


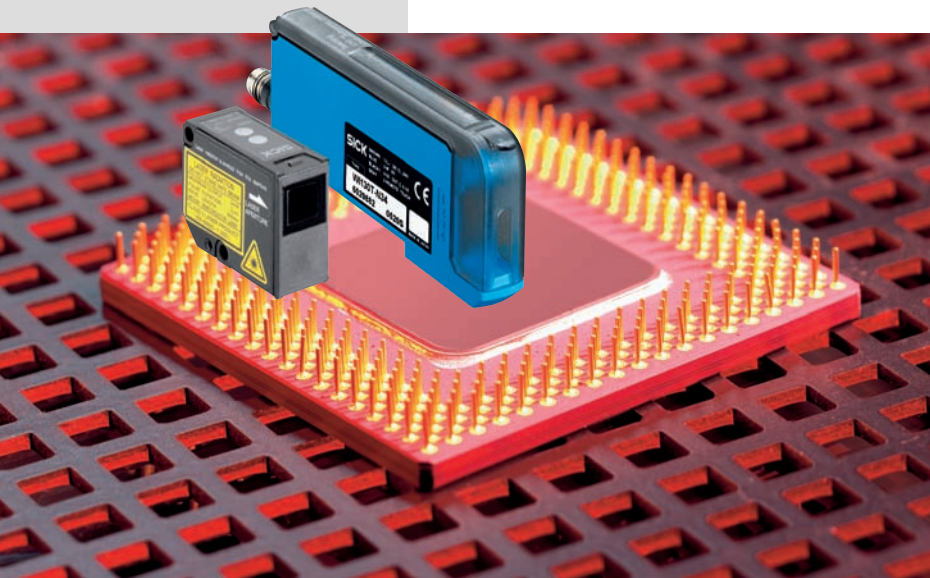


W130 Laser - Customised through configuration, and small format through external laser heads

	Photoelectric proximity switch energ.
	Photoelectric reflex switch
	Through-beam photoelectric switch



outputs is the basis for a variety of application solutions, such as edge control or sorting parts.

Application-oriented, easy commissioning

- *1 or 2 point Teach-in:*
for the safe Teach-in of switching points
- *Auto Teach-in:*
for Teach-in during a running process
- *Zone Teach-in:*
for the Teach-in of an upper and lower switching threshold
- *Transparent Teach-in:*
for transparent objects such as bottles or films

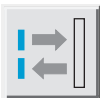
T

The solution for customer-specific requirements: configurable evaluation units with digital and analogue outputs and external laser heads. By separating optics and evaluation, the W130L offers compact laser sensors with extensive functionality, allowing the configuration-based setup of application-specific sensor functions. Fast and easy commissioning is implemented by clear Teach-in functions.

Included in the system

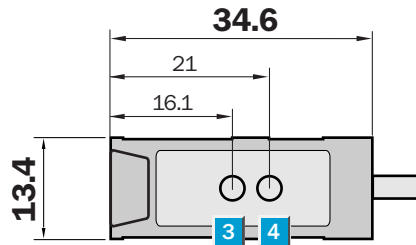
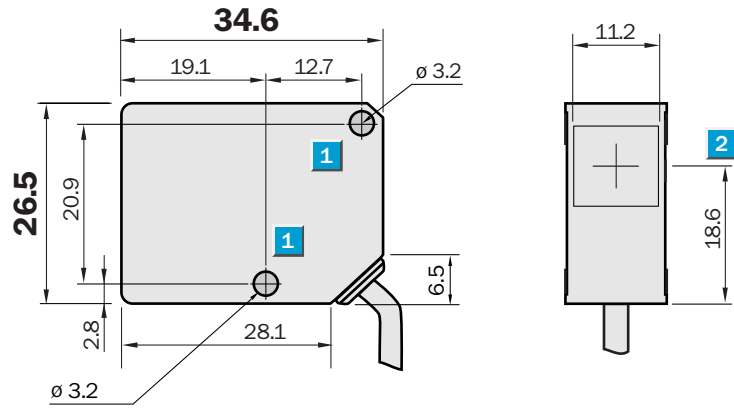
The sensor heads offered, comprise a photoelectric proximity switch, a photoelectric reflex switch and two through-beam photoelectric switches with small laser spot or a parallel laser line 30 mm in width. The combination of the analogue output and two switching

Photoelectric proximity switch, WT130L, energetic


Scanning distance
0 ... 1,200 mm
Photoelectric proximity switch

- Laser sensor in a compact housing
- Easy alignment through red light laser Class 2
- Coaxial light path
- Configuration via amplifier unit

Dimensional drawing

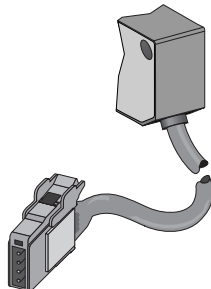


- 1** Through-hole \varnothing 3.2 mm
- 2** Optical axis
- 3** Indicator LED green: operational status indicator
- 4** Indicator LED orange: switching output



Connection type

WT130L-32

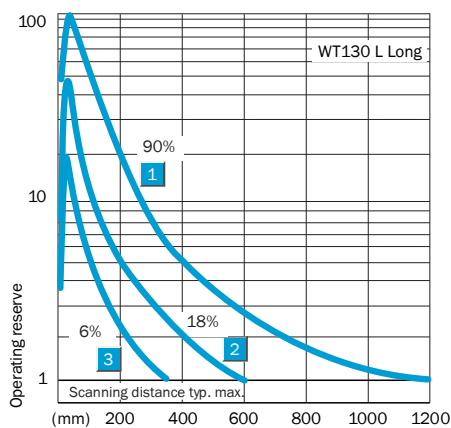


Technical specifications		WT130L-	32										
Sensor head	Operation in combination with amplifier unit W130												
Scanning distance typ. max.	0 ... 1,200 mm ¹⁾												
Operating distance	30 ... 1,000 mm ¹⁾												
Light source, light type	Laser, red light ²⁾												
Laser protection class	2 (IEC 60 825-1/C.D.R.H)												
Light spot diameter	1 mm at 1 m distance												
Supply voltage V_s	See amplifier unit W130												
Switching outputs	See amplifier unit W130												
Connection type	Cable with plug, PVC/PBT, 2 m ³⁾												
VDE protection class	⊖												
Enclosure rating	IP 67												
Ambient temperature operation	-10 °C ... +55 °C												
Ambient temperature storage	-25 °C ... +70 °C												
Weight	Ca. 35 g												
Housing material	PC, polycarbonate, glass												

¹⁾ Object with 90 % remission (based on standard white to DIN 5033). Scanning distance depends on chosen operating mode
²⁾ Average service life 50,000 h at T_a = +25 °C
³⁾ Connection between sensor head and amplifier unit with system specific plug. Do not bend cable below 0 °C

Scanning distance and operating reserve

Mode: Long



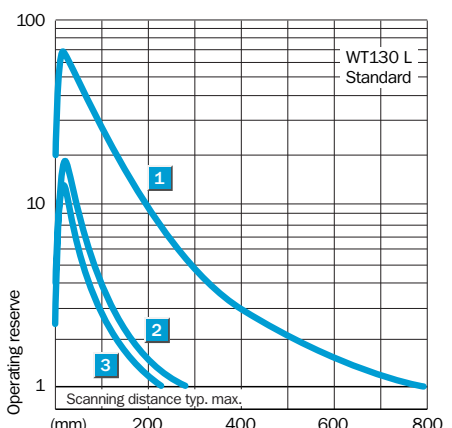
1	0	30	1000	1200
2	0	30	550	600
3	0	30	300	350

0 (mm) 200 400 600 800 1000 1200

Operating distance Scanning distance typ. max.

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

Mode: Standard



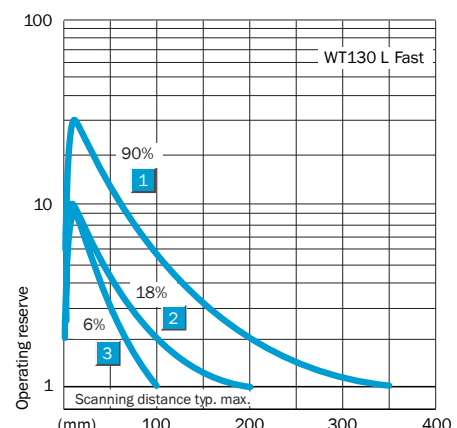
1	0	30	700	800
2	0	30	240	280
3	0	30	200	230

0 (mm) 200 400 600 800

Operating distance Scanning distance typ. max.

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

Mode: Fast



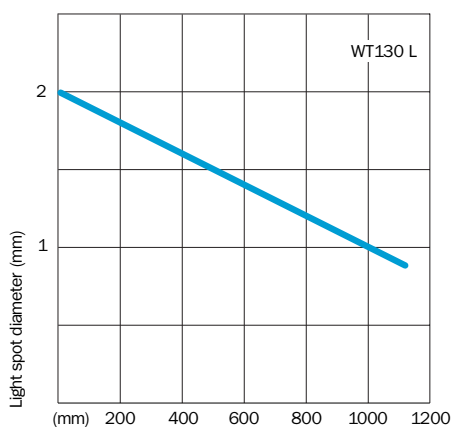
1	0	30	250	350
2	0	30	180	200
3	0	30	90	100

0 (mm) 100 200 300 400

Operating distance Scanning distance typ. max.


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

Light spot diameter



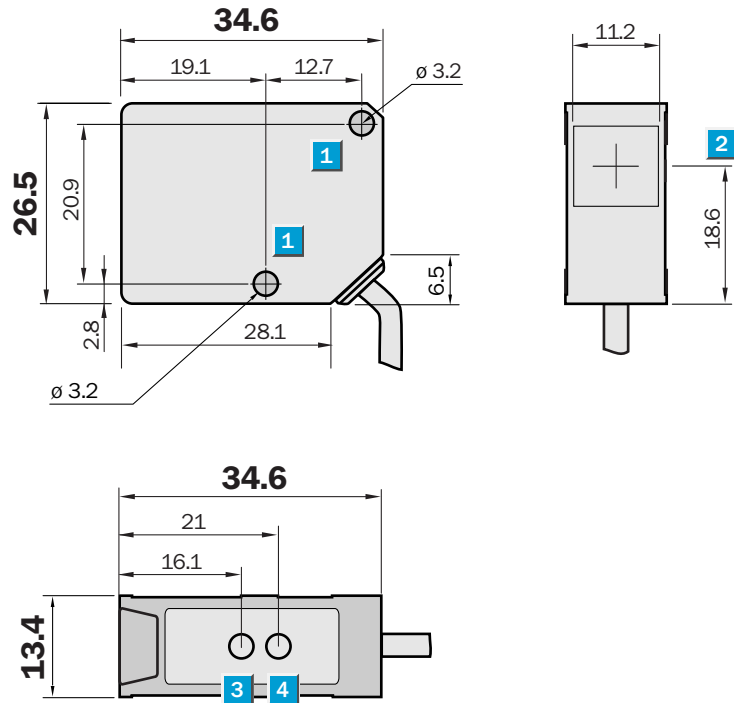
Ordering information	
Model Name	Part Number
WT130L-32	6 029 861

Photoelectric reflex switch, WL130L


Scanning range
0 ... 10 m
Photoelectric reflex switch

- Laser sensor in a compact housing
- Easy alignment through red light laser Class 2
- Coaxial light path
- Configuration via amplifier unit
- Line laser through line attachment

Dimensional drawing

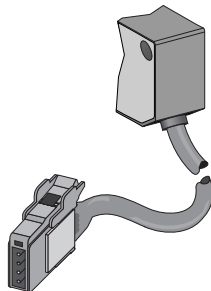


- 1 Through-hole Ø 3.2 mm
- 2 Optical axis
- 3 Indicator LED green: operational status indicator
- 4 Indicator LED orange: switching output



Connection type

WL130L-32



See Accessories chapter

Masks

Reflectors

Technical specifications WL130L- 32

Sensor head	Operation in combination with amplifier unit W130
Scanning range typ. max.	0 ... 10 m
Scanning range, recommended	0 ... 7 m
Laser line through lens	✓
Laser line dimension	26 x 0.5 mm at 200 mm distance
Light source, light type	Laser, red light ¹⁾
Laser protection class	2 (IEC 60 825-1/C.D.R.H)
Light spot diameter	2 mm in 2m Entfernung
Polarisation filter	✓
Supply voltage V_s	See amplifier unit W130
Switching outputs	See amplifier unit W130
Connection type	Cable with plug, PVC/PBT, 2 m ²⁾
VDE protection class	◆
Enclosure rating	IP 67
Ambient temperature operation	-10 °C ... +55 °C
Ambient temperature storage	-25 °C ... +70 °C
Weight	Ca. 35 g
Housing material	PC, polycarbonate, PMMA
Included with delivery	Reflector P41F

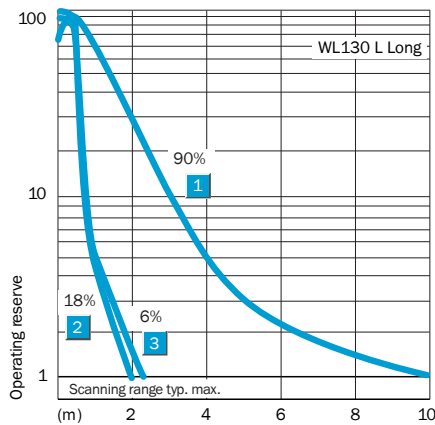
¹⁾ Average service life 50,000 h at T_a = +25 °C

²⁾ Connection between sensor head and amplifier unit with system specific plug.

Do not bend cable below 0 °C

Scanning range and operating reserve

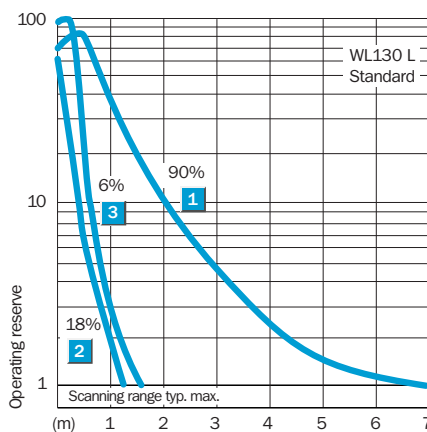
Mode: Long



1	0	7	10
2	0	1.7	2
3	0	2	2.2

■ Operating range ■ Scanning range typ. max.

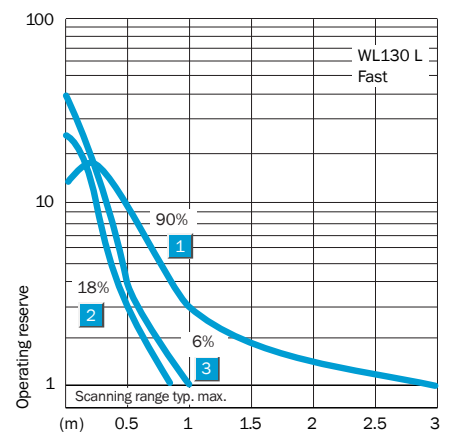
Mode: Standard



1	0	5	7
2	0	1.2	1.3
3	0	1.3	1.5

■ Operating range ■ Scanning range typ. max.

Mode: Fast



1	0	2	3
2	0	0.7	0.8
3	0	0.8	1

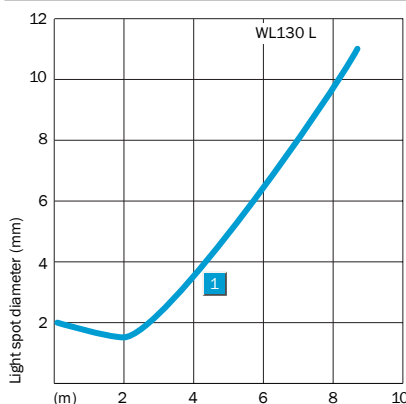
■ Operating range ■ Scanning range typ. max.

Reflector type	Operating range
1 P41F (without tip adapter lens)	0 ... 7 m
2 P41F (with area tip adapter lens)	0 ... 1.7 m
3 P41F (with line tip adapter lens)	0 ... 2 m

Reflector type	Operating range
1 P41F (without tip adapter lens)	0 ... 5 m
2 P41F (with area tip adapter lens)	0 ... 1.2 m
3 P41F (with line tip adapter lens)	0 ... 1.5 m

Reflector type	Operating range
1 P41F (without tip adapter lens)	0 ... 2 m
2 P41F (with area tip adapter lens)	0 ... 0.7 m
3 P41F (with line tip adapter lens)	0 ... 0.8 m

Light spot diameter



Ordering information

Model Name	Part Number
WL130L-32	6 029 862

Technical specifications		WS/WE130L-	32	34										
Sensor head	Operation in combination with amplifier unit W1130													
Scanning range typ. max.	0 ... 3.5 m													
Scanning range, recommended	0 ... 2 m													
Light source, light type	Laser, red light ¹⁾													
Laser protection class	1 (EN 60 825-1)													
Light spot diameter	2 mm at 2 m distance													
Supply voltage V_s	See amplifier unit W1130													
Switching outputs	See amplifier unit W1130													
Connection type	Cable with plug, PVC/PBT, 2 m ²⁾													
	Cable with plug and coupling, PVC/PBT, 2 m ³⁾													
VDE protection class	◆													
Enclosure rating	IP 67													
Ambient temperature operation	-10 °C ... +55 °C													
Ambient temperature storage	-25 °C ... +70 °C													
Weight	Ca. 70 g													
Housing material	PC, polycarbonate, PMMA													

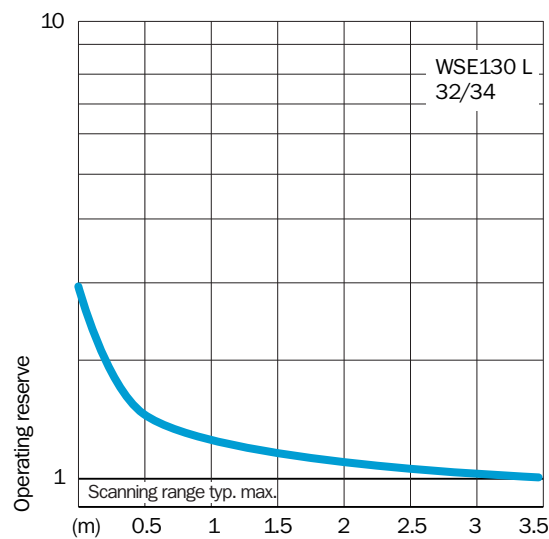
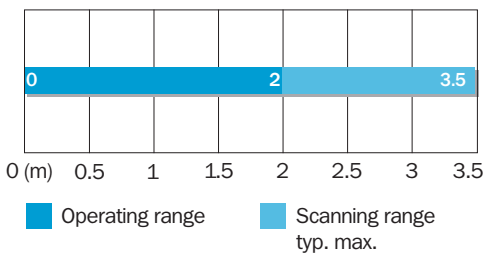
¹⁾ Average service life 50,000 h at T_a = +25 °C

²⁾ Connection between sensor head and amplifier unit with system specific plug.

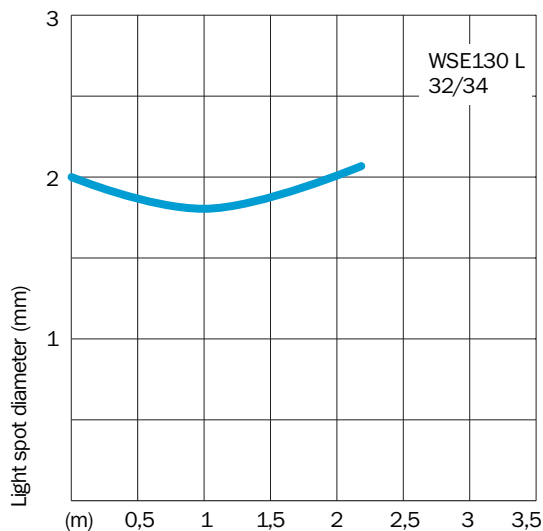
Do not bend cable below 0 °C
³⁾ System cable M8, 2 m necessary for

connection. Included with delivery. Do not bend cable below 0 °C

Scanning range and operating reserve



Light spot diameter



Ordering information

Model Name	Part Number
WS/WE130L-32	6 029 863
WS/WE130L-34	6 029 866

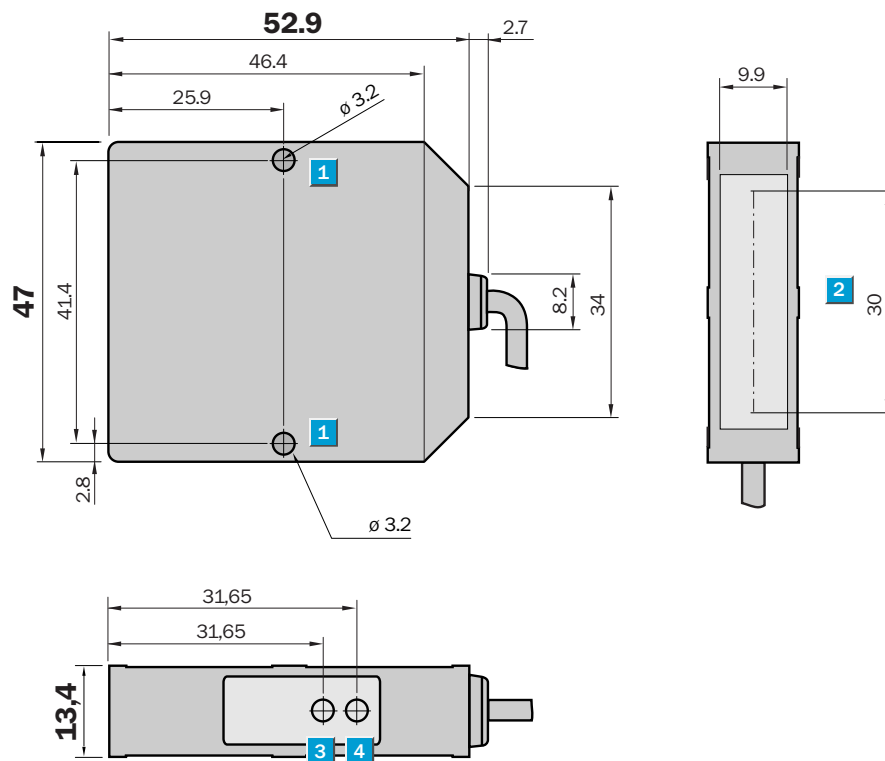
Through-beam photoelectric switch, WS/WE130L "LINE"

Scanning range
0 ... 3.5 m

Through-beam photoelectric switch

- Parallel laser line 30 mm wide
- Range up to 2 m
- "Eye safe" (Class 1) red light laser
- Configuration via amplifier unit enables application solutions such as edge control and detection of objects with position tolerance

Dimensional drawing



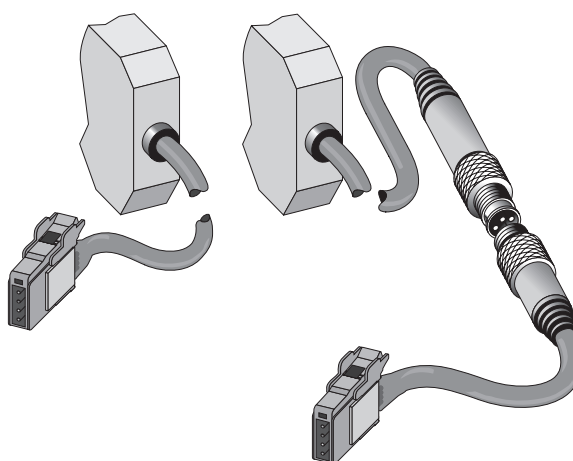
- 1 Through-hole \varnothing 3.2 mm
- 2 Parallel laser line
- 3 Indicator LED green: operational status indicator
- 4 Indicator LED orange: switching output



Connection type

WS/WE130L-52

WS/WE130L-54



Technical specifications		WS/WE130L-	52	54								
Sensor head	Operation in combination with amplifier unit W1130											
Scanning range typ. max.	0 ... 3.5 m											
Scanning range, recommended	0 ... 2 m											
Laser line dimension	30 x 2.5 mm parallel											
Light source, light type	Laser, red light ¹⁾											
Laser protection class	1 (EN 60 825-1)											
Supply voltage V_s	See amplifier unit W1130											
Switching outputs	See amplifier unit W1130											
Connection type	Cable with plug, PVC/PBT, 2 m ²⁾											
	Cable with plug and coupling, PVC/PBT, 2 m ³⁾											
VDE protection class	⊠											
Enclosure rating	IP 67											
Ambient temperature operation	-10 °C ... +55 °C											
Ambient temperature storage	-25 °C ... +70 °C											
Weight	Ca. 100 g											
Housing material	PC, polycarbonate, PMMA											

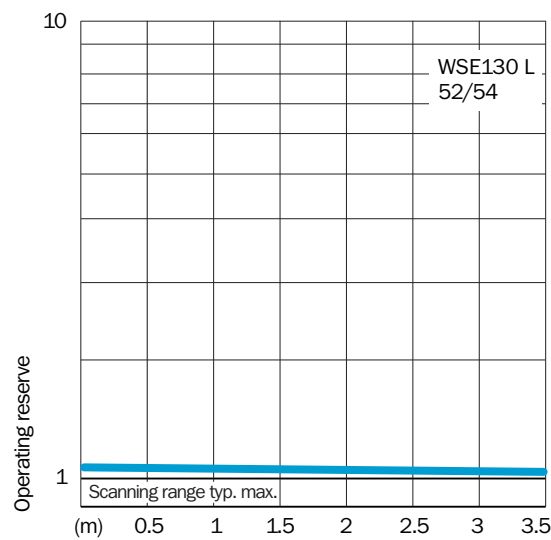
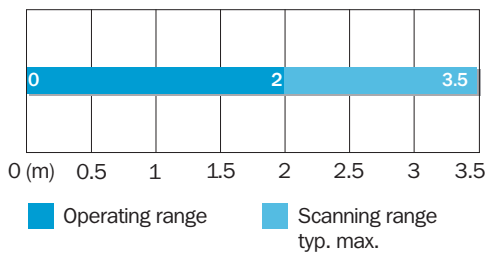
¹⁾ Average service life 50,000 h at T_a = +25 °C

²⁾ Connection between sensor head and amplifier unit with system specific plug.

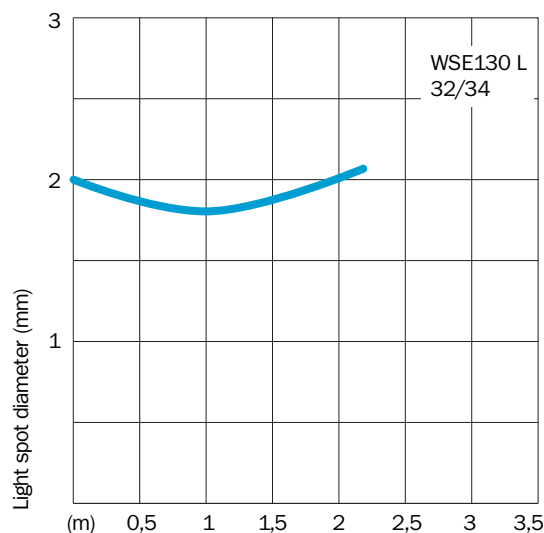
³⁾ System cable M8, 2 m necessary for Do not bend cable below 0 °C

connection. Included with delivery. Do not bend cable below 0 °C

Scanning range and operating reserve

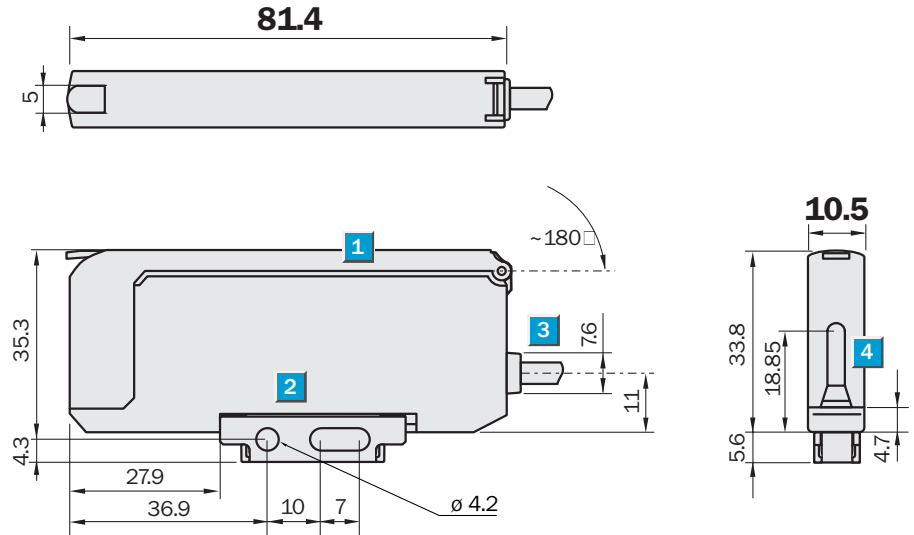


Light spot diameter

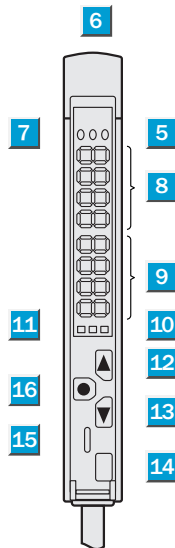


Ordering information	
Model Name	Part Number
WS/WE130L-52	6 029 865
WS/WE130L-54	6 029 868

Dimensional drawing



Adjustments possible

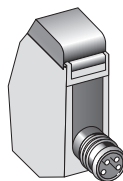


- 1 Protective hood; can be folded open (180° approx.)
- 2 Mounting bracket (included with delivery)
- 3 Connection
- 4 Connection for sensor heads
- 5 Indicator LED: output 1
- 6 Indicator LED: laser active
- 7 Indicator LED: output 2
- 8 Display: measurement value
- 9 Display: switching point
- 10 Indicator: SET active
- 11 Indicator LED: output 1 or 2 activated
- 12 Function key
- 13 Function key
- 14 Teach-in key
- 15 Set/Run selector switch
- 16 Operating key

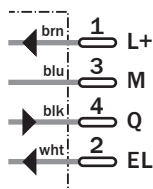
Connection type

WI130T-P340

WI130T-N340



M8, 4-pin



- Provision of varied functions for configuration
- Easy commissioning
- Display for operational status indicator and operator guidance
- Switching and analogue outputs
- Switching frequency up to 8.3 kHz



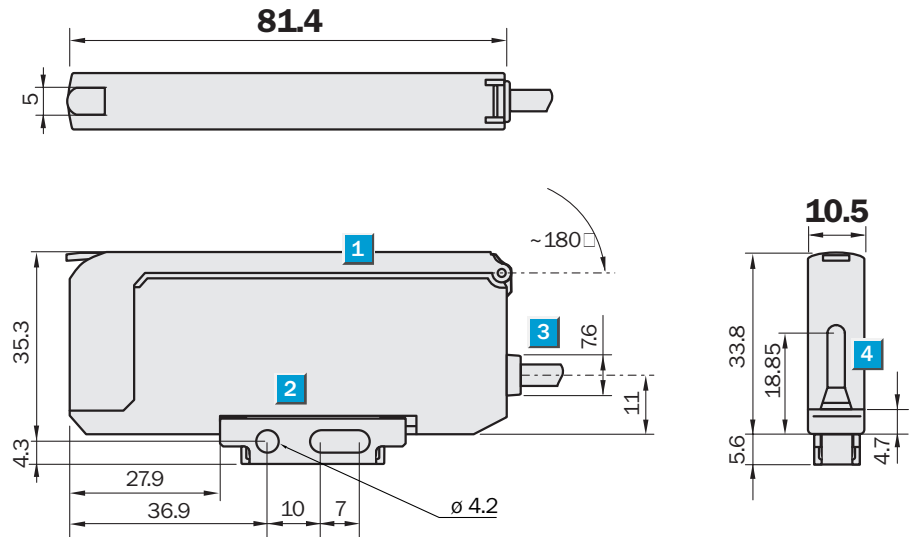
See Accessories chapter

Connector, M8, 4-pin

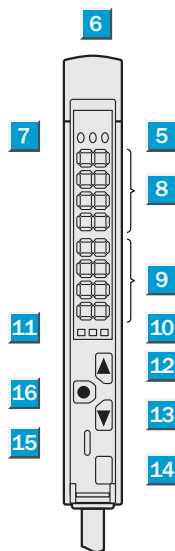
Male bus connector for

Mounting systems

Dimensional drawing



Adjustments possible

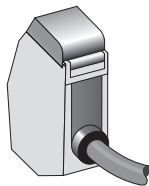


- 1 Protective hood; can be folded open (180° approx.)
- 2 Mounting bracket (included with delivery)
- 3 Connection
- 4 Connection for sensor heads
- 5 Indicator LED: output 1
- 6 Indicator LED: laser active
- 7 Indicator LED: output 2
- 8 Display: measurement value
- 9 Display: switching point
- 10 Indicator: SET active
- 11 Indicator LED: output 1 or 2 activated
- 12 Function key
- 13 Function key
- 14 Teach-in key
- 15 Set/Run selector switch
- 16 Operating key

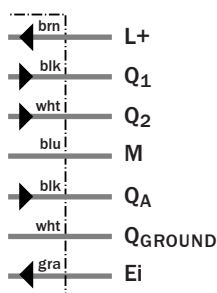
Connection type

WI130T-N720

WI130T-P720



7 wire



- Provision of varied functions for configuration
- Easy commissioning
- Display for operational status indicator and operator guidance
- Switching and analogue outputs
- Switching frequency up to 8.3 kHz



See Accessories chapter

Male bus connector

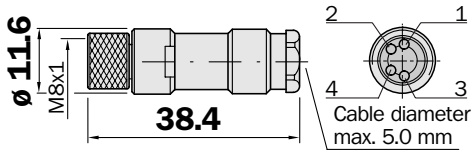
Mounting systems

Dimensional drawings and order information

SENSICK screw-in system M8, 4-pin, enclosure rating IP 67

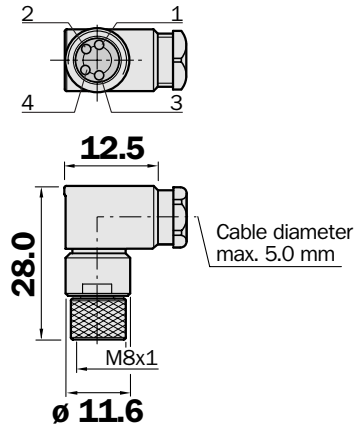
Female connector M8, 4-pin, straight

Type	Order no.	Contacts
DOL-0803-G02M	6010785	4



Female connector M8, 4-pin, right angle

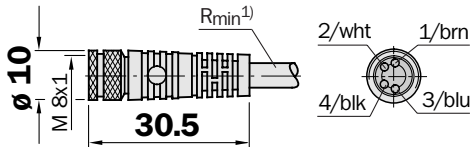
Type	Order no.	Contacts
DOL-0803-W08M	6008489	4



Female connector M8, 3-pin or 4-pin, straight

3 x 0.34 mm² or 4 x 0.25 mm², sheath PVC

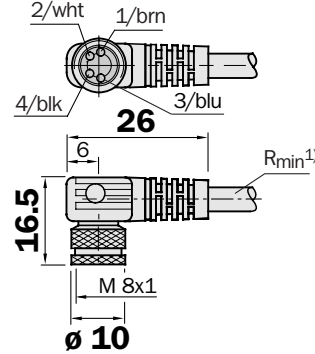
Type	Order no.	Contacts	Cable length
DOL-0803-G02M	6010785	3	2 m
DOL-0803-G05M	6022009	3	5 m
DOL-0803-G10M	6022011	3	10 m
DOL-0804-G02M	6009870	4	2 m
DOL-0804-G05M	6009872	4	5 m
DOL-0804-G10M	6010754	4	10 m



Female connector M8, 3-pin or 4-pin, right angle

3 x 0.34 mm² or 4 x 0.25 mm², sheath PVC

Type	Order no.	Contacts	Cable length
DOL-0803-W02M	6008489	3	2 m
DOL-0803-W05M	6022010	3	5 m
DOL-0803-W10M	6022012	3	10 m
DOL-0804-W02M	6009871	4	2 m
DOL-0804-W05M	6009873	4	5 m
DOL-0804-W10M	6010755	4	10 m

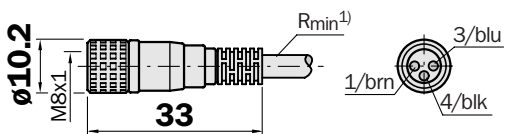


¹⁾ Minimum bend radius in dynamic use
R_{min} = 20 x cable diameter

Female connector M8, 3-pin, straight

Cable diameter 4.5 mm, 3 x 0.25 mm², sheath PUR, halogen free

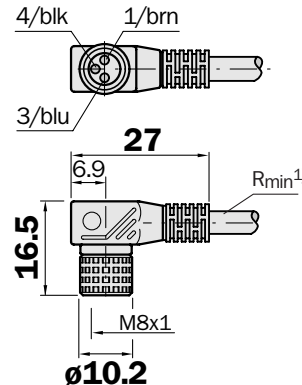
Type	Order no.	Cable length
DOL-0803-G05MB	7902080	5 m



Female connector M8, 3-pin, right angle

Cable diameter 4.5 mm, 3 x 0.25 mm², sheath PUR, halogen free

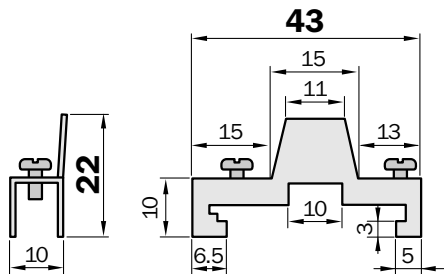
Type	Order no.	Cable length
DOL-0803-W05MB	7902081	5 m



Dimensional drawings and order information

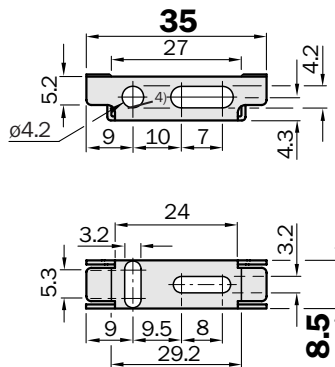
Endcap for block installation WI130L on DIN-RAIL mounting

Type	Order no.
BF-EB01-W190	5313011



Mounting bracket for amplifier unit WI130L*

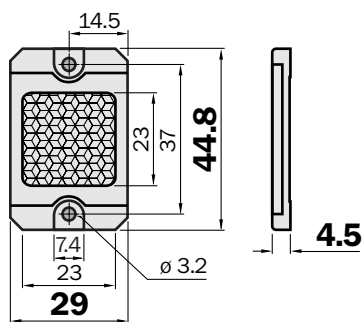
Type	Order no.
BEF WLL170	5306574



* Included with delivery

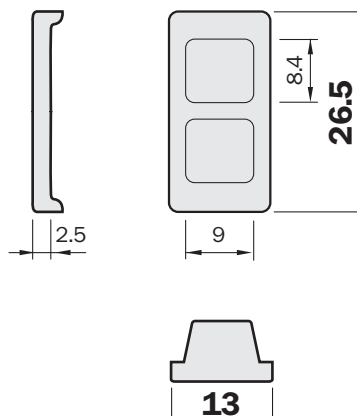
Reflector P41F

Type	Order no.
P41F	5315128



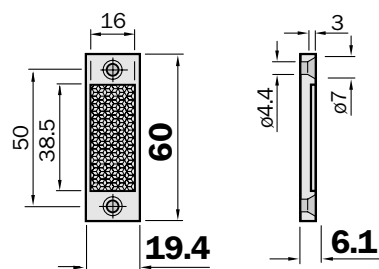
Lens attachment BL W130L-1

Type	Order no.
BL-W130L-1	5314444



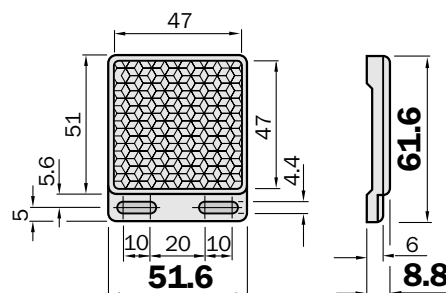
Reflector 20 x 40 mm²

micro triple, 2 hole mounting	
Type	Order no.
PL20F	5308844



Reflector 47 x 47 mm²

micro triple, 2 hole mounting	
Type	Order no.
P250F	5308843



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