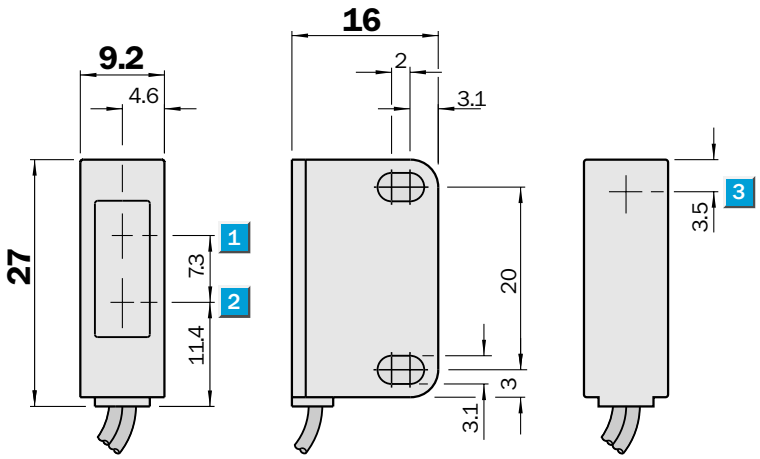
Scanning distance
5 ... 30 mm

Photoelectric proximity switches

- Ultra-miniature housing
- Focused optics, small light spot
- Extremely flexible connection cable
- Red light and LED signal strength indicator as alignment aids

Dimensional drawing

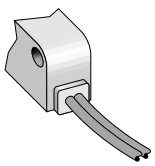


1 Centre of transmitter's optical axis
2 Centre of receiver's optical axis
3 LED indicator, red: light reception

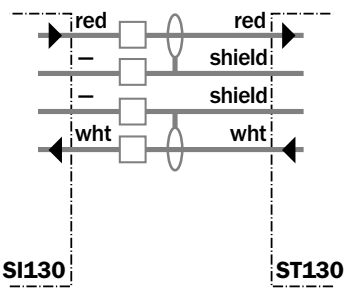
Mounting bracket BEF-130-SM included.

Connection type

ST 130-S 13
ST 130-S 23



2 x 0.8 mm² shielded



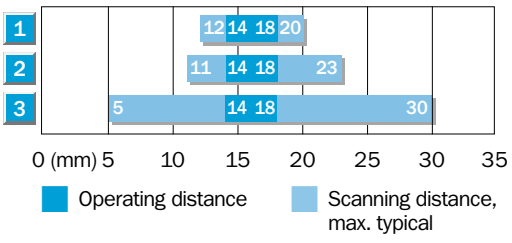
Accessories	page
Mounting brackets*	510

* included with delivery

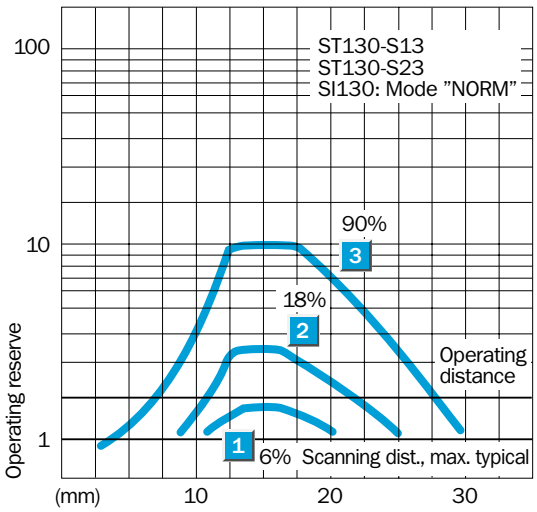
Technical data	ST 130-	S 13	S 23
Photoelectric proximity switches	SI 130 in "NORM" mode, see page 44		
Scanning distance, max. typical	5…30 mm (object with 90 % remission)		
Operating distance	14…18 mm (object with 6 % remission)		
Background blanking	From approx. 45 mm (object with 90 % remission)		
Light source[1], **light type**	LED, visible red light		
Light spot size	Approx. 1 x 4 mm w. focal point 16 mm		
	Approx. 1 x 1 mm w. focal point 16 mm		
Angle of dispersion, sender	Focused, focal point 16 mm ± 0.5 mm		
Power supply and evaluation unit	ST 130 only functional in combination with separate interpreter (SI 130), see page 44		
Supply voltage V_S	See SI 130, page 44		
Switching outputs	See SI 130, page 44		
Output current I_A max.	See SI 130, page 44		
Light receiver, switching mode	See SI 130, page 44		
Response time[2]	See SI 130, page 44		
Max. switching frequency[3]	See SI 130, page 44		
Connection type	PVC cable, 2 m[4] (screened), (cannot be extended)		
VDE protection class	⧫		
Circuit protection[5]	A		
Enclosure rating	IP 65		
Ambient temperature T_A	Operation – 25 °C…+ 55 °C		
	Storage – 40 °C…+ 70 °C		
Weight	Approx. 23 g		
Housing material	Housing: ABS/optics: PC		

1) Average service life 100,000 h at T_A = + 25 °C
2) Signal transit time with resistive load
3) With light/dark ratio 1:1
4) Do not bend below 0 °C
5) A = V_S connections reverse-polarity protected

Scanning distance



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



Order information

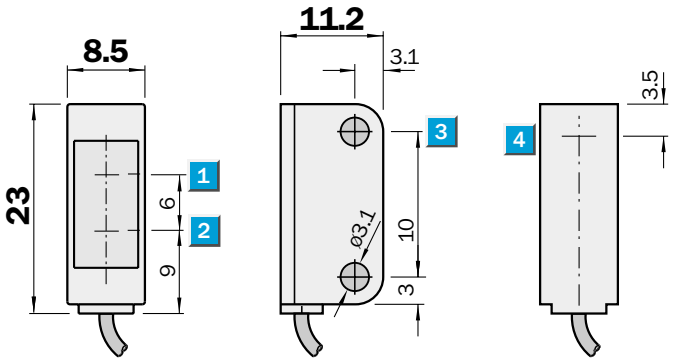
Type	Part no.
ST 130-S 13	6 011 083
ST 130-S 23	6 011 085

Scanning distance
0…200 mm

Photoelectric proximity switches

- Ultra-miniature housing
- Large scanning distance
- Extremely flexible connection cable
- Red light and LED signal strength indicator as alignment aids

Dimensional drawing

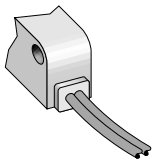


1 Centre of transmitter's optical axis
2 Centre of receiver's optical axis
3 Mounting hole ⌀ 3.1 mm
4 LED indicator, red: light reception

Mounting bracket BEF-130-SP included.

Connection type

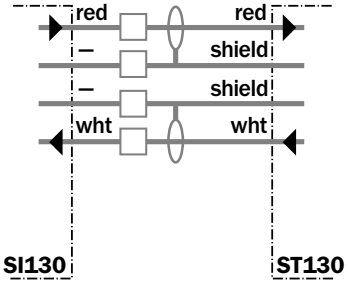
ST 130-S 13



Accessories	page
Mounting brackets*	510

* included with delivery

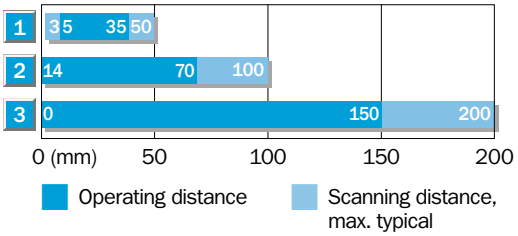
2 x 0.8 mm² shielded



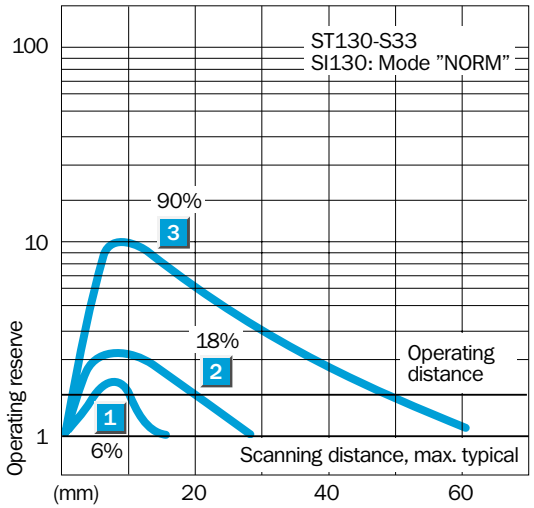
Technical data	ST 130-	S 33
Scanning distance, max. typical	0…200 mm [1]	
Operating distance	0…150 mm [1]	
Light source [2], **light type**	LED, visible red light	
Light spot size	Approx. 13 x 13 mm at 150 mm	
Angle of dispersion, sender	Approx. 5°	
Power supply and evaluation unit	ST 130 only functional in combination with separate interpreter (SI 130), see page 44	
Supply voltage V_S	See SI 130, page 44	
Switching outputs	See SI 130, page 44	
Output current I_A max.	See SI 130, page 44	
Light receiver, switching mode	See SI 130, page 44	
Response time [3]	See SI 130, page 44	
Max. switching frequency [4]	See SI 130, page 44	
Connection type	PVC cable, 2 m [5] (screened), (cannot be extended)	
VDE protection class	III	
Circuit protection [6]	A	
Enclosure rating	IP 65	
Ambient temperature T_A	Operation – 25 °C…+ 55 °C	
	Storage – 40 °C…+ 70 °C	
Weight with cable 2 m	ST 130-S 33: approx. 23 g	
	ST 130-F 43: approx. 20 g	
Housing material	Housing: ABS/optics: PC	

1) Object with 90 % remission (based on standard white to DIN 5033)
2) Average service life 100,000 h at T_A = + 25 °C
3) Signal transit time with resistive load
4) With light/dark ratio 1:1
5) Do not bend below 0 °C
6) A = V_S connections reverse-polarity protected

Scanning distance



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



Order information

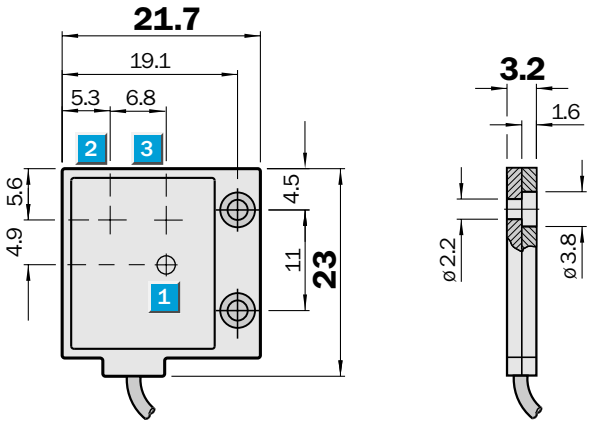
Type	Part no.
ST 130-S 33	6 011 081

Scanning distance
0 ... 60 mm

Photoelectric proximity switches

- Ultra-miniature housing, mounting depth 3.2 mm
- Large scanning distance
- Extremely flexible connection cable
- Red light and LED signal strength indicator as alignment aids

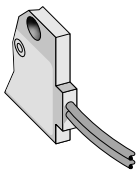
Dimensional drawing



1 LED indicator, red: light reception
2 Centre of transmitter's optical axis
3 Centre of receiver's optical axis

Connection type

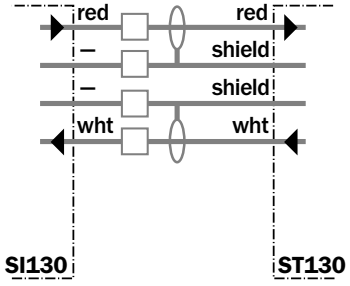
ST 130-F 43



Accessories	page
Mounting brackets*	510

* included with delivery

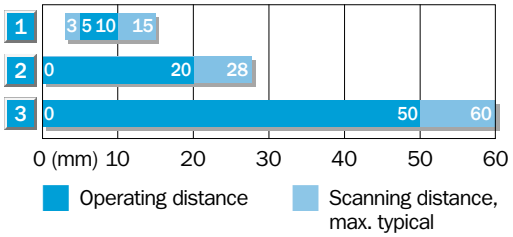
2 x 0.8 mm² shielded



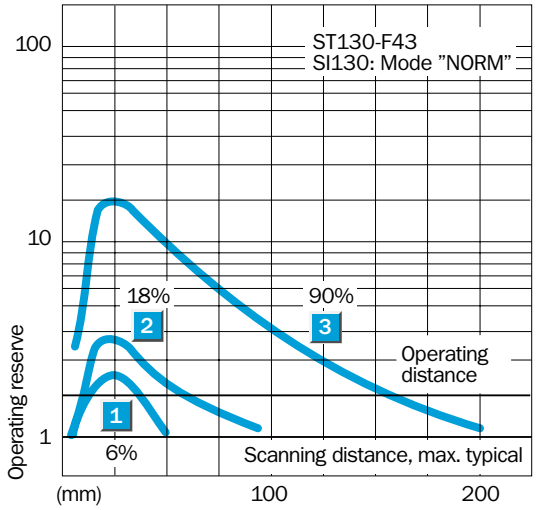
Technical data	ST 130-	F 43
Scanning distance, max. typical	0…60 mm [1]	
Operating distance	0…50 mm [1]	
Light source [2], **light type**	LED, visible red light	
Light spot size	Approx. 35 mm at 50 mm	
Angle of dispersion, sender	Approx. 38°	
Power supply and evaluation unit	ST 130 only functional in combination with separate interpreter (SI 130), see page 44	
Supply voltage V_S	See SI 130, page 44	
Switching outputs	See SI 130, page 44	
Output current I_A max.	See SI 130, page 44	
Light receiver, switching mode	See SI 130, page 44	
Response time [3]	See SI 130, page 44	
Max. switching frequency [4]	See SI 130, page 44	
Connection type	PVC cable, 2 m [5] (screened), (cannot be extended)	
VDE protection class	III	
Circuit protection [6]	A	
Enclosure rating	IP 66	
Ambient temperature T_A	Operation – 25 °C…+ 55 °C	
	Storage – 40 °C…+ 70 °C	
Weight with cable 2 m	ST 130-S 33: approx. 23 g	
	ST 130-F 43: approx. 20 g	
Housing material	Housing: ABS/optics: PC	

1) Object with 90 % remission (based on standard white to DIN 5033)
2) Average service life 100,000 h at T_A = + 25 °C
3) Signal transit time with resistive load
4) With light/dark ratio 1:1
5) Do not bend below 0 °C
6) A = V_S connections reverse-polarity protected

Scanning distance



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



Order information

Type	Part no.
ST 130-F 43	6 011 082