

W 34: Sensor technology that does justice to demanding requirements



detects objects up to 22 m away, and the WS/WE 34 through-beam photoelectric switch even achieves scanning ranges of up to 60 m. All equipment is designed for use in rough environments. The sturdy ABS plastic housing provides enclosure rating IP 67, and the sensors can be operated in a temperature range between $-40\text{ }^{\circ}\text{C}$ and $+60\text{ }^{\circ}\text{C}$. The screw connections and equipment plug can be rotated by 90° and consequently enable optimum cable feed in every installation position. Attachment compatibility to the W 24-2 and W 36 series is ensured. All W 34 sensors are available with DC voltage or universal voltage.

Extensive ranges, flexible installation and independence from an available power supply are the highlights of the new W 34 photoelectric switch series.

Although the WT 34 BGS photoelectric proximity switch already provides scanning distances between 100 and 1200 mm with its red light transmitter and precise background suppression, the infrared model of the sensor has a scanning distance that is twice as far at 2500 mm. The WL 34 photoelectric proximity switch

The W 34 are used in door and gate systems, storage and conveyor engineering, car manufacturing, palette and automatic winding machines as well as in the glass, ceramics and construction sectors. Switching to the W 34 means moving up to the next highest level of innovative sensor technology for automating demanding processes.

	Photoelectric proximity switches
	Photoelectric reflex switches
	Through-beam photoelectric switches

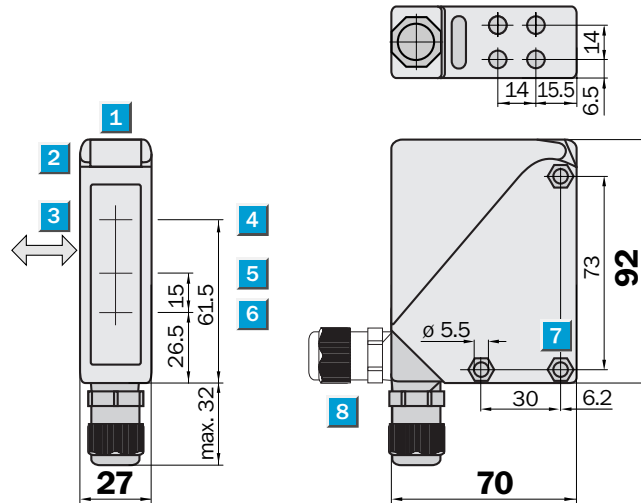


Scanning distance
100 to 1200 mm

Photoelectric proximity switch

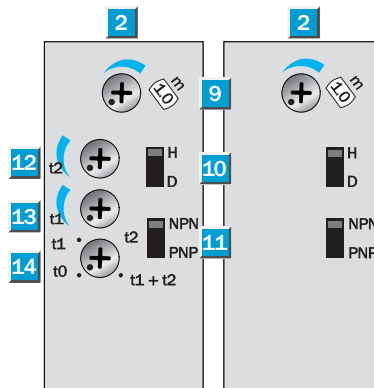
- Sturdy plastic housing
- Visible red light
- Background suppression, can be set very precisely
- M 16 screw fixing or equipment plug rotatable by 90°
- Selectable time delay, optional

Dimension illustration



Setting options

WT 34-V 250	WT 34-V 240
WT 34-B 450	WT 34-B 440
	WT 34-V 540

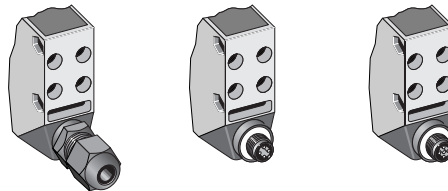


- Alignment sight
- LED signal strength indicator
- Standard direction of material being scanned
- Middle of optic axis, sender
- Middle of optic axis, receiver at close range
- Middle of optic axis, receiver at long range
- Mounting hole \varnothing 5.5 mm, for M 5 hexagon nuts on both sides
- M 16 screw fixing or plug rotatable by 90°
- Scanning distance adjuster
- Light/dark selector
- NPN/PNP selector
- Time control t_2 = OFF-delay
- Time control t_1 = ON-delay
- Time delay selector switch



Connection type

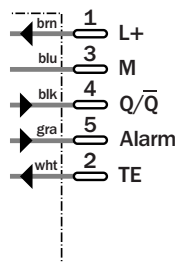
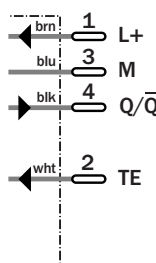
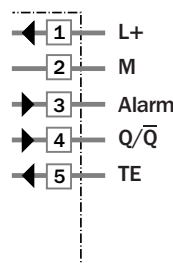
WT 34-V 240	WT 34-B 440	WT 34-V 540
WT 34-V 250	WT 34-B 450	



M 16, terminals

4 pin, M 12

5 pin, M 12



Accessories
Connectors
Mounting systems
Special accessories
Weather hoods



Technical data		WT 34-	V 240	V 250	B 440	B 450	V 540					
Scanning distance	100 to 1200 mm, adjustable											
Light source ⁴⁾ , light type	LED; red light											
Light spot diameter	Approx. 40 mm at a distance of 1200 mm											
Supply voltage V_S	10 to 30 V DC ²⁾											
Ripple ³⁾	< 5 V _{PP}											
Current consumption ⁴⁾	≤ 50 mA											
Switching outputs	PNP or NPN, Q or \bar{Q}											
Output current I_A max.	100 mA											
Response time ⁵⁾	≤ 500 μs											
Max. switching frequency ⁶⁾	1000/s											
VMA contamination signalling output	Alarm, PNP											
Time delay	Adjustable, 0.5 to 10 s											
Test input »TE«	Sender switched off											
Sender off	PNP or NPN: TE to 0 V											
Connection type	M 16 screw fixing											
	Plug											
VDE protection class ⁷⁾	□											
Circuit protection ⁸⁾	A, B, C											
Enclosure rating	IP 67											
Ambient temperature	Operation -40 °C to +60 °C Storage -40 °C to +75 °C											
Weight	Approx. 140 g											
Housing material	ABS											

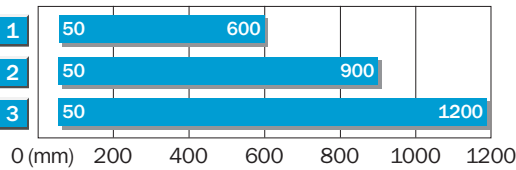
¹⁾ Average service life 100,000 h at $T_A = +25\text{ °C}$
²⁾ Limit values
³⁾ May not exceed or fall short of V_S tolerances

⁴⁾ Without load
⁵⁾ Signal flight time with ohmic load
⁶⁾ With light/dark ratio 1:1
⁷⁾ Withstand voltage 50 V DC

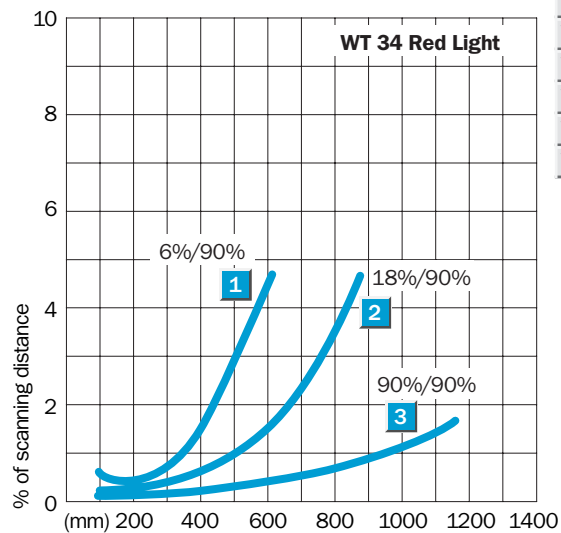
⁸⁾ A = V_S connections reverse-polarity protected
 B = Outputs Q and \bar{Q} short-circuit protected
 C = Interference pulse suppression

⁹⁾ Black = 6% remission
 Grey = 18% remission
 White = 90% remission

Scanning distance



- 1 Scanning distance on black ⁹⁾
- 2 Scanning distance on grey ⁹⁾
- 3 Scanning distance on white ⁹⁾



Order information

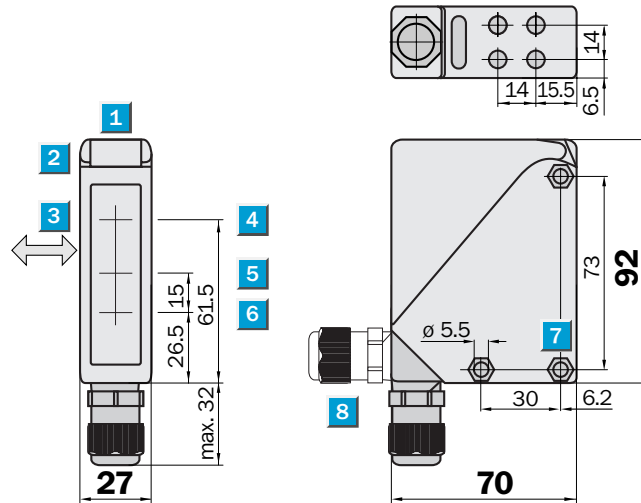
Type	Order no.
WT 34-V 240	1 019 227
WT 34-V 250	1 019 236
WT 34-B 440	1 019 237
WT 34-B 450	1 019 234
WT 34- V 540	1 019 238

Scanning distance
100 to 1200 mm

Photoelectric proximity switch

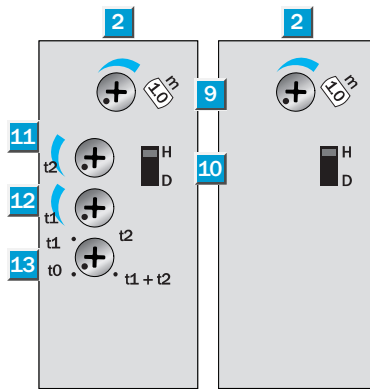
- Sturdy plastic housing
- Visible red light
- Background suppression, can be set very precisely
- M 16 screw fixing rotatable by 90°
- Selectable time delay, optional

Dimension illustration



Setting options

WT 34-R 250 WT 34-R 240

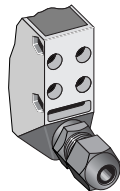


- 1 Alignment sight
- 2 LED signal strength indicator
- 3 Standard direction of material being scanned
- 4 Middle of optic axis, sender
- 5 Middle of optic axis, receiver at close range
- 6 Middle of optic axis, receiver at long range
- 7 Mounting hole \varnothing 5.5 mm, for M 5 hexagon nuts on both sides
- 8 M 16 screw fixing rotatable by 90°
- 9 Scanning distance adjuster
- 10 Light/dark selector
- 11 Time control t_2 = OFF-delay
- 12 Time control t_1 = ON-delay
- 13 Time delay selector switch

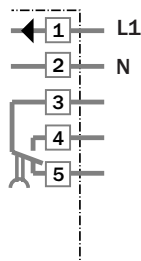


Connection type

WT 34-R 240
WT 34-R 250



M 16, terminals



Accessories
Connectors
Mounting systems
Special accessories
Weather hoods

Technical data		WT 34-	R 240	R 250								
Scanning distance	100 to 1200 mm, adjustable											
Light source ⁴⁾, light type	LED; red light											
Light spot diameter	Approx. 40 mm at a distance of 1200 mm											
Supply voltage V_S	12 to 240 V DC ²⁾ , 24 to 240 V AC ³⁾											
Power consumption	< 2 VA											
Switching output	Relay SPDT isolated ⁴⁾											
Max. switching voltage	250 V AC/120 V DC											
Max. switching current	4 A/240 V AC, 4 A/24 V DC											
Max. switching capacity	1000 VA AC/100 W DC											
Response time	≤ 10 ms											
Max. switching frequency ⁵⁾	10/s											
Time delay	Adjustable, 0.5 to 10 s											
Connection type	M 16 screw fixing											
VDE protection class ⁶⁾	□											
Circuit protection ⁷⁾	A, C											
Enclosure rating	IP 67											
Ambient temperature	Operation -40 °C to +60 °C Storage -40 °C to +75 °C											
Weight	Approx. 140 g											
Housing material	ABS											

¹⁾ Average service life 100,000 h at T_A = +25 °C
²⁾ Limit values
³⁾ ± 10 %

⁴⁾ Provide suitable spark suppression for inductive or capacitive loads
⁵⁾ With light/dark ratio 1:1

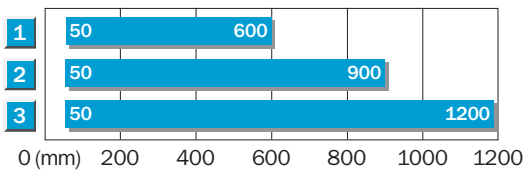
⁶⁾ Withstand voltage 250 V AC/DC
⁷⁾ A = V_S connections reverse-polarity protected
 C = Interference pulse suppression

⁸⁾ Black = 6 % remission
 Grey = 18 % remission
 White = 90 % remission

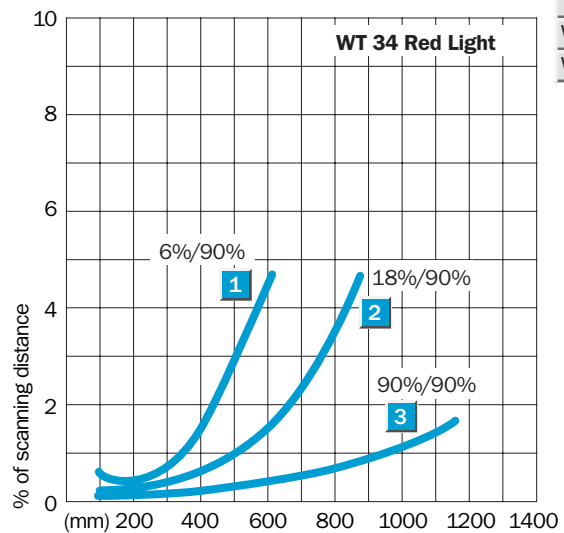
Scanning distance

Order information

Type	Order no.
WT 34-R 240	1 019 239
WT 34-R 250	1 019 240



- 1 Scanning distance on black ⁸⁾
- 2 Scanning distance on grey ⁸⁾
- 3 Scanning distance on white ⁸⁾

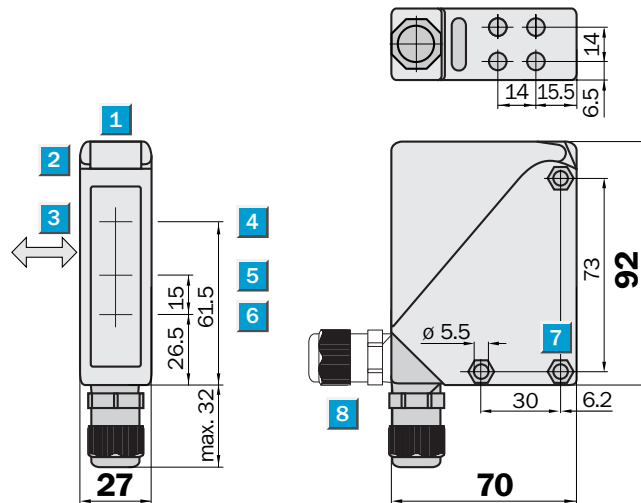


Scanning distance
100 to 2500 mm

Photoelectric proximity switch

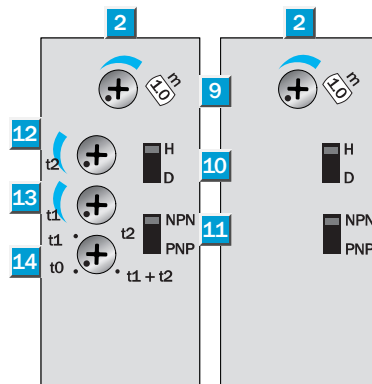
- Sturdy plastic housing
- Infrared light
- Background suppression, can be set very precisely
- M 16 screw fixing or equipment plug rotatable by 90°
- Selectable time delay, optional

Dimension illustration



Setting options

WT 34-B 420	WT 34-B 410
WT 34-V 220	WT 34-V 210
	WT 34-V 510

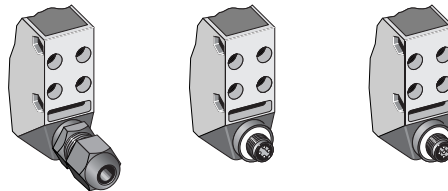


- Alignment sight
- LED signal strength indicator
- Standard direction of material being scanned
- Middle of optic axis, sender
- Middle of optic axis, receiver at short range
- Middle of optic axis, receiver at long range
- Mounting hole \varnothing 5.5 mm, for M 5 hexagon nuts on both sides
- M 16 screw fixing or plug rotatable by 90°
- Sensitivity control
- Light/dark selector
- NPN/PNP selector
- Time control t_2 = OFF-delay
- Time control t_1 = ON-delay
- Time delay selector switch

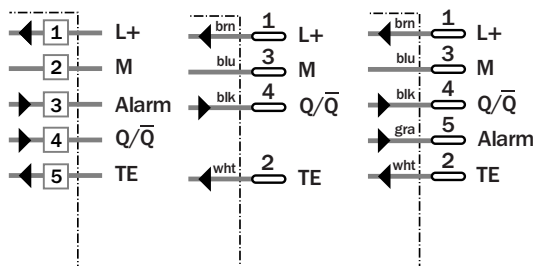


Connection type

WT 34-V 210	WT 34-B 410	WT 34-V 510
WT 34-V 220	WT 34-B 420	



M 16, terminals 4 pin, M 12 5 pin, M 12



Accessories
Connectors
Mounting systems
Special accessories
Weather hoods



Technical data		WT 34-	V 210	V 220	B 410	B 420	V 510					
Scanning distance	100 to 2500 mm, adjustable											
Light source ⁴⁾, light type	LED; infrared											
Light spot diameter	Approx. 80 mm at a distance of 2500 mm											
Supply voltage V_S	10 to 30 V DC ²⁾											
Ripple ³⁾	< 5 V _{PP}											
Current consumption ⁴⁾	≤ 50 mA											
Switching outputs	PNP or NPN, Q or \bar{Q}											
Output current I_A max.	100 mA											
Response time ⁵⁾	≤ 500 μs											
Max. switching frequency ⁶⁾	1000/s											
VMA contamination signalling output	Alarm, PNP											
Time delay	Adjustable, 0.5 to 10 s											
Test input »TE«	Sender switched off											
Sender off	PNP or NPN: TE to 0 V											
Connection type	M 16 screw fixing											
	Plug											
VDE protection class⁷⁾	□											
Circuit protection⁸⁾	A, B, C											
Enclosure rating	IP 67											
Ambient temperature	Operation -40 °C ... +60 °C											
	Storage -40 °C ... +75 °C											
Weight	Approx. 140 g											
Housing material	ABS											

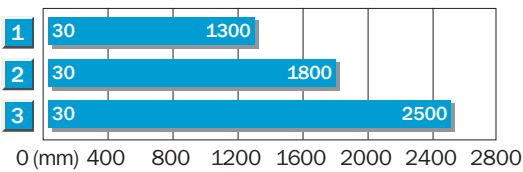
¹⁾ Average service life 100,000 h at T_A = +25 °C
²⁾ Limit values
³⁾ May not exceed or fall short of V_S tolerances

⁴⁾ Without load
⁵⁾ Signal flight time with ohmic load
⁶⁾ With light/dark ratio 1:1
⁷⁾ Withstand voltage 50 V DC

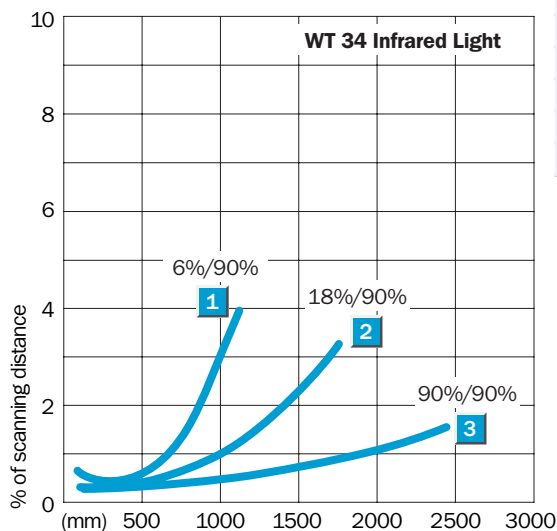
⁸⁾ A = V_S connections reverse-polarity protected
 B = Outputs Q and \bar{Q} short-circuit protected
 C = Interference pulse suppression

⁹⁾ Black = 6 % remission
 Grey = 18 % remission
 White = 90 % remission

Scanning distance



- 1 Scanning distance on black ⁹⁾
- 2 Scanning distance on grey ⁹⁾
- 3 Scanning distance on white ⁹⁾



Order information

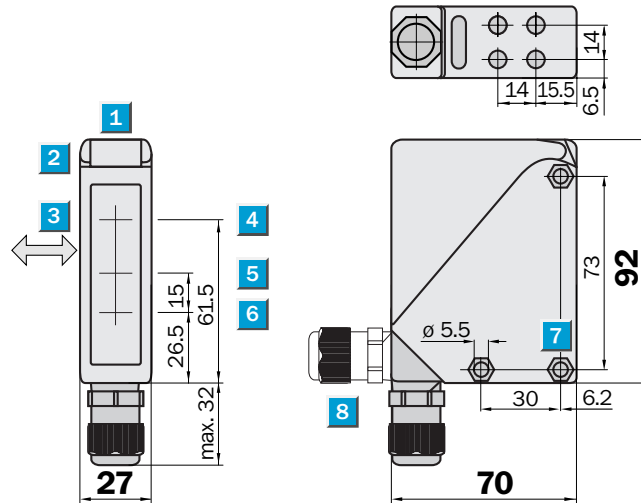
Type	Order no.
WT 34-V 210	1 019 280
WT 34-V 220	1 019 228
WT 34-B 410	1 019 229
WT 34-B 420	1 019 230
WT 34-V 510	1 019 231

Scanning distance
100 to 2500 mm

Photoelectric proximity switch

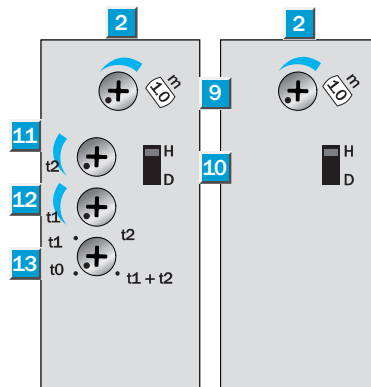
- Sturdy plastic housing
- Infrared light
- Background suppression, can be set very precisely
- M 16 screw fixing rotatable by 90°
- Selectable time delay, optional

Dimension illustration



Setting options

WT 34-R 220 WT 34-R 210

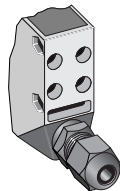


- 1 Alignment sight
- 2 LED signal strength indicator
- 3 Standard direction of the material being scanned
- 4 Middle of optic axis, sender
- 5 Middle of optic axis, receiver at close range
- 6 Middle of optic axis, receiver at long range
- 7 Mounting hole \varnothing 5.5 mm, for M 5 hexagon nuts on both sides
- 8 M 16 screw fixing rotatable by 90°
- 9 Scanning distance adjuster
- 10 Light/dark selector
- 11 Time control t_2 = OFF-delay
- 12 Time control t_1 = ON-delay
- 13 Time delay selector switch

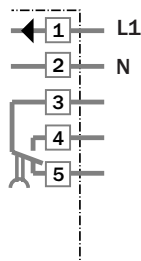


Connection type

WT 34-R 210
WT 34-R 220



M 16, terminals



Accessories
Connectors
Mounting systems
Special accessories
Weather hoods

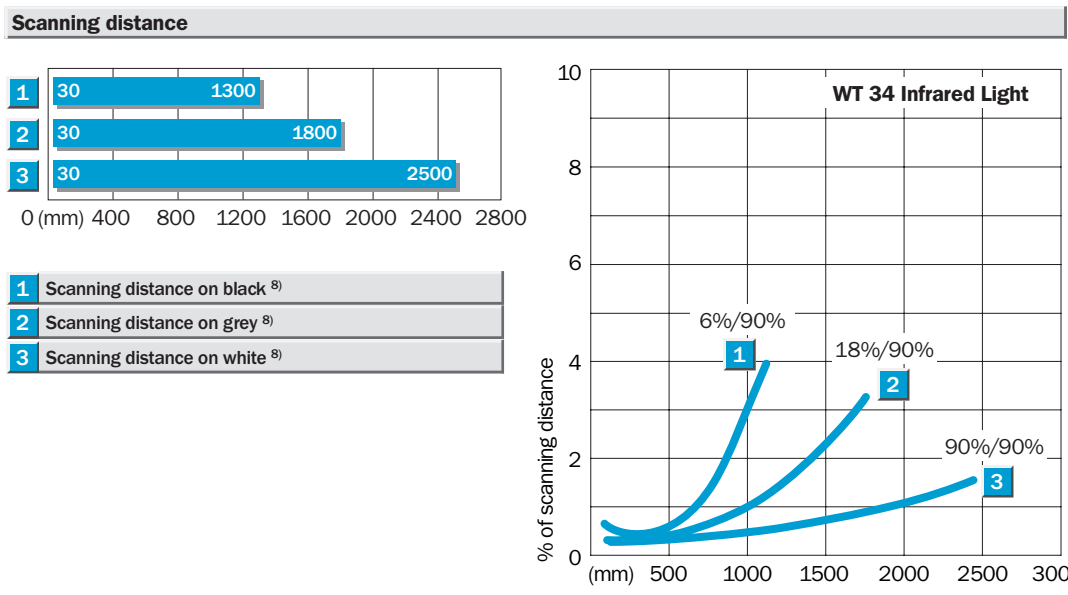
Technical data		WT 34-	R 210	R 220							
Scanning distance	100 to 2500 mm, adjustable										
Light source ⁴⁾ , light type	LED; infrared										
Light spot diameter	Approx. 80 mm at a distance of 2500 mm										
Supply voltage V _S	12 to 240 V DC ²⁾ , 24 to 240 V AC ³⁾										
Power consumption	< 2 VA										
Switching output	Relay SPDT isolated ⁴⁾										
Max. switching voltage	250 V AC/120 V DC										
Max. switching current	4 A/240 V AC, 4 A/24 V DC										
Max. switching capacity	1000 VA AC/100 W DC										
Response time	≤ 10 ms										
Max. switching frequency ⁵⁾	10/s										
Time delay	Adjustable, 0.5 to 10 s										
Connection type	M 16 screw fixing										
VDE protection class ⁶⁾	□										
Circuit protection ⁷⁾	A, C										
Enclosure rating	IP 67										
Ambient temperature	Operation -40 °C to +60 °C Storage -40 °C to +75 °C										
Weight	Approx. 140 g										
Housing material	ABS										

¹⁾ Average service life 100,000 h at T_A = +25 °C
²⁾ Limit values
³⁾ ± 10 %

⁴⁾ Provide suitable spark suppression for inductive or capacitive loads
⁵⁾ With light/dark ratio 1:1

⁶⁾ Withstand voltage 250 V AC/DC
⁷⁾ A = V_S connections reverse-polarity protected
 C = Interference pulse suppression

⁸⁾ Black = 6 % remission
 Grey = 18 % remission
 White = 90 % remission



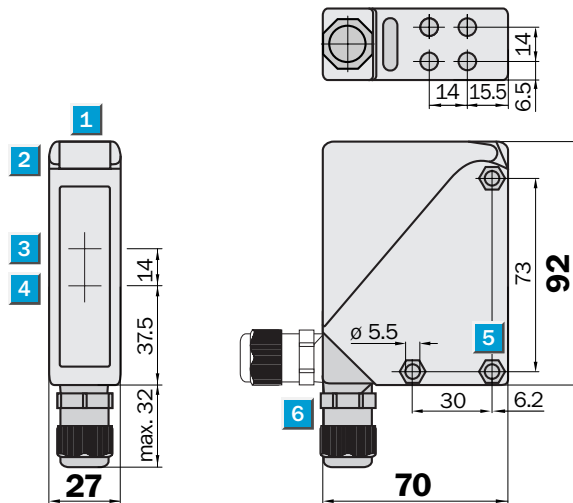
Order information	
Type	Order no.
WT 34-R 210	1 019 232
WT 34-R 220	1 019 223

Scanning range
22 m

Photoelectric Reflex Switch

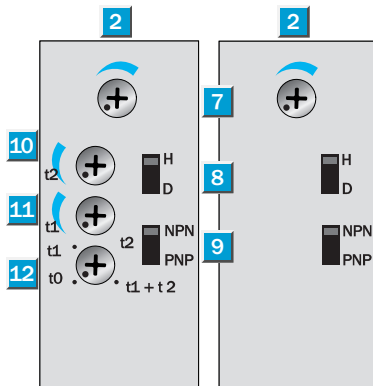
- Sturdy plastic housing
- High operating reserve in visible red light
- M 16 screw fixing or equipment plug rotatable by 90°
- Selectable time delay, optional

Dimension illustration



Setting options

WL 34-B 440	WL 34-B 430
WL 34-V 240	WL 34-V 230
WL 34-V 540	WL 34-V 530

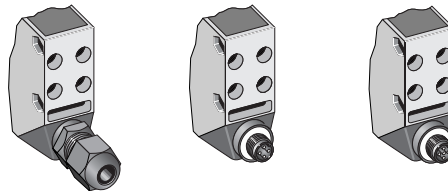


- Alignment sight
- LED signal strength indicator
- Middle of optic axis, sender
- Middle of optic axis, receiver
- Mounting hole \varnothing 5.5 mm, for M 5 hexagon nuts on both sides
- M 16 screw fixing or plug rotatable by 90°
- Sensitivity control
- Light/dark selector
- NPN/PNP selector
- Time control t_2 = OFF-delay
- Time control t_1 = ON-delay
- Time delay selector switch



Connection type

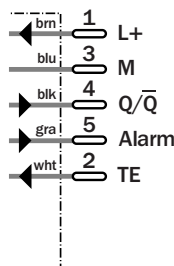
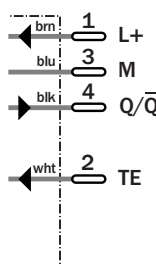
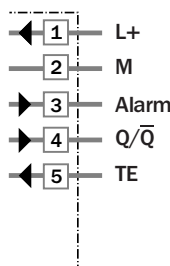
WL 34-V 230	WL 34-B 430	WL 34-V 530
WL 34-V 240	WL 34-B 440	WL 34-V 540



M 16, terminals

4 pin, M 12

5 pin, M 12



Accessories

- Connectors
- Mounting systems
- Reflectors
- Special accessories**
- Weather hoods



Technical data		WL 34-	V 230	V 240	B 430	B 440	V 530	V 540				
Scanning range, typ. max./on reflector	22 m/on PL 80 A											
Sensitivity	Adjustable											
Light source ¹⁾ , light type	LED; red light											
Light spot diameter	Approx. 250 mm at a distance of 15 m											
Supply voltage V _S	10 to 30 V DC ²⁾											
Ripple ³⁾	< 5 V _{PP}											
Current consumption ⁴⁾	≤ 50 mA											
Switching outputs	PNP or NPN, Q or \bar{Q}											
Output current I _A max.	100 mA											
Response time ⁵⁾	≤ 500 μs											
Max. switching frequency ⁶⁾	1000/s											
VMA contamination signalling output	Alarm, PNP											
Time delay	Adjustable, 0.5 to 10 s											
Test input »TE«	Sender switched off											
Sender off	PNP or NPN: TE to 0 V											
Connection type	M 16 screw fixing											
	Plug											
VDE protection class ⁷⁾	□											
Circuit protection ⁸⁾	A, B, C											
Enclosure rating	IP 67											
Ambient temperature	Operation -40 °C to +60 °C Storage -40 °C to +75 °C											
Weight	Approx. 140 g											
Polarizing filter												
Housing material	ABS											

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

²⁾ Limit values

³⁾ May not exceed or fall short of V_S tolerances

⁴⁾ Without load

⁵⁾ Signal flight time with ohmic load

⁶⁾ With light/dark ratio 1:1

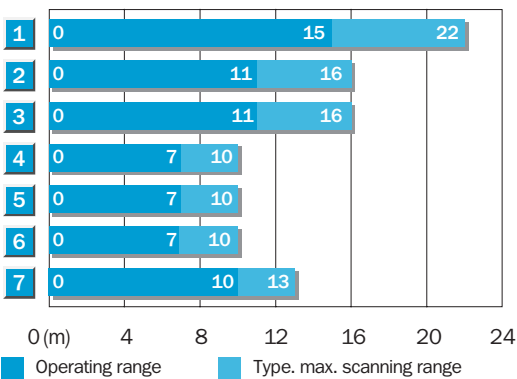
⁷⁾ Withstand voltage 50 V DC

⁸⁾ A = V_S connections reverse-polarity protected

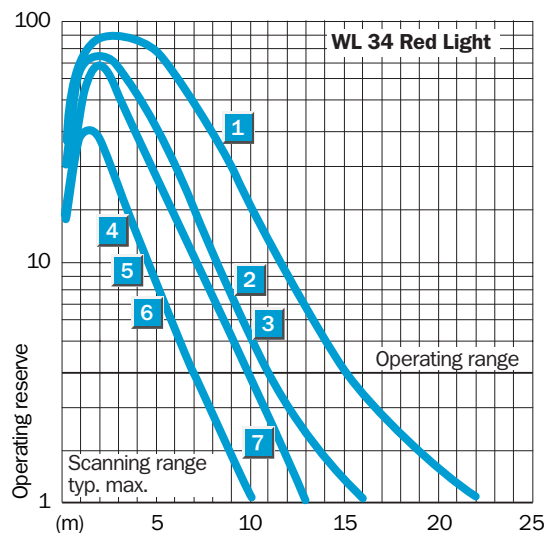
B = Outputs Q and \bar{Q} short-circuit protected

C = Interference pulse suppression

Scanning range and operating reserve



Reflector type	Operating range
1 PL 80 A	0 to 15 m
2 PL 50 A	0 to 11 m
3 PL 40 A	0 to 11 m
4 PL 30 A	0 to 7 m
5 PL 20 A	0 to 7 m
6 Diamond Grade (20 cm x 20 cm)	0 to 7 m
7 C 110	0 to 10 m



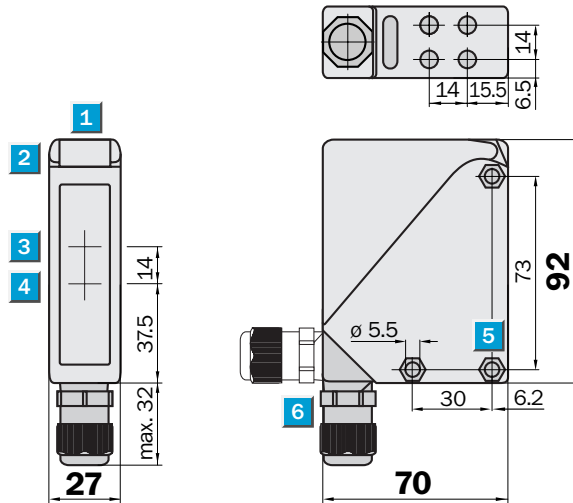
Order information

Type	Order no.
WL 34-V 230	1 019 243
WL 34-V 240	1 019 244
WL 34-B 430	1 019 245
WL 34-B 440	1 019 246
WL 34-V 530	1 019 247
WL 34-V 540	1 019 248

	Scanning range 22 m
Photoelectric Reflex Switch	

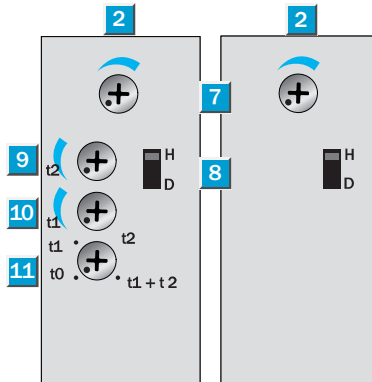
- Sturdy plastic housing
- High operating reserve in visible red light
- M 16 screw fixing rotatable by 90°
- Selectable time delay, optional

Dimension illustration



Setting options

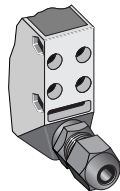
WL 34-R 240	WL 34-R 230
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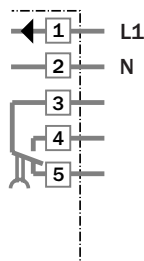
- Alignment sight
- Led signal strength indicator
- Middle of optic axis, sender
- Middle of optic axis, receiver
- Mounting hole \varnothing 5.5 mm, for M 5 hexagon nuts on both sides
- M 16 screw fixing rotatable by 90°
- Sensitivity control
- Light/dark selector
- Time control t_2 = OFF-delay
- Time control t_1 = ON-delay
- Time delay selector switch

Connection type

WL 34-R 230
WL 34-R 240



M16, terminals



Accessories

- Connectors
- Reflectors
- Mounting systems

Special accessories

- Weather hoods

Technical data		WL 34-	R 230	R 240							
Scanning range, typ. max./on reflector	22 m/on PL 80 A										
Sensitivity	Adjustable										
Light source ⁴⁾, light type	LED; red light										
Light spot diameter	Approx. 250 mm at a distance of 15 m										
Supply voltage V_S	12 to 240 V DC ²⁾ , 24 to 240 V AC ³⁾										
Power consumption	< 2 VA										
Switching output	Relay SPDT isolated ⁴⁾										
Max. switching voltage	250 V AC/120 V DC										
Max. switching current	4 A/240 V AC, 4 A/100 VA DC										
Max. switching capacity	1000 VA AC/100 W DC										
Response time ⁵⁾	≤ 10 ms										
Max. switching frequency ⁶⁾	10/s										
Time delay	Adjustable, 0.5 to 10 s										
Connection type	M 16 screw fixing										
VDE protection class ⁷⁾	□										
Circuit protection ⁸⁾	A, C										
Enclosure rating	IP 67										
Ambient temperature	Operation -40 °C to +60 °C Storage -40 °C to +75 °C										
Weight	Approx. 140 g										
Polarizing filter											
Housing material	ABS										

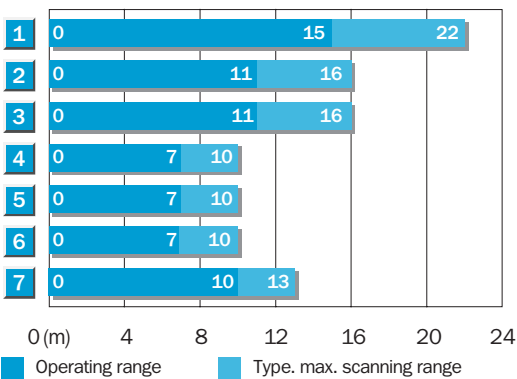
¹⁾ Average service life 100,000 h at T_A = +25 °C
²⁾ Limit values

³⁾ ± 10 %
⁴⁾ Provide suitable spark suppression for inductive or capacitive loads

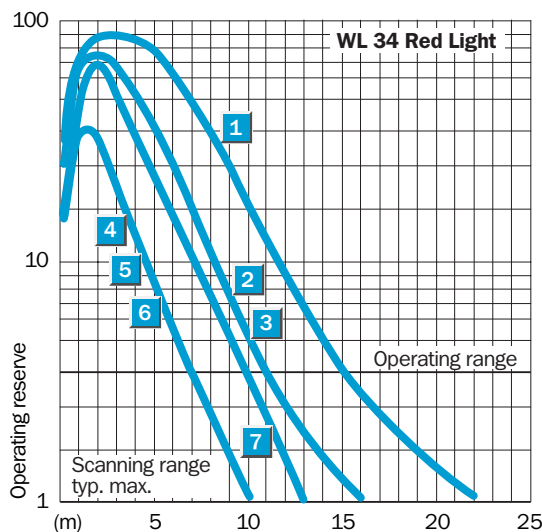
⁵⁾ Signal flight time for ohmic loads
⁶⁾ With light/dark ratio 1:1
⁷⁾ Withstand voltage 250 V UC

⁸⁾ A = V_S connections reverse-polarity protected
C = Interference pulse suppression

Scanning range and operating reserve



Reflector type	Operating range
1 PL 80 A	0 to 15 m
2 PL 50 A	0 to 11 m
3 PL 40 A	0 to 11 m
4 PL 30 A	0 to 7 m
5 PL 20 A	0 to 7 m
6 Diamond Grade (20 cm x 20 cm)	0 to 7 m
7 C 110	0 to 10 m



Order information

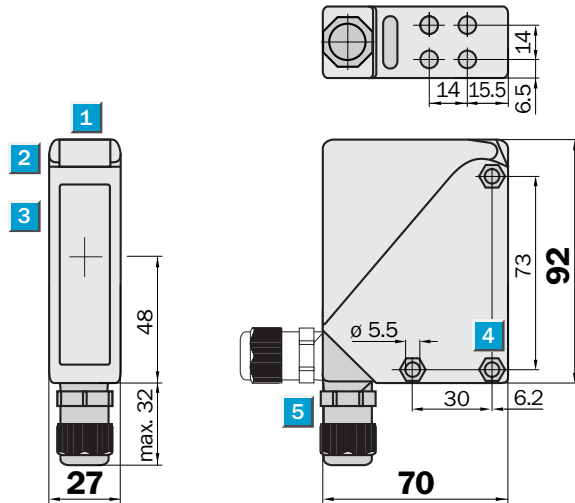
Type	Order no.
WL 34-R 230	1 019 249
WL 34-R 240	1 019 250

Scanning range
0 to 60 m

Through-beam photoelectric switch

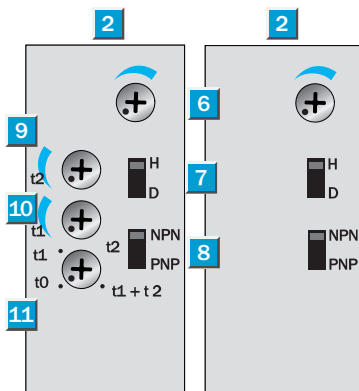
- Sturdy plastic housing
- High operating reserve in visible red light
- M 16 screw fixing or equipment plug rotatable by 90°
- Selectable time delay, optional

Dimension illustration



Setting options

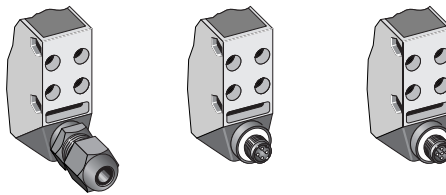
WS/WE 34-B 440	WS/WE 34-B 430
WS/WE 34-V 240	WS/WE 34-V 230
WS/WE 34-V 540	WS/WE 34-V 530



- 1 Alignment sight
- 2 LED signal strength indicator
- 3 Middle of optic axis
- 4 Mounting hole Ø 5.5 mm, for M 5 hexagon nuts on both sides
- 5 M 16 screw fixing or plug rotatable by 90°
- 6 Sensitivity control
- 7 Light/dark selector
- 8 NPN/PNP selector
- 9 Time control t_2 = OFF-delay
- 10 Time control t_1 = ON-delay
- 11 Time delay selector switch

Connection type

WS/WE 34-V 230	WS/WE 34-B 430	WS/WE 34-V 530
WS/WE 34-V 240	WS/WE 34-B 440	WS/WE 34-V 540



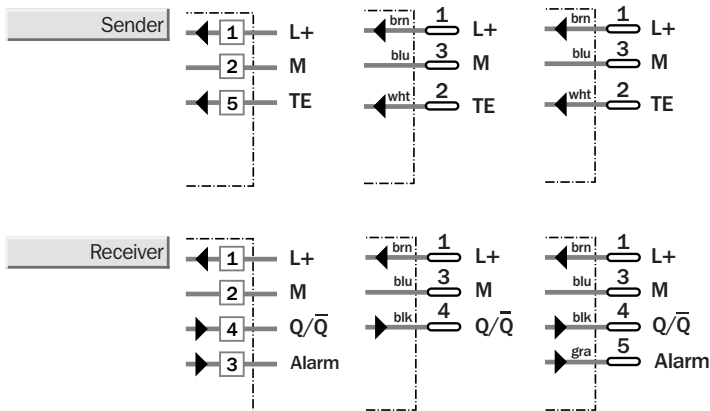
M 16, terminals

4 pin, M 12

5 pin, M 12



Accessories
Connectors
Mounting systems
Special accessories
Weather hoods



Technical data		WS/WE 34-	V 230	V 240	B 430	B 440	V 530	V 540				
Scanning range, typ. max.	0 to 60 m											
Sensitivity	Adjustable											
Light source ⁴⁾, light type	LED; red light											
Light spot diameter	Approx. 700 mm at a distance of 50 m											
Angle of dispersion/reception	1°/2,5°											
Supply voltage V_S	10 to 30 V DC ²⁾											
Ripple ³⁾	< 5 V _{PP}											
Current consumption ⁴⁾												
Sender	≤ 50 mA											
Receiver	≤ 40 mA											
Switching output	PNP or NPN, Q or \bar{Q}											
Output current I_A max.	100 mA											
Response time ⁵⁾	≤ 500 μs											
Max. switching frequency ⁶⁾	1000/s											
VMA contamination signalling output	Alarm, PNP											
Time delay	Adjustable, 0.5 to 10 s											
Test input »TE«	Sender switched off											
Sender off	PNP or NPN: TE to 0 V											
Connection type	M 16 screw fixing											
	Plug											
VDE protection class⁷⁾	□											
Circuit protection⁸⁾	A, B, C											
Enclosure rating	IP 67											
Ambient temperature	Operation -40 °C to +60 °C											
	Storage -40 °C to +75 °											
Weight	Approx. 140 g											
Housing material	ABS											

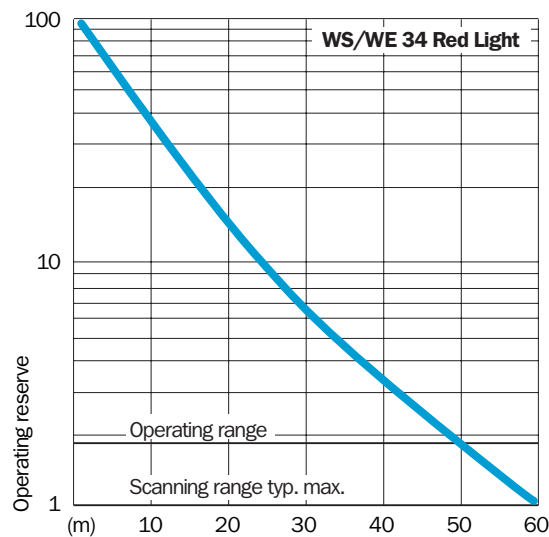
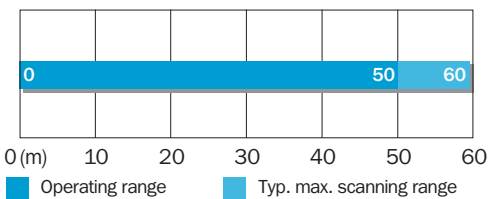
¹⁾ Average service life 100,000 h at T_A = +25 °C
²⁾ Limit values

³⁾ May not exceed or fall short of V_S tolerances
⁴⁾ Without load

⁵⁾ Signal flight time for ohmic loads
⁶⁾ With light/dark ratio 1:1
⁷⁾ Withstand voltage 50 V DC

⁸⁾ A = V_S connections reverse-polarity protected
 B = Outputs Q and \bar{Q} short-circuit protected
 C = Interference pulse suppression

Operating range and operating reserve



Order information

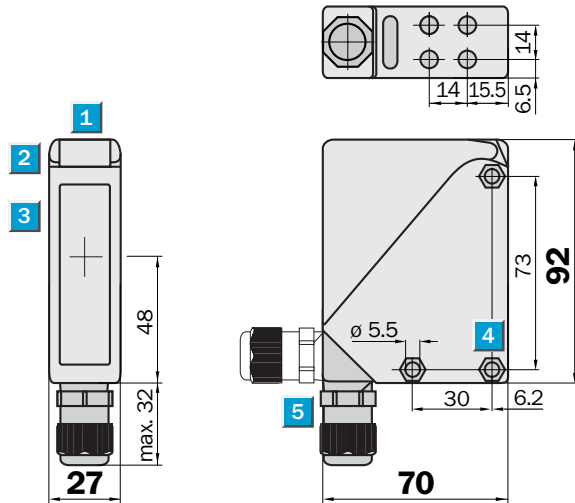
Type	Order no.
WS/WE 34-V 230	1 019 253
WS/WE 34-V 240	1 019 251
WS/WE 34-B 430	1 019 254
WS/WE 34-B 440	1 019 255
WS/WE 34-V 530	1 019 256
WS/WE 34-V 540	1 019 252

Scanning range
0 to 60 m

Through-beam photoelectric switch

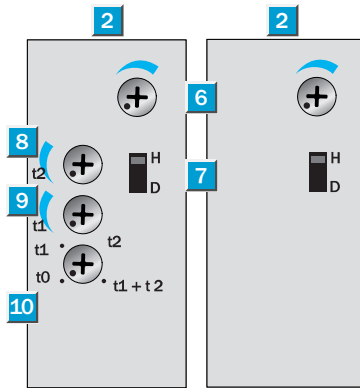
- Sturdy plastic housing
- High operating reserve in visible red light
- M 16 screw fixing rotatable by 90°
- Selectable time delay, optional

Dimension illustration



Setting options

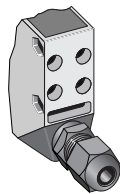
WS/WE 34-R 240 WS/WE 34-R 230



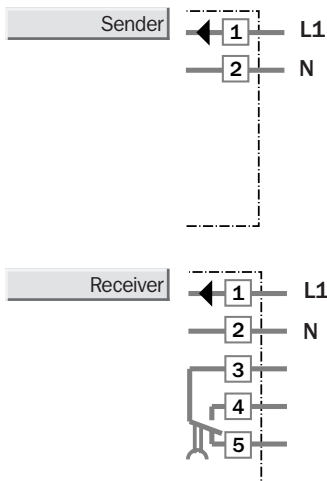
- 1 Alignment sight
- 2 LED signal strength indicator
- 3 Middle of optic axis
- 4 Mounting hole \varnothing 5.5 mm, for M 5 hexagon nuts on both sides
- 5 M 16 screw fixing rotatable by 90°
- 6 Sensitivity control
- 7 Light/dark selector
- 8 Time control t_2 = OFF-delay
- 9 Time control t_1 = ON-delay
- 10 Time delay selector switch

Connection type

WS/WE 34-R 230
WS/WE 34-R 240



M 16, terminals



Accessories
Connectors
Mounting systems
Special accessories
Weather hoods

Technical data		WS/WE 34-	R 230	R 240							
Scanning range, typ. max.	0 to 60 m										
Sensitivity	Adjustable										
Light source ⁴⁾, light type	LED; red light										
Light spot diameter	Approx. 700 mm at a distance of 50 m										
Angle of dispersion/angle of reception	1°/2,5°										
Supply voltage V_S	12 to 240 V DC ²⁾ , 24 to 240 V AC ³⁾										
Power consumption	< 2 VA										
Switching output	Relay SPDT isolated ⁴⁾										
Max. switching voltage	250 V AC/120 V DC										
Max. switching current	4 A/240 V AC, 4 A/100 W DC										
Max. switching capacity	1000 VA AC/100 VA DC										
Response time	≤ 10 ms										
Max. switching frequency ⁵⁾	10/s										
Time delay	Adjustable, 0.5 to 10 s										
Connection type	M 16 screw fixing										
VDE protection class ⁶⁾	□										
Circuit protection ⁷⁾	A, C										
Enclosure rating	IP 67										
Ambient temperature	Operation -40 °C to +60 °C Storage -40 °C to +75 °C										
Weight	Approx. 140 g										
Housing material	ABS										

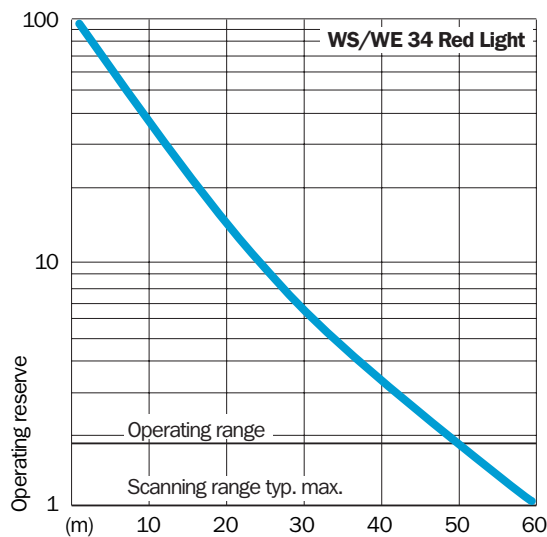
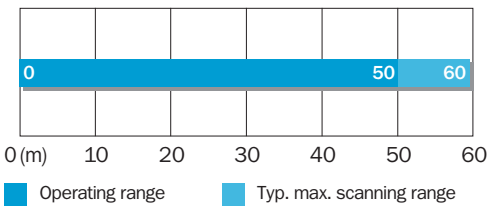
¹⁾ Average service life 100,000 h at T_A = +25 °C
²⁾ Limit values

³⁾ ± 10 %
⁴⁾ Provide suitable spark suppression for inductive or capacitive loads

⁵⁾ With light/dark ratio 1:1
⁶⁾ Withstand voltage 250 V UC

⁷⁾ A = V_S connections reverse-polarity protected
C = Interference pulse suppression

Operating range and operating reserve



Order information

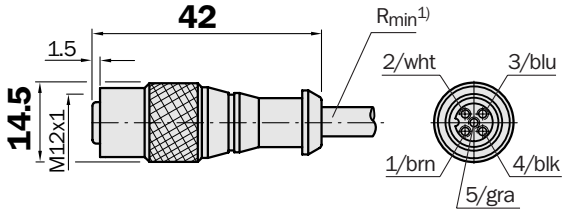
Type	Order no.
WS/WE 34-R 230	1 019 257
WS/WE 34-R 240	1 019 258

Dimension drawings and order information

Female connector M 12, 4- or 5-pin, straight

Cable Ø 5/6 mm, 4/5 x 0.25 mm², sheath PVC

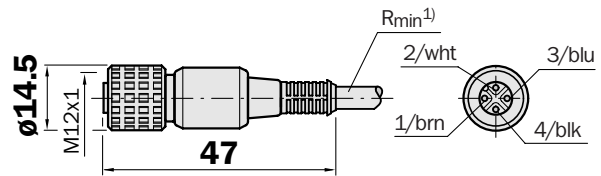
Contacts	Type	Order no.	Cable length
4	DOL-1204-G02M	6 009 382	2 m
4	DOL-1204-G05M	6 009 866	5 m
4	DOL-1204-G10M	6 010 543	10 m
4	DOL-1204-G15M	6 010 753	15 m
5	DOL-1205-G02M	6 008 899	2 m
5	DOL-1205-G05M	6 009 868	5 m
5	DOL-1205-G10M	6 010 544	10 m



Female connector M 12, 4-pin, straight

Cable Ø 4.5 mm, 4 x 0.34 mm², sheath PUR

Type	Order no.	Cable length
DOL-1204-G05MB	7 902 084	5 m

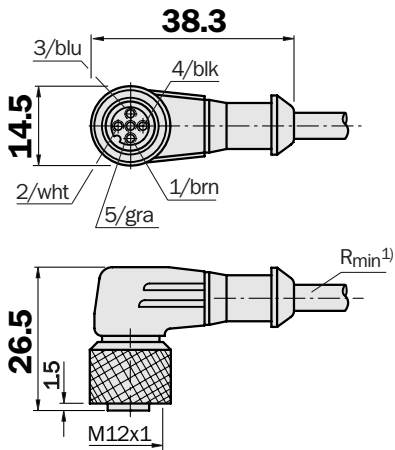


¹⁾ Minimum bend radius in dynamic use
 $R_{min} = 20 \times \text{cable diameter}$

Female connector M 12, 4- or 5-pin, right angle

Cable Ø 5/6 mm, 4/5 x 0.25 mm², sheath PVC

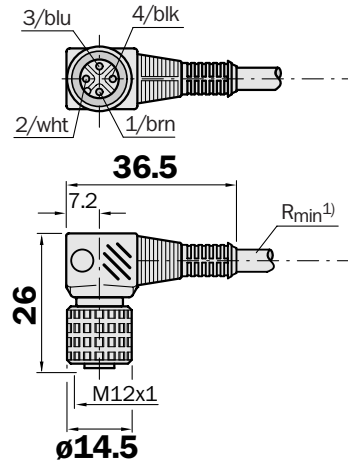
Contacts	Type	Order no.	Cable length
4	DOL-1204-W02M	6 009 383	2 m
4	DOL-1204-W05M	6 009 867	5 m
4	DOL-1204-W10M	6 010 541	10 m
5	DOL-1205-W02M	6 008 900	2 m
5	DOL-1205-W05M	6 009 869	5 m
5	DOL-1205-W10M	6 010 542	10 m



Female connector M 12, 4-pin, right angle

Cable Ø 4.5 mm, 4 x 0.34 mm², sheath PUR

Type	Order no.	Cable length
DOL-1204-W05MB	7 902 085	5 m

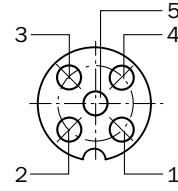


¹⁾ Minimum bend radius in dynamic use
 $R_{min} = 20 \times \text{cable diameter}$

Dimension drawings and order information

- Contact assignments according to EN 50044
- DC coding

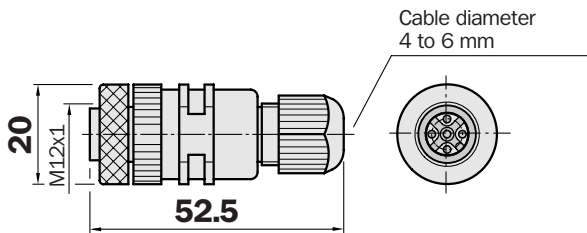
Pin assignments
 Pin 1 = brown
 Pin 2 = white
 Pin 3 = blue
 Pin 4 = black
 Pin 5 = grey



SENSICK screw-in system M 12, 4- or 5-pin, enclosure rating IP 67

Female connector M 12, 4- or 5-pin, straight

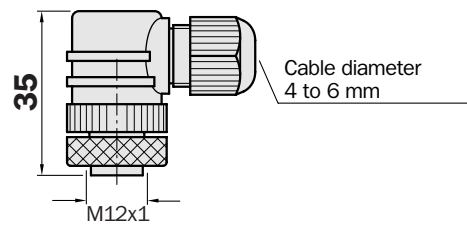
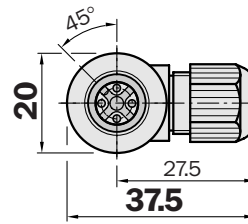
Contacts	Type	Order no.	Cable length
4	DOS-1204-G	6 007 302	–
5	DOS-1205-G	6 009 719	–



Can be self-made for cables Ø 4.5 to 6.5 mm long

Female connector M 12, 4- or 5-pin, right angle

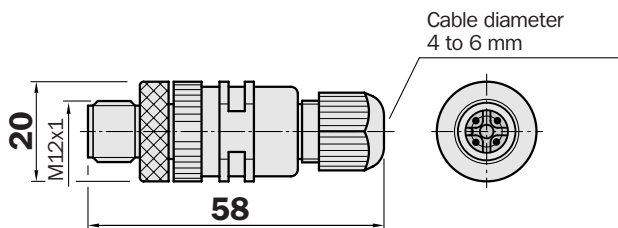
Contacts	Type	Order no.	Cable length
4	DOS-1204-W	6 007 303	–
5	DOS-1205-W	6 009 720	–



Can be self-made for cables Ø 4.5 to 6.5 mm long

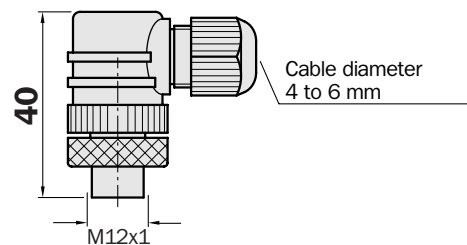
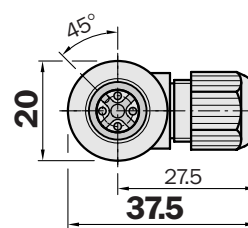
Male connector M 12, 4-pin, straight, can be ready-made

Contacts	Type	Order no.	Cable length
4	STE-1204-G	6 009 932	–
5	STE-1205-G	6 022 083	–



Male connector M 12, 4-pin, right angle, can be ready-made

Contacts	Type	Order no.	Cable length
4	STE-1204-W	6 022 084	–
5	STE-1205-W	6 022 082	–

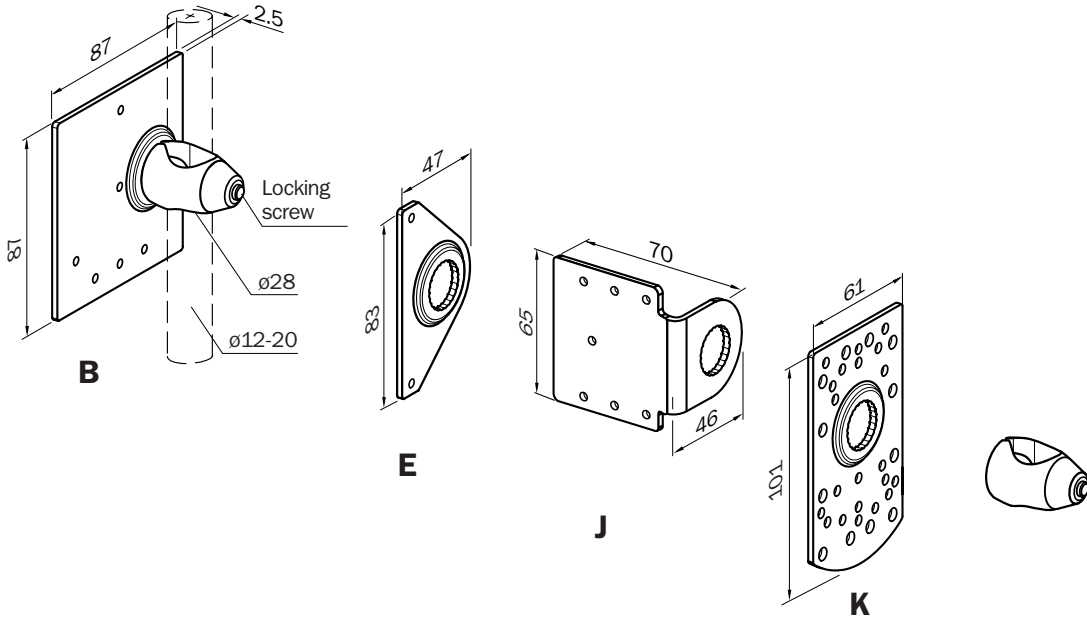


DC lines, by the metre, 5 x 0.34 mm²

	Type	Order no.
Cable, 5 x 0.34 mm ²	LTG-1105-MW	6 005 897

Dimension drawings and order information

Universal bar clamps (pole attachment) for sensors and reflectors

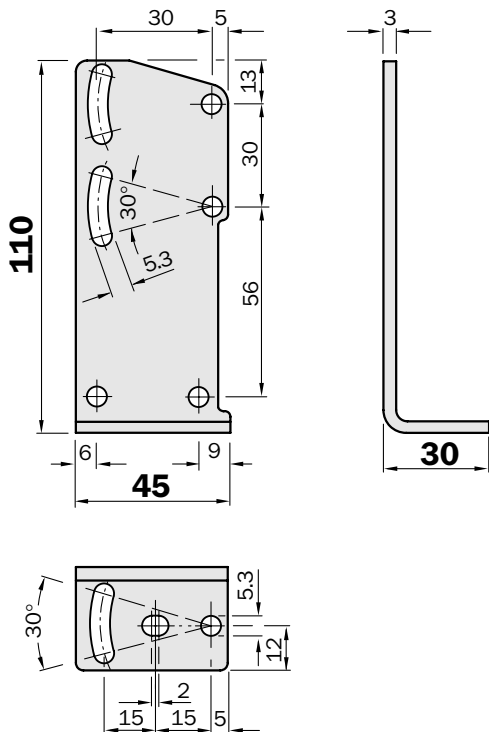


Mounting plate	Type	Order no.	for device/reflector type
B	BEF-KHS-B01	2 022 459 ¹⁾²⁾	P 250, PL 30 A, PL 40 A, PL 50 A, PL 80 A, C 110
E	BEF-KHS-E01	2 022 462 ¹⁾	W 30, W 32, W 34, W 36
J	BEF-KHS-J01	2 022 719 ¹⁾²⁾	PL 20 A, PL 40 A, PL 50 A, P 250, C 110
K	BEF-KHS-K01	2 022 718 ¹⁾	W 11, W 12-2, W 12L-2, W 14, W 18-2, W 23, W 24-2, W 27-2, W 30, W 32, W 34, W 36, KT 2, KT 5, KT 10, CS, LUT 3, DS 60, PL 20 A, PL 30 A, PL 40 A, PL 50 A, PL 80 A, P 250, C 110
	BEF-KHS-KH1	2 022 726	Clamp bracket rod mounting without attachment plate and mounting material

¹⁾ The order no. contains pole bracket and mounting material.
²⁾ Mounting plate does not contain threads; the sensor/reflector is mounted from the sensor-/reflector side with self-cutting screws.

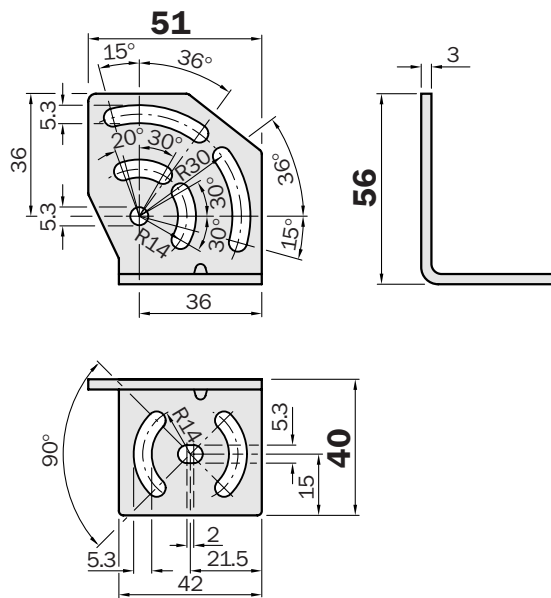
Mounting bracket, large

Type	Order no.
BEF-WG-W24	4 026 324



Mounting bracket, small

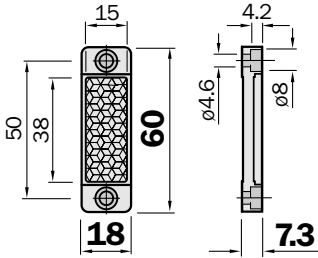
Type	Order no.
BEF-WK-W24	4 027 532



Dimension drawings and order information

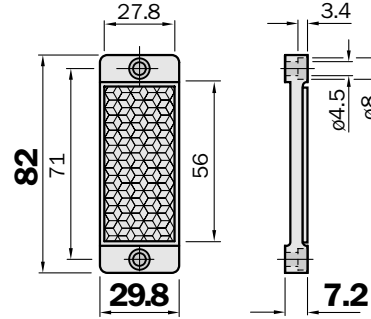
Reflector 20 x 40 mm

Type	Order no.
PL 20A	1 012 719



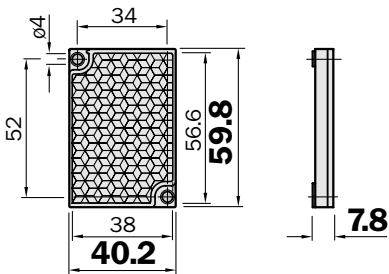
Reflector 30 x 50 mm

Type	Order no.
PL 30A	1 002 314



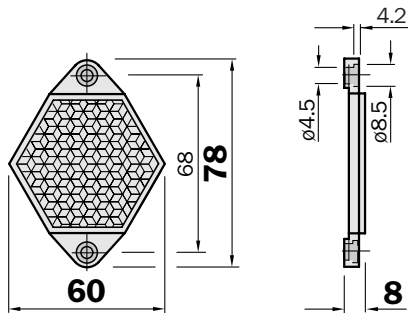
Reflector 40 x 60 mm

Type	Order no.
PL 40A	1 012 720



Reflector hexagonal, SW 48 mm

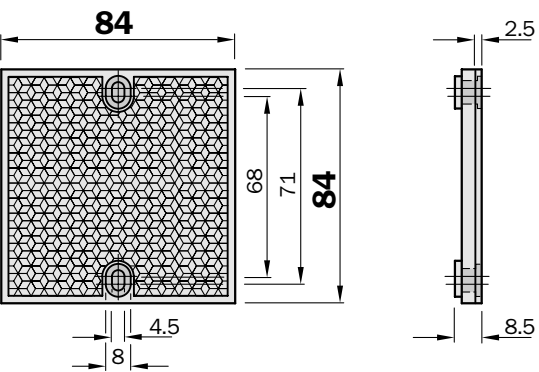
Type	Order no.
PL 50A	1 000 132



Also available in heatable model:
 Continuous heating: PL 50HK,
 Order no. 1 011 545
 Regulated heating: PL 50HS,
 Order no. 1 009 871

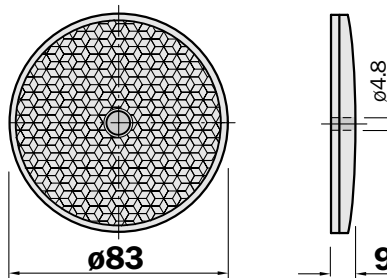
Reflector 80 x 80 mm

Type	Order no.
PL 80A	1 003 865



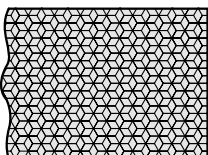
Reflector Ø 83 mm, center hole mounting

Type	Order no.
C 110	5 304 549



Reflective tape

Type	Order no.	
REF-DG-K	4 019 634	fabricated
REF-DG	5 304 334	sheet 749 x 914 mm



Dimension drawings and order information

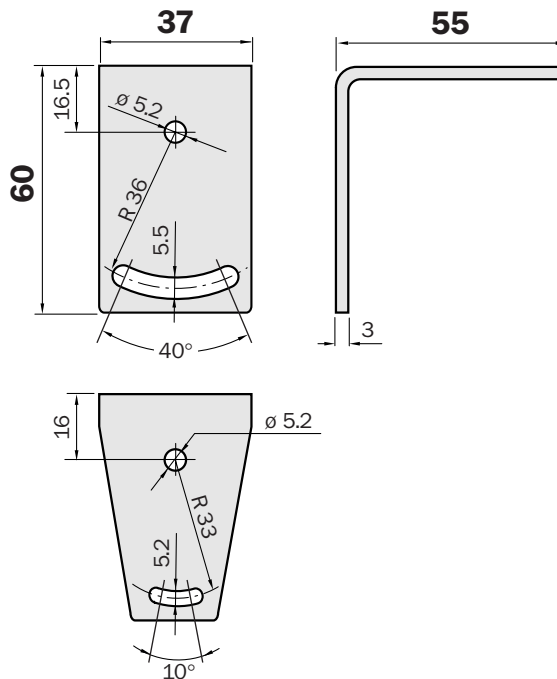
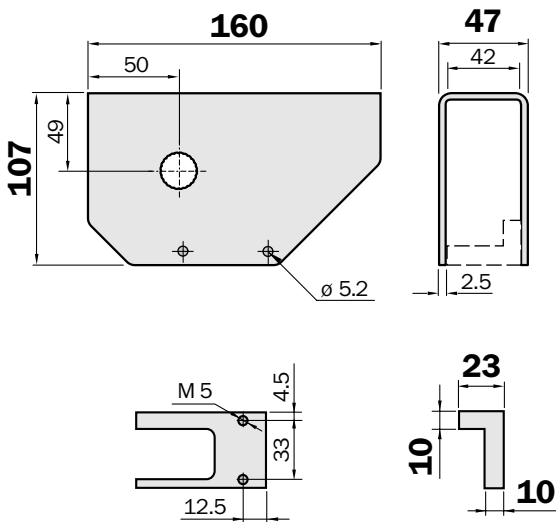
Special accessories

Weather protection hood for W 23, W 24-2, W 27-2, W 34, W 260 *)

Type	Order no.
OBW-KHS-M01	2 023 240

Mounting bracket for weather protection hood OBW-KHS-M01

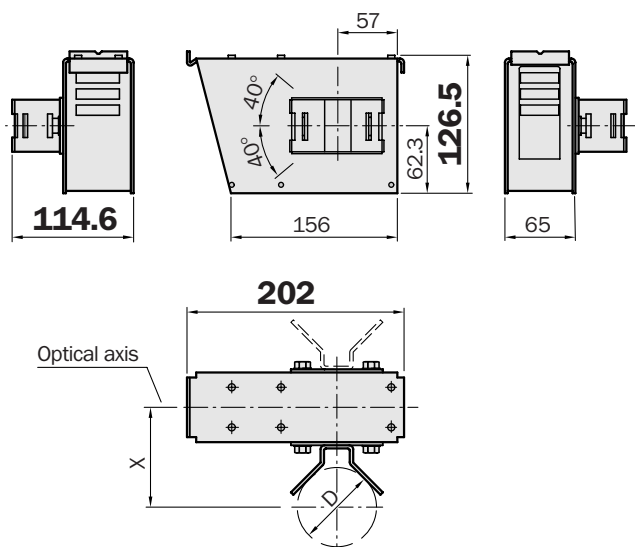
Type	Order no.
BEF-WN-OBW	2 023 251



*) Can also be used as pole clamp in connection with separate clamp BEF-KHS-KH1 (Order no. 2 022 726)

Weather hood housing for W 24-2, W 30, W 32, W 34, W 36, DS 60

Type	Order no.
WSG1-01	1 018 470



Bar-Ø D	Distance X
48.0	74.2
60.3	82.9
76.1	94.1
88.9	103.1
108.0	116.6

Great Britain

Erwin Sick Ltd.
 Waldkirch House
 39 Hedley Road, St. Albans
 Hertfordshire AL 1 5BN
 ☎ +44 17 27-83 11 21
 Fax +44 17 27-85 67 67
 erwin@sick.co.uk

USA

SICK, Inc.
 6900 West 110th Street
 Bloomington, MN 55438
 ☎ +1 (952) 9 41-67 80
 Fax +1 (952) 9 41-92 87
 WATS: 1-800-325-7425
 info@sickoptic.com

Australia

Erwin Sick Optic-Electronic
 Pty. Ltd. Head Office, P.O. Box 214
 899 Heidelberg Road
 Ivanhoe, Vic. 3079, Australia
 ☎ +61 39 49 74 10 0
 (0 08) 33 48 02 - toll free
 Fax +61 39 49 71 18 7
 sick@werple.net.au

