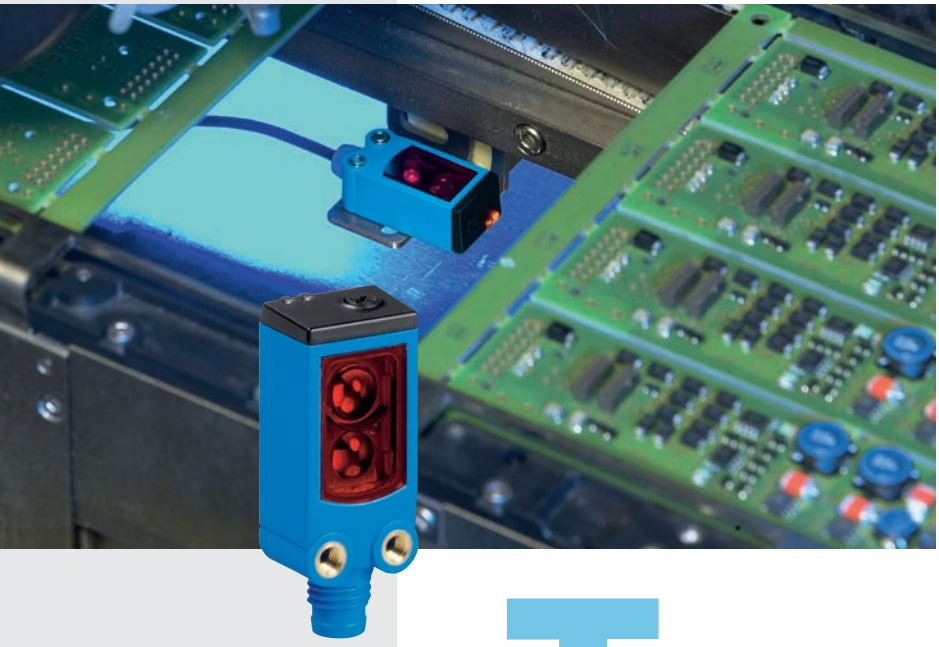
W4-3: Miniature Photoelectric Switch Family: Efficient and Space-Saving



The outer dimensions of a sugar cube and, inside, the technology of a large photoelectric switch. The integration of photoelectric proximity switches no longer depends on space, even for demanding tasks.

Reliable detection of small, transparent or even reflective objects is standard, as is reliable detection largely irrespective of colour and surface finish.

The W4-3 series sensors reliably detect objects with low reflectance even where a moving background is only a few millimetres away - the result of a new chip-set specifically developed for this task, enabling precise active background suppression. In conjunction with the robust housing, the W4-3 sensors remain largely unaffected by the influence of environmental effects! Whether humidity or water spray, EMC contamination, flashlights or heavy vibrations, the miniature sensors operate reliably in harsh industrial environments.

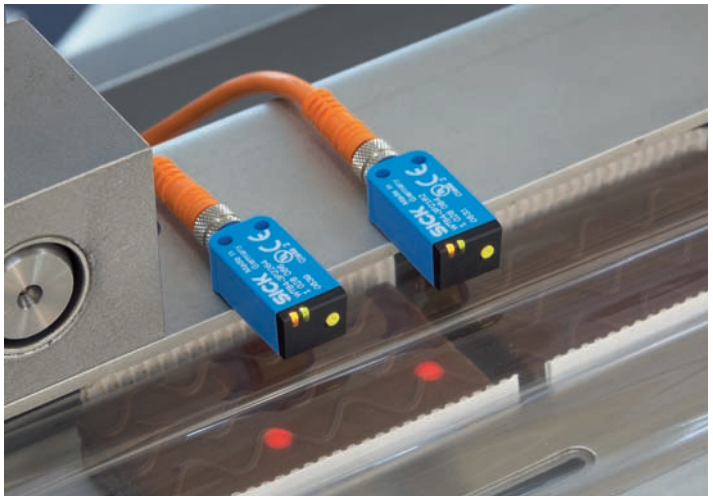
Unsurpassed ease of use with the new process of electronic active background suppression. Fast commissioning at the touch of a button or, if the sensor is inaccessible, via control cable. Secure setting via potentiometer.

So, the sensor is built for the future. The specially developed chip-set is field bus enabled. Remote maintenance, parametrisation and diagnostics can be implemented.

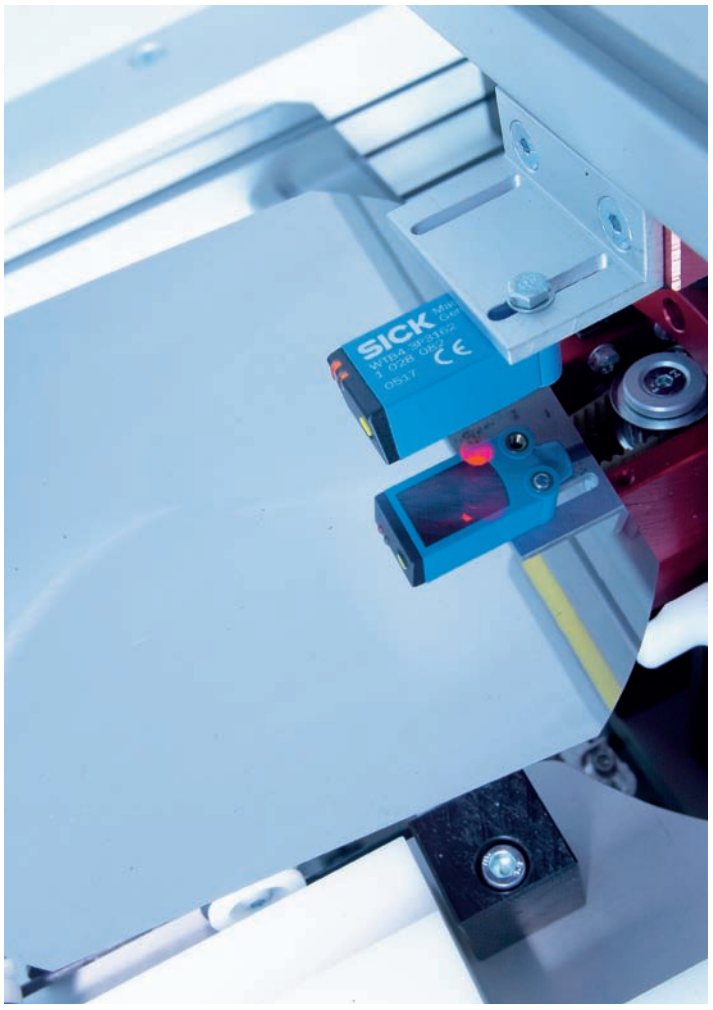
The W4-3 series photoelectric reflex switch offers important customer benefits:

- Secure and fast alignment through an easily visible, intensive red homogeneous light spot.
- Minimum assembly through optimum housing shape, requiring no mounting bracket for most installations.

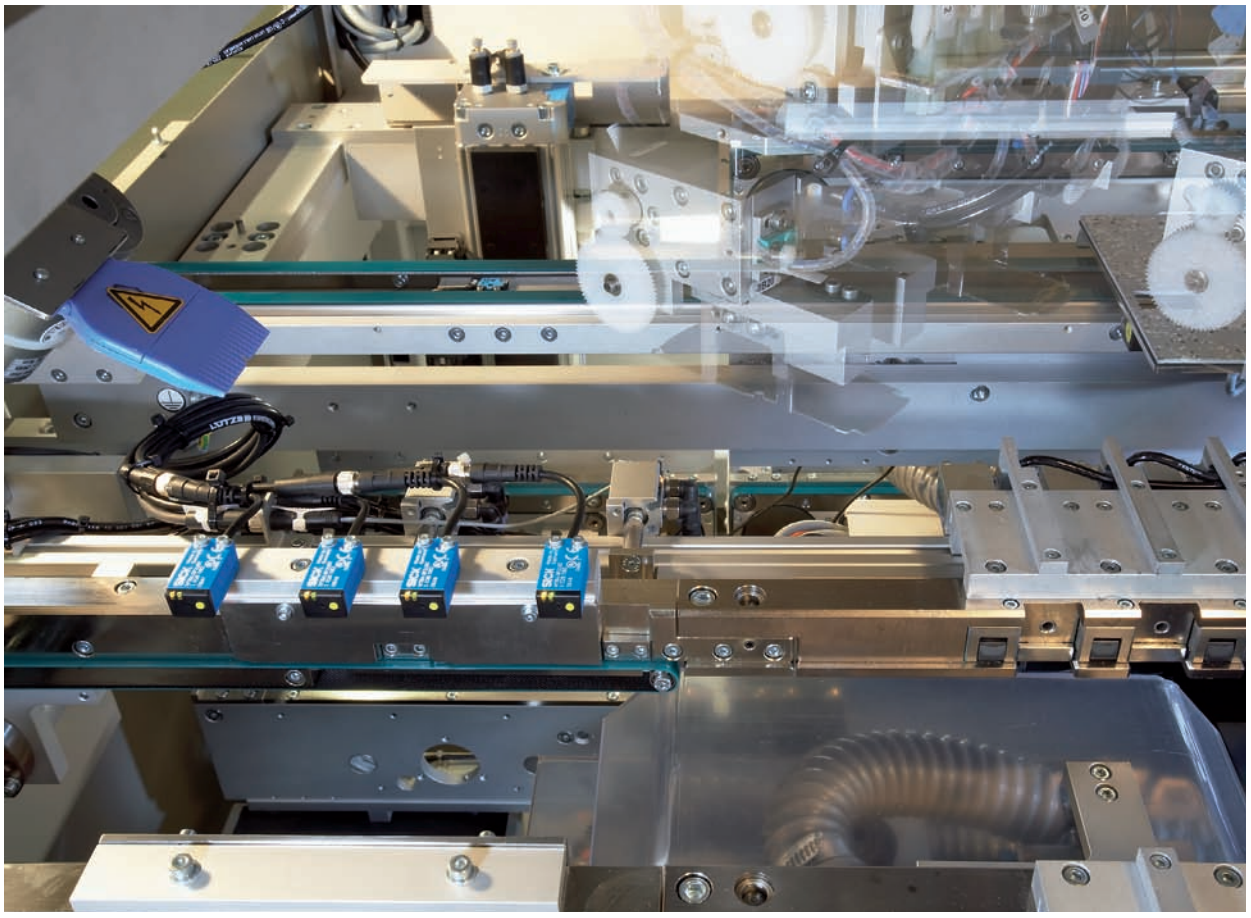
▼ The WL4-3 photoelectric reflex switch with high visibility light spot. Fast and easy alignment. Good recognition of transparent objects.



▼ WT4-3 photoelectric proximity switch with 'V' optics for the reliable detection of reflective and transparent objects.



▲ Detection of dark black objects with the WT4-3 photoelectric proximity switch.



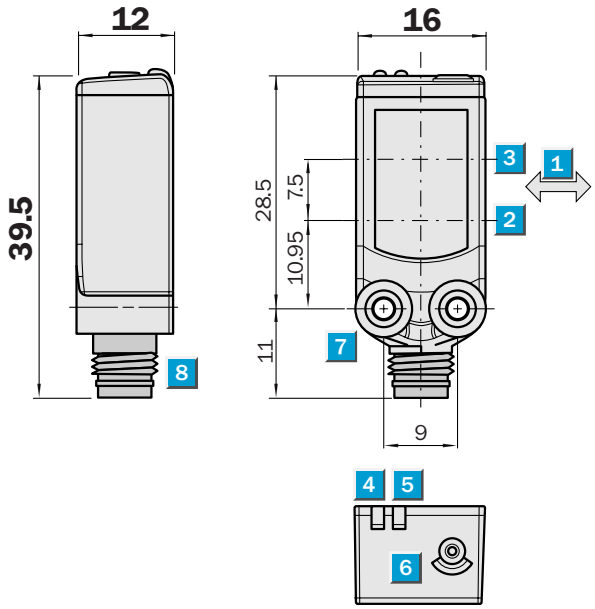
► Optimum and safe use. No mutual interference, reliable suppression of reflective, moving backgrounds with the WT4-3 photoelectric proximity switch.

Scanning distance
4 ... 150 mm

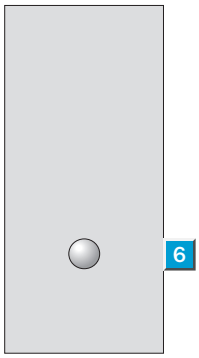
Photoelectric proximity switch

- Commissioning by simple Teach-in function
- Object detection almost irrespective of colour and background consistency
- Secure function when mounted opposite other sensors

Dimensional drawing

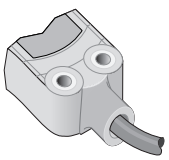
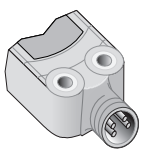
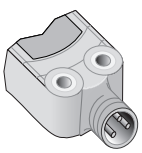
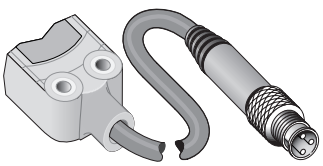
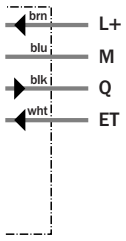
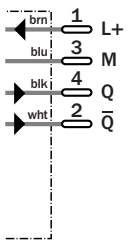
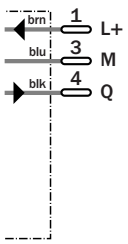
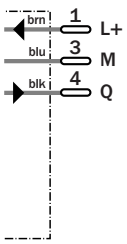


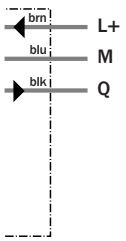
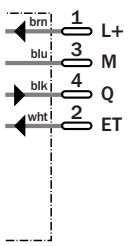
Adjustments possible



1 Standard direction of the material being scanned
2 Optical axis, sender
3 Optical axis, receiver
4 LED indicator yellow, status of received light beam
5 LED indicator green, power on
6 Teach button
7 Mounting hole M3
8 Connector

Connection type

WTB4-3N1164	WTB4-3P2262	WTB4-3N2162 WTB4-3P2162	WTB4-3N3162 WTB4-3P3162
			
4 x 0.14 mm²	M8, 4-pin	M8, 3-pin	M8, 3-pin
			
brn L+ blu M blk Q wht ET	brn 1 L+ blu 3 M blk 4 Q wht 2 $\overline{Q}$	brn 1 L+ blu 3 M blk 4 Q	brn 1 L+ blu 3 M blk 4 Q

WTB4-3N1362 WTB4-3P1362	WTB4-3P2264
3 x 0.14 mm²	M8, 4-pin
	
brn L+ blu M blk Q	brn 1 L+ blu 3 M blk 4 Q wht 2 ET

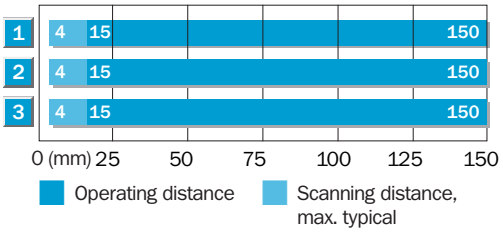
See chapter Accessories

Connector, M8, 3-pin
Connector, M8, 4-pin
Mounting systems

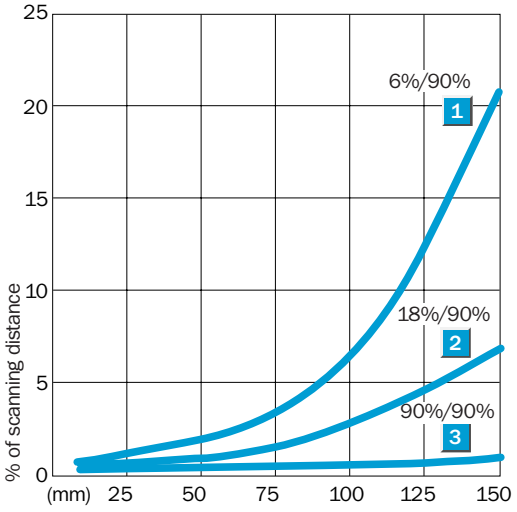
Technical data	WTB4-3	N1164	N1362	N2162	N3162	P1362	P2162	P2262	P2264	P3162
Scanning distance typ. max.	4 ... 150 mm	■	■	■	■	■	■	■	■	■
Operating distance	15 ... 150 mm	■	■	■	■	■	■	■	■	■
Adjustment of operating distance	Teach-in: single teach button & cable[1]	■							■	
	Teach-in: single teach button		■	■	■	■	■	■		■
Light source, light type	Pin Point LED, Red light, 650 nm[2]	■	■	■	■	■	■	■	■	■
Light spot diameter	7 mm at 50 mm distance	■	■	■	■	■	■	■	■	■
Supply voltage V_S	DC 10 ... 30 V[3]	■	■	■	■	■	■	■	■	■
Ripple	< 5 V_{PP}[4]	■	■	■	■	■	■	■	■	■
Power consumption	≤ 30 mA[5]	■	■	■	■	■	■	■	■	■
Switching outputs	NPN, Q	■	■	■	■					
	PNP, Q					■	■		■	■
	PNP antivalent							■		
Switching mode	Light-switching	■	■	■	■	■	■		■	■
	Complementary							■		
Output current $I_a$max	≤ 100 mA	■	■	■	■	■	■	■	■	■
Response time	< 0.5 ms[6]	■	■	■	■	■	■	■	■	■
Switching frequency	1,000 Hz[7]	■	■	■	■	■	■	■	■	■
Connection type	Cable, PVC, 2 m[8]	■	■			■				
	Connector, M8, 3-pin			■			■			
	Cable with plug, M8, 3-pin, PVC, 100 mm[8]				■					■
	Connector, M8, 4-pin							■	■	
VDE protection class	⧈	■	■	■	■	■	■	■	■	■
Circuit protection	V_S connections reverse-polarity protected / Output Q and Q not short-circuit protected / Interference suppression	■	■	■	■	■	■	■	■	■
Enclosure rating	IP 66, IP 67	■	■	■	■	■	■	■	■	■
Ambient temperature operation	-40 °C ... +60 °C	■	■	■	■	■	■	■	■	■
Ambient temperature storage	-40 °C ... +75 °C	■	■	■	■	■	■	■	■	■
Weight	Approx. 20 g	■	■	■	■	■	■	■	■	■
Housing material	Bayblend, PMMA	■	■	■	■	■	■	■	■	■

[1] Extern teach-in: impuls > 2s with voltage V_S for PNP or M for NPN
[2] Average service life 100,000 h
[3] Limit values at T_a = +25 °C
[4] May not exceed or fall short of V_S 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

Scanning distance



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



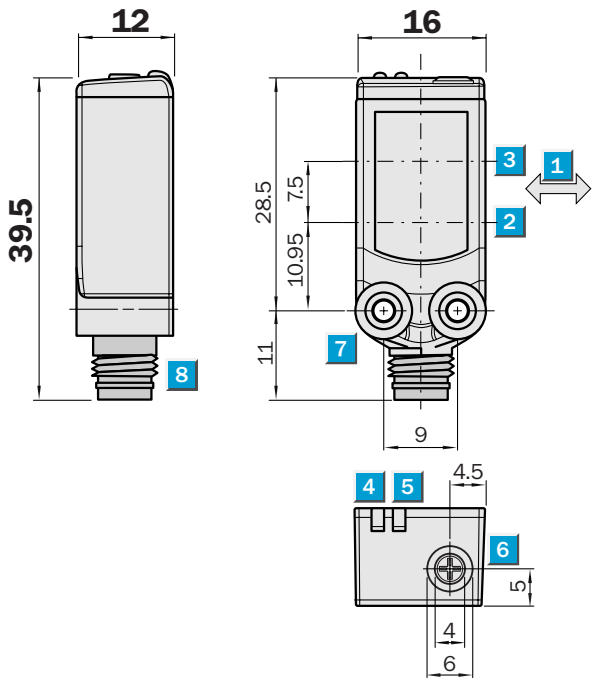
Ordering information	
Type	**Part Number**
WTB4-3N1164	1 028 090
WTB4-3N1362	1 028 087
WTB4-3N2162	1 028 088
WTB4-3N3162	1 028 089
WTB4-3P1362	1 028 081
WTB4-3P2162	1 028 084
WTB4-3P2262	1 028 085
WTB4-3P2264	1 028 086
WTB4-3P3162	1 028 082

Scanning distance
4 ... 150 mm

Photoelectric proximity switch

- High-precision setting of scanning distance thanks to 5-turn potentiometer
- Object detection almost irrespective of colour and background consistency
- Secure function when mounted opposite other sensors

Dimensional drawing

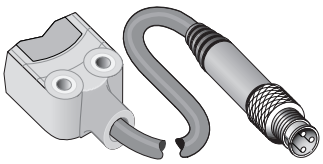


Adjustments possible

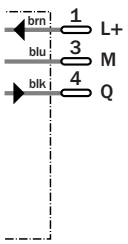
1 Standard direction of the material being scanned
2 Optical axis, sender
3 Optical axis, receiver
4 LED indicator yellow, status of received light beam
5 LED indicator green, power on
6 Potentiometer
7 Mounting hole M3
8 Connector

Connection type

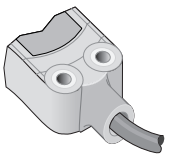
WTB4-3N3161
WTB4-3P3161



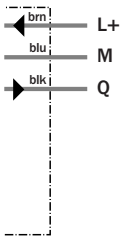
M8, 3-pin



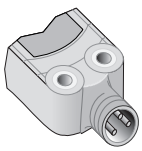
WTB4-3N1361
WTB4-3P1361



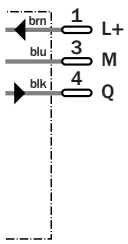
3 x 0.14 mm²



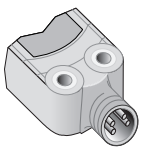
WTB4-3N2161
WTB4-3P2161



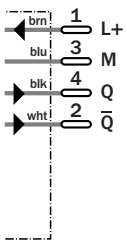
M8, 3-pin



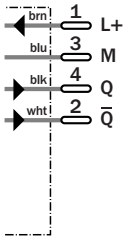
WTB4-3P2261



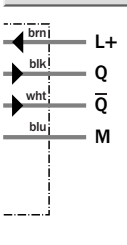
M8, 4-pin



WTB4-3P3261
M8, 4-pin



WTB4-3N1161
WTB4-3P1161
4 x 0.14 mm²



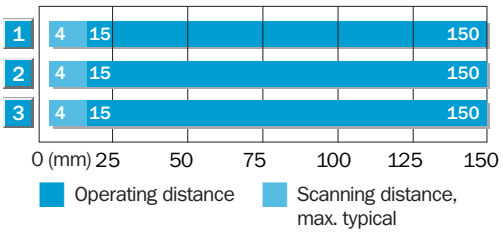
See chapter Accessories

Connector, M8, 3-pin
Connector, M8, 4-pin
Mounting systems

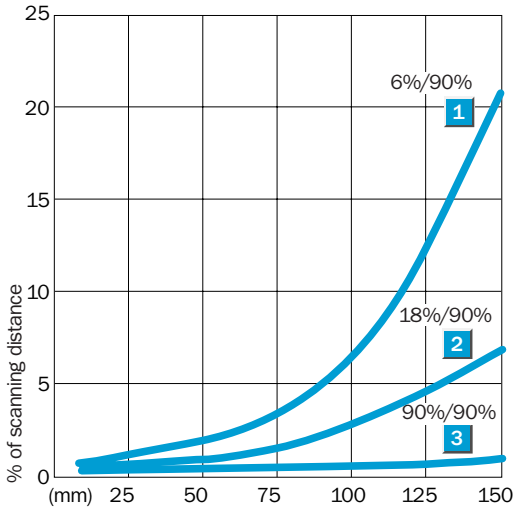
Technical data	WTB4-3	N1161	N1361	N2161	N3161	P1161	P1361	P2161	P2261	P3161	P3261
Scanning distance typ. max.	4 ... 150 mm	■	■	■	■	■	■	■	■	■	■
Operating distance	15 ... 150 mm	■	■	■	■	■	■	■	■	■	■
Adjustment of operating distance	Potentiometer, 5 revolutions	■	■	■	■	■	■	■	■	■	■
Light source, light type	Pin Point LED, Red light, 650 nm[1]	■	■	■	■	■	■	■	■	■	■
Light spot diameter	7 mm at 50 mm distance	■	■	■	■	■	■	■	■	■	■
Supply voltage V_S	DC 10 ... 30 V[2]	■	■	■	■	■	■	■	■	■	■
Ripple	< 5 V_{PP}[3]	■	■	■	■	■	■	■	■	■	■
Power consumption	≤ 30 mA[4]	■	■	■	■	■	■	■	■	■	■
Switching outputs	NPN antivalent	■									
	NPN, Q		■	■	■						
	PNP antivalent					■			■		■
	PNP, Q						■	■		■	
Switching mode	Complementary	■				■			■		■
	Light-switching		■	■	■		■	■		■	
Output current $I_a$max	≤ 100 mA	■	■	■	■	■	■	■	■	■	■
Response time	< 0.5 ms[5]	■	■	■	■	■	■	■	■	■	■
Switching frequency	1,000 Hz[6]	■	■	■	■	■	■	■	■	■	■
Connection type	Cable, PVC, 2 m[7]	■	■			■	■				
	Connector, M8, 3-pin			■				■			
	Cable with plug, M8, 3-pin, PVC, 100 mm[7]				■					■	
	Connector, M8, 4-pin								■		
	Cable with plug, M8, 4-pin, PVC, 100 mm[7]										■
VDE protection class	⏚	■	■	■	■	■	■	■	■	■	■
Circuit protection	V_S connections reverse-polarity protected / Output Q and Q not short-circuit protected / Interference suppression	■	■	■	■	■	■	■	■	■	■
Enclosure rating	IP 66, IP 67	■	■	■	■	■	■	■	■	■	■
Ambient temperature operation	-40 °C ... +60 °C	■	■	■	■	■	■	■	■	■	■
Ambient temperature storage	-40 °C ... +75 °C	■	■	■	■	■	■	■	■	■	■
Weight	Approx. 20 g	■	■	■	■	■	■	■	■	■	■
Housing material	Bayblend, PMMA	■	■	■	■	■	■	■	■	■	■

[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 transit time with resistive load
[6] With light/dark ratio 1:1
[7] Do not bend below 0 °C

Scanning distance



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



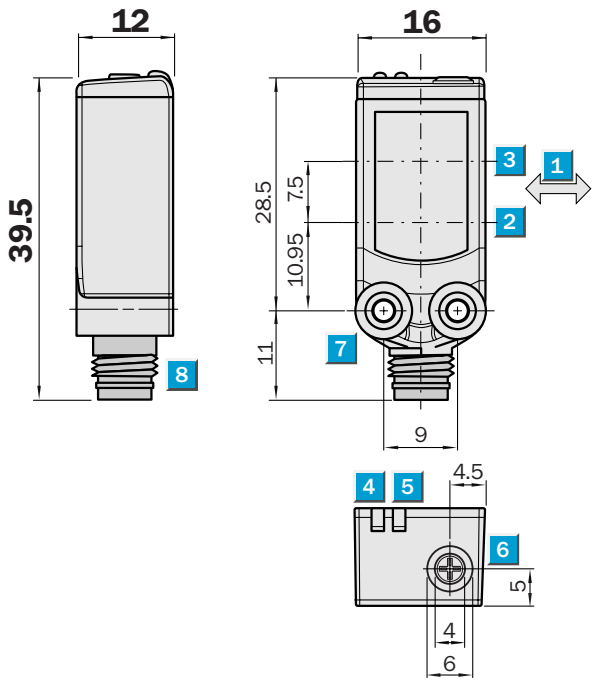
Ordering information	
Type	**Part Number**
WTB4-3N1161	1 028 102
WTB4-3N1361	1 028 101
WTB4-3N2161	1 028 104
WTB4-3N3161	1 028 103
WTB4-3P1161	1 028 096
WTB4-3P1361	1 028 094
WTB4-3P2161	1 028 099
WTB4-3P2261	1 028 100
WTB4-3P3161	1 028 097
WTB4-3P3261	1 028 098

Scanning distance
4 ... 150 mm

Photoelectric proximity switch

- High-precision setting of scanning distance thanks to 5-turn potentiometer
- Object detection almost irrespective of colour and background consistency
- Secure function when mounted opposite other sensors

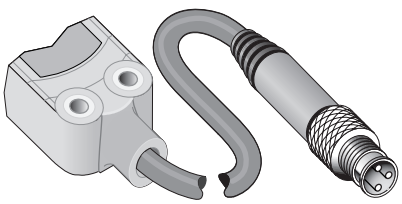
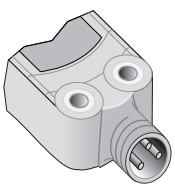
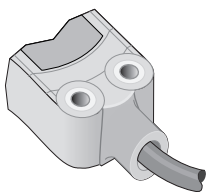
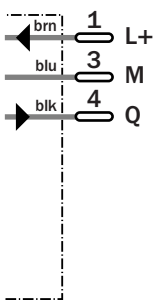
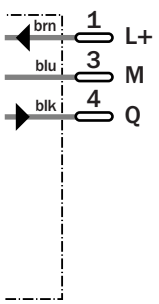
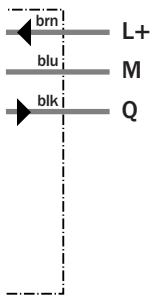
Dimensional drawing



Adjustments possible

1 Standard direction of the material being scanned
2 Optical axis, sender
3 Optical axis, receiver
4 LED indicator yellow, status of received light beam
5 LED indicator green, power on
6 Potentiometer
7 Mounting hole M3
8 Connector

Connection type

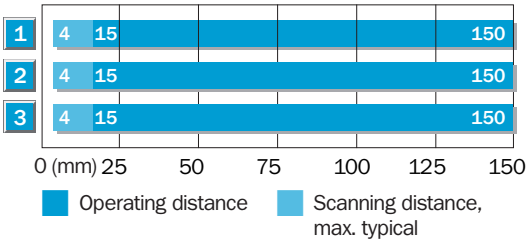
WTB4-3E3161 WTB4-3F3161	WTB4-3E2161 WTB4-3F2161	WTB4-3N1361 WTB4-3F1361
		
M8, 3-pin	M8, 3-pin	3 x 0.14 mm²
		

See chapter Accessories
Connector, M8, 3-pin
Mounting systems

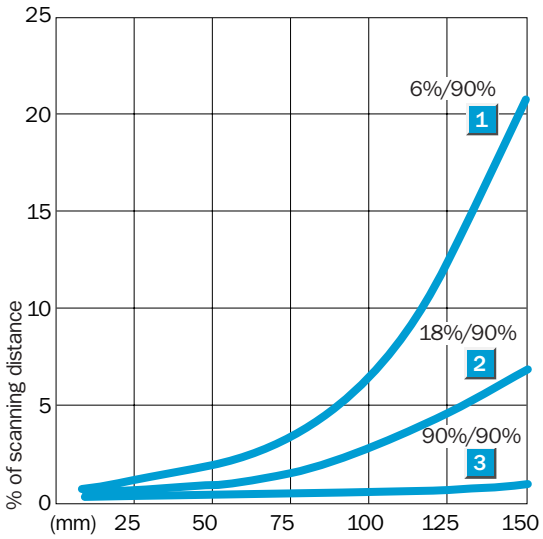
Technical data	WTB4-3	N1361	E2161	E3161	F1361	F2161	F3161
Scanning distance typ. max.	4 ... 150 mm	■	■	■	■	■	■
Operating distance	15 ... 150 mm	■	■	■	■	■	■
Adjustment of operating distance	Potentiometer, 5 revolutions	■	■	■	■	■	■
Light source, light type	Pin Point LED, Red light, 650 nm[1]	■	■	■	■	■	■
Light spot diameter	7 mm at 50 mm distance	■	■	■	■	■	■
Supply voltage V_S	DC 10 ... 30 V[2]	■	■	■	■	■	■
Ripple	< 5 V_{PP}[3]	■	■	■	■	■	■
Power consumption	≤ 30 mA[4]	■	■	■	■	■	■
Switching outputs	NPN, Q	■	■	■			
	PNP, Q				■	■	■
Switching mode	Dark-switching	■	■	■	■	■	■
Output current $I_a$max	≤ 100 mA	■	■	■	■	■	■
Response time	< 0.5 ms[5]	■	■	■	■	■	■
Switching frequency	1,000 Hz[6]	■	■	■	■	■	■
Connection type	Cable, PVC, 2 m[7]	■			■		
	Connector, M8, 3-pin		■			■	
	Cable with plug, M8, 3-pin, PVC, 100 mm[7]			■			■
VDE protection class	⧈	■	■	■	■	■	■
Circuit protection	V_S connections reverse-polarity protected / Output Q and Q not short-circuit protected / Interference suppression	■	■	■	■	■	■
Enclosure rating	IP 66, IP 67	■	■	■	■	■	■
Ambient temperature operation	-40 °C ... +60 °C	■	■	■	■	■	■
Ambient temperature storage	-40 °C ... +75 °C	■	■	■	■	■	■
Weight	Approx. 20 g	■	■	■	■	■	■
Housing material	Bayblend, PMMA	■	■	■	■	■	■

[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 transit time with resistive load
[6] With light/dark ratio 1:1
[7] Do not bend below 0 °C

Scanning distance



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



Ordering information

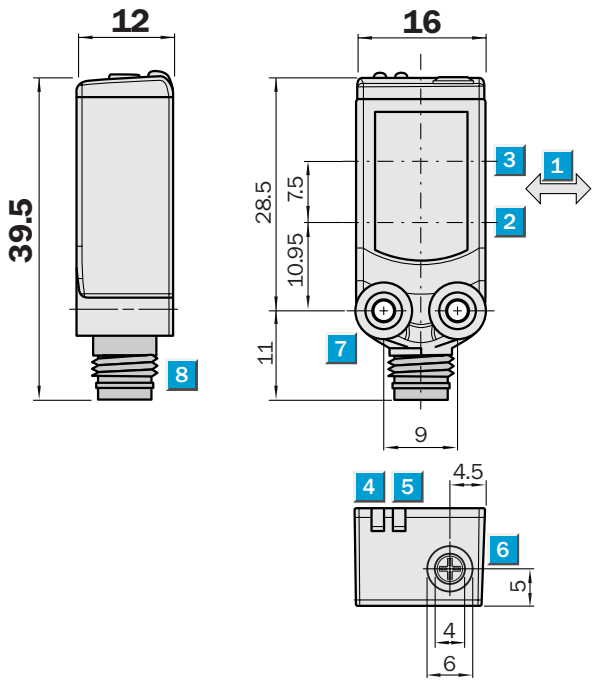
Type	Part Number
WTB4-3N1361	1 028 108
WTB4-3E2161	1 028 110
WTB4-3E3161	1 028 109
WTB4-3F1361	1 028 105
WTB4-3F2161	1 028 107
WTB4-3F3161	1 028 106

Scanning distance
4 ... 50 mm

Photoelectric proximity switch

- Reliable detection of highly transparent and shiny objects at a distance of 20 ... 25 mm
- High-precision setting of scanning distance thanks to 5-turn potentiometer
- Large, homogeneous light spot

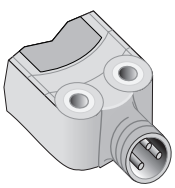
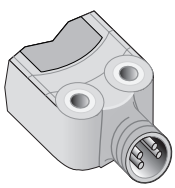
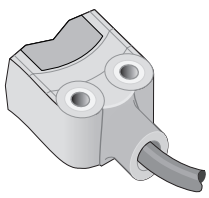
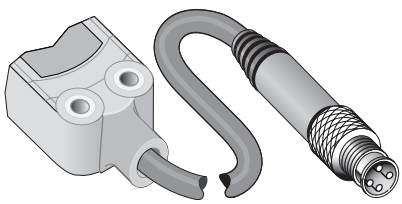
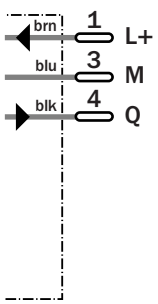
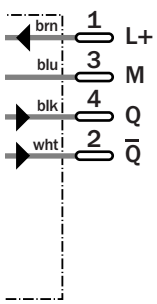
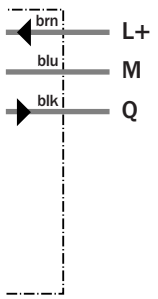
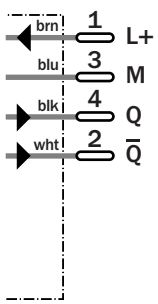
Dimensional drawing



Adjustments possible

1 Standard direction of the material being scanned
2 Optical axis, sender
3 Optical axis, receiver
4 LED indicator yellow, status of received light beam
5 LED indicator green, power on
6 Potentiometer
7 Mounting hole M3
8 Connector

Connection type

WTV4-3N2181 WTV4-3P2181	WTV4-3P2241	WTV4-3N1341 WTV4-3P1341	WTV4-3P3441
			
M8, 3-pin	M8, 4-pin	3 x 0.14 mm²	M12, 4-pin
			

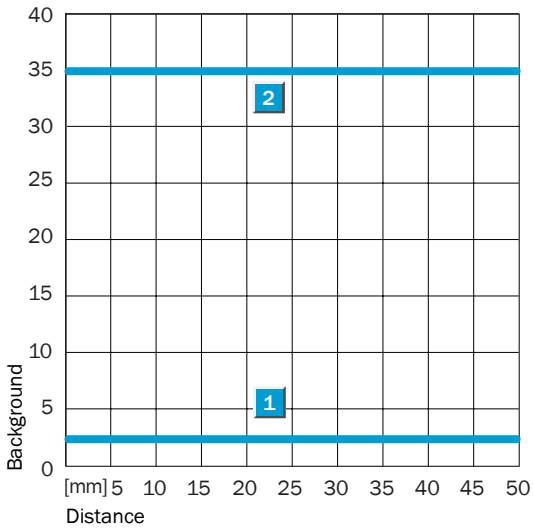
See chapter Accessories

- Connector, M12, 4-pin
- Connector, M8, 3-pin
- Connector, M8, 4-pin
- Mounting systems

Technical data	WTV4-3	N1341	N2181	P1341	P2181	P2241	P3441
Scanning distance typ. max.	4 ... 50 mm	■	■	■	■	■	■
Operating distance	15 ... 50 mm	■	■	■	■	■	■
Adjustment of operating distance	Potentiometer, 5 revolutions	■	■	■	■	■	■
Light source, light type	Pin Point LED, Red light, 650 nm[1]	■	■	■	■	■	■
Light spot diameter	10 mm at 40 mm distance	■	■	■	■	■	■
Supply voltage V_S	DC 10 ... 30 V[2]	■	■	■	■	■	■
Ripple	< 5 V_{PP}[3]	■	■	■	■	■	■
Power consumption	≤ 30 mA[4]	■	■	■	■	■	■
Switching outputs	NPN, Q	■	■				
	PNP, Q			■	■		
	PNP antivalent					■	■
Switching mode	Light-switching	■	■	■	■		
	Complementary					■	■
Output current $I_a$max	≤ 100 mA	■	■	■	■	■	■
Response time	< 0.5 ms[5]	■	■	■	■	■	■
Switching frequency	1,000 Hz[6]	■	■	■	■	■	■
Connection type	Cable, PVC, 2 m[7]	■		■			
	Connector, M8, 3-pin		■		■		
	Connector, M8, 4-pin					■	
	Cable with plug, M12, 4-pin, 150 mm						■
VDE protection class	⏚	■	■	■	■	■	■
Circuit protection	V_S connections reverse-polarity protected / Output Q and Q not short-circuit protected / Interference suppression	■	■	■	■	■	■
Enclosure rating	IP 66, IP 67	■	■	■	■	■	■
Ambient temperature operation	-40 °C ... +60 °C	■	■	■	■	■	■
Ambient temperature storage	-40 °C ... +75 °C	■	■	■	■	■	■
Weight	Approx. 20 g	■	■	■	■	■	■
Housing material	Bayblend, PMMA	■	■	■	■	■	■

[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 transit time with resistive load
[6] With light/dark ratio 1:1
[7] Do not bend below 0 °C

Black-white shift / distance to background



1	Black-white shift 90 %/6 %
2	Distance to background detecting transparent objects

Ordering information

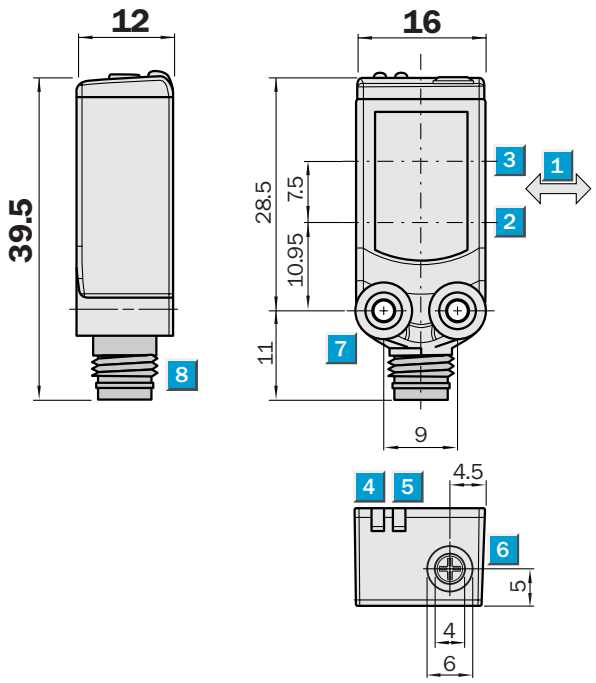
Type	Part Number
WTV4-3N1341	1 028 115
WTV4-3N2181	1 028 116
WTV4-3P1341	1 028 111
WTV4-3P2181	1 028 113
WTV4-3P2241	1 028 114
WTV4-3P3441	1 029 582

Scanning distance
4 ... 150 mm

Photoelectric proximity switch

- Wide-angle light spot with an aperture of 30°
- Reliable detection of objects with slots and holes
- Reliable detection of grid structures

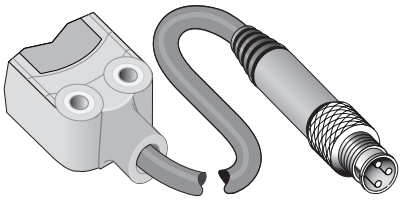
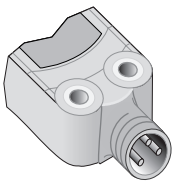
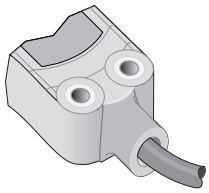
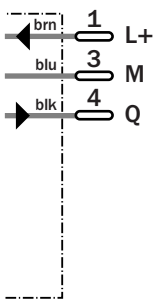
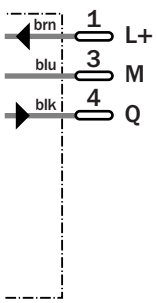
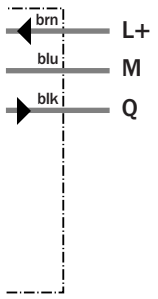
Dimensional drawing



Adjustments possible

1 Direction of the sender light line
2 Optical axis, sender
3 Optical axis, receiver
4 LED indicator yellow, status of received light beam
5 LED indicator green, power on
6 Potentiometer
7 Mounting hole M3
8 Connector

Connection type

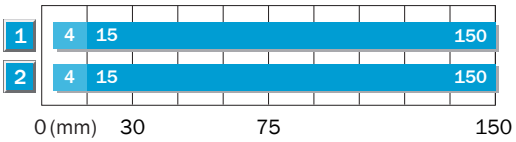
WTB4-3P3171	WTB4-3P2171	WTB4-3N1371
		
M8, 3-pin	M8, 3-pin	3 x 0.14 mm²
		

See chapter Accessories
Connector, M8, 3-pin
Mounting systems

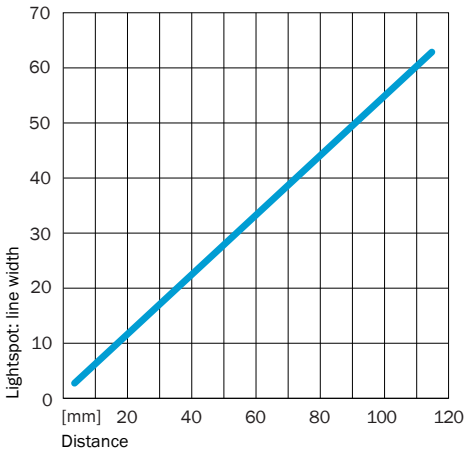
Technical data	WTB4-3	N1371	P2171	P3171
Scanning distance typ. max.	4 ... 150 mm	■	■	■
Operating distance	15 ... 150 mm	■	■	■
Adjustment of operating distance	Potentiometer, 5 revolutions	■	■	■
Light source, light type	Pin Point LED, Red light, 650 nm[1]	■	■	■
Light spot diameter	5 x 28 mm at 50 mm distance	■	■	■
Supply voltage V_S	DC 10 ... 30 V[2]	■	■	■
Ripple	< 5 V_{PP}[3]	■	■	■
Power consumption	≤ 30 mA[4]	■	■	■
Switching outputs	NPN, Q	■		
	PNP, Q		■	■
Switching mode	Light-switching	■	■	■
Output current $I_a$max	≤ 100 mA	■	■	■
Response time	< 0.5 ms[5]	■	■	■
Switching frequency	1,000 Hz[6]	■	■	■
Connection type	Cable, PVC, 2 m[7]	■		
	Connector, M8, 3-pin		■	
	Cable with plug, M8, 3-pin, PVC, 100 mm[7]			■
VDE protection class	⧈	■	■	■
Circuit protection	V_S connections reverse-polarity protected / Output Q and Q not short-circuit protected / Interference suppression	■	■	■
Enclosure rating	IP 66, IP 67	■	■	■
Ambient temperature operation	-40 °C ... +60 °C	■	■	■
Ambient temperature storage	-40 °C ... +75 °C	■	■	■
Weight	Approx. 20 g	■	■	■
Housing material	Bayblend, PMMA	■	■	■

[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 transit time with resistive load
[6] With light/dark ratio 1:1
[7] Do not bend below 0 °C

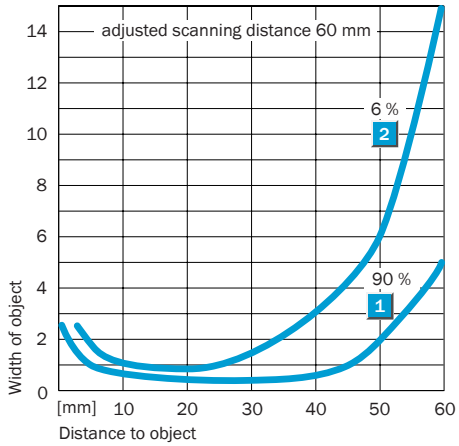
Scanning distance and light spot width

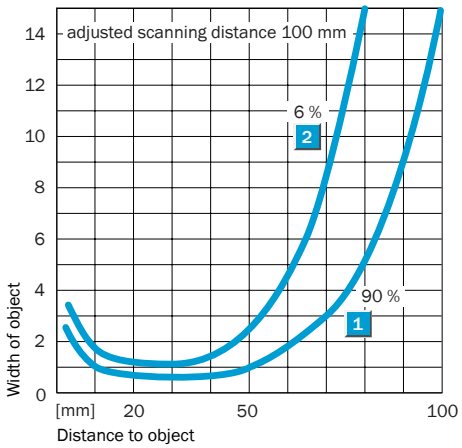


1 Scanning range on white, 90 % reflectance
2 Scanning range on black,6 % reflectance



Minimum detectable object





Ordering information

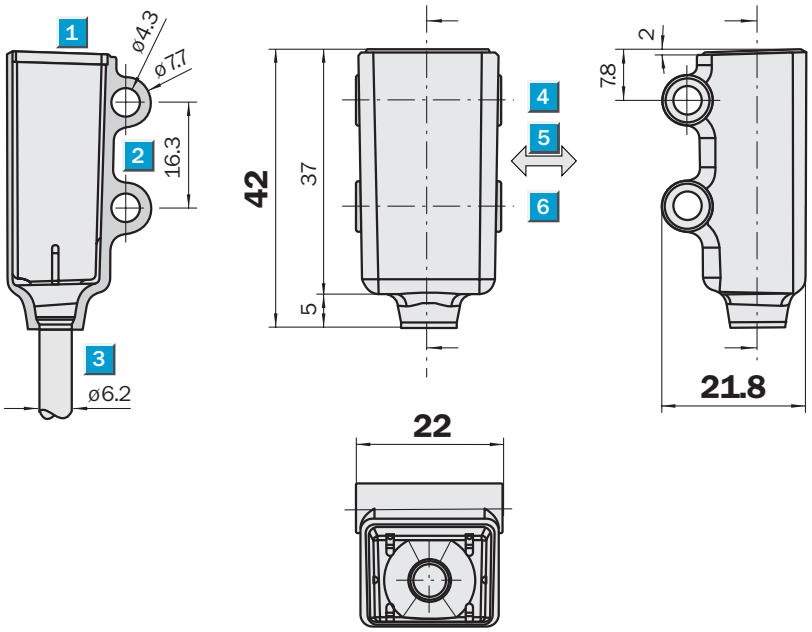
Type	Part Number
WTB4-3N1371	1 028 125
WTB4-3P2171	1 028 123
WTB4-3P3171	1 028 122

Scanning distance
4 ... 120 mm

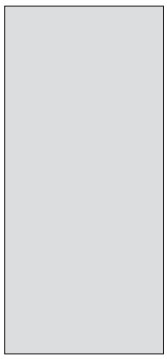
Photoelectric proximity switch

- Robust Teflon housing for use in wet and aggressive environments
- Suitable for food applications
- Scanning distance set via Teach-in wire
- Background suppression

Dimensional drawing



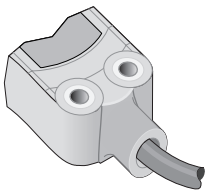
Adjustments possible



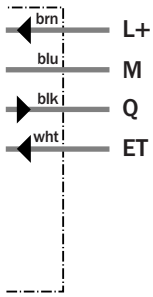
1 LED signal
2 Mounting hole Ø 4.3 mm
3 Cable 5 m, Ø 3.4 mm, 2 m Teflon coated, Ø 6.2 mm
4 Optical axis, receiver
5 Standard direction of the material being scanned
6 Optical axis, sender

Connection type

WTB4T-3P1264
WTB4T-3N1264



4 x 0.14 mm²



See chapter Accessories
Mounting systems

Technical data	WTB4T-3	P1264	N1264
Scanning distance typ. max.	4 ... 120 mm	■	■
Operating distance	15 ... 120 mm	■	■
Adjustment of operating distance	Teach-in: External	■	■
Light source, light type	Pin Point LED, Red light, 650 nm[1]	■	■
Light spot diameter	7 mm at 50 mm distance	■	■
Supply voltage V_S	DC 10 ... 30 V[2]	■	■
Ripple	< 5 V_{PP}[3]	■	■
Power consumption	≤ 30 mA[4]	■	■
Switching outputs	PNP, Q	■	
	NPN, Q		■
Switching mode	Light-switching	■	■
Output current $I_a$max	≤ 100 mA	■	■
Response time	< 0.5 ms[5]	■	■
Switching frequency	1,000 Hz[6]	■	■
Connection type	Cable, PVC, 5 m[7]	■	■
VDE protection class	⧫	■	■
Circuit protection	V_S connections reverse-polarity protected / Output Q and Q not short-circuit protected / Interference suppression	■	■
Enclosure rating	IP68, IP 69K	■	■
Ambient temperature operation	-40 °C ... +60 °C	■	■
Ambient temperature storage	-40 °C ... +75 °C	■	■
Weight	Approx. 50 g	■	■
Housing material	PTFE/teflon, PMMA	■	■

[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 transit time with resistive load
[6] With light/dark ratio 1:1
[7] Do not bend below 0 °C

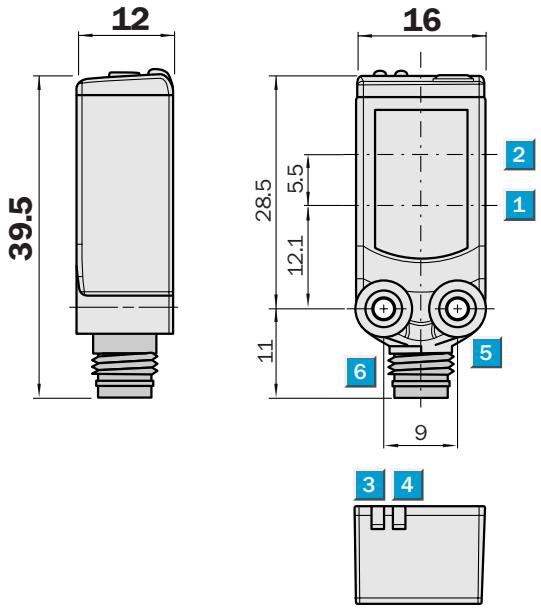
Ordering information	
Type	**Part Number**
WTB4T-3P1264	1 028 091
WTB4T-3N1264	1 028 092

Scanning range
0.01 ... 4 m

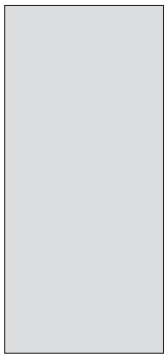
Photoelectric reflex switch

- Fast and safe alignment through high visibility light spot
- Fast commissioning. Connect, align, ready!
- Easy assembly in slots and guide rails

Dimensional drawing

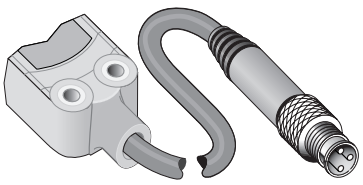
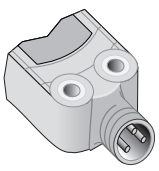
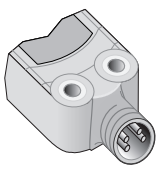
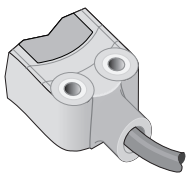
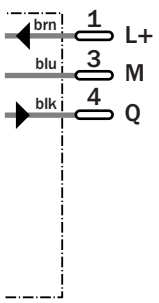
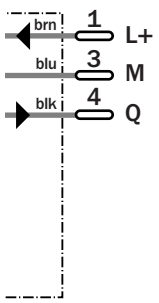
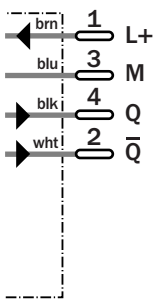
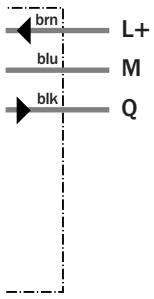


Adjustments possible



1 Centre of optical axis, sender
2 Centre of optical axis, receiver
3 LED signal strength indicator orange: status of received light beam
4 LED signal strength indicator green: power on
5 Mounting hole M3
6 Connector

Connection type

WL4-3N3130	WL4-3N2130 WL4-3P2130 WL4-3P3130	WL4-3P2230	WL4-3N1330 WL4-3P1330
			
M8, 3-pin	M8, 3-pin	M8, 4-pin	3 x 0.14 mm²
			

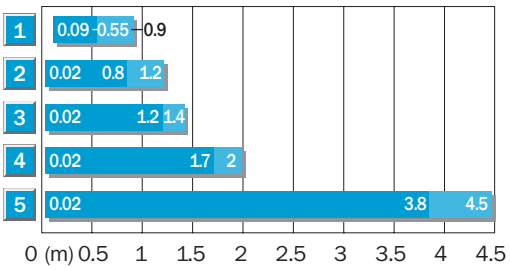
See chapter Accessories

Connector, M8, 3-pin
Connector, M8, 4-pin
Mounting systems

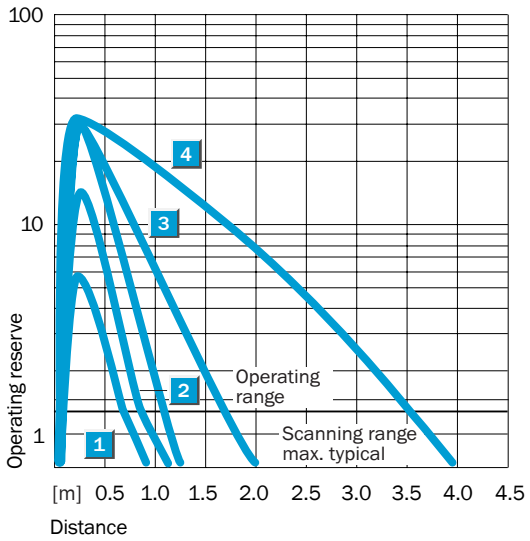
Technical data	WL4-3	N1330	N2130	N3130	P1330	P2130	P2230	P3130
Scanning range typ. max.	0.01 ... 4 m	■	■	■	■	■	■	■
Scanning range, recommended	0.02 ... 3.5 m	■	■	■	■	■	■	■
Relating to	Reflector PL80A	■	■	■	■	■	■	■
Light source, light type	Pin Point LED, Red light, 650 nm[1]	■	■	■	■	■	■	■
Polarisation filter	✓	■	■	■	■	■	■	■
Supply voltage V_S	DC 10 ... 30 V[2]	■	■	■	■	■	■	■
Ripple	≤ 5 V_{PP}[3]	■	■	■	■	■	■	■
Power consumption	≤ 20 mA[4]	■	■	■	■	■	■	■
Switching outputs	NPN, Q	■	■	■				
	PNP, Q				■	■		■
	PNP antivalent						■	
Switching mode	Light-switching	■	■	■	■	■	■	■
Output current $I_a$max	≤ 100 mA	■	■	■	■	■	■	■
Response time	< 0.5 ms[5]	■	■	■	■	■	■	■
Switching frequency	1,000 Hz[6]	■	■	■	■	■	■	■
Connection type	Cable, PVC, 2 m[7]	■			■			
	Connector, M8, 3-pin		■			■		
	Cable with plug, M8, 3-pin, 100 mm[7]			■				■
	Connector, M8, 4-pin						■	
Circuit protection	V_S connections reverse-polarity protected / Output Q and Q not short-circuit protected / Interference suppression	■	■	■	■	■	■	■
Enclosure rating	IP 66, IP 67	■	■	■	■	■	■	■
Ambient temperature operation	-40 °C ... +60 °C	■	■	■	■	■	■	■
Ambient temperature storage	-40 °C ... +75 °C	■	■	■	■	■	■	■
Weight	Approx. 30 g	■	■	■	■	■	■	■
Housing material	Bayblend, PMMA	■	■	■	■	■	■	■

[1] Average service life 100,000 h at T_a = +25 °C
[2] Limit values, reverse-polarity protected operation in short-circuit protected network max. 8 A
[3] May not exceed or fall short of V_S tolerances
[4] Without load
[5] Signal transit time with resistive load
[6] With light/dark ratio 1:1
[7] Do not bend below 0 °C

Scanning range and operating reserve



Reflector type		Operating range
1	REF-IRF-56	0.09 ... 0.55 m
2	PL10F	0.02 ... 0.8 m
3	PL20A	0.02 ... 1.2 m
4	PL40A	0.02 ... 1.7 m
5	PL80A	0.02 ... 3.8 m



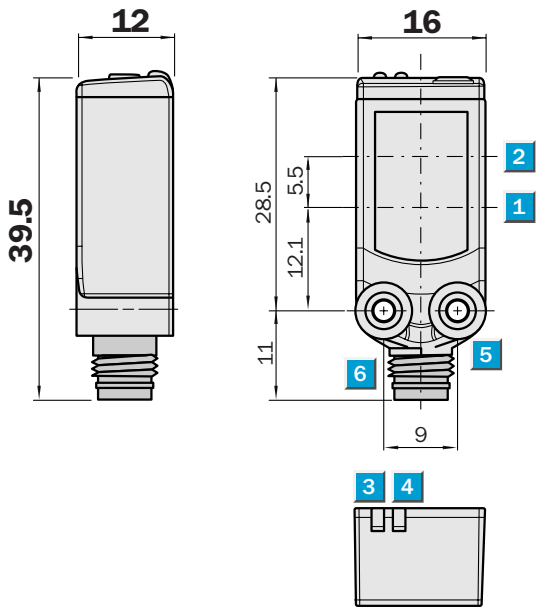
Ordering information	
Type	**Part Number**
WL4-3N1330	1 028 148
WL4-3N2130	1 028 151
WL4-3N3130	1 028 150
WL4-3P1330	1 028 143
WL4-3P2130	1 028 146
WL4-3P2230	1 028 147
WL4-3P3130	1 028 144

Scanning range 0.01 ... 4 m

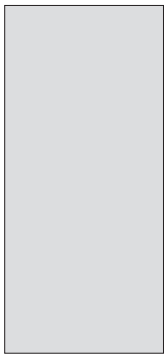
Photoelectric reflex switch

- Fast and safe alignment through high visibility light spot
- Fast commissioning. Connect, align, ready!
- Easy assembly in slots and guide rails

Dimensional drawing

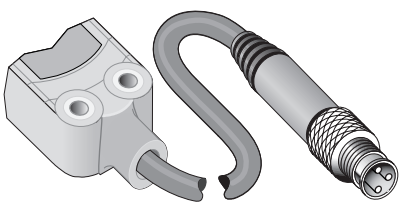
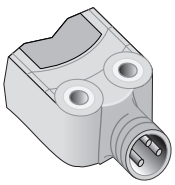
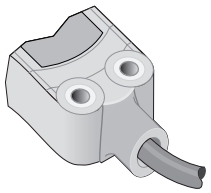
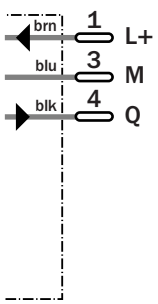
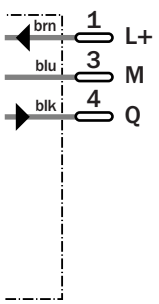
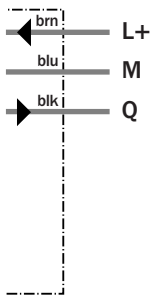


Adjustments possible



1 Centre of optical axis, sender
2 Centre of optical axis, receiver
3 LED signal strength indicator orange: status of received light beam
4 LED signal strength indicator green: power on
5 Mounting hole M3
6 Connector

Connection type

WL4-3E3130 WL4-3F3130	WL4-3E2130 WL4-3F2130	WL4-3E1330 WL4-3F1330
		
M8, 3-pin	M8, 3-pin	3 x 0.14 mm²
		

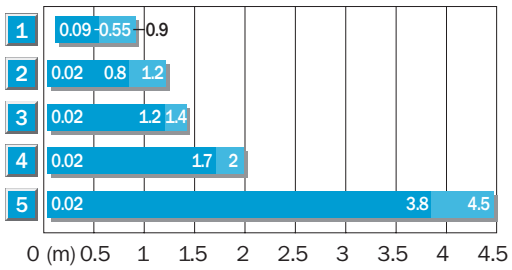
See chapter Accessories

Connector, M8, 3-pin
Mounting systems

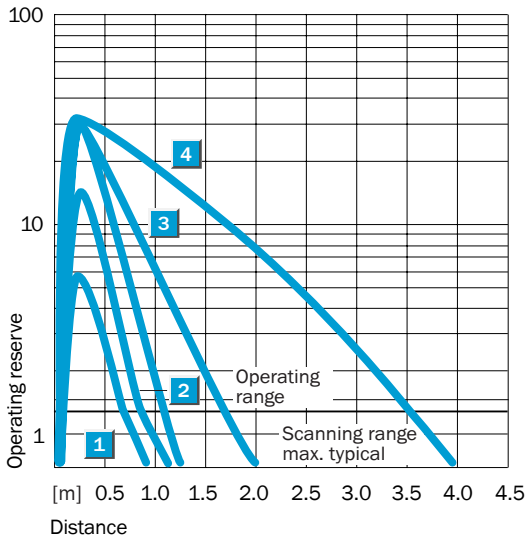
Technical data	WL4-3	E1330	E2130	E3130	F1330	F2130	F3130
Scanning range typ. max.	0.01 ... 4 m	■	■	■	■	■	■
Scanning range, recommended	0.02 ... 3.5 m	■	■	■	■	■	■
Relating to	Reflector PL80A	■	■	■	■	■	■
Light source, light type	Pin Point LED, Red light, 650 nm[1]	■	■	■	■	■	■
Polarisation filter	✓	■	■	■	■	■	■
Supply voltage V_S	DC 10 ... 30 V[2]	■	■	■	■	■	■
Ripple	≤ 5 V_{PP}[3]	■	■	■	■	■	■
Power consumption	≤ 20 mA[4]	■	■	■	■	■	■
Switching outputs	NPN, Q	■	■	■			
	PNP, Q				■	■	■
Switching mode	Dark-switching	■	■	■	■	■	■
Output current $I_a$max	≤ 100 mA	■	■	■	■	■	■
Response time	< 0.5 ms[5]	■	■	■	■	■	■
Switching frequency	1,000 Hz[6]	■	■	■	■	■	■
Connection type	Cable, PVC, 2 m[7]	■			■		
	Connector, M8, 3-pin		■			■	
	Cable with plug, M8, 3-pin, 100 mm[7]			■			■
Circuit protection	V_S connections reverse-polarity protected / Output Q and Q not short-circuit protected / Interference suppression	■	■	■	■	■	■
Enclosure rating	IP 66, IP 67	■	■	■	■	■	■
Ambient temperature operation	-40 °C ... +60 °C	■	■	■	■	■	■
Ambient temperature storage	-40 °C ... +75 °C	■	■	■	■	■	■
Weight	Approx. 30 g	■	■	■	■	■	■
Housing material	Bayblend, PMMA	■	■	■	■	■	■

[1] Average service life 100,000 h at T_a = +25 °C
[2] Limit values, reverse-polarity protected operation in short-circuit protected network max. 8 A
[3] May not exceed or fall short of V_S tolerances
[4] Without load
[5] Signal transit time with resistive load
[6] With light/dark ratio 1:1
[7] Do not bend below 0 °C

Scanning range and operating reserve



Reflector type		Operating range
1	REF-IRF-56	0.09 ... 0.55 m
2	PL10F	0.02 ... 0.8 m
3	PL20A	0.02 ... 1.2 m
4	PL40A	0.02 ... 1.7 m
5	PL80A	0.02 ... 3.8 m



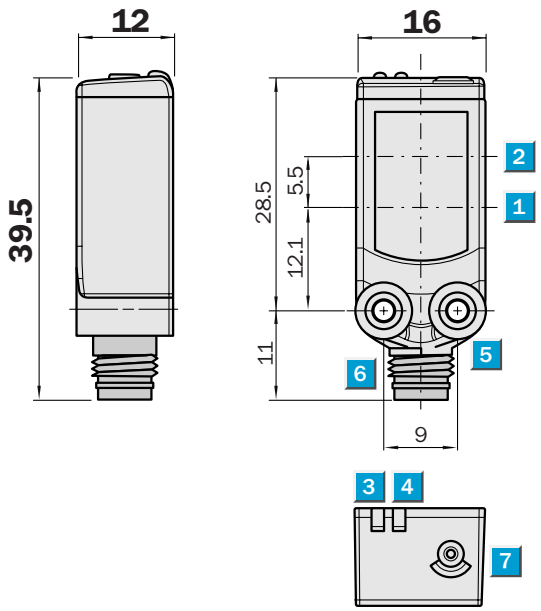
Ordering information	
Type	**Part Number**
WL4-3E1330	1 028 156
WL4-3E2130	1 028 158
WL4-3E3130	1 028 157
WL4-3F1330	1 028 152
WL4-3F2130	1 028 155
WL4-3F3130	1 028 153

Scanning range
0.01 ... 4 m

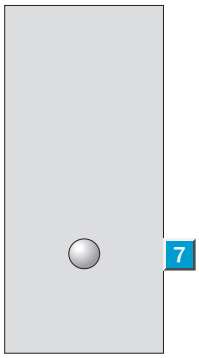
Photoelectric reflex switch

- Fast and safe alignment through high visibility light spot
- Detection of glass objects with an attenuation of > 8%
- Sensitivity setting via wire

Dimensional drawing

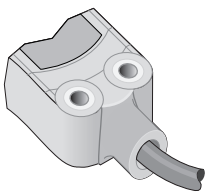
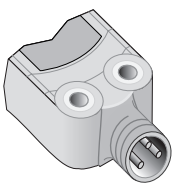
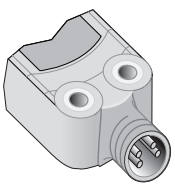
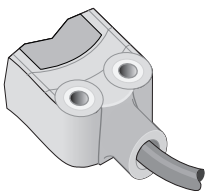
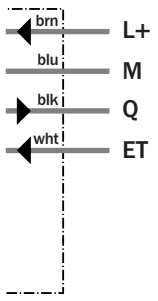
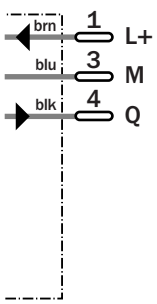
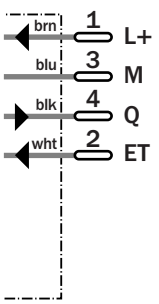
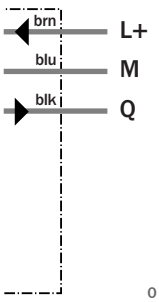


Adjustments possible



1 Centre of optical axis, sender
2 Centre of optical axis, receiver
3 LED signal strength indicator orange: status of received light beam
4 LED signal strength indicator green: power on
5 Mounting hole M3
6 Connector
7 Teach button

Connection type

WLG4-3E1134	WLG4-3E2132 WLG4-3F2132 WLG4-3F3132 WLG4-3P2132	WLG4-3F2234	WLG4-3E1332
			
3 x 0.14 mm²	M8, 3-pin	M8, 4-pin	3 x 0.14 mm²
			

See chapter Accessories

Connector, M8, 3-pin
Connector, M8, 4-pin
Mounting systems

Technical data	WLG4-3	E1134	E1332	E2132	F2132	F2234	F3132	P2132
Scanning range typ. max.	0.01 ... 4 m	■	■	■	■	■	■	■
Scanning range, recommended	0.02 ... 3.5 m	■	■	■	■	■	■	■
Relating to	Reflector PL80A	■	■	■	■	■	■	■
Sensitivity adjustment	Teach-in: single teach button & cable	■				■		
	Teach-in: single teach button		■	■	■		■	■
Light source, light type	Pin Point LED, Red light, 650 nm[1]	■	■	■	■	■	■	■
Polarisation filter	✓	■	■	■	■	■	■	■
Supply voltage V_S	DC 10 ... 30 V[2]	■	■	■	■	■	■	■
Ripple	≤ 5 V_{PP}[3]	■	■	■	■	■	■	■
Power consumption	≤ 20 mA[4]	■	■	■	■	■	■	■
Switching outputs	NPN, Q	■	■	■				
	PNP, Q				■	■	■	■
Switching mode	Dark-switching	■	■	■	■	■	■	
	Light-switching							■
Output current $I_a$max	≤ 100 mA	■	■	■	■	■	■	■
Response time	< 0.5 ms[5]	■	■	■	■	■	■	■
Switching frequency	1,000 Hz[6]	■	■	■	■	■	■	■
Connection type	Cable, PVC, 2 m[7]	■	■					
	Connector, M8, 3-pin			■	■			■
	Connector, M8, 4-pin					■		
	Cable with plug, M8, 3-pin, 100 mm[7]						■	
Circuit protection	V_S connections reverse-polarity protected / Output Q and Q not short-circuit protected / Interference suppression	■	■	■	■	■	■	■
Enclosure rating	IP 66, IP 67	■	■	■	■	■	■	■
Ambient temperature operation	-40 °C ... +60 °C	■	■	■	■	■	■	■
Ambient temperature storage	-40 °C ... +75 °C	■	■	■	■	■	■	■
Weight	Approx. 30 g	■	■	■	■	■	■	■
Housing material	Bayblend, PMMA	■	■	■	■	■	■	■

[1] Average service life 100,000 h at T_a = +25 °C
[2] Limit values, reverse-polarity protected operation in short-circuit protected network max. 8 A
[3] May not exceed or fall short of V_S tolerances
[4] Without load
[5] Signal transit time with resistive load
[6] With light/dark ratio 1:1
[7] Do not bend below 0 °C

Teach-in function

Programming via Teach-in button.

Simple programming:

Position object in the beam and push the button, finished:

LED confirms the Teach-in procedure.

Teach-in values can be stored.

Two operating modes:

Default setting: short Teach-in time (< 8 s); for standard applications;

approx. double reserve via switching threshold;

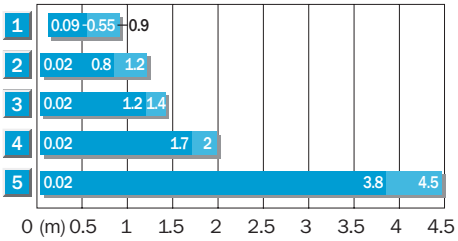
LED lights continuously.

Precise setting: long Teach-in time (> 8 s);

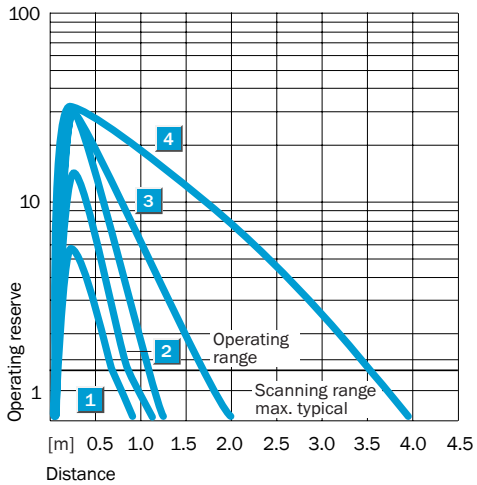
for precise applications; small switching hysteresis;

LED blinks.

Scanning range and operating reserve



Reflector type	Operating range
1 REF-IRF-56	0.09 ... 0.55 m
2 PL10F	0.02 ... 0.8 m
3 PL20A	0.02 ... 1.2 m
4 PL40A	0.02 ... 1.7 m
5 PL80A	0.02 ... 3.8 m



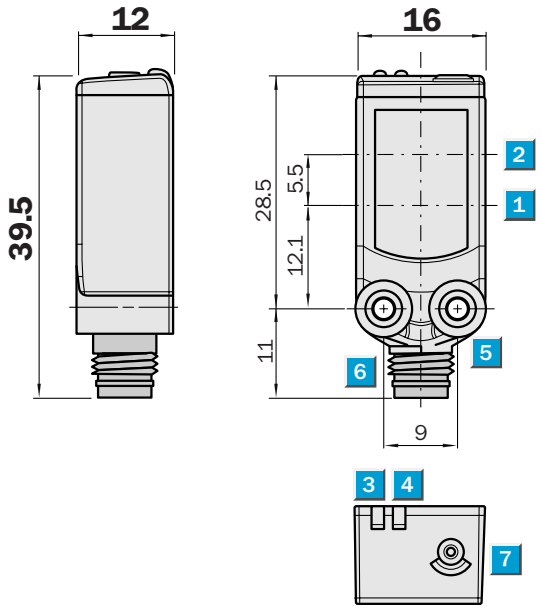
Ordering information	
Type	**Part Number**
WLG4-3E1134	1 028 133
WLG4-3E1332	1 028 131
WLG4-3E2132	1 028 132
WLG4-3F2132	1 028 127
WLG4-3F2234	1 028 130
WLG4-3F3132	1 028 128
WLG4-3P2132	1 029 567

Scanning range 0.1 ... 1 m

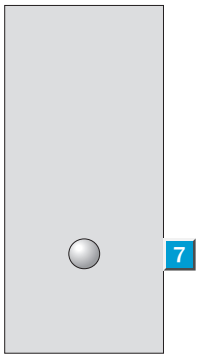
Photoelectric reflex switch

- Fast and safe alignment through high visibility light spot
- Detection of PET bottles and foils with an attenuation of > 8%
- Sensitivity setting via wire

Dimensional drawing

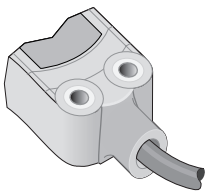
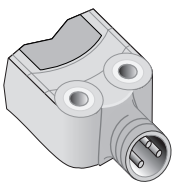
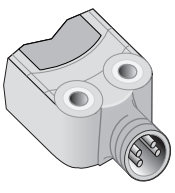
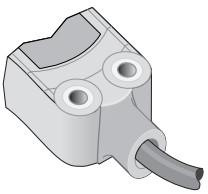
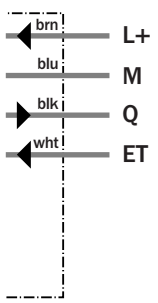
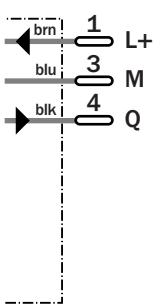
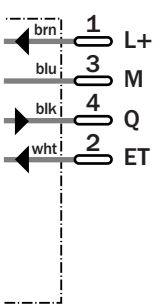
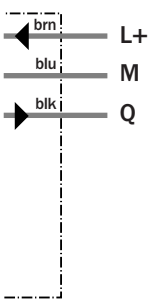


Adjustments possible



1 Centre of optical axis, sender
2 Centre of optical axis, receiver
3 LED signal strength indicator orange: status of received light beam
4 LED signal strength indicator green: power on
5 Mounting hole M3
6 Connector
7 Teach button

Connection type

WLG4-3E1184	WLG4-3F2182	WLG4-3F2284	WLG4-3E1382
			
3 x 0.14 mm²	M8, 3-pin	M8, 4-pin	3 x 0.14 mm²
			

See chapter Accessories

- Connector, M8, 3-pin
- Connector, M8, 4-pin
- Mounting systems

Technical data	WLG4-3	E1184	E1382	F2182	F2284
Scanning range typ. max.	0.1 ... 1 m	■	■	■	■
Scanning range, recommended	0.1 ... 0.6 m	■	■	■	■
Relating to	Reflector PL80A	■	■	■	■
Sensitivity adjustment	Teach-in: single teach button & cable	■			■
	Teach-in: single teach button		■	■	
Light source, light type	Pin Point LED, Red light, 650 nm[1)]	■	■	■	■
Supply voltage V_S	DC 10 ... 30 V[2)]	■	■	■	■
Ripple	≤ 5 V_{PP}[3)]	■	■	■	■
Power consumption	≤ 20 mA[4)]	■	■	■	■
Switching outputs	NPN, Q	■	■		
	PNP, Q			■	■
Switching mode	Dark-switching	■	■	■	■
Output current $I_a$max	≤ 100 mA	■	■	■	■
Response time	< 0.5 ms[5)]	■	■	■	■
Switching frequency	1,000 Hz[6)]	■	■	■	■
Connection type	Cable, PVC, 2 m[7)]	■	■		
	Connector, M8, 3-pin			■	
	Connector, M8, 4-pin				■
Circuit protection	V_S connections reverse-polarity protected / Output Q and Q not short-circuit protected / Interference suppression	■	■	■	■
Enclosure rating	IP 66, IP 67	■	■	■	■
Ambient temperature operation	-40 °C ... +60 °C	■	■	■	■
Ambient temperature storage	-40 °C ... +75 °C	■	■	■	■
Weight	Approx. 30 g	■	■	■	■
Housing material	Bayblend, PMMA	■	■	■	■

[1)] Average service life 100,000 h at T_a = +25 °C
[2)] Limit values, reverse-polarity protected operation in short-circuit protected network max. 8 A
[3)] May not exceed or fall short of V_S tolerances
[4)] Without load
[5)] Signal transit time with resistive load
[6)] With light/dark ratio 1:1
[7)] Do not bend below 0 °C

Teach-in function

- **Programming via Teach-in button.**
- **Simple programming:**

Position object in the beam and push the button, finished:

LED confirms the Teach-in procedure.

- **Teach-in values can be stored.**
- **Two operating modes:**

Default setting: short Teach-in time (< 8 s); for standard applications;

approx. double reserve via switching threshold;

LED lights continuously.

Precise setting: long Teach-in time (> 8 s);

for precise applications; small switching hysteresis;

LED blinks.

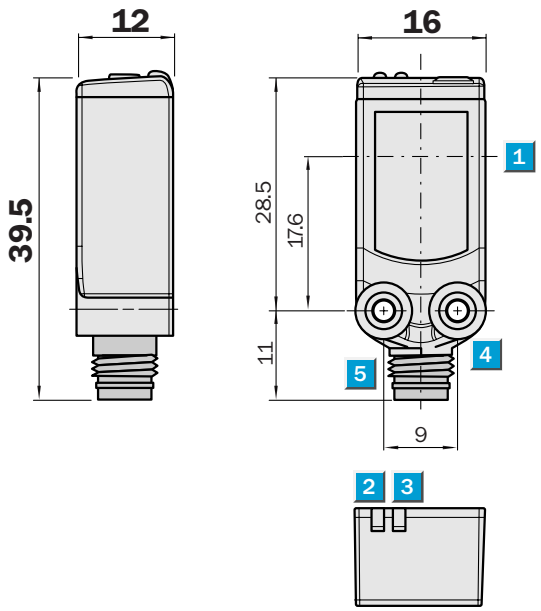
Ordering information	
Type	**Part Number**
WLG4-3E1184	1 028 140
WLG4-3E1382	1 028 138
WLG4-3F2182	1 028 134
WLG4-3F2284	1 028 137

Scanning range
0 ... 5.5 m

Through-beam photoelectric switch

- Fast and safe alignment through high visibility light spot
- Fast commissioning. Connect, align, ready!
- Easy assembly in slots and guide rails

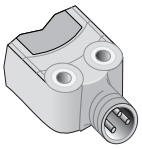
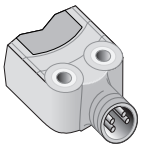
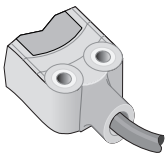
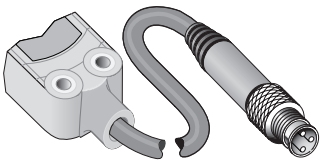
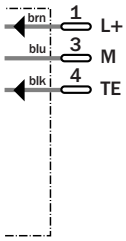
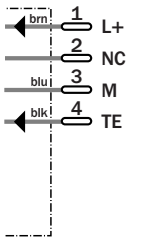
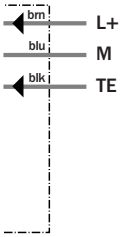
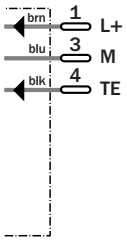
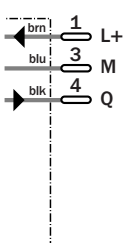
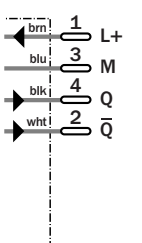
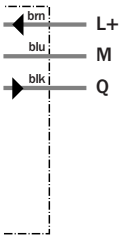
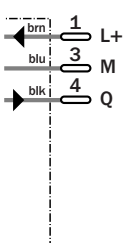
Dimensional drawing



Adjustments possible

1 Centre of optical axis
2 LED signal strength indicator orange: status of received light beam
3 LED signal strength indicator green: power on
4 Mounting hole M3
5 Connector

Connection type

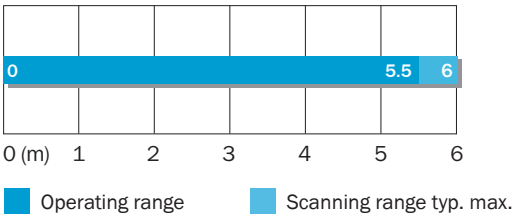
	WSE4-3N2130 WSE4-3P2130	WSE4-3P2230	WSE4-3N1330 WSE4-3P1330 WSE4-3P1330	WSE4-3P3130
				
Sender	M8, 3-pin	M8, 4-pin	3 x 0.14 mm²	M8, 3-pin
				
Receiver	M8, 3-pin	M8, 4-pin	3 x 0.14 mm²	M8, 3-pin
				

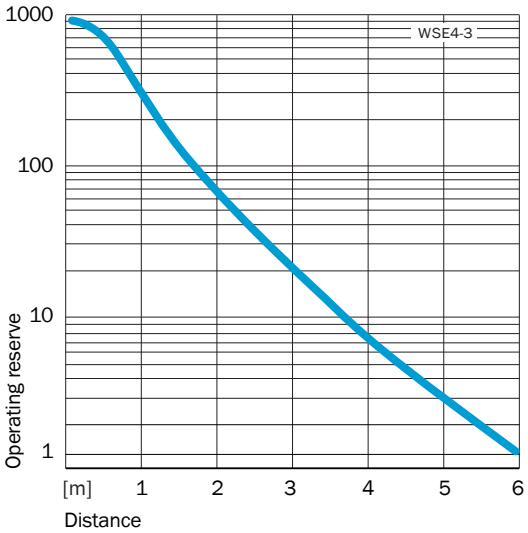
See chapter Accessories
Mounting systems

Technical data	WSE4-3	N1330	N2130	P1330	P1330	P2130	P2230	P3130
Scanning range typ. max.	0 ... 5.5 m							
Scanning range, recommended	0 ... 6 m							
Light source, light type	Pin Point LED, Red light, 650 nm[1]							
Supply voltage V_S	DC 10 ... 30 V[2]							
Ripple	≤ 5 V_{PP}[3]							
Power consumption, sender	≤ 20 mA							
Power consumption, receiver	≤ 20 mA							
Switching outputs	NPN, Q							
	PNP, Q							
	PNP							
Switching mode	Light-switching							
	Complementary							
Output current $I_a$max	≤ 100 mA							
Response time	> 0.5 ms[4]							
Switching frequency	1,000 Hz[5]							
Connection type	Cable, 2 m[6]							
	Connector, M8, 3-pin[6]							
	Cable, 5 m[6]							
	Connector, M8, 4-pin							
	Cable with plug, M8, 3-pin, 100 mm[6]							
Circuit protection	V_S connections reverse-polarity protected / Output Q and Q not short-circuit protected / Interference suppression							
Enclosure rating	IP 66, IP 67							
Ambient temperature operation	-40 °C ... +60 °C							
Ambient temperature storage	-40 °C ... +70 °C							
Weight	Approx. 40 g							
Housing material	Bayblend, PMMA							

[1] Average service life 100,000 h at T_a = +25 °C
[2] Limit values, reverse-polarity protected operation in short-circuit protected network max. 8 A
[3] May not exceed or fall short of V_S tolerances
[4] Signal transit time with resistive load
[5] With light/dark ratio 1:1
[6] Do not bend below 0 °C

Scanning range and operating reserve





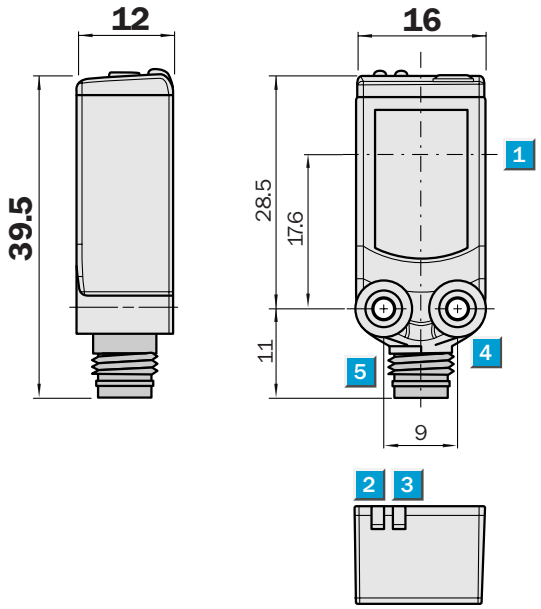
Ordering information	
Type	**Part Number**
WSE4-3N1330	1 028 164
WSE4-3N2130	1 028 167
WSE4-3P1330	1 028 159
WSE4-3P1330	1 029 645
WSE4-3P2130	1 028 163
WSE4-3P2230	1 028 160
WSE4-3P3130	1 028 161

Scanning range
0 ... 5.5 m

Through-beam photoelectric switch

- Fast and safe alignment through high visibility light spot
- Fast commissioning. Connect, align, ready!
- Easy assembly in slots and guide rails

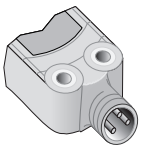
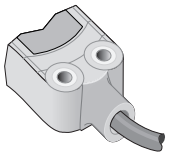
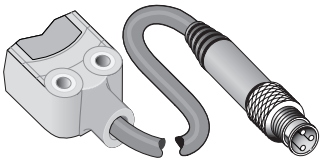
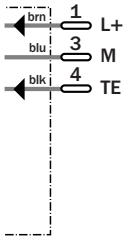
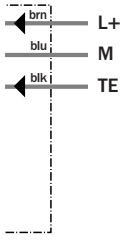
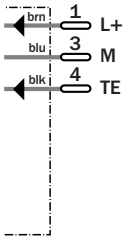
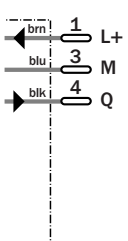
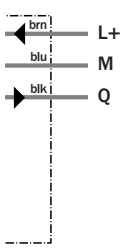
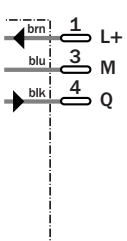
Dimensional drawing



Adjustments possible

1 Centre of optical axis
2 LED signal strength indicator orange: status of received light beam
3 LED signal strength indicator green: power on
4 Mounting hole M3
5 Connector

Connection type

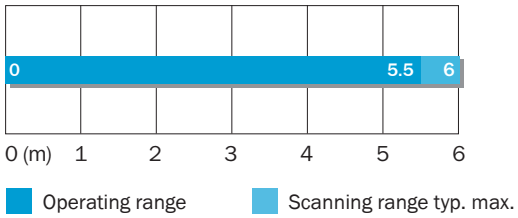
	WSE4-3E2130 WSE4-3F2130	WSE4-3E1330 WSE4-3F1330	WSE4-3E3130 WSE4-3F3130
			
Sender	M8, 3-pin	3 x 0.14 mm²	M8, 3-pin
			
Receiver	M8, 3-pin	3 x 0.14 mm²	M8, 3-pin
			

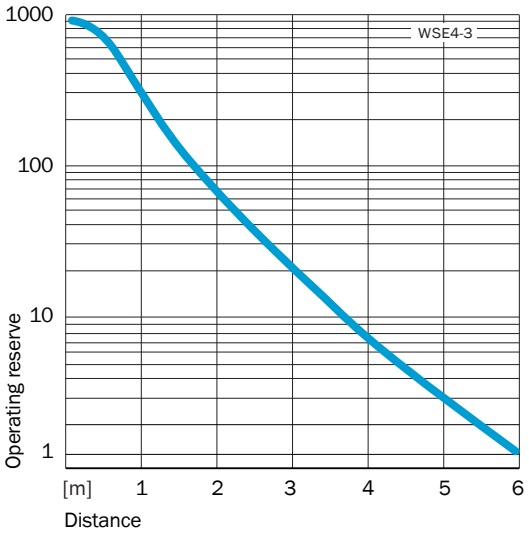
See chapter Accessories
Mounting systems

Technical data	WSE4-3	E1330	E2130	E3130	F1330	F2130	F3130
Scanning range typ. max.	0 ... 5.5 m	■	■	■	■	■	■
Scanning range, recommended	0 ... 6 m	■	■	■	■	■	■
Light source, light type	Pin Point LED, Red light, 650 nm[1]	■	■	■	■	■	■
Supply voltage V_S	DC 10 ... 30 V[2]	■	■	■	■	■	■
Ripple	≤ 5 V_{PP}[3]	■	■	■	■	■	■
Power consumption, sender	≤ 20 mA	■	■	■	■	■	■
Power consumption, receiver	≤ 20 mA	■	■	■	■	■	■
Switching outputs	NPN, Q	■	■	■			
	PNP, Q				■	■	■
Switching mode	Dark-switching	■	■	■	■	■	■
Output current $I_a$max	≤ 100 mA	■	■	■	■	■	■
Response time	> 0.5 ms[4]	■	■	■	■	■	■
Switching frequency	1,000 Hz[5]	■	■	■	■	■	■
Connection type	Cable, 2 m[6]	■			■		
	Connector, M8, 3-pin[6]		■			■	
	Cable with plug, M8, 3-pin, 100 mm[6]			■			■
Circuit protection	V_S connections reverse-polarity protected / Output Q and Q not short-circuit protected / Interference suppression	■	■	■	■	■	■
Enclosure rating	IP 66, IP 67	■	■	■	■	■	■
Ambient temperature operation	-40 °C ... +60 °C	■	■	■	■	■	■
Ambient temperature storage	-40 °C ... +70 °C	■	■	■	■	■	■
Weight	Approx. 40 g	■	■	■	■	■	■
Housing material	Bayblend, PMMA	■	■	■	■	■	■

[1] Average service life 100,000 h at T_a = +25 °C
[2] Limit values, reverse-polarity protected operation in short-circuit protected network max. 8 A
[3] May not exceed or fall short of V_S tolerances
[4] Signal transit time with resistive load
[5] With light/dark ratio 1:1
[6] Do not bend below 0 °C

Scanning range and operating reserve





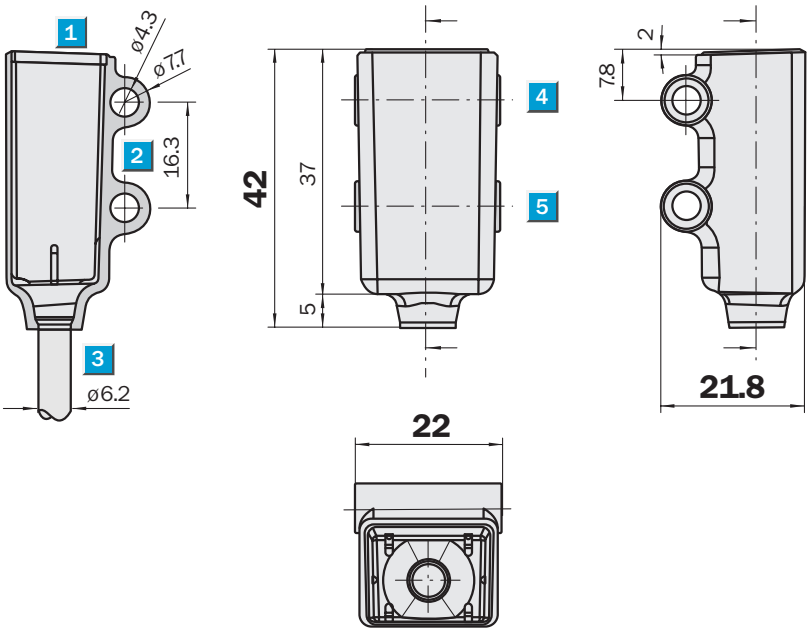
Ordering information	
Type	**Part Number**
WSE4-3E1330	1 028 172
WSE4-3E2130	1 028 175
WSE4-3E3130	1 028 174
WSE4-3F1330	1 028 168
WSE4-3F2130	1 028 171
WSE4-3F3130	1 028 170

Scanning range
0 ... 3 m

Through-beam photoelectric switch

- Robust Teflon housing for use in wet and aggressive environments
- Suitable for food applications
- Test input

Dimensional drawing

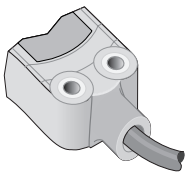


Adjustments possible

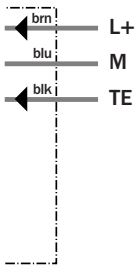
1 LED signal
2 Mounting hole Ø 4.3 mm
3 Cable 5 m, Ø 3.4 mm, 2 m Teflon coated, Ø 6.2 mm
4 Optical axis, receiver
5 Optical axis, sender

Connection type

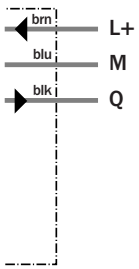
WSE4T-3E1430
WSE4T-3F1430
WSE4T-3P1430



Sender	3 x 0.14 mm²



Receiver	3 x 0.14 mm²

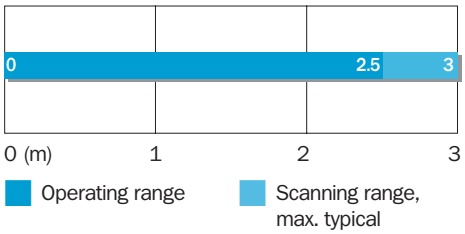


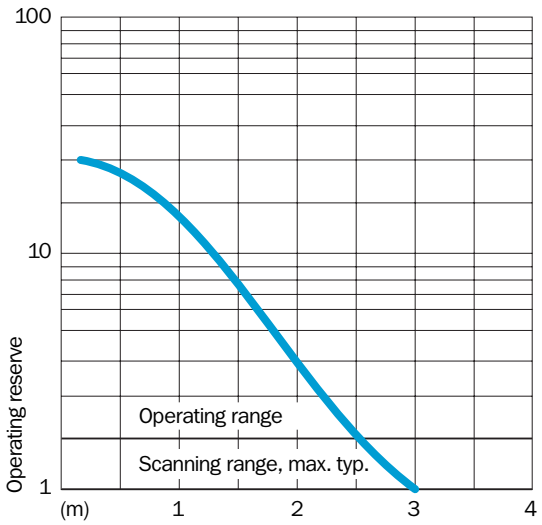
See chapter Accessories
Mounting systems

Technical data	WSE4T-3	E1430	F1430	P1430
Scanning range typ. max.	0 ... 3 m	■	■	■
Scanning range, recommended	0 ... 2.5 m	■	■	■
Light source, light type	Pin Point LED, Red light, 650 nm[1]	■	■	■
Supply voltage V_S	DC 10 ... 30 V[2]	■	■	■
Ripple	≤ 5 V_{PP}[3]	■	■	■
Power consumption, sender	≤ 20 mA	■	■	■
Power consumption, receiver	≤ 20 mA	■	■	■
Switching outputs	NPN, Q	■		
	PNP, Q		■	■
Switching mode	Dark-switching	■	■	
	Light-switching			■
Output current $I_a$max	≤ 100 mA	■	■	■
Response time	> 0.5 ms[4]	■	■	■
Switching frequency	1,000 Hz[5]	■	■	■
Connection type	Cable, 5 m[6]	■	■	■
Circuit protection	V_S connections reverse-polarity protected / Output Q and Q not short-circuit protected / Interference suppression	■	■	■
Enclosure rating	IP68, IP 69K	■	■	■
Ambient temperature operation	-40 °C ... +60 °C	■	■	■
Ambient temperature storage	-40 °C ... +70 °C	■	■	■
Weight	Approx. 60 g	■	■	■
Housing material	Bayblend, PMMA	■	■	■

[1] Average service life 100,000 h at T_a = +25 °C
[2] Limit values, reverse-polarity protected operation in short-circuit protected network max. 8 A
[3] May not exceed or fall short of V_S tolerances
[4] Signal transit time with resistive load
[5] With light/dark ratio 1:1
[6] Do not bend below 0 °C

Scanning range and operating reserve





Ordering information	
Type	**Part Number**
WSE4T-3E1430	1 029 648
WSE4T-3F1430	1 029 647
WSE4T-3P1430	1 029 646