

	Photoelectric proximity switches BGS
	Photoelectric reflex switches
	Through-beam photoelectric switches

W 34: Sensor technology that does justice to demanding requirements



Due to their easy operation, the devices are quickly ready to operate. The screw connections and device plugs, which are rotatable through 90°, provide optimum cable entry in any mounting position. Moreover, the W 34 series is compatible with the W 36 series from a mounting viewpoint. All W34s are available either as a DC or DC/AC option.

Overview of W 34:

Very robust housing with very good resistance to chemicals as well as IP 69K.

Long ranges, fast and easy assembly and independence from the available type of voltage supply are the highlights of the W 34 series of photoelectric switches.

The further prominent features are precise background suppression and insensitivity to ambient light.

The robust plastic housing can even be used in a temperature range of -40°C ... +60°C.

Useful features increase the flexibility and reduce the number of options and stockholding, e.g. selectable light-/dark-switching, NPN/PNP switching.

Alarm output, test input and time delays extend the range of applications.

Very long ranges and high precision, long scanning range.

High insensitivity to ambient light increases the reliability.

User-friendly connection concept offers fast commissioning.

Useful features reduce the number of options and stockholding.

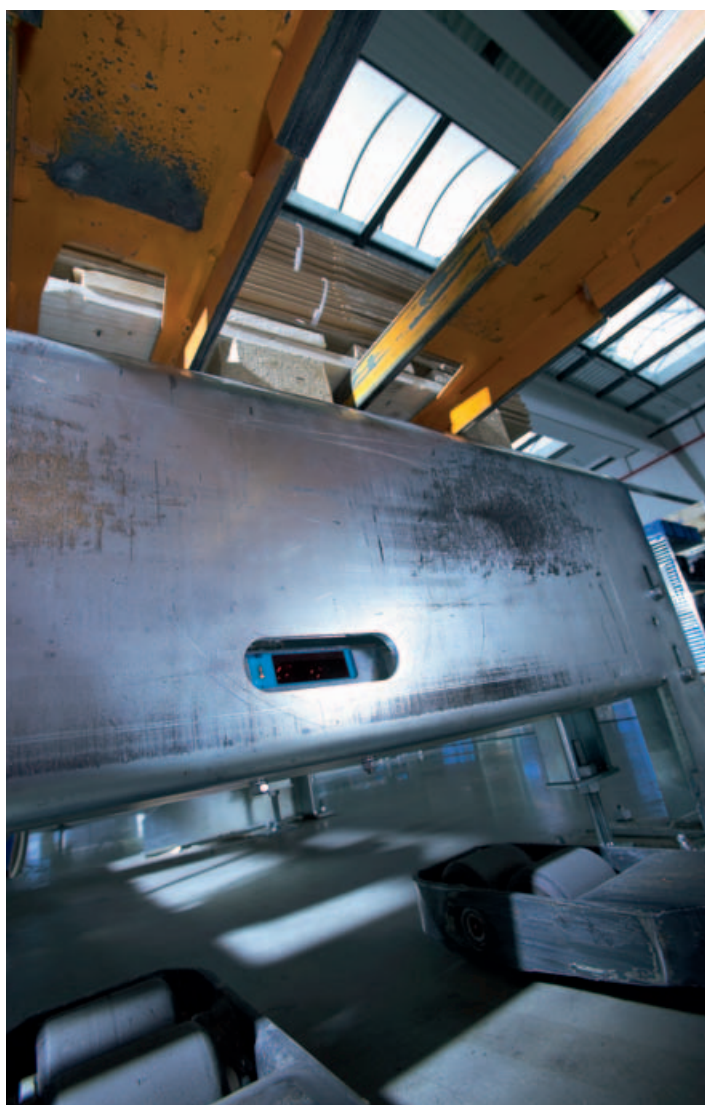
Main industries:

- Plant construction (glass production, ceramics, construction),
- Timber industry,
- Lifting and transport technology,
- Chemical industry,
- Door and gate and access control.

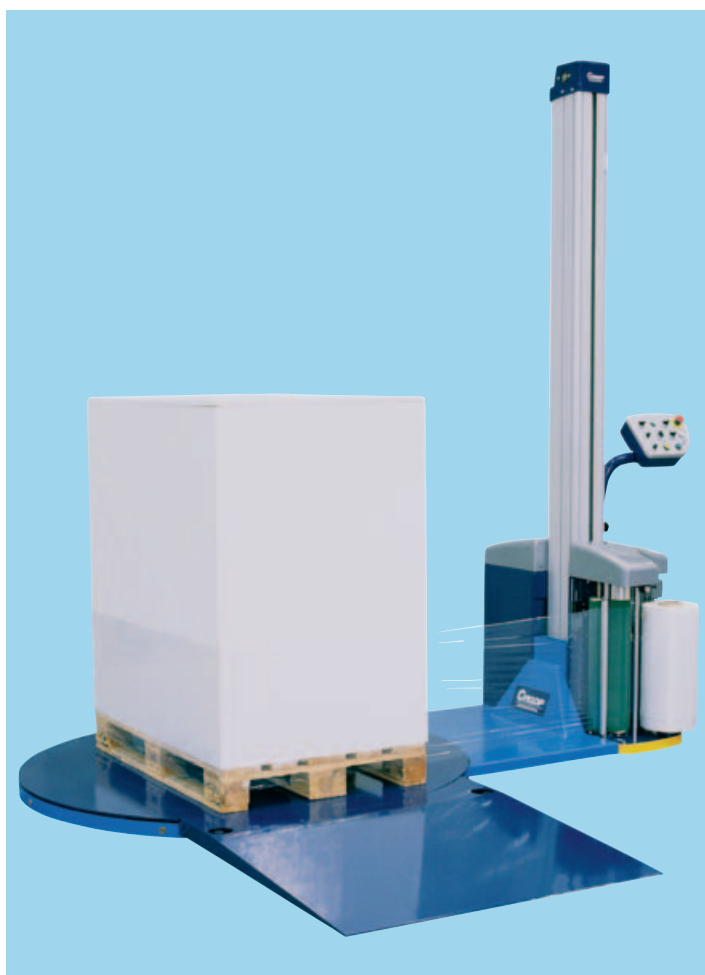


◀ The WT34 photoelectric proximity switch stands out for its large scanning distance with regard to checking whether second or backward storage bays are occupied.

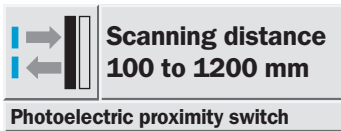
▼ The WL34 photoelectric reflex switch is impressive with its long range for overhang control on a conveyor system.



◀ The WT34 photoelectric proximity switch detects the forklift truck and thus stops incoming pallets during loading and unloading at the pallet dispatch station.

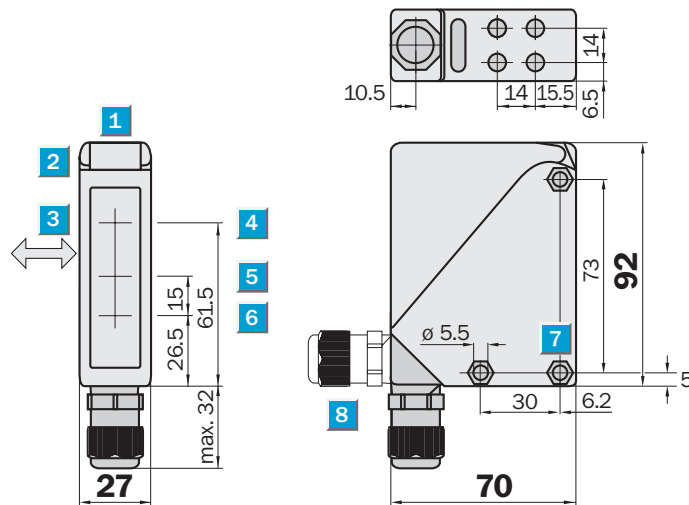


▲ Cyklop International uses the WT34 photoelectric proximity switch for setting height detection for standard right-hand wrappers.



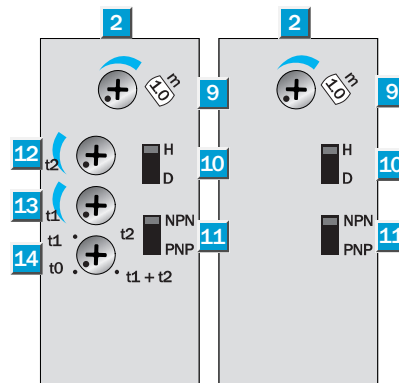
- Sturdy plastic housing
- Visible red light
- Background suppression, can be set very precisely
- M16 screw fixing or equipment plug rotatable by 90°
- Test input, time delays and contamination signaling output

Dimensional drawing



Adjustments possible

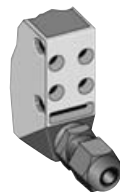
WT 34-V 250	WT 34-V 240
WT 34-B 450	WT 34-B 440
	WT 34-V 540



- 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 Ø 5.5 mm, for M5 hexagon nuts on both sides
- M16 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

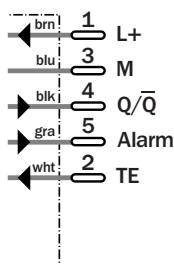
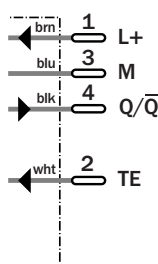
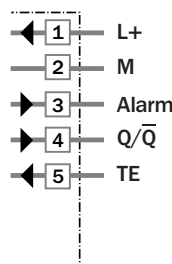
WT 34-V 240	WT 34-B 440	WT 34-V 540
WT 34-V 250	WT 34-B 450	



M16, terminals

4-pin, M12

5-pin, M12



See chapter Accessories

Cables and connectors

Mounting systems

Special accessories

Technical data		WT 34-	V 240	V 250	B 440	B 450	V 540					
Scanning distance	100 to 1200 mm, adjustable											
Light source ¹⁾, light type	LED; red light											
Light spot diameter	Approx. 40 mm at 1200 mm											
Supply voltage V_S	10 to 30 V DC ²⁾											
Residual 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	M16 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

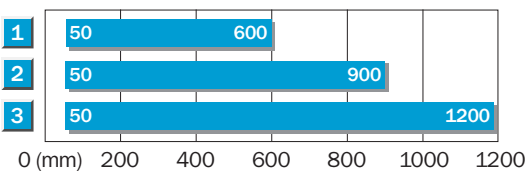
⁷⁾ Withstand voltage 50 V DC

⁸⁾ A = V_S connections reverse-polarity
protected

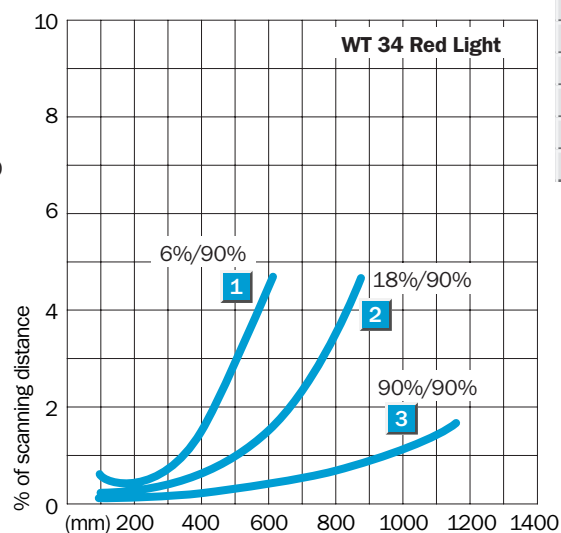
B = Outputs Q and $\bar{Q}$ short-circuit
protected

C = Interference pulse suppression

Scanning distance



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



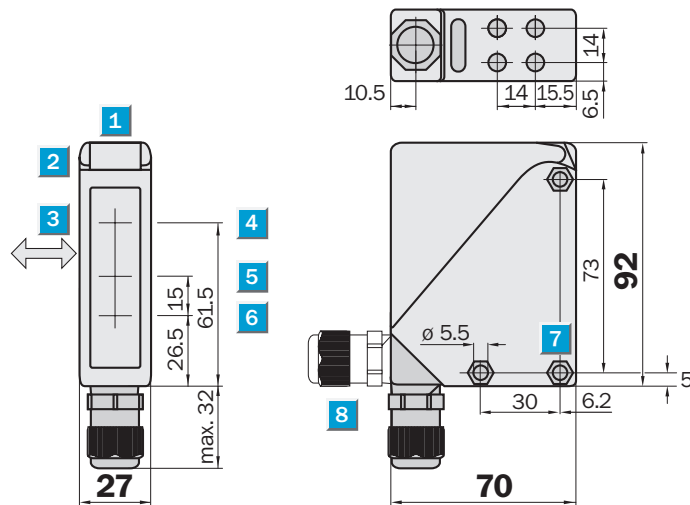
Order information

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	

- Universal voltage
- Sturdy plastic housing
- Visible red light
- Background suppression, can be set very precisely
- M16 screw fixing rotatable by 90°
- Time delay

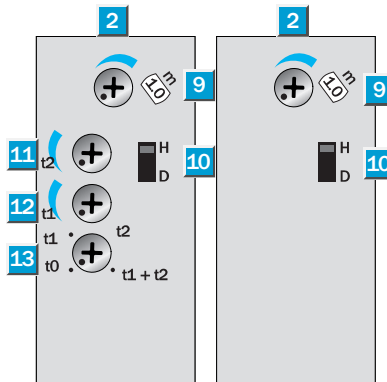
Dimensional drawing



Adjustments possible

WT 34-R 250

WT 34-R 240

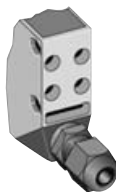


- Alignment sight
- LED signal strength indicator
- Standard direction of material being scanned
- Middle of optic axis, sender
- Middle of optic axis, receiver at close range
- Middle of optic axis, receiver at long range
- Mounting hole $\varnothing$ 5.5 mm, for M5 hexagon nuts on both sides
- M16 screw fixing rotatable by 90°
- Scanning distance adjuster
- Light/dark selector
- Time control t_2 = OFF-delay
- Time control t_1 = ON-delay
- Time delay selector switch

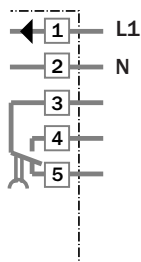
Connection type

WT 34-R 240

WT 34-R 250



M16, terminals



See chapter Accessories

Cables and connectors

Mounting systems

Special accessories

Technical data		WT 34-	R 240	R 250								
Scanning distance	100 to 1200 mm, adjustable											
Light source ¹⁾, light type	LED; red light											
Light spot diameter	Approx. 40 mm at 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/250 V AC, 4 A/24 V DC ⁵⁾											
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	M16 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 $T_A = +25\text{ °C}$

²⁾ Limit values

³⁾ ± 10 %

⁴⁾ Provide suitable spark suppression for
inductive or capacitive loads

⁵⁾ Usage category to EN 60947-1,
15 AC, 13 DC

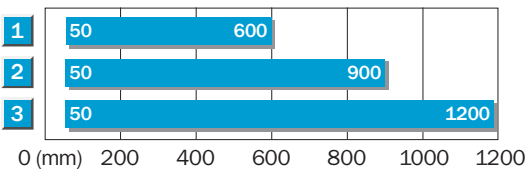
⁶⁾ With light/dark ratio 1:1

⁷⁾ Withstand voltage 250 V AC/DC

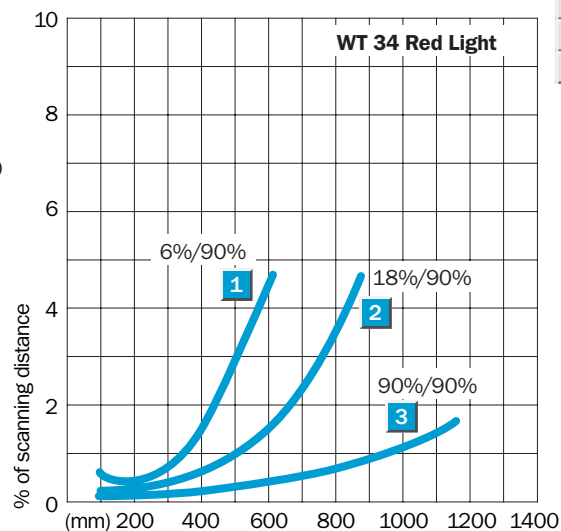
⁸⁾ A = V_S connections reverse-polarity
protected

C = Interference pulse suppression

Scanning distance

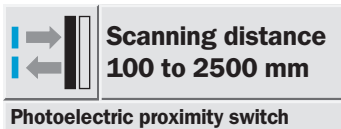


- 1 Scanning distance on black, 6 % remission
- 2 Scanning distance on grey, 18 % remission
- 3 Scanning distance on white, 90 % remission



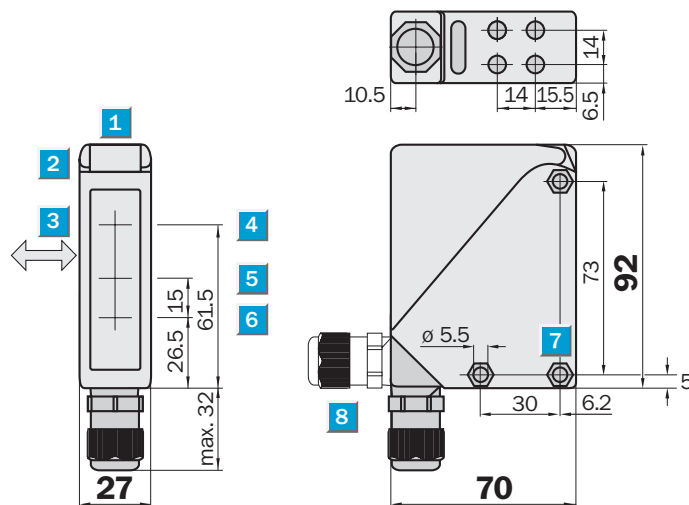
Order information

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



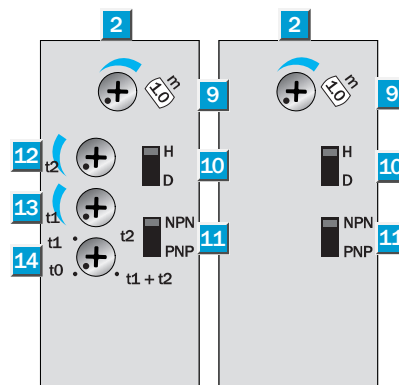
- Sturdy plastic housing
- Infrared light
- Background suppression, can be set very precisely
- M16 screw fixing or equipment plug rotatable by 90°
- Test input, time delays and contamination signaling output

Dimensional drawing



Adjustments possible

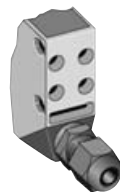
WT 34-B 420	WT 34-B 410
WT 34-V 220	WT 34-V 210
	WT 34-V 510



- 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 Ø 5.5 mm, for M5 hexagon nuts on both sides
- M16 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

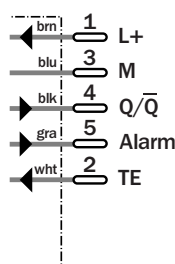
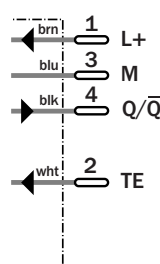
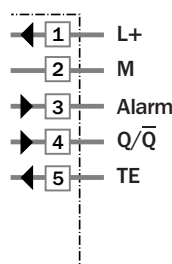
WT 34-V 210	WT 34-B 410	WT 34-V 510
WT 34-V 220	WT 34-B 420	



M16, terminals

4-pin, M12

5-pin, M12



See chapter Accessories

Cables and connectors

Mounting systems

Special accessories

Technical data		WT 34-	V 210	V 220	B 410	B 420	V 510					
Scanning distance	100 to 2500 mm, adjustable											
Light source ¹⁾, light type	LED; infrared											
Light spot diameter	Approx. 80 mm at 2500 mm											
Supply voltage V_S	10 to 30 V DC ²⁾											
Residual 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	M16 screw fixing											
	Plug											
VDE protection class ⁷⁾	□											
Circuit protection ⁸⁾	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 $T_A = +25\text{ °C}$

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

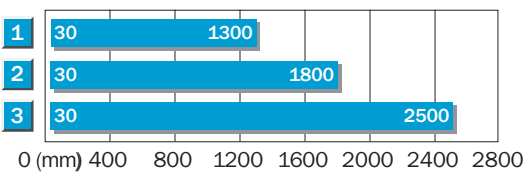
⁷⁾ Withstand voltage 50 V DC

⁸⁾ A = V_S connections reverse-polarity
protected

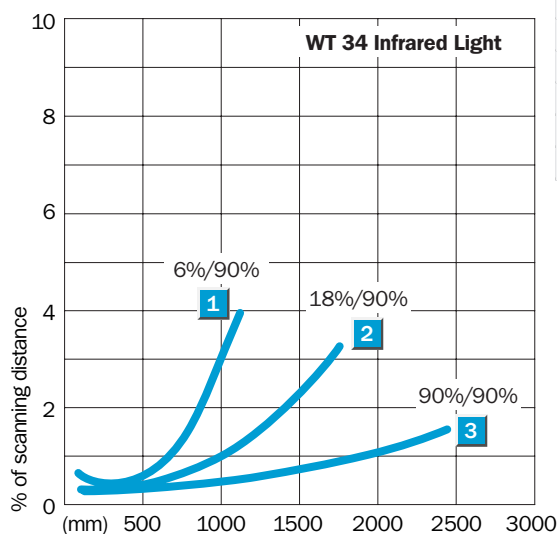
B = Outputs Q and $\bar{Q}$ short-circuit
protected

C = Interference pulse suppression

Scanning distance



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



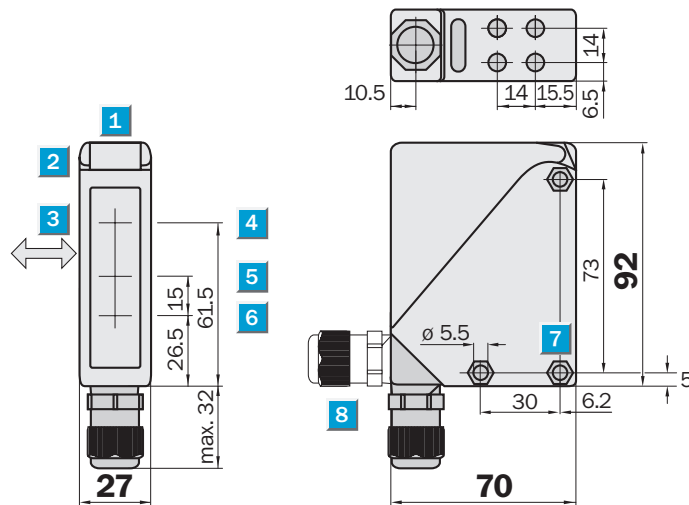
Order information

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	

- Universal voltage
- Sturdy plastic housing
- Infrared light
- Background suppression, can be set very precisely
- M16 screw fixing rotatable by 90°
- Time delay

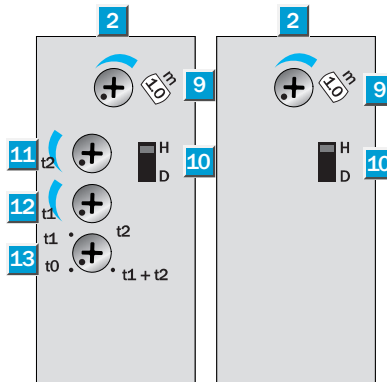
Dimensional drawing



Adjustments possible

WT 34-R 220

WT 34-R 210

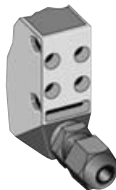


- 1 Alignment sight
- 2 LED signal strength indicator
- 3 Standard direction of the material being scanned
- 4 Middle of optic axis, sender
- 5 Middle of optic axis, receiver at close range
- 6 Middle of optic axis, receiver at long range
- 7 Mounting hole Ø 5.5 mm, for M5 hexagon nuts on both sides
- 8 M16 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

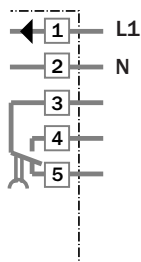
Connection type

WT 34-R 210

WT 34-R 220



M16, terminals



See chapter Accessories

Cables and connectors

Mounting systems

Special accessories

Technical data		WT 34-	R 210	R 220								
Scanning distance	100 to 2500 mm, adjustable											
Light source ¹⁾, light type	LED; infrared											
Light spot diameter	Approx. 80 mm at 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/250 V AC, 4 A/24 V DC ⁵⁾											
Max. switching capacity	1000 VA AC/100 W DC											
Response time	≤ 10 ms											
Max. switching frequency ⁶⁾	10/s											
Time delay	Adjustable, 0.5 to 10 s											
Connection type	M16 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											
Housing material	ABS											

¹⁾ Average service life 100,000 h
at $T_A = +25\text{ °C}$

²⁾ Limit values

³⁾ ± 10 %

⁴⁾ Provide suitable spark suppression for
inductive or capacitive loads

⁵⁾ Usage category to EN 60947-1,
15 AC, 13 DC

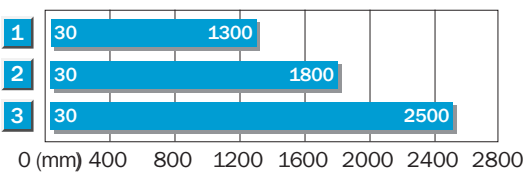
⁶⁾ With light/dark ratio 1:1

⁷⁾ Withstand voltage 250 V AC/DC

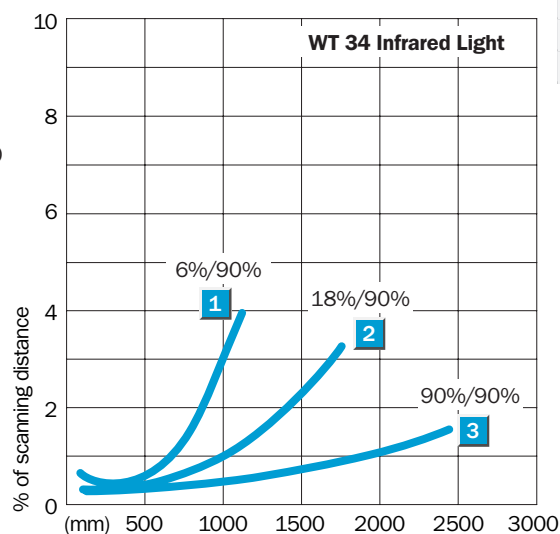
⁸⁾ A = V_S connections reverse-polarity
protected

C = Interference pulse suppression

Scanning distance



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



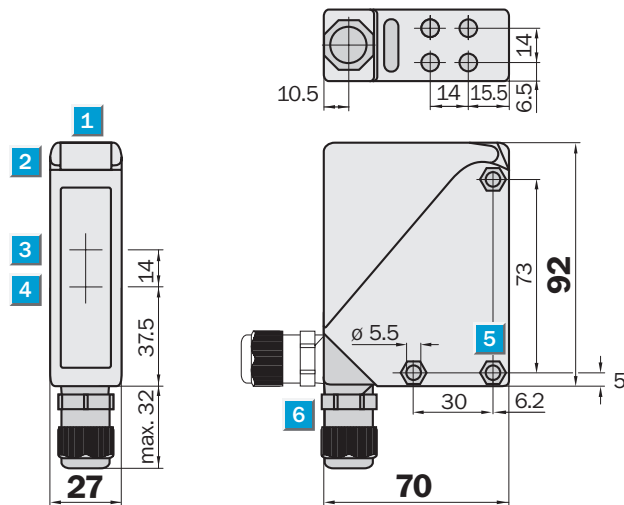
Order information

Type	Order no.
WT 34-R 210	1 019 232
WT 34-R 220	1 019 233

	Scanning range 22 m
Photoelectric reflex switch	

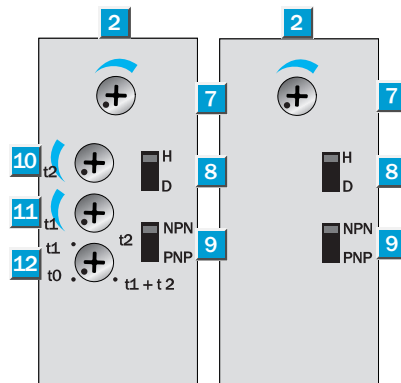
- Sturdy plastic housing
- High operating reserve in visible red light
- M16 screw fixing or equipment plug rotatable by 90°
- Time delay

Dimensional drawing



Adjustments possible

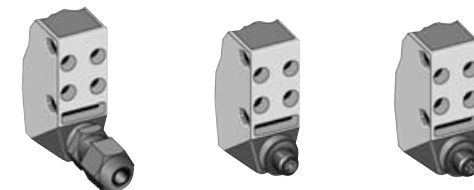
WL 34-B 440	WL 34-B 430
WL 34-V 240	WL 34-V 230
WL 34-V 540	WL 34-V 530



- 1 Alignment sight
- 2 LED signal strength indicator
- 3 Middle of optic axis, sender
- 4 Middle of optic axis, receiver
- 5 Mounting hole Ø 5.5 mm, for M5 hexagon nuts on both sides
- 6 M16 screw fixing or plug rotatable by 90°
- 7 Sensitivity control
- 8 Light/dark selector
- 9 NPN/PNP selector
- 10 Time control t_2 = OFF-delay
- 11 Time control t_1 = ON-delay
- 12 Time delay selector switch

Connection type

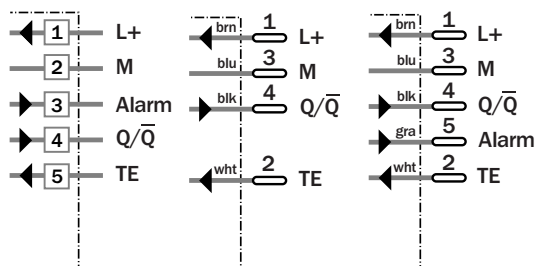
WL 34-V 230	WL 34-B 430	WL 34-V 530
WL 34-V 240	WL 34-B 440	WL 34-V 540



M16, terminals

4-pin, M12

5-pin, M12



See chapter Accessories

- Cables and connectors
- Mounting systems
- Reflectors
- Special accessories

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 source⁴⁾, light type	LED; red light											
Light spot diameter	Approx. 250 mm at 15 m											
Supply voltage V_S	10 to 30 V DC ²⁾											
Residual 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	M16 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 °C											
Weight	Approx. 140 g											
Polarisation filter												
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

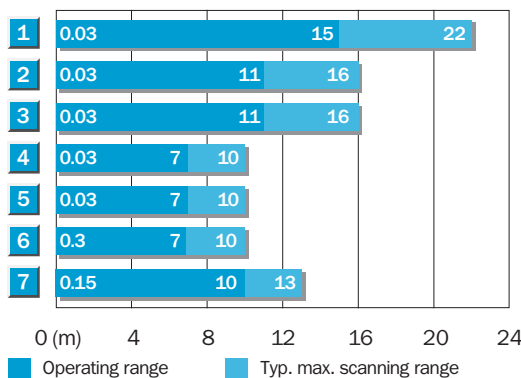
⁷⁾ Withstand voltage 50 V DC

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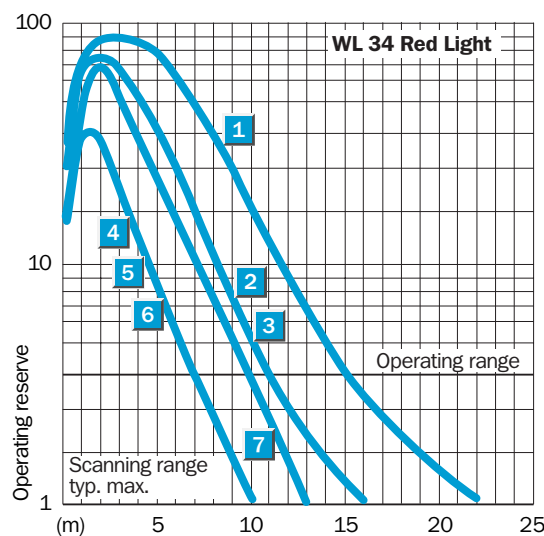
B = Outputs Q and $\bar{Q}$ short-circuit
protected

C = Interference pulse suppression

Scanning range and operating reserve



Reflector type	Operating range
1 PL 80 A	0.03 to 15 m
2 PL 50 A	0.03 to 11 m
3 PL 40 A	0.03 to 11 m
4 PL 30 A	0.03 to 7 m
5 PL 20 A	0.03 to 7 m
6 Diamond Grade (20 cm x 20 cm)	0.3 to 7 m
7 C 110	0.15 to 10 m



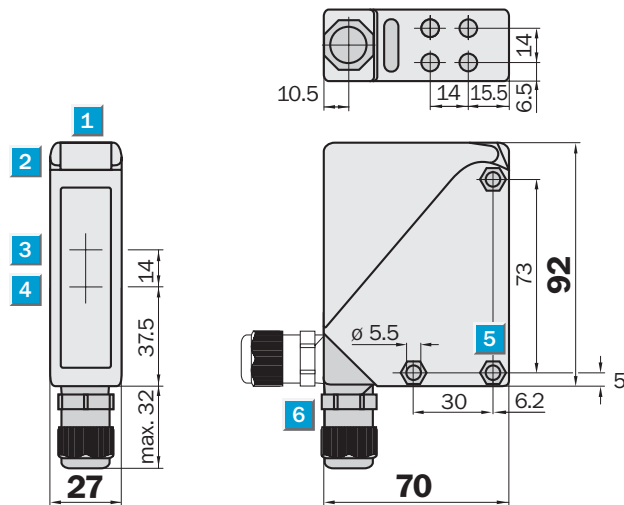
Order information

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	

- Universal voltage
- Sturdy plastic housing
- High operating reserve in visible red light
- M16 screw fixing rotatable by 90°
- Time delay

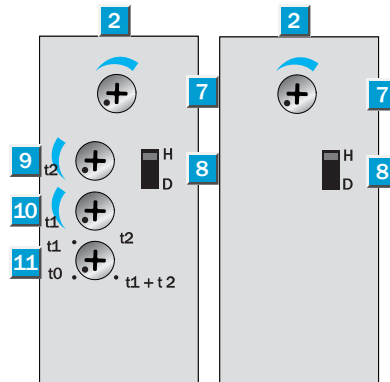
Dimensional drawing



Adjustments possible

WL 34-R 240

WL 34-R 230

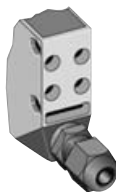


- 1 Alignment sight
- 2 Led signal strength indicator
- 3 Middle of optic axis, sender
- 4 Middle of optic axis, receiver
- 5 Mounting hole Ø 5.5 mm, for M5 hexagon nuts on both sides
- 6 M16 screw fixing rotatable by 90°
- 7 Sensitivity control
- 8 Light/dark selector
- 9 Time control t_2 = OFF-delay
- 10 Time control t_1 = ON-delay
- 11 Time delay selector switch

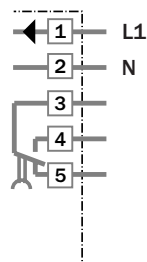
Connection type

WL 34-R 230

WL 34-R 240



M16, terminals



See chapter Accessories

Cables and connectors

Mounting systems

Reflectors

Special accessories

Technical data		WL 34-	R 230	R 240								
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 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/250 V AC, 4 A/100 VA DC ⁵⁾											
Max. switching capacity	1000 VA AC/100 W DC											
Response time ⁶⁾	≤ 10 ms											
Max. switching frequency ⁷⁾	10/s											
Time delay	Adjustable, 0.5 to 10 s											
Connection type	M16 screw fixing											
VDE protection class ⁸⁾	□											
Circuit protection ⁹⁾	A, C											
Enclosure rating	IP 67											
Ambient temperature	Operation -40 °C to +60 °C Storage -40 °C to +75 °C											
Weight	Approx. 140 g											
Polarisation filter												
Housing material	ABS											

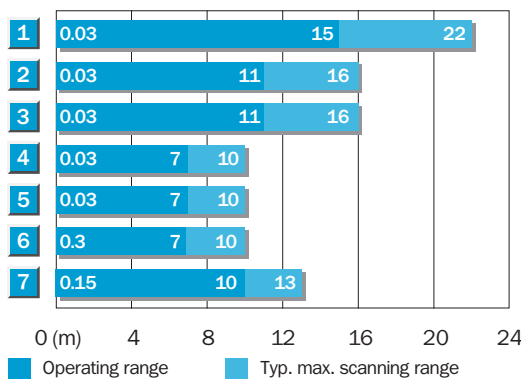
¹⁾ Average service life 100,000 h
at $T_A = +25\text{ °C}$
²⁾ Limit values
³⁾ ± 10 %

⁴⁾ Provide suitable spark suppression
for inductive or capacitive loads
⁵⁾ Usage category to EN 60947-1,
15 AC, 13 DC

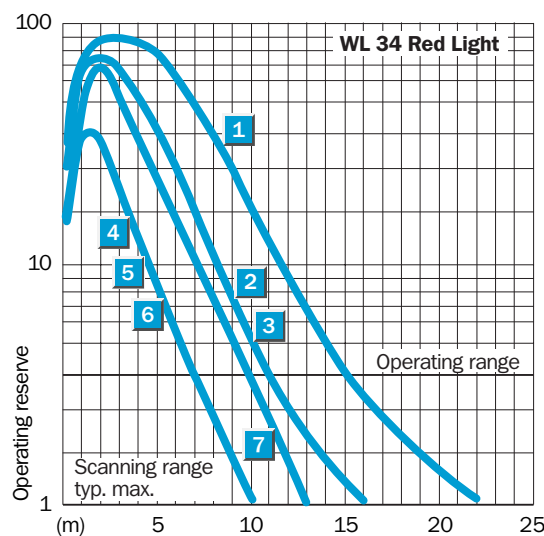
⁶⁾ Signal flight time for ohmic loads
⁷⁾ With light/dark ratio 1:1
⁸⁾ Withstand voltage 250 V UC

⁹⁾ A = V_S connections reverse-polarity
protected
C = Interference pulse suppression

Scanning range and operating reserve



Reflector type	Operating range
1 PL 80 A	0.03 to 15 m
2 PL 50 A	0.03 to 11 m
3 PL 40 A	0.03 to 11 m
4 PL 30 A	0.03 to 7 m
5 PL 20 A	0.03 to 7 m
6 Diamond Grade (20 cm x 20 cm)	0.3 to 7 m
7 C 110	0.15 to 10 m



Order information

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

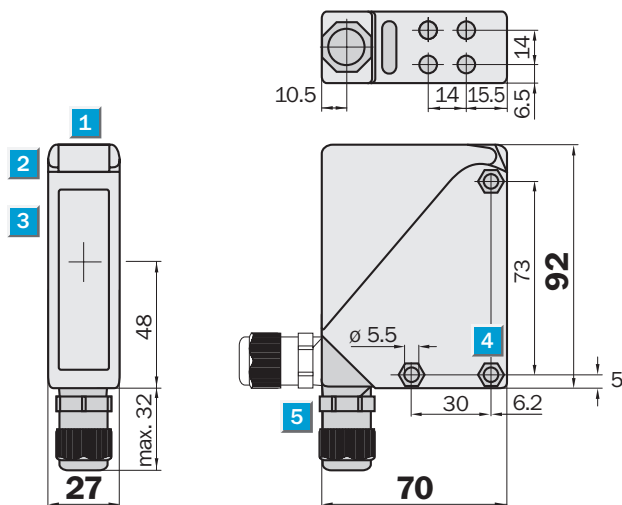


Scanning range
0 to 60 m

Through-beam photoelectric switch

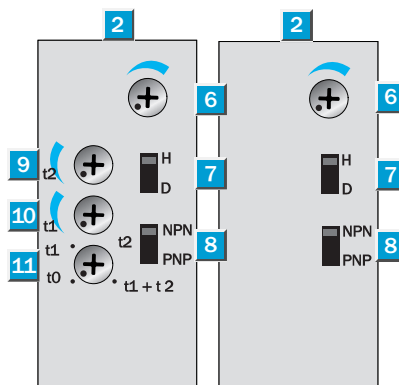
- Sturdy plastic housing
- High operating reserve in visible red light
- M16 screw fixing or equipment plug rotatable by 90°
- Time delay

Dimensional drawing



Adjustments possible

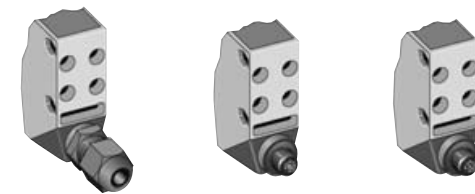
WS/WE 34-B 440	WS/WE 34-B 430
WS/WE 34-V 240	WS/WE 34-V 230
WS/WE 34-V 540	WS/WE 34-V 530



- Alignment sight
- LED signal strength indicator
- Middle of optic axis
- Mounting hole Ø 5.5 mm, for M5 hexagon nuts on both sides
- M16 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

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



M16, terminals

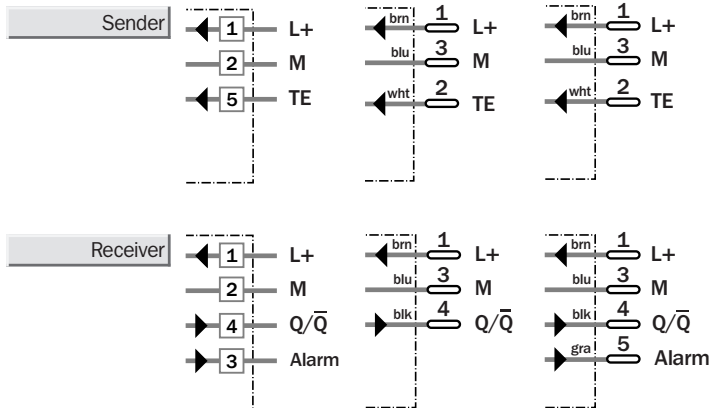
4-pin, M12

5-pin, M12



See chapter Accessories

- Cables and connectors
- Mounting systems
- Special accessories



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 ¹⁾, light type	LED; red light											
Light spot diameter	Approx. 700 mm at 50 m											
Angle of dispersion/reception	1°/2.5°											
Supply voltage V_S	10 to 30 V DC ²⁾											
Residual 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	M16 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 °											
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 for ohmic loads

⁶⁾ With light/dark ratio 1:1

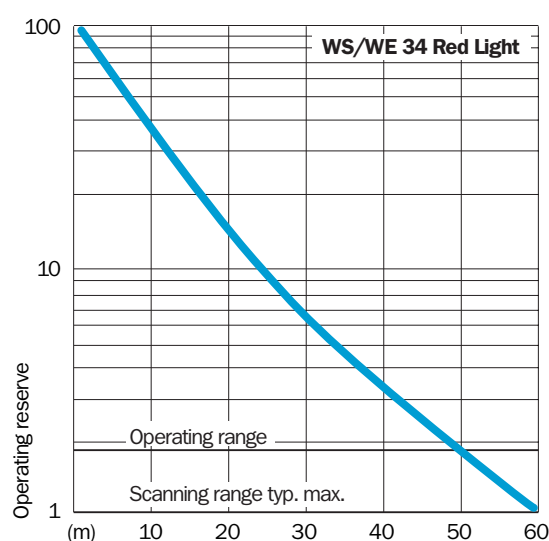
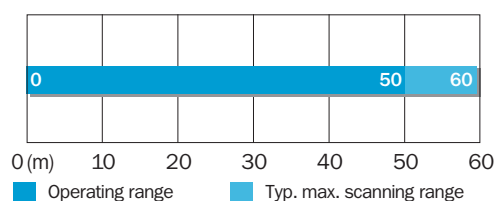
⁷⁾ Withstand voltage 50 V DC

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

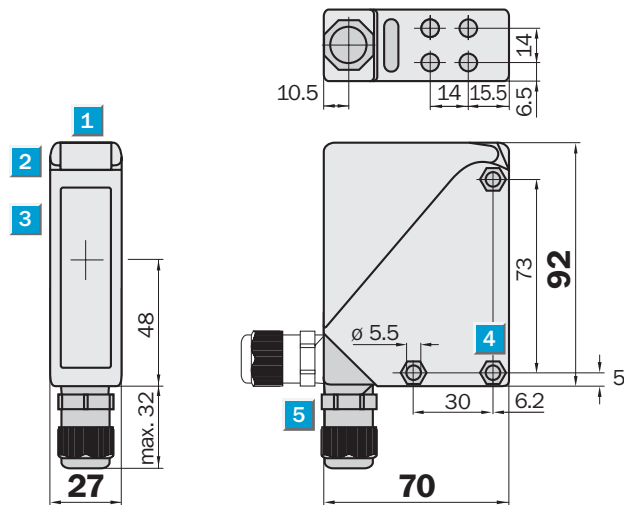


Scanning range
0 to 60 m

Through-beam photoelectric switch

- Universal voltage
- Sturdy plastic housing
- High operating reserve in visible red light
- M16 screw fixing rotatable by 90°
- Time delay

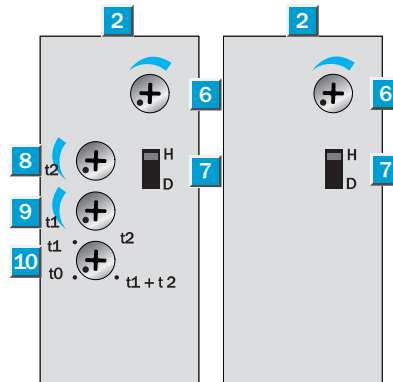
Dimensional drawing



Adjustments possible

WS/WE 34-R 240

WS/WE 34-R 230

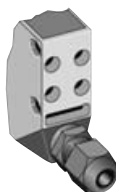


- 1 Alignment sight
- 2 LED signal strength indicator
- 3 Middle of optic axis
- 4 Mounting hole Ø 5.5 mm, for M5 hexagon nuts on both sides
- 5 M16 screw fixing rotatable by 90°
- 6 Sensitivity control
- 7 Light/dark selector
- 8 Time control t_2 = OFF-delay
- 9 Time control t_1 = ON-delay
- 10 Time delay selector switch

Connection type

WS/WE 34-R 230

WS/WE 34-R 240



M16, terminals

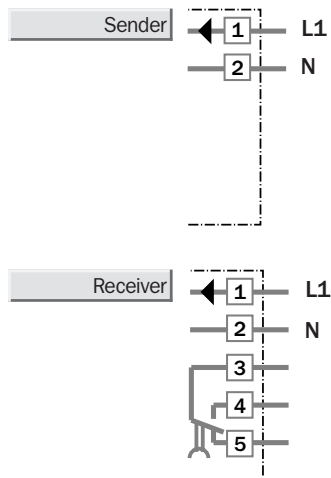


See chapter Accessories

Cables and connectors

Mounting systems

Special accessories



Technical data		WS/WE 34-	R 230	R 240								
Scanning range, typ. max.	0 to 60 m											
Sensitivity	Adjustable											
Light source ¹⁾, light type	LED; red light											
Light spot diameter	Approx. 700 mm at 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/250 V AC, 4 A/100 W DC ⁵⁾											
Max. switching capacity	1000 VA AC/100 VA DC											
Response time	10 ms											
Max. switching frequency ⁶⁾	≤ 10/s											
Time delay	Adjustable, 0.5 to 10 s											
Connection type	M16 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											
Housing material	ABS											

¹⁾ Average service life 100,000 h at $T_A = +25\text{ °C}$

²⁾ Limit values

³⁾ ± 10 %

⁴⁾ Provide suitable spark suppression for inductive or capacitive loads

⁵⁾ Usage category to EN 60947-1, 15 AC, 13 DC

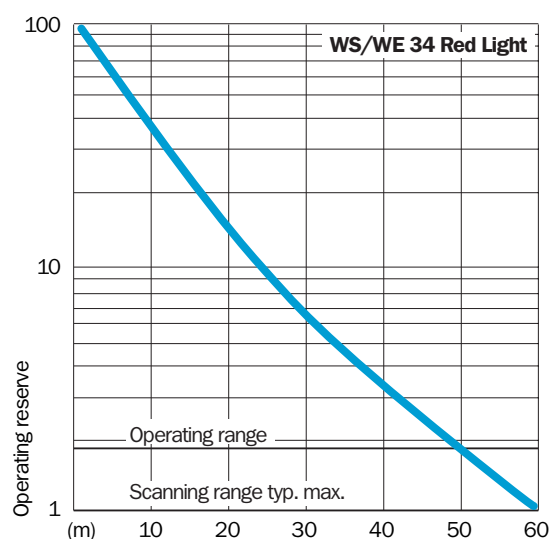
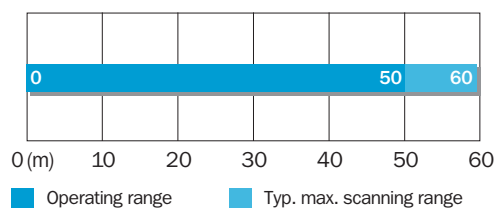
⁶⁾ With light/dark ratio 1:1

⁷⁾ Withstand voltage 250 V UC

⁸⁾ A = V_S connections reverse-polarity protected

C = Interference pulse suppression

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