_s connections reverse-polarity protected

C = Interference suppression

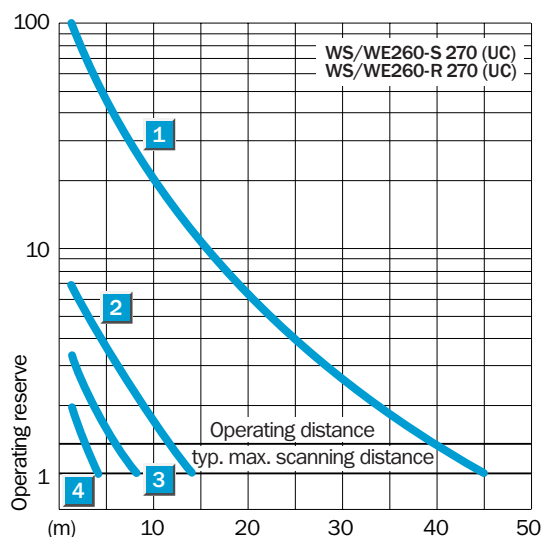
Operating range and operating reserve



■ Operating range ■ Typ. max. scanning range

Scanning range reduction when using slotted masks

1	Without slotted mask
2	Slot width 5 mm
3	Slot width 2 mm
4	Slot width 1 mm



Ordering information

Type	Order no.
WS/WE 260-S 270	6 020 773
WS/WE 260-R 270	6 020 774