




# W 27-3: The all-rounder: robust, powerful, very wide range of applications

	<b>BGS Photoelectric proximity switch</b>
	<b>Photoelectric reflex switch</b>
	<b>Through-beam photoelectric switch</b>



speed of set up: simply press the button and, within seconds, the sensor is adjusted to the object.

The highly visible red light enormously simplifies the alignment of the photoelectric reflex switch to the reflector.

Optionally, the photoelectric proximity switch can be offered with the new, unique "Sensor-Hub" fieldbus link.

#### Overview of W 27-3:

- Robust, universal all-rounder
- Greater security against unwanted optical reflections
- Easy Teach-in, Simple and fast commissioning
- Compact laser, long scanning distance

#### Typical uses:

- Storage and conveying technology
- Automotive industry
- Woodworking machinery
- Doors/gates

**T**he all-rounder W 27-3 shows its particular strengths in harsh industrial environments, easily coping with heavy vibration, shocks and extreme temperature variations.

Another benefit of the W 27-3 is its very wide range of applications. A choice of variants offering functions including 24 VDC or 24 to 240 VAC, output time delays and front screen heating, permits simple integration into any control system.

Additionally, the full W 27-3 product range with different laser sensors and devices for Ex areas according to category 3G/3D (ATEX) opens up new applications (see separate data sheets).

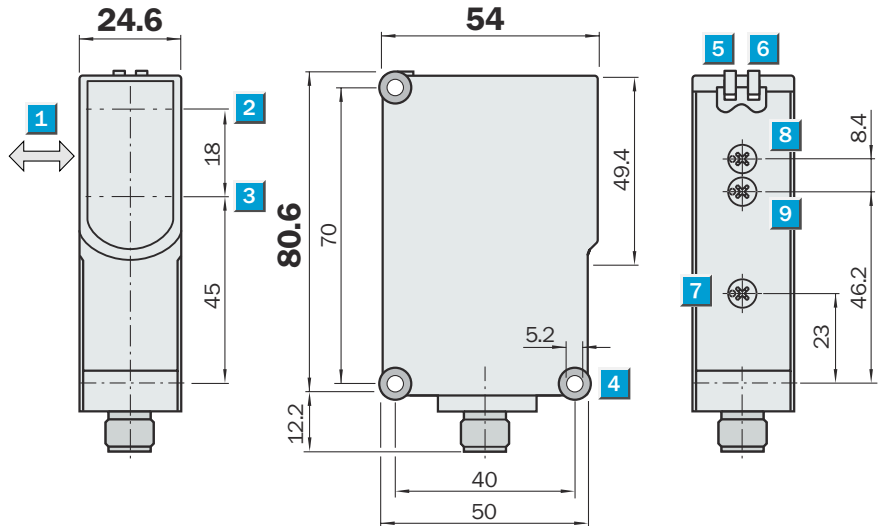
The photoelectric proximity switch leads its class through improved operational security in case of unwanted optical reflections and its

**Scanning range**  
30 ... 1,100 mm

Photoelectric proximity switch

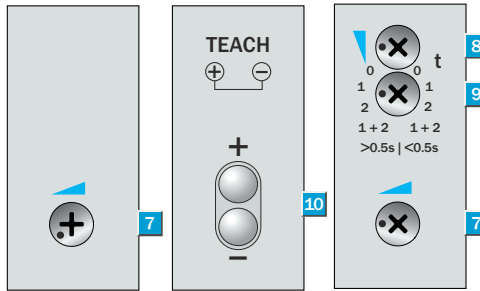
- Precise background suppression without scanning distance drift
- Reliable in industrial environments; secure against the effects of ambient light, unwanted optical reflections, other sensors mounted adjacently and temperatures from -40 °C ... +60 °C
- Easy Teach-in, simple and fast commissioning

Dimensional drawing



Adjustments possible

WTB27-3P2441	WTB27-3P2443	WTB27-3E2641
WTB27-3P3741		WTB27-3F2641



- Standard direction of the material being scanned
- Optical axis sender
- Optical axis receiver
- Mounting hole Ø 5.2 mm
- LED indicator green; power on
- LED indicator yellow; status of received light beam
- Adjustment of scanning distance: Poti
- Time control
- Time delay selector switch
- Adjustment of scanning distance: Double teach button



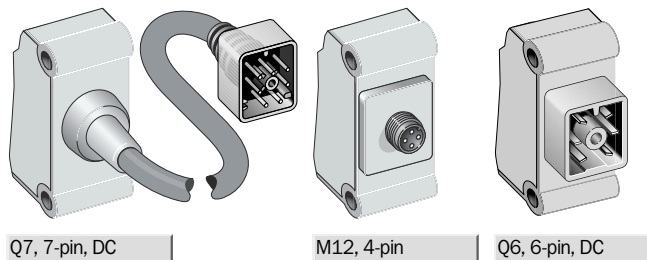
Switch-selectable time delay

0.02 - 0.5s or 0.5 - 10s

- 0 Without time delay
- 1 OFF-delay from trailing edge of object
- 2 ON-delay from leading edge of object
- 1 + 2 OFF- and ON-delay

Connection type

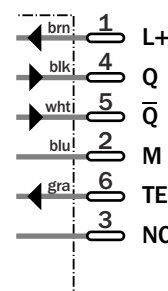
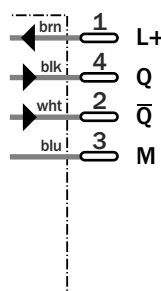
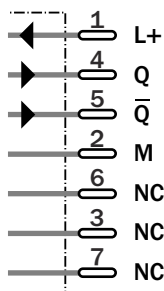
WTB27-3P3741	WTB27-3P2441	WTB27-3E2641
	WTB27-3P2443	WTB27-3F2641



Q7, 7-pin, DC

M12, 4-pin

Q6, 6-pin, DC



**Accessories**

Connector, M12, 4-pin
Connector, Q6, 6-pin, DC-coding
Connector, Q7, 7-pin, DC-coding
Mounting systems
Weather protection

	WTB27-3	E2641	F2641	P2441	P2443	P3741				
<b>Scanning range typ. max.</b>	30 ... 1,100 mm <sup>1)</sup>									
<b>Scanning range, recommended</b>	100 ... 1,100 mm <sup>1)</sup>									
Scanning range sensitivity	Poti									
	Teach-in: Double Teach button									
<b>Light source, light type</b>	LED, Red light, 660 nm <sup>2)</sup>									
Light spot diameter	Approx. 15 mm at 500 mm distance									
<b>Supply voltage V<sub>s</sub></b>	DC 10 ... 30 V <sup>3)</sup>									
Ripple	≤ 5 V <sub>SS</sub> <sup>4)</sup>									
Current consumption	≤ 35 mA <sup>5)</sup>									
<b>Switching outputs</b>	NPN antivalent									
	PNP antivalent									
Signal voltage PNP HIGH / LOW	> V <sub>s</sub> - 2.5 V / approx. 0 V									
Signal voltage NPN HIGH / LOW	Approx. V <sub>s</sub> / < 2.5 V									
Output current I <sub>a</sub> max	100 mA									
Response time	≤ 1.5 ms <sup>6)</sup>									
Switching frequency	350 Hz <sup>7)</sup>									
Time step	Selectable: 0.5 ... 10s / 0.02 ... 0.5s									
Time type	OFF, T <sub>off</sub> , T <sub>on</sub> , T <sub>off</sub> + T <sub>on</sub>									
<b>Test input sender off</b>	TE to V <sub>s</sub>									
	TE to 0 V									
<b>Connection type</b>	Connector, Q6, 6-pin, DC									
	Connector, M12, 4-pin									
	Cable with plug, Q7, 7-pin, DC, PVC, 150 mm <sup>8)</sup>									
<b>VDE protection class</b>	□ <sup>9)</sup>									
<b>Circuit protection</b>	V <sub>s</sub> connections reverse-polarity protected / All outputs short-circuit protected / Interference pulse suppression									
<b>Enclosure rating</b>	IP 65									
	IP 66 / IP 67									
<b>Ambient temperature operation</b>	-40 °C ... +60 °C									
<b>Ambient temperature storage</b>	-40 °C ... +75 °C									
<b>Weight</b>	Ca. 100 g									
	Ca. 120 g									
<b>Housing material</b>	ABS, PMMA									

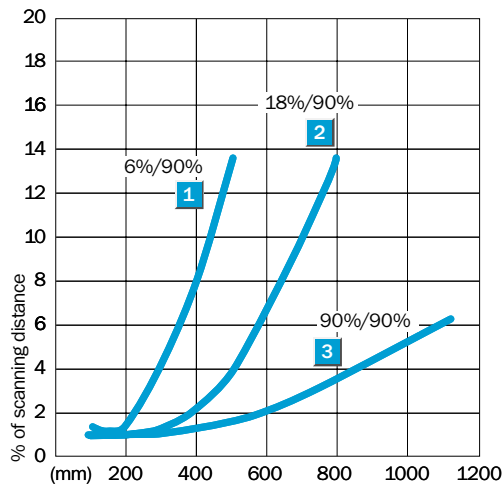
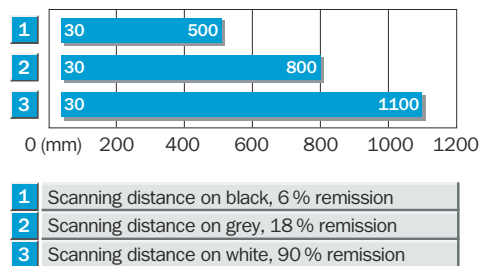
<sup>1)</sup> Object with 90% remission (based on standard white to DIN 5033)  
<sup>2)</sup> Average service life 100,000 h at

T<sub>a</sub> = +25°C  
<sup>3)</sup> Limit values, operation in short-circuit protected network max. 8 A

<sup>4)</sup> May not exceed or fall short of V<sub>s</sub> tolerances  
<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  
<sup>9)</sup> Reference voltage 50 V DC

**Scanning distance**



**Ordering information**

Type	Order No.
WTB27-3E2641	1 027 747
WTB27-3F2641	1 027 746
WTB27-3P2441	1 027 744
WTB27-3P2443	1 027 745
WTB27-3P3741	1 027 748

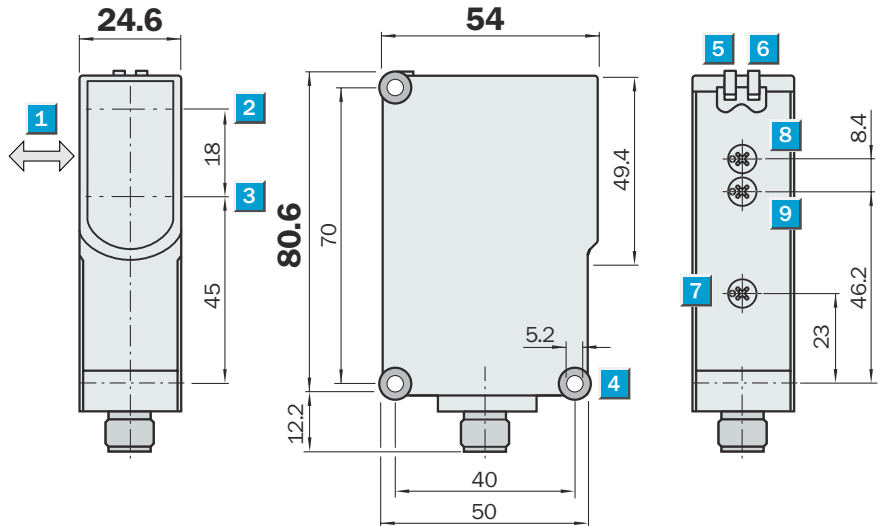
# Photoelectric proximity switch, WTB 27-3, BGS, red light - UC

**Scanning range**  
30 ... 1,100 mm

Photoelectric proximity switch

- Universal supply voltage
- High-precision background suppression without scanning distance drift
- Reliable in industrial environments; secure against the effects of ambient light, unwanted optical reflections, other sensors mounted adjacently and temperatures from -40 °C ... +60 °C

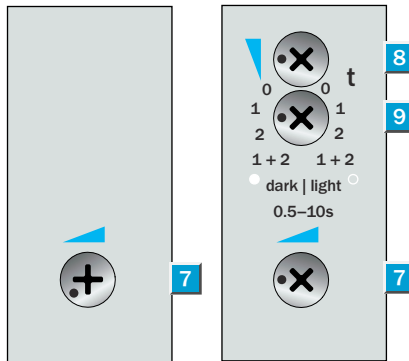
## Dimensional drawing



## Adjustments possible

WTB27-3S1541  
WTB27-3S3741

WTB27-3R2641



- 1 Standard direction of the material being scanned
- 2 Optical axis sender
- 3 Optical axis receiver
- 4 Mounting hole Ø 5.2 mm
- 5 LED indicator green; power on
- 6 LED indicator yellow; status of received light beam
- 7 Adjustment of scanning distance: Poti
- 8 Time control
- 9 Time delay selector switch
- 0 Light-switching
- 1 Dark-switching

## Switch-selectable time delay

0.5 - 10s

- |       |  |
|-------|--|
| 0     | Without time delay                     |
| 1     | OFF-delay from trailing edge of object |
| 2     | ON-delay from leading edge of object   |
| 1 + 2 | OFF- and ON-delay                      |

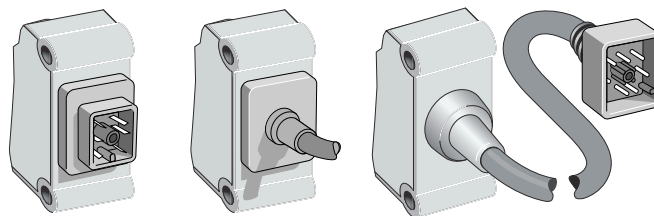


## Connection type

WTB27-3R2641

WTB27-3S1541

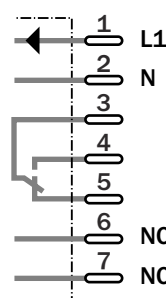
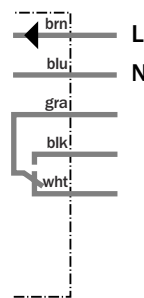
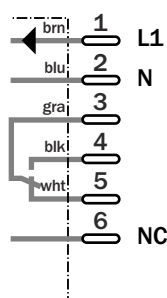
WTB27-3S3741



Q6, 6-pin, AC/UC

5 x 0.25 mm<sup>2</sup>

Q7, 7-pin, AC/UC



## Accessories \*

- Connector, Q6, 6-pin, UC-coding
- Connector, Q7, 7-pin, UC-coding
- Mounting systems
- Weather protection

\* Recommendation for connectors:

AWM Style 2464

	WTB27-3	R2641	S1541	S3741							
<b>Scanning range typ. max.</b>	30 ... 1,100 mm <sup>1)</sup>										
<b>Scanning range, recommended</b>	100 ... 1,100 mm <sup>1)</sup>										
Scanning range sensitivity	Poti										
<b>Light source, light type</b>	LED, Red light, 660 nm <sup>2)</sup>										
Light spot diameter	Approx. 15 mm at 500 mm distance										
<b>Supply voltage V<sub>s</sub></b>	UC 24 ... 240 V <sup>3)</sup>										
<b>Switching outputs</b>	Relay 1 x c/o, electrically isolated <sup>4)</sup>										
	Relay 1 x c/o, electrically safety isolated <sup>5)</sup>										
Switching mode	Light/dark-switching, switchable										
Power consumption	≤ 2 VA										
Max. switching voltage	250 VAC / 120 VDC										
Switching current max.	4A @ 250 VAC o. 24 VDC <sup>6)</sup>										
Max. switching power	AC 1000 VA / DC 100 W										
Response time	≤ 10 ms										
Switching frequency	10 Hz <sup>7)</sup>										
Time step	Selectable: 0.5...10s										
Time type	OFF, T <sub>off</sub> , T <sub>on</sub> , T <sub>off</sub> + T <sub>on</sub>										
<b>Connection type</b>	Connector, Q6, 6-pin, AC/UC										
	Cable, PVC, 2 m <sup>8)</sup>										
	Cable with plug, Q7, 7-pin, AC/UC, PVC, 150 mm <sup>8)</sup>										
<b>VDE protection class</b>	□ <sup>9)</sup>										
<b>Circuit protection</b>	V <sub>s</sub> connections reverse-polarity protected / Interference pulse suppression										
<b>Enclosure rating</b>	IP 65										
	IP 66 / IP 67										
<b>Ambient temperature operation</b>	-40 °C ... +60 °C										
<b>Ambient temperature storage</b>	-40 °C ... +75 °C										
<b>Weight</b>	Ca. 120 g										
	Ca. 200 g										
	Ca. 140 g										
<b>Housing material</b>	ABS, PMMA										

<sup>1)</sup> Object with 90% remission (based on standard white to DIN 5033)

<sup>2)</sup> Average service life 100,000 h at T<sub>a</sub> = +25°C

<sup>3)</sup> • 10%

<sup>4)</sup> Provide suitable spark suppression for inductive or capacitive loads. Relay contacts are separated from the power supply by basis insulation of 3 mm. Depending on the application, an

additional insulation might have to be applied on the users circuit

<sup>5)</sup> Provide suitable spark suppression for inductive or capacitive loads

<sup>6)</sup> Usage category to EN 60947-1,

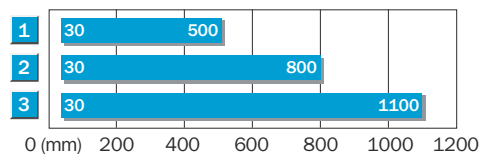
AC-15, DC-13

<sup>7)</sup> With light/dark ratio 1:1

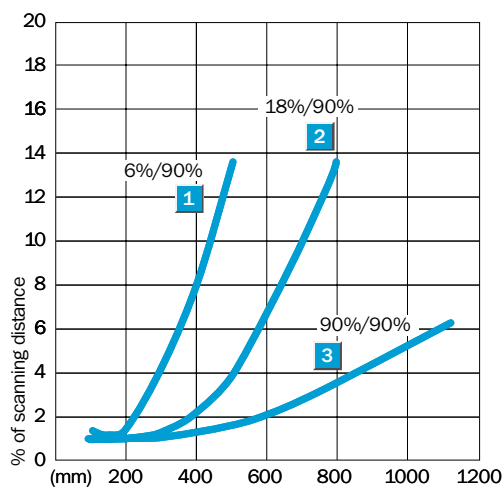
<sup>8)</sup> Do not bend below 0 °C

<sup>9)</sup> Reference voltage 250 V AC

**Scanning distance**



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



**Ordering information**

Type	Order No.
WTB27-3R2641 *	1 027 750
WTB27-3S1541 *	1 027 749
WTB27-3S3741 *	1 027 751

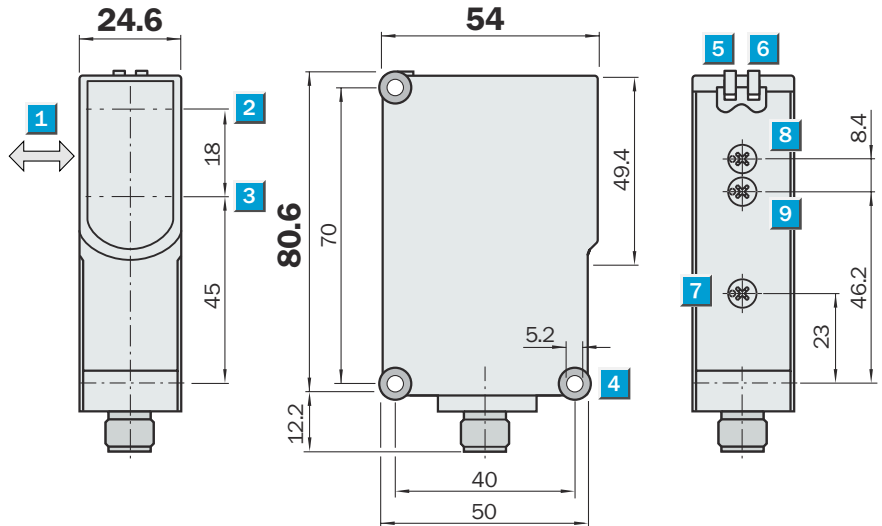
\* Available November 2005

**Scanning range**  
30 ... 1,600 mm

Photoelectric proximity switch

- Infrared light, very long scanning distance
- Reliable in industrial environments; secure against the effects of ambient light, unwanted optical reflections, other sensors mounted adjacently and temperatures from -40 °C ... +60 °C
- Time delays, test input, front screen heating

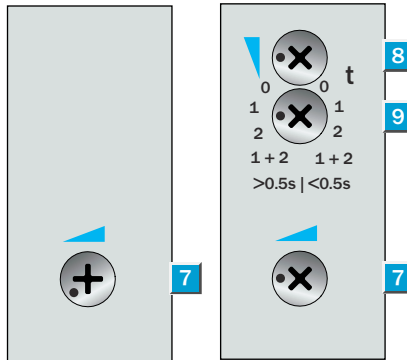
Dimensional drawing



Adjustments possible

WTB27-3P1111	WTB27-3E2411
WTB27-3P2411	WTB27-3E2611
WTB27-3P2421	WTB27-3F2411
WTB27-3P3711	WTB27-3F2611

- 1 Standard direction of the material being scanned
- 2 Optical axis sender
- 3 Optical axis receiver
- 4 Mounting hole Ø 5.2 mm
- 5 LED indicator green; power on
- 6 LED indicator yellow; status of received light beam
- 7 Adjustment of scanning distance: Poti
- 8 Time control
- 9 Time delay selector switch



Switch-selectable time delay

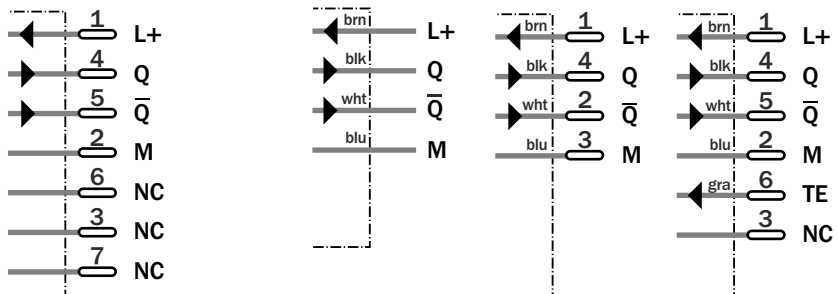
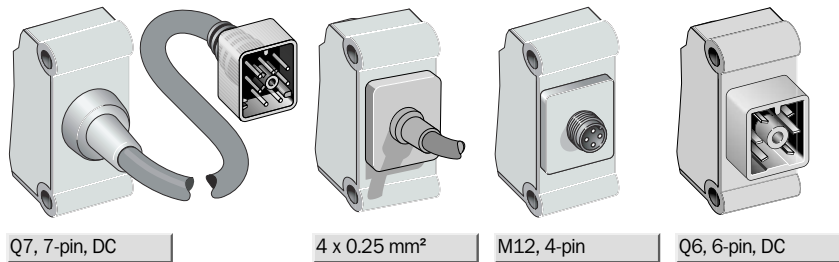
0.02 - 0.5s or 0.5 - 10s

- 0 Without time delay
- 1 OFF-delay from trailing edge of object
- 2 ON-delay from leading edge of object
- 1 + 2 OFF- and ON-delay



Connection type

WTB27-3P3711	WTB27-3P1111	WTB27-3E2411 WTB27-3F2411 WTB27-3P2411 WTB27-3P2421	WTB27-3E2611 WTB27-3F2611
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**Accessories**

Connector, M12, 4-pin
Connector, Q6, 6-pin, DC-coding
Connector, Q7, 7-pin, DC-coding
Mounting systems
Weather protection

	WTB27-3	E2411	E2611	F2411	F2611	P1111	P2411	P2421	P3711		
<b>Scanning range typ. max.</b>	30 ... 1,600 mm <sup>1)</sup>										
<b>Scanning range, recommended</b>	100 ... 1,600 mm <sup>1)</sup>										
Scanning range sensitivity	Poti										
<b>Light source, light type</b>	LED, Infrared light, 880 nm <sup>2)</sup>										
Light spot diameter	Approx. 25 mm at 800 mm distance										
<b>Supply voltage V<sub>s</sub></b>	DC 10 ... 30 V <sup>3)</sup>										
Ripple	≤ 5 V <sub>SS</sub> <sup>4)</sup>										
Current consumption	≤ 40 mA <sup>5)</sup>										
	≤ 55 mA <sup>5)</sup>										
<b>Switching outputs</b>	NPN antivalent										
	PNP antivalent										
Signal voltage PNP HIGH / LOW	> V <sub>s</sub> - 2.5 V / approx. 0 V										
Signal voltage NPN HIGH / LOW	Approx. V <sub>s</sub> / < 2.5 V										
Output current I <sub>a</sub> max	100 mA										
Response time	≤ 1.5 ms <sup>6)</sup>										
Switching frequency	350 Hz <sup>7)</sup>										
Time step	Selectable: 0.5...10s / 0.02...0.5s										
Time type	OFF, T <sub>off</sub> , T <sub>on</sub> , T <sub>off</sub> + T <sub>on</sub>										
<b>Test input sender off</b>	TE to V <sub>s</sub>										
	TE to 0 V										
<b>Connection type</b>	Connector, M12, 4-pin										
	Connector, Q6, 6-pin, DC										
	Cable, PVC, 2 m <sup>8)</sup>										
	Cable with plug, Q7, 7-pin, DC, PVC, 150 mm <sup>9)</sup>										
<b>VDE protection class</b>	□ <sup>9)</sup>										
<b>Circuit protection</b>	V <sub>s</sub> connections reverse-polarity protected / All outputs short-circuit protected / Interference pulse suppression										
<b>Enclosure rating</b>	IP 66 / IP 67										
	IP 65										
<b>Ambient temperature operation</b>	-40 °C ... +60 °C										
<b>Ambient temperature storage</b>	-40 °C ... +75 °C										
<b>Weight</b>	Ca. 100 g										
	Ca. 180 g										
	Ca. 120 g										
Front screen heating	✓										
<b>Housing material</b>	ABS, PMMA										

<sup>1)</sup> Object with 90% remission (based on standard white to DIN 5033)

<sup>2)</sup> Average service life 100,000 h at

T<sub>a</sub> = +25°C

<sup>3)</sup> Limit values, operation in short-circuit protected network max. 8 A

<sup>4)</sup> May not exceed or fall short of V<sub>s</sub> tolerances

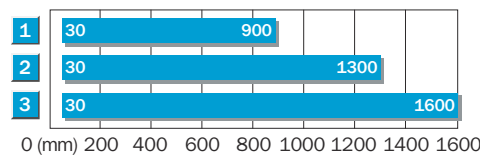
<sup>5)</sup> Without load

<sup>6)</sup> Signal transit time with resistive load

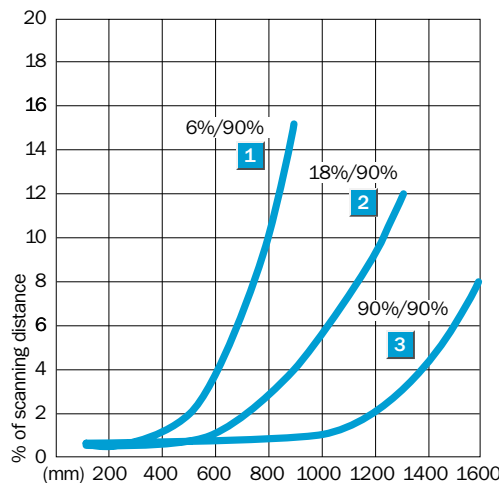
<sup>7)</sup> With light/dark ratio 1:1

<sup>8)</sup> Do not bend below 0 °C

<sup>9)</sup> Reference voltage 50 V DC



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



**Ordering information**

Type	Order No.
WTB27-3E2411	1 027 755
WTB27-3E2611	1 027 757
WTB27-3F2411	1 027 753
WTB27-3F2611	1 027 756
WTB27-3P1111	1 027 752
WTB27-3P2411	1 025 994
WTB27-3P2421	1 027 754
WTB27-3P3711	1 027 758

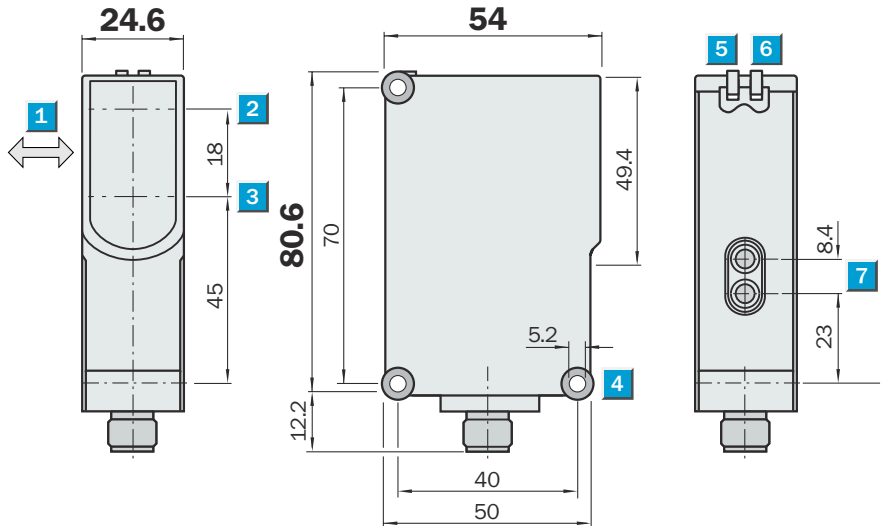
**Scanning range**  
30 ... 1,600 mm

Photoelectric proximity switch

- Infrared light, very long scanning distance
- Easy Teach-in, simple and fast commissioning
- Reliable in industrial environments; secure against the effects of ambient light, unwanted optical reflections, other sensors mounted adjacently and temperatures from -40 °C ... +60 °C



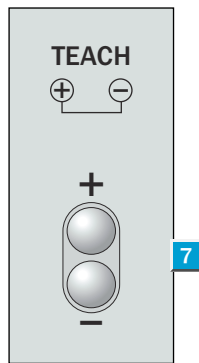
**Dimensional drawing**



**Adjustments possible**

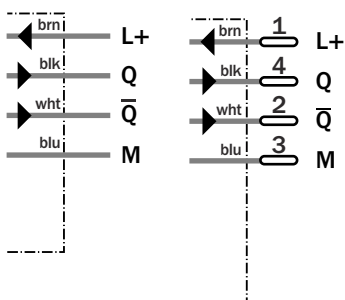
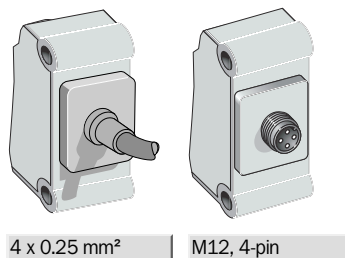
- WTB27-3N2413
- WTB27-3P1113
- WTB27-3P2413

- 1 Standard direction of the material being scanned
- 2 Optical axis sender
- 3 Optical axis receiver
- 4 Mounting hole Ø 5.2 mm
- 5 LED indicator green; power on
- 6 LED indicator yellow; status of received light beam
- 7 Adjustment of scanning distance: Double teach button



**Connection type**

- WTB27-3P1113
- WTB27-3N2413
- WTB27-3P2413



**Accessories**

Connector, M12, 4-pin
Mounting systems
Weather protection

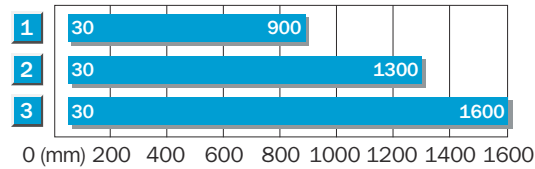




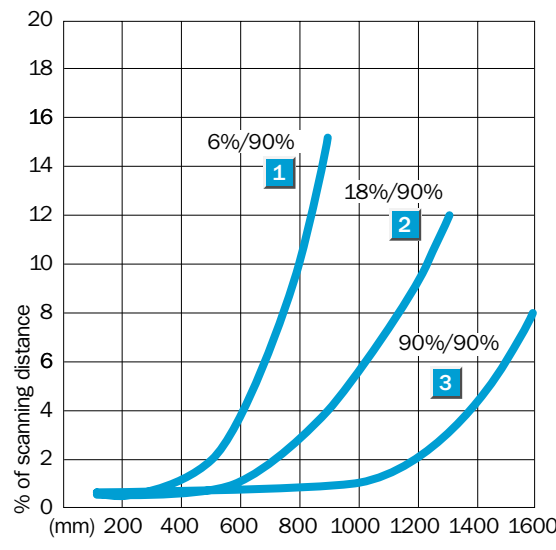
WTB27-3		N2413	P1113	P2413						
<b>Scanning range typ. max.</b>	30 ... 1,600 mm <sup>1)</sup>									
<b>Scanning range, recommended</b>	100 ... 1,600 mm <sup>1)</sup>									
Scanning range sensitivity	Teach-in: Double Teach button									
<b>Light source, light type</b>	LED, Infrared light, 880 nm <sup>2)</sup>									
Light spot diameter	Approx. 25 mm at 800 mm distance									
<b>Supply voltage V<sub>s</sub></b>	DC 10 ... 30 V <sup>3)</sup>									
Ripple	≤ 5 V <sub>SS</sub> <sup>4)</sup>									
Current consumption	≤ 40 mA <sup>5)</sup>									
<b>Switching outputs</b>	NPN antivalent									
	PNP antivalent									
Signal voltage PNP HIGH / LOW	> V <sub>s</sub> - 2.5 V / approx. 0 V									
Signal voltage NPN HIGH / LOW	Approx. V <sub>s</sub> / < 2.5 V									
Output current I <sub>a</sub> max	100 mA									
Response time	≤ 1.5 ms <sup>6)</sup>									
Switching frequency	350 Hz <sup>7)</sup>									
<b>Connection type</b>	Connector, M12, 4-pin									
	Cable, PVC, 2 m <sup>8)</sup>									
<b>VDE protection class</b>	□ <sup>9)</sup>									
<b>Circuit protection</b>	V <sub>s</sub> connections reverse-polarity protected / All outputs short-circuit protected / Interference pulse suppression									
<b>Enclosure rating</b>	IP 66 / IP 67									
<b>Ambient temperature operation</b>	-40 °C ... +60 °C									
<b>Ambient temperature storage</b>	-40 °C ... +75 °C									
<b>Weight</b>	Ca. 100 g									
	Ca. 180 g									
<b>Housing material</b>	ABS, PMMA									

1) Object with 90% remission (based on standard white to DIN 5033)  
 2) Average service life 100,000 h at T<sub>a</sub> = +25°C  
 3) Limit values, operation in short-circuit protected network max. 8 A  
 4) May not exceed or fall short of V<sub>s</sub> tolerances  
 5) Without load  
 6) Signal transit time with resistive load  
 7) With light/dark ratio 1:1  
 8) Do not bend below 0 °C  
 9) Reference voltage 50 V DC

**Scanning distance**



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



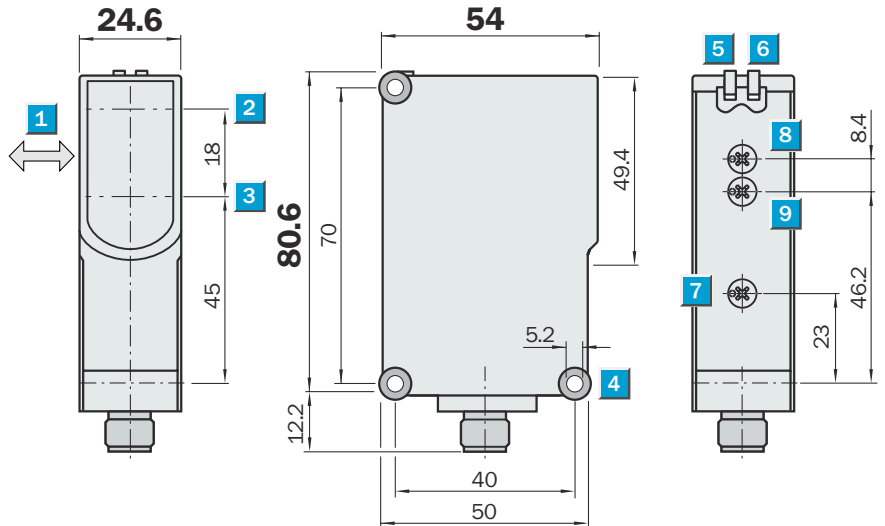
Ordering information	
Type	Order No.
WTB27-3N2413	1 027 761
WTB27-3P1113	1 027 759
WTB27-3P2413	1 027 760

**Scanning range**  
30 ... 1,600 mm

Photoelectric proximity switch

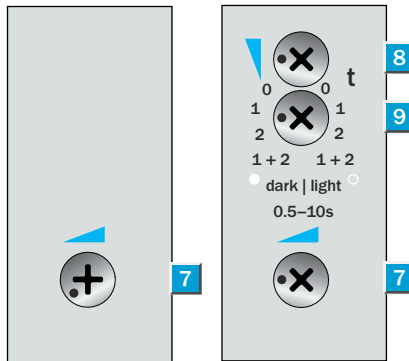
- Universal supply voltage
- Infrared light, very long scanning distance
- Reliable in industrial environments; secure against the effects of ambient light, unwanted optical reflections, other sensors mounted adjacently and temperatures from -40 °C ... +60 °C
- Time delays

Dimensional drawing



Adjustments possible

WTB27-3S1511	WTB27-3R2611
WTB27-3S3711	



- 1 Standard direction of the material being scanned
- 2 Optical axis sender
- 3 Optical axis receiver
- 4 Mounting hole Ø 5.2 mm
- 5 LED indicator green; power on
- 6 LED indicator yellow; status of received light beam
- 7 Adjustment of scanning distance: Poti
- 8 Time control
- 9 Time delay selector switch
- 0 Light-switching
- Dark-switching

Switch-selectable time delay

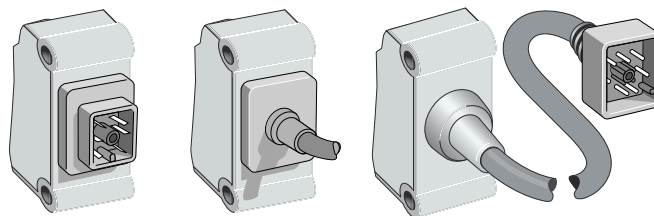
0.5 - 10s

0	Without time delay
1	OFF-delay from trailing edge of object
2	ON-delay from leading edge of object
1 + 2	OFF- and ON-delay



Connection type

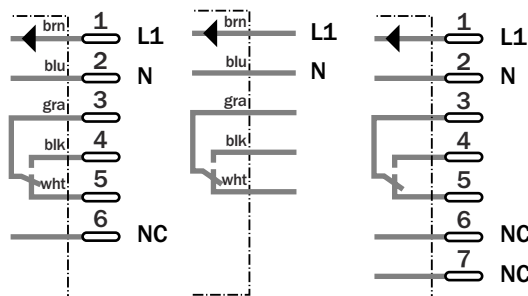
WTB27-3R2611	WTB27-3S1511	WTB27-3S3711
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Q6, 6-pin, AC/UC

5 x 0.25 mm<sup>2</sup>

Q7, 7-pin, AC/UC



Accessories \*

Connector, Q6, 6-pin, UC-coding
Connector, Q7, 7-pin, UC-coding
Mounting systems
Weather protection

\* Recommendation for connectors:

AWM Style 2464

WTB27-3		R2611	S1511	S3711						
<b>Scanning range typ. max.</b>	30 ... 1,600 mm <sup>1)</sup>									
<b>Scanning range, recommended</b>	100 ... 1,600 mm <sup>1)</sup>									
Scanning range sensitivity	Poti									
<b>Light source, light type</b>	LED, Infrared light, 880 nm <sup>2)</sup>									
Light spot diameter	Approx. 25 mm at 800 mm distance									
<b>Supply voltage V<sub>s</sub></b>	UC 24 ... 240 V <sup>3)</sup>									
<b>Switching outputs</b>	Relay 1 x c/o, electrically isolated <sup>4)</sup>									
	Relay 1 x c/o, electrically safety isolated <sup>5)</sup>									
Power consumption	≤ 2 VA									
Max. switching voltage	250 VAC / 120 VDC									
Switching current max.	4A @ 250 VAC o. 24 VDC <sup>6)</sup>									
Max. switching power	AC 1000 VA / DC 100 W									
Response time	≤ 10 ms									
Switching frequency	10 Hz <sup>7)</sup>									
Time step	Selectable: 0.5...10s									
Time type	OFF, T <sub>off</sub> , T <sub>on</sub> , T <sub>off</sub> + T <sub>on</sub>									
<b>Connection type</b>	Connector, Q6, 6-pin, AC/UC									
	Cable, PVC, 2 m <sup>8)</sup>									
	Cable with plug, Q7, 7-pin, AC/UC, PVC, 150 mm <sup>9)</sup>									
<b>VDE protection class</b>	□ <sup>9)</sup>									
<b>Circuit protection</b>	V <sub>s</sub> connections reverse-polarity protected / Interference pulse suppression									
<b>Enclosure rating</b>	IP 65									
	IP 66 / IP 67									
<b>Ambient temperature operation</b>	-40 °C ... +60 °C									
<b>Ambient temperature storage</b>	-40 °C ... +75 °C									
<b>Weight</b>	Ca. 120 g									
	Ca. 200 g									
	Ca. 140 g									
<b>Housing material</b>	ABS, PMMA									

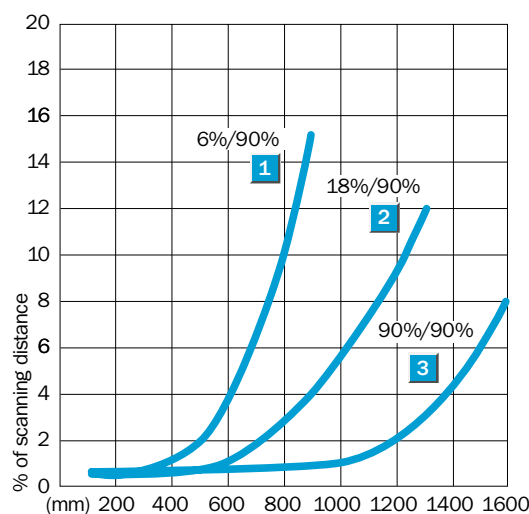
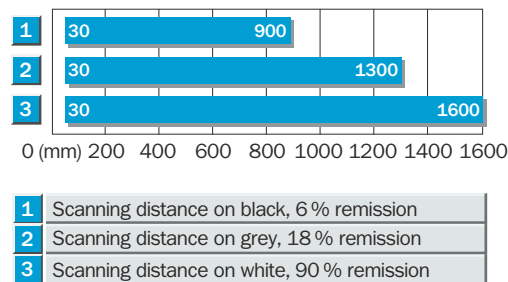
<sup>1)</sup> Object with 90% remission (based on standard white to DIN 5033)  
<sup>2)</sup> Average service life 100,000 h at T<sub>a</sub> = +25°C  
<sup>3)</sup> • 10%

<sup>4)</sup> Provide suitable spark suppression for inductive or capacitive loads. Relay contacts are separated from the power-supply by basis insulation of 3 mm. Depending on the application, an

additional insulation might have to be applied on the users circuit  
<sup>5)</sup> Provide suitable spark suppression for inductive or capacitive loads  
<sup>6)</sup> Usage category to EN 60947-1,

AC-15, DC-13  
<sup>7)</sup> With light/dark ratio 1:1  
<sup>8)</sup> Do not bend below 0 °C  
<sup>9)</sup> Reference voltage 250 V AC

**Scanning distance**



Ordering information	
Type	Order No.
WTB27-3R2611 *	1 027 763
WTB27-3S1511 *	1 027 762
WTB27-3S3711 *	1 027 764

\* Available November 2005

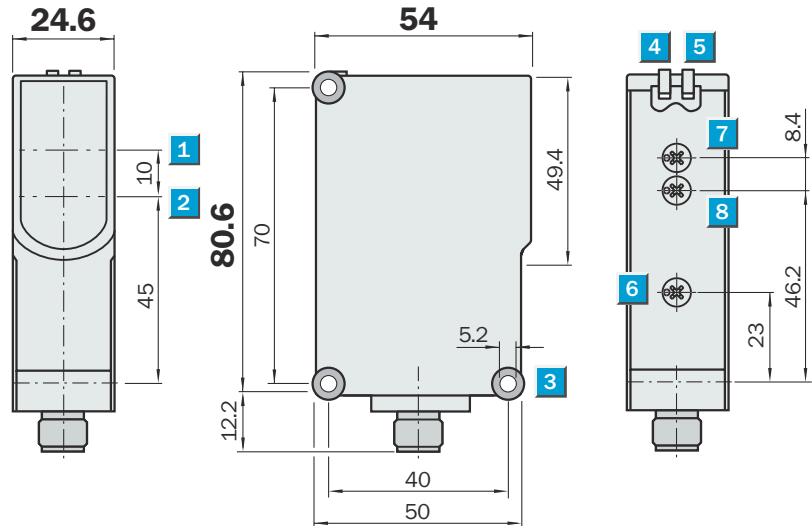
# Photoelectric reflex switch, WL 27-3, red light - DC

**Scanning range**  
0.1 ... 15 m

Photoelectric reflex switch

- Red light for easier alignment
- Long range, high operating reserve
- Reliable in industrial environments; secure against the effects of ambient light, other sensors mounted adjacently and temperatures from -40 °C ... +60 °C
- Front screen heating, time delays

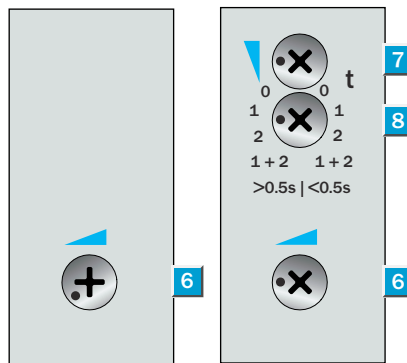
## Dimensional drawing



## Adjustments possible

WL27-3P1131	WL27-3E2631
WL27-3P2431	WL27-3F2631
WL27-3P2451	

- 1 Optical axis sender
- 2 Optical axis receiver
- 3 Mounting hole Ø 5.2 mm
- 4 LED indicator green; power on
- 5 LED indicator yellow; status of received light beam
- 6 Sensitivity adjustment: Poti
- 7 Time control
- 8 Time delay selector switch



## Switch-selectable time delay

0.02 - 0.5s or 0.5 - 10s

0 Without time delay

1 OFF-delay from interruption of light path

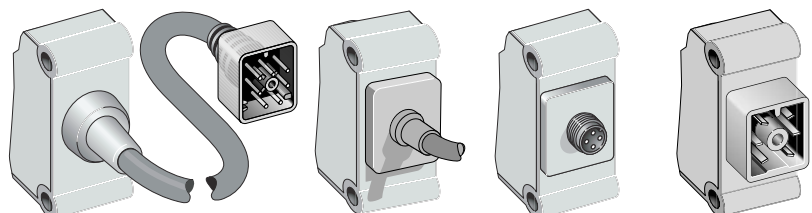
2 ON-delay from reset of light path

1 + 2 OFF- and ON-delay



## Connection type

WL27-3P3730	WL27-3P1131	WL27-3P2430 WL27-3P2431 WL27-3P2450 WL27-3P2451	WL27-3E2631 WL27-3F2631
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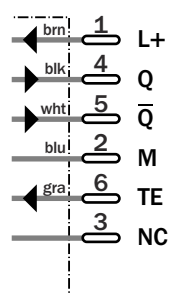
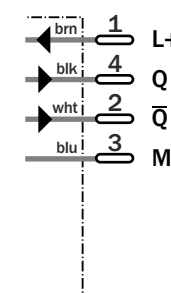
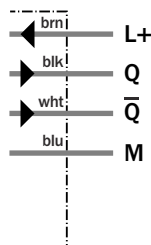
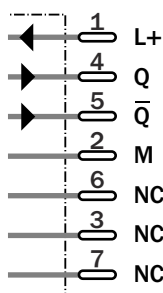


Q7, 7-pin, DC

4 x 0.25 mm²

M12, 4-pin

Q6, 6-pin, DC



## Accessories

- Connector, M12, 4-pin
- Connector, Q6, 6-pin, DC-coding
- Connector, Q7, 7-pin, DC-coding
- Mounting systems
- Reflectors
- Weather protection

	WL27-3	E2631	F2631	P1131	P2430	P2431	P2450	P2451	P3730
<b>Scanning range max. typ.</b>	0.1 ... 15 m								
<b>Scanning range, recommended</b>	0.1 ... 11 m								
Relating to	Reflector PL 80 A								
Sensitivity adjustment	Potentiometer								
<b>Light source, light type</b>	LED, Red light, 660 nm <sup>1)</sup>								
Light spot diameter	Approx. 220 mm at 10 m distance								
Angle of dispersion	Ca. 1.5 °								
Polarisation filter	✓								
<b>Supply voltage V<sub>s</sub></b>	DC 10 ... 30 V <sup>2)</sup>								
Ripple	≤ 5 V <sub>SS</sub> <sup>3)</sup>								
Current consumption	≤ 30 mA <sup>4)</sup> ≤ 45 mA <sup>4)</sup>								
<b>Switching outputs</b>	NPN antivalent PNP antivalent								
Signal voltage PNP HIGH / LOW	> V <sub>s</sub> - 2.5 V / approx. 0 V								
Signal voltage NPN HIGH / LOW	Approx. V <sub>s</sub> / < 2.5 V								
Output current I <sub>a</sub> max	100 mA								
Response time	≤ 500 μs <sup>5)</sup>								
Switching frequency	1,000 Hz <sup>6)</sup>								
Time step	Selectable: 0.5...10s / 0.02...0.5s								
Time type	OFF, T <sub>off</sub> , T <sub>on</sub> , T <sub>off</sub> + T <sub>on</sub>								
<b>Test input sender off</b>	TE to V <sub>s</sub> TE to 0 V								
<b>Connection type</b>	Connector, Q6, 6-pin, DC Cable, PVC, 2 m <sup>7)</sup> Connector, M12, 4-pin Cable with plug, Q7, 7-pin, DC, PVC, 150 mm <sup>7)</sup>								
<b>VDE protection class</b>	□ <sup>8)</sup>								
<b>Circuit protection</b>	V <sub>s</sub> connections reverse-polarity protected / All outputs short-circuit protected / Interference pulse suppression								
<b>Enclosure rating</b>	IP 65 IP 66 / IP 67								
<b>Ambient temperature operation</b>	-40 °C ... +60 °C								
<b>Ambient temperature storage</b>	-40 °C ... +75 °C								
<b>Weight</b>	Ca. 100 g Ca. 180 g Ca. 120 g								
Front screen heating	✓								
<b>Housing material</b>	ABS, PMMA								

<sup>1)</sup> Average service life 100,000 h at T<sub>a</sub> = +25 °C

<sup>2)</sup> Limit values, operation in short-circuit

protected network max. 8 A

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

V<sub>s</sub> tolerances

<sup>4)</sup> Without load

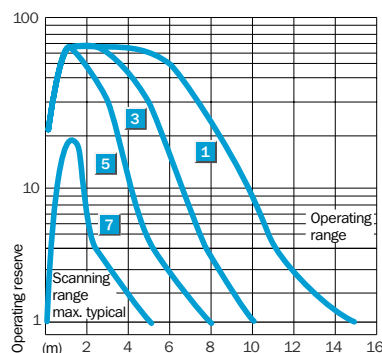
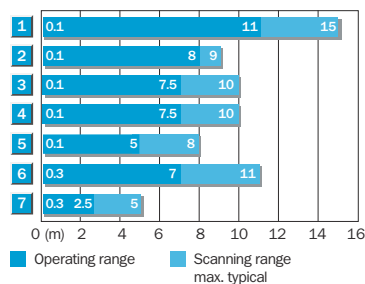
<sup>5)</sup> Signal transit time with resistive load

<sup>6)</sup> With light/dark ratio 1:1

<sup>7)</sup> Do not bend below 0 °C

<sup>8)</sup> Reference voltage 50 V DC

**Scanning range and operating reserve**



Reflector type	Operating range
1 PL 80 A	0.1 ... 11.0 m
2 PL 50 A	0.1 ... 8.0 m
3 PL 40 A	0.1 ... 7.5 m
4 PL 30 A	0.1 ... 7.5 m
5 PL 20 A	0.1 ... 5.0 m
6 C 110	0.3 ... 7.0 m
7 Reflective tape Diamond Grade	0.3 ... 2.5 m

**Ordering information**

Type	Order No.
WL27-3E2631	1 027 773
WL27-3F2631	1 027 772
WL27-3P1131	1 027 768
WL27-3P2430	1 027 769
WL27-3P2431	1 027 982
WL27-3P2450	1 027 771
WL27-3P2451	1 027 770
WL27-3P3730	1 027 774

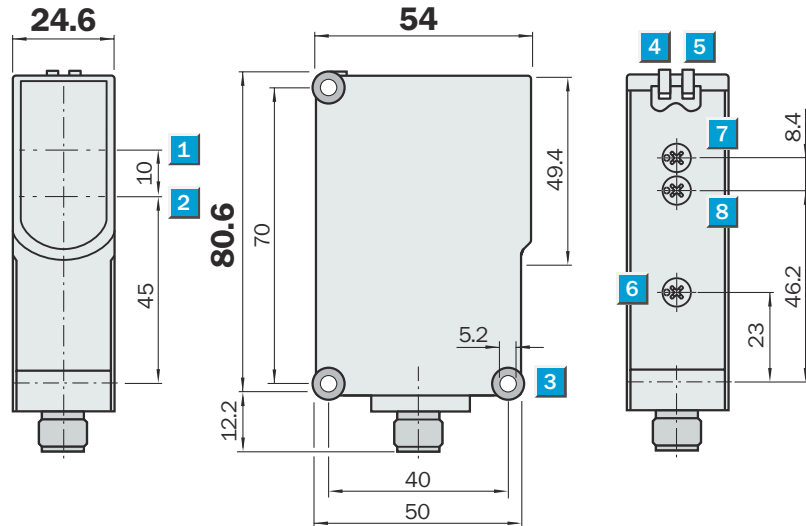
# Photoelectric reflex switch, WL 27-3, red light - UC

**Scanning range**  
0.1 ... 15 m

Photoelectric reflex switch

- Universal supply voltage
- Red light, for easier alignment
- Reliable in industrial environments; secure against the effects of ambient light, other sensors mounted adjacently and temperatures from -40 °C ... +60 °C
- Time delays

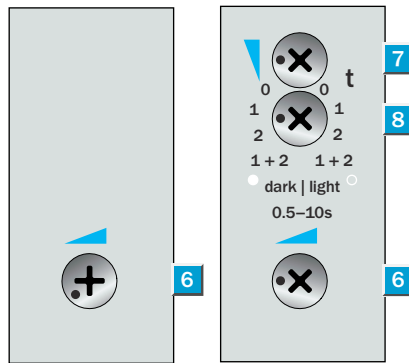
## Dimensional drawing



## Adjustments possible

WL27-3S1531  
WL27-3S3731

WL27-3R2631



- 1 Optical axis sender
- 2 Optical axis receiver
- 3 Mounting hole Ø 5.2 mm
- 4 LED indicator green; power on
- 5 LED indicator yellow; status of received light beam
- 6 Sensitivity adjustment: Poti
- 7 Time control
- 8 Time delay selector switch
- 0 Light-switching
- Dark-switching

## Switch-selectable time delay

0.5 - 10s

0 Without time delay

1 OFF-delay from interruption of light path

2 ON-delay from reset of light path

1 + 2 OFF- and ON-delay

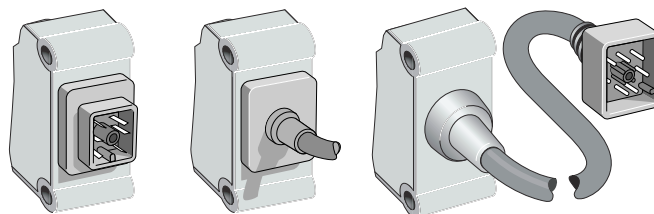


## Connection type

WL27-3R2631

WL27-3S1531

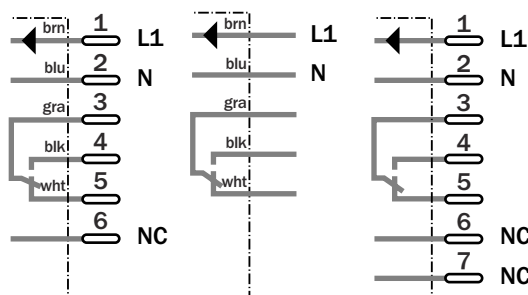
WL27-3S3731



Q6, 6-pin, AC/UC

5 x 0.25 mm<sup>2</sup>

Q7, 7-pin, AC/UC



## Accessories \*

Connector, Q6, 6-pin, UC-coding

Connector, Q7, 7-pin, UC-coding

Mounting systems

Reflectors

Weather protection

\* Recommendation for connectors:

AWM Style 2464

	WL27-3	R2631	S1531	S3731						
<b>Scanning range max. typ.</b>	0.1 ... 15 m									
<b>Scanning range, recommended</b>	0.1 ... 11 m									
Relating to	Reflector PL 80 A									
Sensitivity adjustment	Potentiometer									
<b>Light source, light type</b>	LED, Red light, 660 nm <sup>1)</sup>									
Light spot diameter	Approx. 220 mm at 10 m distance									
Angle of dispersion	Ca. 1.5 °									
Polarisation filter	✓									
<b>Supply voltage V<sub>s</sub></b>	UC 24 ... 240 V <sup>2)</sup>									
<b>Switching outputs</b>	Relay 1 x c/o, electrically isolated <sup>3)</sup>									
	Relay 1 x c/o, electrically safety isolated <sup>4)</sup>									
Switching mode	Light-/dark-switching, selectable									
Power consumption	≤ 2 VA									
Max. switching voltage	250 VAC / 120 VDC									
Switching current max.	4A @ 250 VAC o. 24 VDC <sup>5)</sup>									
Max. switching power	AC 1000 VA / DC 100 W									
Response time	≤ 10 ms									
Switching frequency	10 Hz <sup>6)</sup>									
Time step	Selectable: 0.5...10s									
Time type	OFF, T <sub>off</sub> , T <sub>on</sub> , T <sub>off</sub> + T <sub>on</sub>									
<b>Connection type</b>	Connector, Q6, 6-pin, AC/UC									
	Cable, PVC, 2 m <sup>7)</sup>									
	Cable with plug, Q7, 7-pin, AC/UC, PVC, 150 mm <sup>7)</sup>									
<b>VDE protection class</b>	□ <sup>8)</sup>									
<b>Circuit protection</b>	V <sub>s</sub> connections reverse-polarity protected / Interference pulse suppression									
<b>Enclosure rating</b>	IP 65									
	IP 66 / IP 67									
<b>Ambient temperature operation</b>	-40 °C ... +60 °C									
<b>Ambient temperature storage</b>	-40 °C ... +75 °C									
<b>Weight</b>	Ca. 120 g									
	Ca. 200 g									
	Ca. 140 g									
<b>Housing material</b>	ABS, PMMA									

<sup>1)</sup> Average service life 100,000 h at T<sub>a</sub> = +25 °C

<sup>2)</sup> • 10%

<sup>3)</sup> Provide suitable spark suppression for

inductive or capacitive loads. Relay contacts are separated from the power supply by basis insulation of 3 mm. Depending on the application, an additional

insulation might have to be applied on the users circuit  
<sup>4)</sup> Provide suitable spark suppression for inductive or capacitive loads

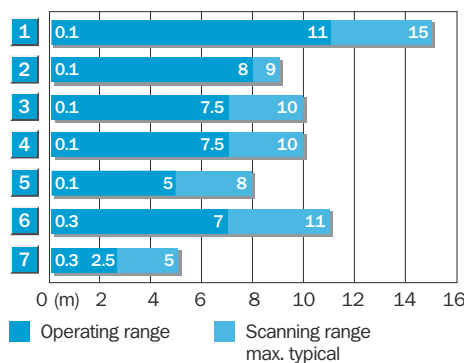
<sup>5)</sup> Usage category to EN 60947-1, AC-15, DC-13

<sup>6)</sup> With light/dark ratio 1:1

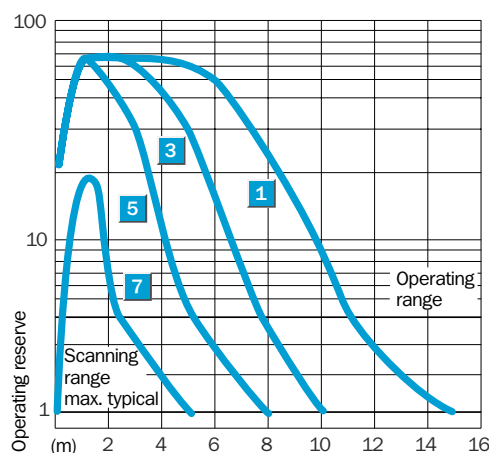
<sup>7)</sup> Do not bend below 0 °C

<sup>8)</sup> Reference voltage 250 V AC

**Scanning range and operating reserve**



	Reflector type	Operating range
1	PL 80 A	0.1 ... 11.0 m
2	PL 50 A	0.1 ... 8.0 m
3	PL 40 A	0.1 ... 7.5 m
4	PL 30 A	0.1 ... 7.5 m
5	PL 20 A	0.1 ... 5.0 m
6	C 110	0.3 ... 7.0 m
7	Reflective tape Diamond Grade	0.3 ... 2.5 m



**Ordering information**

Type	Order No.
WL27-3R2631 *	1 027 776
WL27-3S1531 *	1 027 775
WL27-3S3731 *	1 027 777

\* Available November 2005

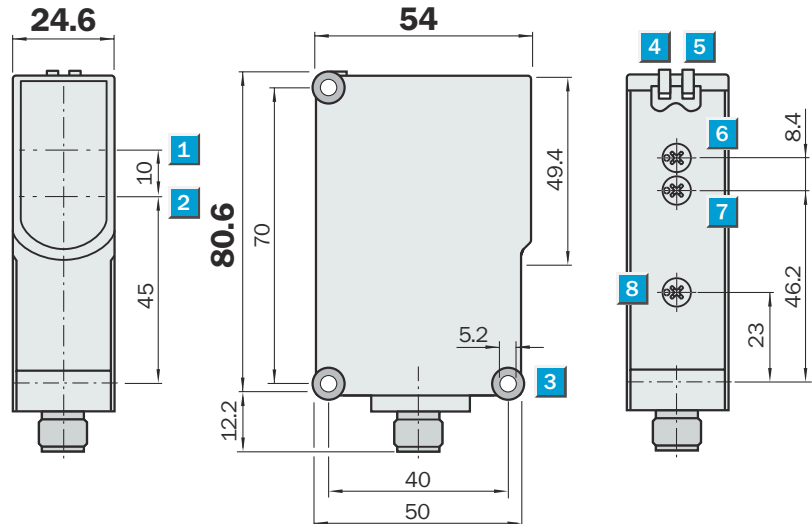
# Through-beam photoelectric switch, WSE 27-3, red light - DC

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

Through-beam photoelectric

- Red light for easier alignment
- Long range, high operating reserve
- Reliable in industrial environments; secure against the effects of ambient light and temperatures from -40 °C ... +60 °C
- Alarm output, front screen heating, test input, time delays

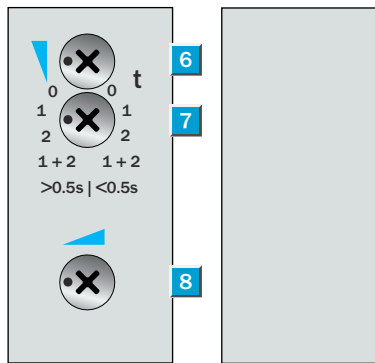
## Dimensional drawing



## Adjustments possible

WSE27-3E2631	WSE27-3P2430
WSE27-3F2631	WSE27-3P2450
	WSE27-3P3730

- 1 Optical axis sender
- 2 Optical axis receiver
- 3 Mounting hole  $\varnothing$  5.2 mm
- 4 LED indicator green; power on
- 5 LED indicator yellow; status of received light beam
- 6 Time control
- 7 Time delay selector switch
- 8 Sensitivity adjustment: Poti



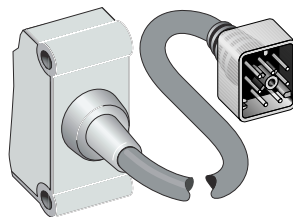
## Switch-selectable time delay

0.02 - 0.5s or 0.5 - 10s

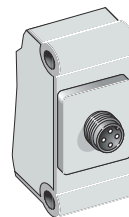
- 0 Without time delay
- 1 OFF-delay from interruption of light path
- 2 ON-delay from reset of light path
- 1 + 2 OFF- and ON-delay

## Connection type

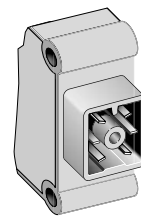
WSE27-3P3730	WSE27-3P2430 WSE27-3P2450	WSE27-3E2631 WSE27-3F2631
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Q7, 7-pin, DC

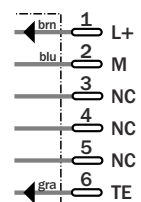
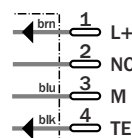
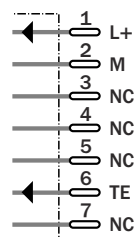


M12, 4-pin

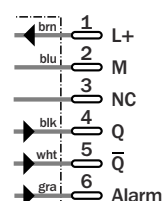
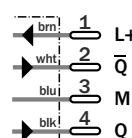
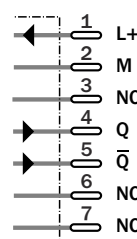


Q6, 6-pin, DC

Sender



Receiver



## Accessories

- Connector, M12, 4-pin
- Connector, Q6, 6-pin, DC-coding
- Connector, Q7, 7-pin, DC-coding
- Mounting systems
- Weather protection



	WSE27-3	E2631	F2631	P2430	P2450	P3730						
<b>Scanning range max. typ.</b>	0 ... 35 m											
<b>Scanning range, recommended</b>	0 ... 25 m											
Sensitivity adjustment	Potentiometer											
<b>Light source, light type</b>	LED, Red light, 645 nm <sup>1)</sup>											
Light spot diameter	Approx. 600 mm at 25 m distance											
Angle of dispersion	Ca. 1.5 °											
Angle of reception	Ca. 3 °											
<b>Supply voltage V<sub>s</sub></b>	DC 10 ... 30 V <sup>2)</sup>											
Ripple	≤ 5 V <sub>SS</sub> <sup>3)</sup>											
Current consumption, sender	≤ 35 mA without front screen heating <sup>4)</sup> ≤ 50 mA with front screen heating <sup>4)</sup>											
Current consumption, receiver	≤ 20 mA without front screen heating <sup>4)</sup> ≤ 35 mA with front screen heating <sup>4)</sup>											
<b>Switching outputs</b>	NPN antivalent											
	PNP antivalent											
Signal voltage PNP HIGH / LOW	> V <sub>s</sub> - 2.5 V / approx. 0 V											
Signal voltage NPN HIGH / LOW	Approx. V <sub>s</sub> / < 2.5 V											
Output current I <sub>a</sub> max	100 mA											
Response time	≤ 500 μs <sup>5)</sup>											
Switching frequency	1,000 Hz <sup>6)</sup>											
Time step	Selectable: 0.5...10s / 0.02...0.5s											
Time type	OFF, T <sub>off</sub> , T <sub>on</sub> , T <sub>off</sub> + T <sub>on</sub>											
<b>Test input sender off</b>	TE to 0 V											
Alarm output	Alarm <sup>7)</sup>											
<b>Connection type</b>	Connector, Q6, 6-pin, DC											
	Connector, M12, 4-pin											
	Cable with plug, Q7, 7-pin, DC, PVC, 150 mm <sup>8)</sup>											
<b>VDE protection class</b>	□ <sup>9)</sup>											
<b>Circuit protection</b>	V <sub>s</sub> connections reverse-polarity protected / All outputs short-circuit protected / Interference pulse suppression											
<b>Enclosure rating</b>	IP 65											
	IP 66 / IP 67											
<b>Ambient temperature operation</b>	-40 °C ... +60 °C											
<b>Ambient temperature storage</b>	-40 °C ... +75 °C											
<b>Weight</b>	Ca. 200 g											
	Ca. 240 g											
Front screen heating	✓											
<b>Housing material</b>	ABS, PMMA											

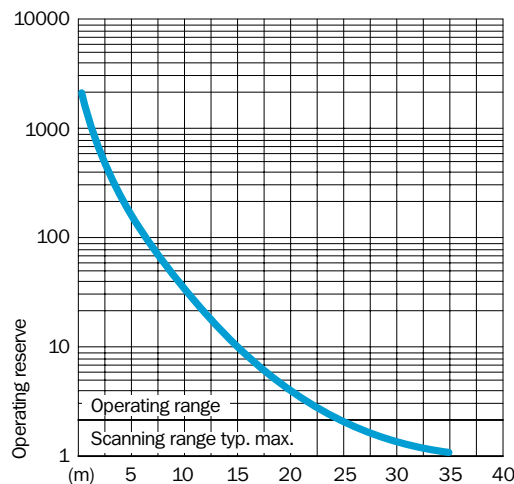
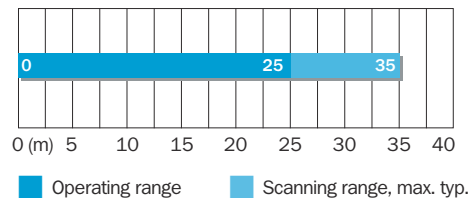
<sup>1)</sup> Average service life 100,000 h at T<sub>a</sub> = +25 °C  
<sup>2)</sup> Limit values, operation in short-circuit

protected network max. 8 A  
<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> NPN: Signal reserve > 50% HIGH. PNP: Signal reserve > 50% LOW  
<sup>8)</sup> Do not bend below 0 °C  
<sup>9)</sup> Reference voltage 50 V DC

**Scanning range and operating reserve**



**Ordering information**

Type	Order No.
WSE27-3E2631	1 027 793
WSE27-3F2631	1 027 792
WSE27-3P2430	1 027 790
WSE27-3P2450	1 027 791
WSE27-3P3730	1 027 794

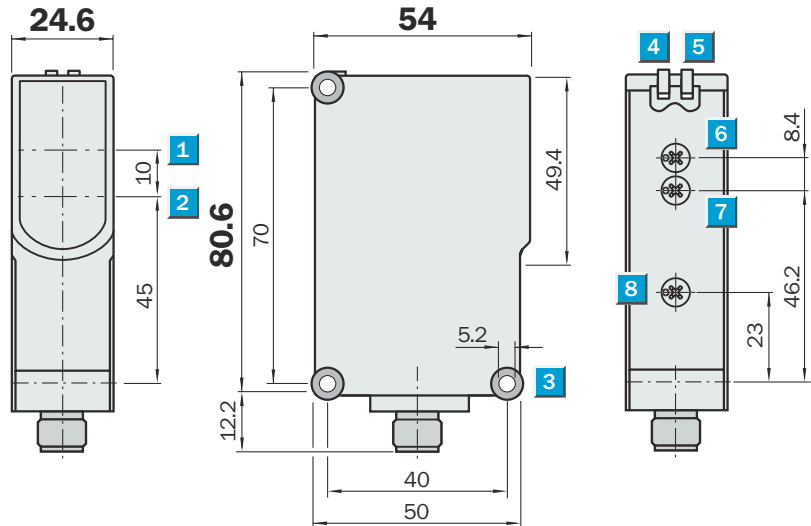
# Through-beam photoelectric switch, WSE 27-3, red light - UC

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

Through-beam photoelectric

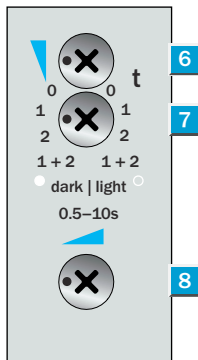
- Universal supply voltage
- Red light  
for easier alignment
- Long range,  
high operating reserve
- Reliable in industrial environ-  
ments; secure against the effects  
of ambient light and temperatures  
from -40 °C ... +60 °C
- Time delays

## Dimensional drawing



## Adjustments possible

WSE27-3R2631



- 1 Optical axis sender
- 2 Optical axis receiver
- 3 Mounting hole Ø 5.2 mm
- 4 LED indicator green; power on
- 5 LED indicator yellow; status of received light beam
- 6 Time control
- 7 Time delay selector switch
- 8 Sensitivity adjustment: Poti
- 0 Light-switching
- Dark-switching

## Switch-selectable time delay

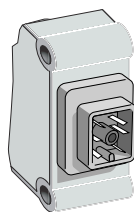
0.5 - 10s

- 0 Without time delay
- 1 OFF-delay from interruption of light path
- 2 ON-delay from reset of light path
- 1 + 2 OFF- and ON-delay

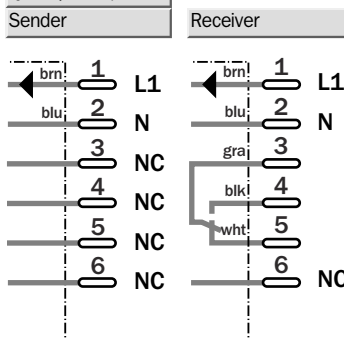


## Connection type

WSE27-3R2631



Q6, 6-pin, AC/UC



## Accessories \*

- Connector, Q6, 6-pin, UC-coding
- Mounting systems
- Weather protection

\* Recommendation for connectors:

AWM Style 2464

WSE27-3

R2631

<b>Scanning range max. typ.</b>	0 ... 35 m
<b>Scanning range, recommended</b>	0 ... 25 m
Sensitivity adjustment	Potentiometer
<b>Light source, light type</b>	LED, Red light, 645 nm <sup>1)</sup>
Light spot diameter	Approx. 600 mm at 25 m distance
Angle of dispersion	Ca. 1.5 °
Angle of reception	Ca. 3 °
<b>Supply voltage V<sub>s</sub></b>	UC 24 ... 240 V <sup>2)</sup>
<b>Switching outputs</b>	Relay 1 x c/o, electrically isolated <sup>3)</sup>
Switching mode	Light-/dark-switching, selectable
Power consumption	≤ 2 VA
Max. switching voltage	250 VAC / 120 VDC
Switching current max.	4A @ 250 VAC o. 24 VDC <sup>4)</sup>
Max. switching power	AC 1000 VA / DC 100 W
Response time	≤ 10 ms <sup>5)</sup>
Switching frequency	10 Hz <sup>6)</sup>
Time step	Selectable: 0.5...10s
Time type	OFF, T <sub>off</sub> , T <sub>on</sub> , T <sub>off</sub> + T <sub>on</sub>
<b>Connection type</b>	Connector, Q6, 6-pin, AC/UC
<b>VDE protection class</b>	□ <sup>7)</sup>
<b>Circuit protection</b>	V <sub>s</sub> connections reverse-polarity protected / Interference pulse suppression
<b>Enclosure rating</b>	IP 65
<b>Ambient temperature operation</b>	-40 °C ... +60 °C
<b>Ambient temperature storage</b>	-40 °C ... +75 °C
<b>Weight</b>	Ca. 240 g
<b>Housing material</b>	ABS, PMMA

<sup>1)</sup> Average service life 100,000 h at T<sub>a</sub> = +25°C

<sup>2)</sup> 10%

<sup>3)</sup> Provide suitable spark suppression for

inductive or capacitive loads. Relay contacts are separated from the power supply by basis insulation of 3 mm.

Depending on the application, an additional insulation might have to be applied on the users circuit

<sup>4)</sup> Usage category to EN 60947-1,

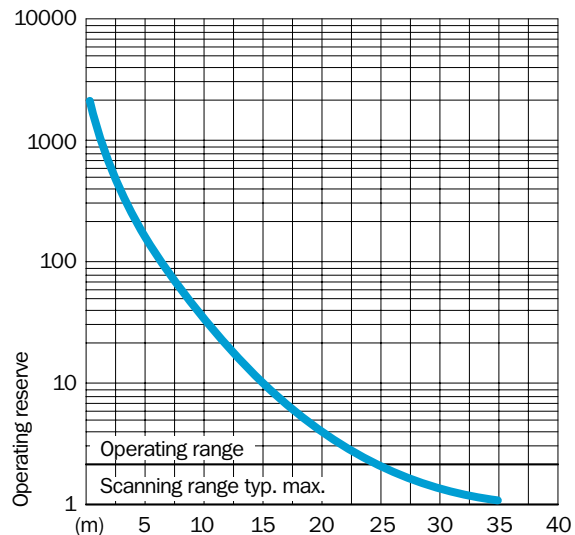
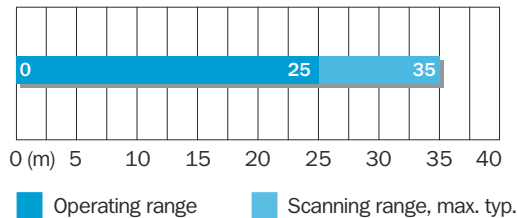
AC-15, DC-13

<sup>5)</sup> Signal transit time with resistive load

<sup>6)</sup> With light/dark ratio 1:1

<sup>7)</sup> Reference voltage 250 V AC

**Scanning range and operating reserve**



**Ordering information**

<b>Type</b>	<b>Order No.</b>
WSE27-3R2631 *	1 027 795

\* Available November 2005

Dimensional drawings and order information

SENSICK screw-in system M12, 4-pin, enclosure rating IP 67

Female connectors M12, 4-pin, straight

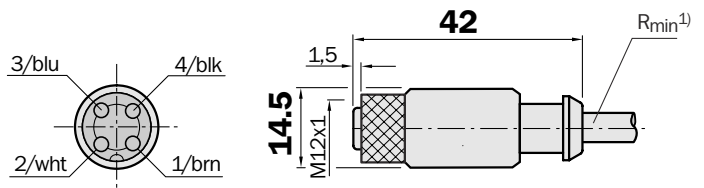
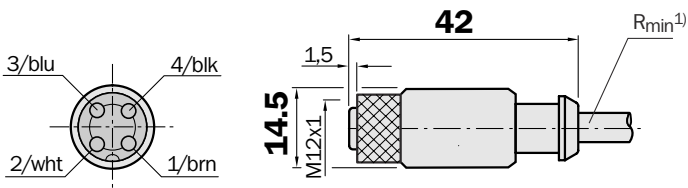
Cable diameter 5/6 mm, 4/5 x 0.25 mm<sup>2</sup>, sheath PVC

Type	Order no.	Contacts	Cable length
DOL-1204-G02M	6 009 382	4	2 m
DOL-1204-G05M	6 009 866	4	5 m
DOL-1204-G10M	6 010 543	4	10 m
DOL-1204-G15M	6 010 753	4	15 m

Female connector M12, 4-pin, straight

Cable diameter 4.5 mm, 4 x 0.34 mm<sup>2</sup>, sheath PUR

Type	Order no.	Cable length
DOL-1204-G05MC	6 025 901	5 m



Female connectors M12, 4-pin, right angle

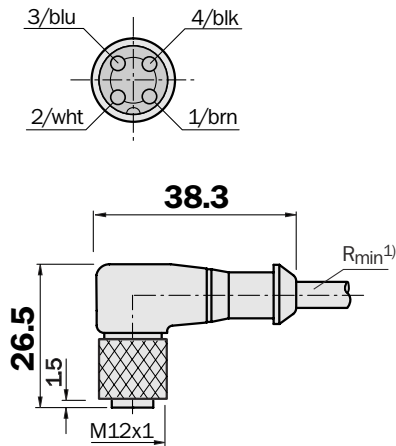
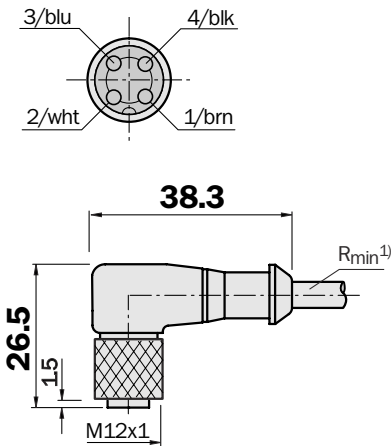
Cable diameter 5/6 mm, 4/5 x 0.25 mm<sup>2</sup>, sheath PVC

Type	Order no.	Contacts	Cable length
DOL-1204-W02M	6 009 383	4	2 m
DOL-1204-W05M	6 009 867	4	5 m
DOL-1204-W10M	6 010 541	4	10 m

Female connector M12, 4-pin, right angle

Cable diameter 4.5 mm, 4 x 0.34 mm<sup>2</sup>, sheath PUR

Type	Order no.	Contacts
DOL-1204-W05MC	6 025 904	5 m



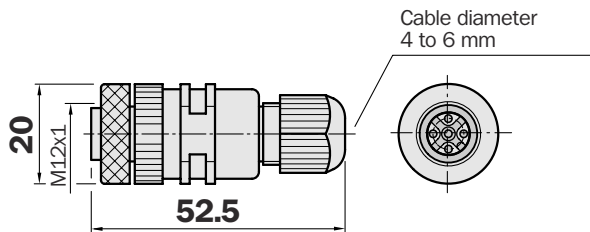
<sup>1)</sup> Minimum bend radius in dynamic use  
 $R_{min} = 20 \times \text{cable diameter}$

Dimensional drawings and order information

SENSICK screw-in system M12, 4-pin, enclosure rating IP 67

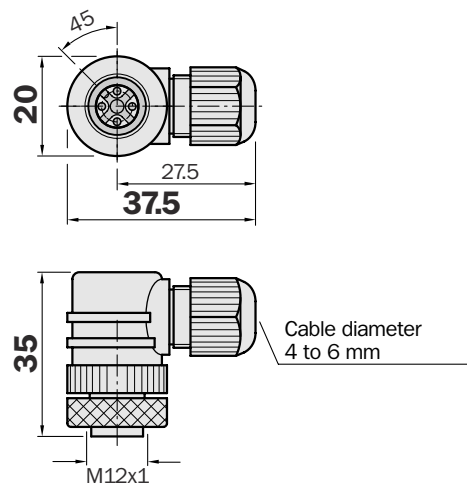
Female connector M12, 4-pin, straight

Type	Order no.	Contacts
DOS-1204-G	6 007 302	4



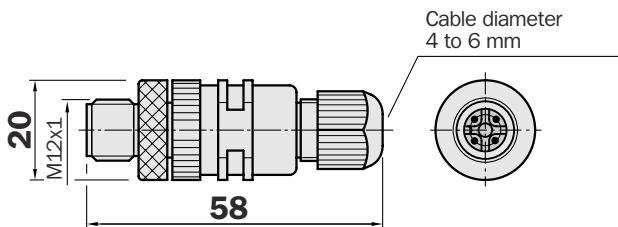
Female connector M12, 4-pin, right angle

Type	Order no.	Contacts
DOS-1204-W	6 007 303	4



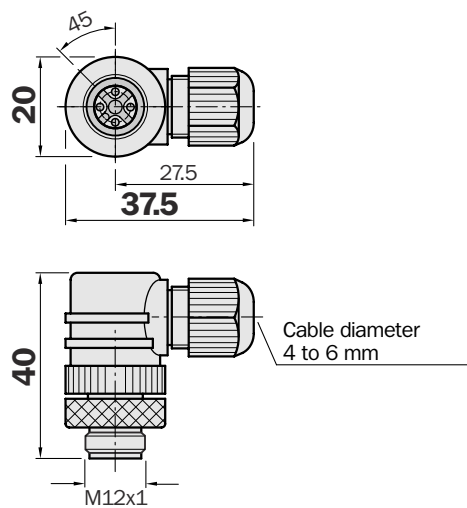
Male connector M12, 4-pin, straight

Type	Order no.
STE-1204-G	6 009 932



Male connector M12, 4-pin, right angle

Type	Order no.
STE-1204-W	6 022 084



Dimensional drawings and order information

SENSICK rectangular plug-in system, Q6, 6-pin, enclosure rating IP 65

Female connectors, 6-pin, DC-coding

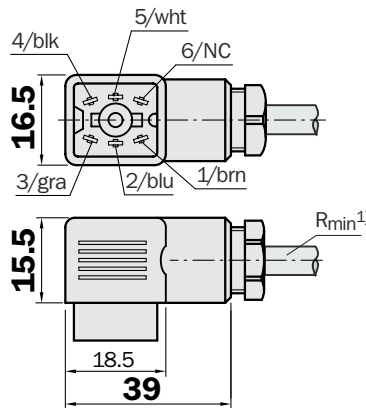
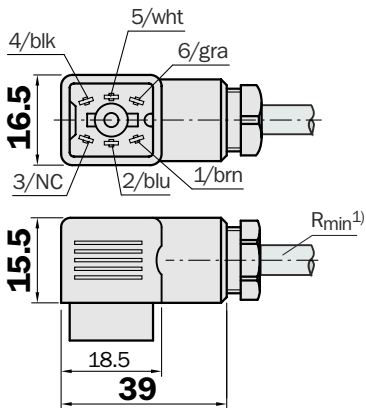
Cable diameter 5 mm, 5 x 0.25 mm<sup>2</sup>, sheath PVC

Type	Order no.	Cable length
DOS-1306-W	6 006 710	-
DOL-1306-W02M	6 030 217	2 m
DOL-1306-W03M	6 030 218	3 m
DOL-1306-W05M5	6 030 219	5,5 m
DOL-1306-W10M	6 030 220	10 m

Female connectors, 6-pin, AC/UC-coding

Cable diameter 6.8 mm, 5 x 0.5 mm<sup>2</sup>, sheath PVC

Type	Order no.	Cable length
DOS-1406-W	6 006 685	-
DOL-1406-W02M	6 030 221	2 m
DOL-1406-W03M	6 030 222	3 m
DOL-1406-W05M5	6 030 223	5,5 m
DOL-1406-W10M	6 030 224	10 m

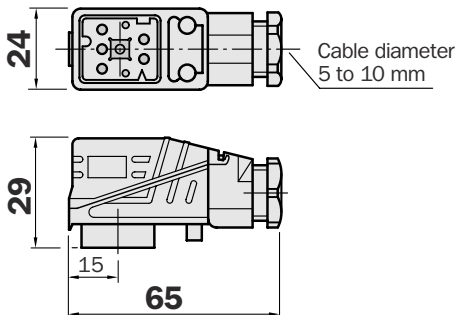


<sup>1)</sup> Minimum bend radius in dynamic use  
 $R_{min} = 20 \times \text{cable diameter}$

SENSICK rectangular plug-in system, Q7, 7-pin, enclosure rating IP 65

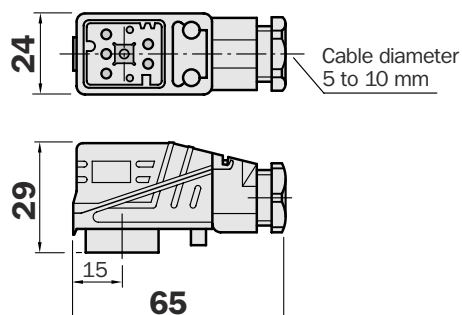
Female connector, 7-pin, DC-coding

Type	Order no.
DOS-2107-W	6 006 823



Female connector, 7-pin, AC/UC-coding

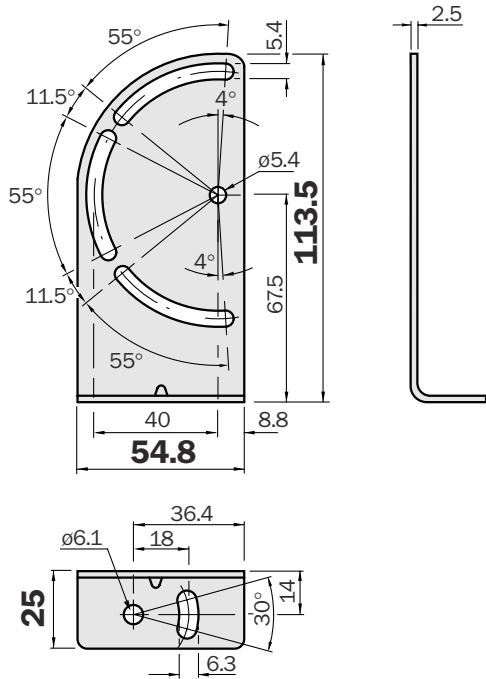
Type	Order no.
DOS-2207-W	6 006 821



Dimensional drawings and order information

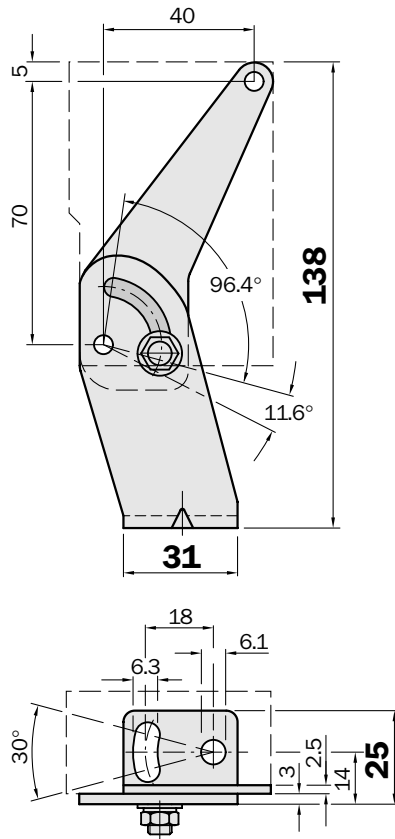
Mounting bracket for W 27-3

Type	Order no.
BEF-WN-W23	2 019 085

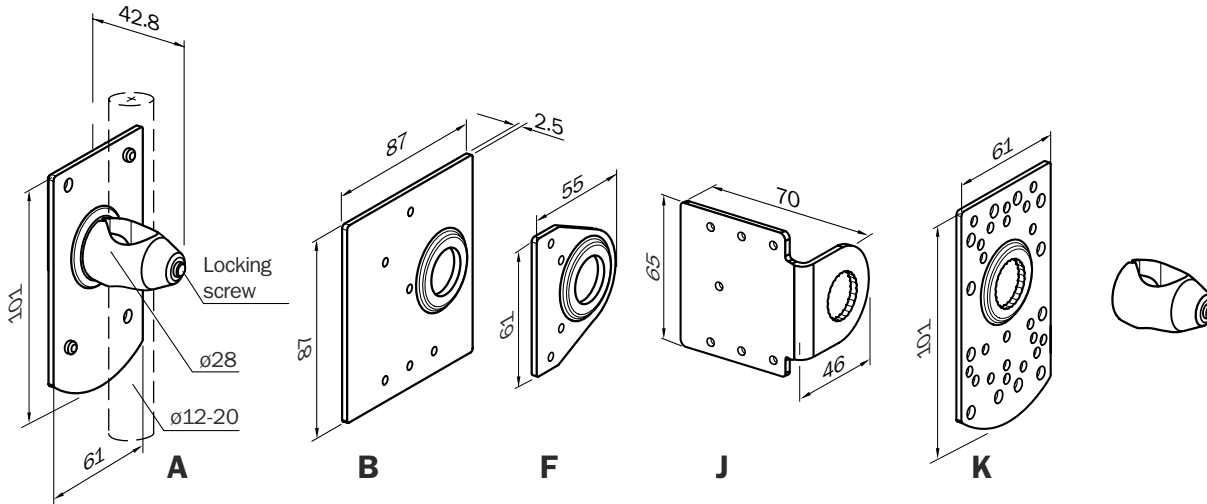


Mounting bracket for W 27-3

Type	Order no.
BEF-WN-W27	2 009 122



## Universal bar clamps for sensors and reflectors



Mounting plates	Type	Order no.	for device/reflector type
<b>A</b>	BEF-KHS-A01	2 022 458 <sup>1)2)</sup>	W 27-3
<b>B</b>	BEF-KHS-B01	2 022 459 <sup>1)2)</sup>	P 250, P 250 F, PL 30 A, PL 40 A, PL 50 A, PL 80 A, C 110
<b>F</b>	BEF-KHS-F01	2 022 463 <sup>1)2)</sup>	PL 20 A, PL 20 F, P 250, P 250 F
<b>J</b>	BEF-KHS-J01	2 022 719 <sup>1)2)</sup>	PL 20 A, PL 20 F, PL 40 A, PL 50 A, P 250, P 250 F, C 110
<b>K</b>	BEF-KHS-K01	2 022 718 <sup>1)</sup>	W 11, W 12-2, W 12L-2, W 14-2, W 18-3, W 23-2, W 24-2, W 27-3, W 30, W 32, W 34, KT 2, KT 5, KT 10, CS 1/3, LUT 3, DS 60, PL 20 A, PL 20 F, PL 30 A, PL 40 A, PL 50 A, PL 80 A, P 250, P 250 F, C 110
	BEF-KHS-KH1	2 022 726	Clamp without mounting plate

<sup>1)</sup> Order no. includes bar support and mounting material.

<sup>2)</sup> Mounting plate does not contain threads; the sensor/reflector is mounted from the sensor-/reflector side with self-cutting screws.

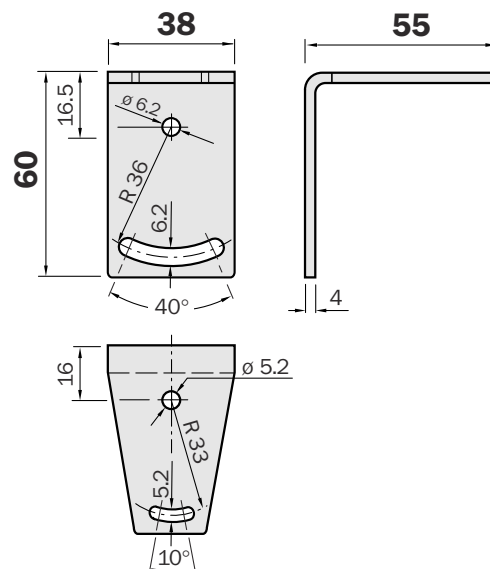
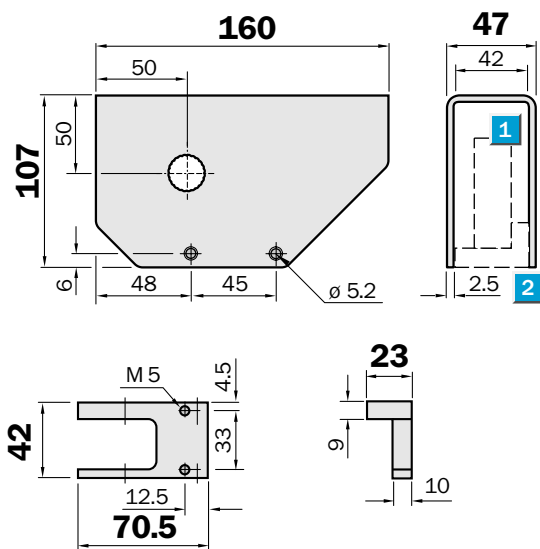
## Special accessories

### Weather protection hood for W 27-3 \*)

Type	Order no.	1	2
OBW-KHS-M01	2 023 240	Sensor	Clamp with mounting material included with delivery

### Mounting bracket for weather protection hood OBW-KHS-M01

Type	Order no.
BEF-WN-OBW	2 023 251



\*) Also suitable as bar support with separate bar clamp BEF-KHS-KH1 (Order no. 2 022 726)

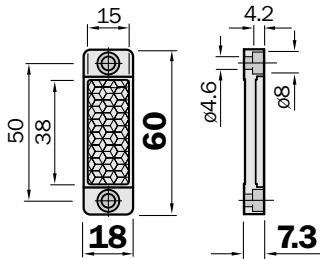


Dimensional drawings and order information

Plastic design for temperatures up to 65 °C

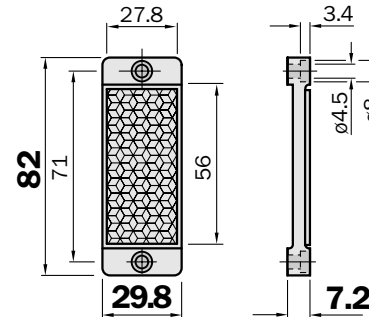
Reflector 20 x 40 mm<sup>2</sup>

Type	Order no.
PL 20 A	1 012 719



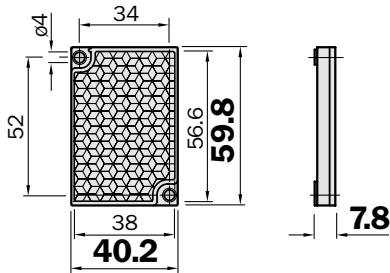
Reflector 30 x 50 mm<sup>2</sup>

Type	Order no.
PL 30 A	1 002 314



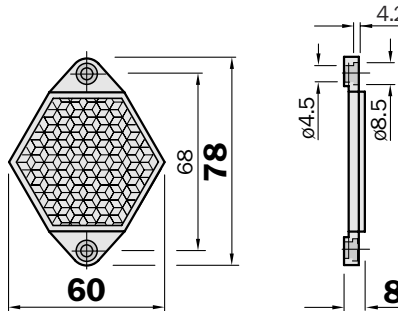
Reflector 40 x 60 mm<sup>2</sup>

Type	Order no.
PL 40 A	1 012 720



Reflector, 6-sided

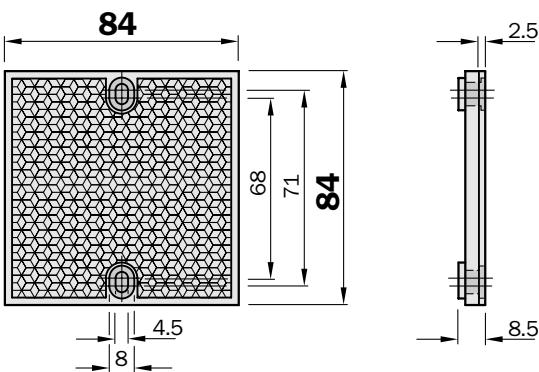
width across flats 48 mm	
Type	Order no.
PL 50 A	1 000 132



Also available with heating:  
 Continuous heating: PL 50 HK,  
 order no. 1 011 545  
 Regulated heating: PL 50 HS,  
 order no. 1 009 871

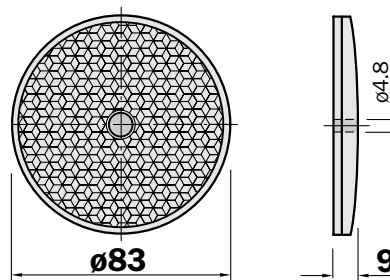
Reflector 80 x 80 mm<sup>2</sup>

Type	Order no.
PL 80 A	1 003 865



Reflector ø 83 mm, centre hole mounting

Type	Order no.
C 110	5 304 549



Self-adhesive reflective tape for photoelectric switches with polarisation filter

Reflective tape "Diamond Grade"

Type	Order no.	
REF-DG-K	4 019 634	Cut to size
REF-DG	5 304 334	Sheet 749 x 914 mm <sup>2</sup>



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