



# S5 / SL5 ST

## M18 TUBULAR SINGLE BEAM INFRARED AND LASER SAFETY SENSORS



Photoelectric tubular M18 safety sensor to be used in combination with safety units SG-BWS

- Emitter-receiver photocells with test input
- Visible red class 1 laser emission (SL5) or infrared LED emission (S5)

- Type 2 and Type 4 models
- Plastic M18 tubular format
- Up to 40m operating distance
- Standard M12 connectors



## CODE DESCRIPTION

**S5** - **5** - **G8-62** - **SG** - **ST2**

series	<b>S5</b>	M18 Photoelectric infrared sensor
	<b>SL5</b>	M18 Laser infrared sensor
supply type	<b>5</b>	10...30 Vdc
function	<b>G8-62</b>	Infrared emitter
	<b>F8-92</b>	Infrared receiver
	<b>G-82</b>	Laser emitter
	<b>F-92</b>	Laser receiver
safety connectivity	<b>SG</b>	to be used with SG-BWS safety unit
type	<b>ST2</b>	type 2
	<b>ST4</b>	type 4

# S5 / SLS ST TECHNICAL SPECIFICATIONS

SAFETY SENSORS

S5-5-\*-\*8-\*\*-ST\*



## GENERAL DATA

Operating principle	Emitter, Receiver
Control units to be used	SG-BWS-T4 Series

## DETECTION CAPABILITIES

Nominal sensing distance	0 ... 8 m
Controlled height	Single-beam

## EMISSION DATA

Emission	LED Infrared
Effective beam angle	$\leq \pm 2.5^\circ$ (S5-5-*8-**-SG-ST4), $\leq \pm 5^\circ$ (S5-5-*8-**-SG-ST2)

## SAFETY PARAMETERS

Type	2 (S5-5-*8-*2-SG-ST2), 4 (S5-5-*8-*2-SG-ST4)
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## INPUT/OUTPUT

Response time	1 ms
Output type	PNP
Output function	To be connected to SG-BWS-T4 Safety Control Unit Series

## HMI/UI

LED indicators	Green (Power ON)
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## ELECTRICAL DATA

Supply voltage	24 Vdc $\pm 15\%$
Maximum No-load absorption	30mA
Maximum DC load current	100 mA
Insulation resistance	$>20 \text{ M}\Omega$ 500 Vdc, between electronics and housing
Ground resistivity	500 Vac 1 min., between electronics and housing

## MECHANICAL DATA

Dimensions	M18x1 / L=73.5 mm
Housing material	PBT / PMMA
Active part material	PMMA

## CERTIFICATIONS

Shocks	16 ms (10 G) 1,000 shocks per axis (EN 60068-2-29)
Vibrations	Width 0.35 mm, frequency 10 ... 55Hz; 20 sweep per axis, 1 octave/min (EN 60068-2-6)

## ENVIRONMENTAL DATA

Operating Temperature	-25 ... 55 °C (Without freeze)
Mechanical Protection	IP67
Storage temperature max.	-25 ... 70 °C
Shocks and vibrations	IEC60068-2-6
Ambient light immunity	according to EN 60947-5-2 : 2020

## TECHNICAL SPECIFICATIONS

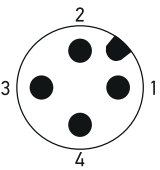
SL5-5-\*-\*\*-SG-ST\*

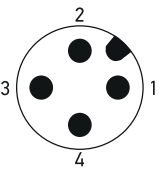


GENERAL DATA	
Operating principle	Emitter, Receiver
Control units to be used	SG-BWS-T4 Series
DETECTION CAPABILITIES	
Nominal sensing distance	0 ... 40 m
Controlled height	Single-beam
EMISSION DATA	
Emission	LASER Red
Effective beam angle	$\leq \pm 2.5^\circ$ (SL5-5-*-**-SG-ST4)
SAFETY PARAMETERS	
Type	4 (SL5-5-*-**2-SG-ST4)
INPUT/OUTPUT	
Response time	1 ms
Output type	PNP
Output function	To be connected to SG-BWS-T4 Safety Control Unit Series
HMI/UI	
LED indicators	Green (Power ON)
ELECTRICAL DATA	
Supply voltage	24 Vdc $\pm 15\%$
Maximum No-load absorption	35mA
Maximum DC load current	100 mA
Insulation resistance	$>20 \text{ M}\Omega$ 500 Vdc, between electronics and housing
Ground resistivity	500 Vac 1 min., between electronics and housing
MECHANICAL DATA	
Dimensions	M18x1 / L=86 mm
Housing material	ABS / PMMA
Active part material	PMMA
CERTIFICATIONS	
Shocks	16 ms (10 G) 1,000 shocks per axis (EN 60068-2-29)
Vibrations	Width 0.35 mm, frequency 10 ... 55Hz; 20 sweep per axis, 1octave/min (EN 60068-2-6)
ENVIRONMENTAL DATA	
Operating Temperature	-10 ... 50 °C (Without freeze)
Mechanical Protection	IP67
Storage temperature max.	-25 ... 70 °C
Shocks and vibrations	IEC60068-2-6
Ambient light immunity	according to EN 60947-5-2 : 2020

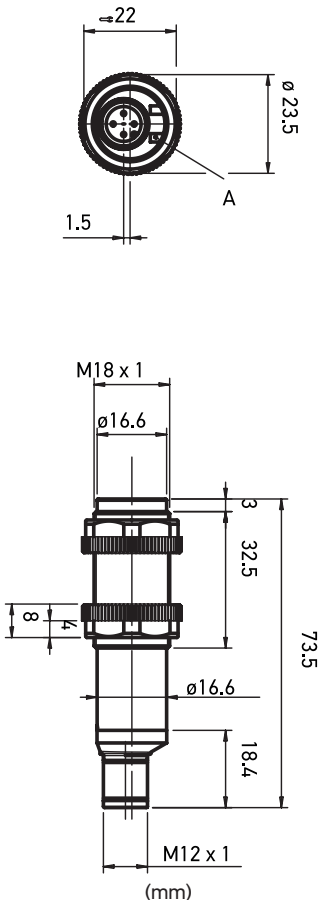
## AVAILABLE MODELS

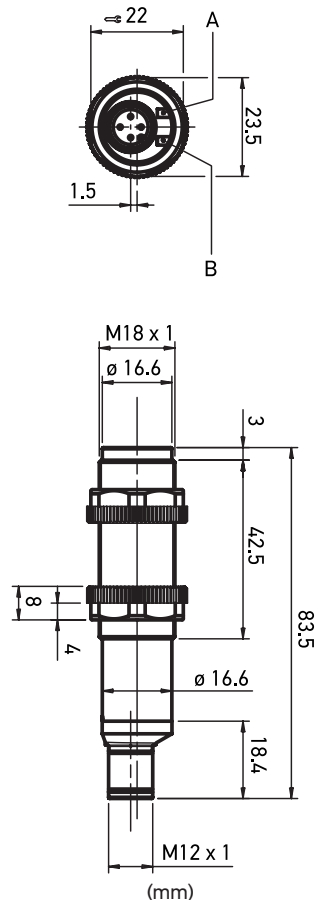
Emission	Type	e_prodotto_distanza_di_rilevazione_nominale	Housing material	Operating principle	Model
LED Infrared	2	0 ... 8 m	PBT / PMMA	Emitter	<b>S5-5-G8-62-SG-ST2</b> (952051870)
n/a				Receiver	<b>S5-5-F8-92-SG-ST2</b> (952051890)
LED Infrared	4			Emitter	<b>S5-5-G8-62-SG-ST4</b> (952051910)
n/a				Receiver	<b>S5-5-F8-92-SG-ST4</b> (952051930)
LASER Red	4	0 ... 40 m	ABS / PMMA	Emitter	<b>SL5-5-G-82-SG-ST4</b> (952501160)
n/a				Receiver	<b>SL5-5-F-92-SG-ST4</b> (952501170)

S*5-G*-*2-SG-ST* (Emitter)			
	1	Brown	24 Vdc
	2	White	NOT USED
	3	Blue	0 V
	4	Black	Test
	MALE M12 4 pins Safety Single Beam Emitter		

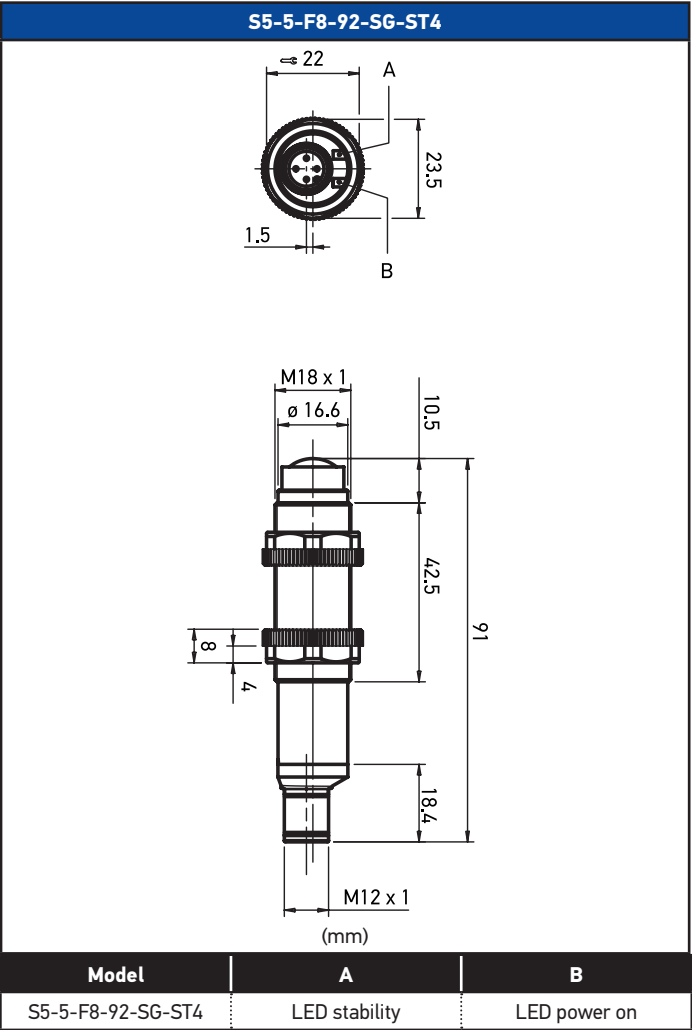
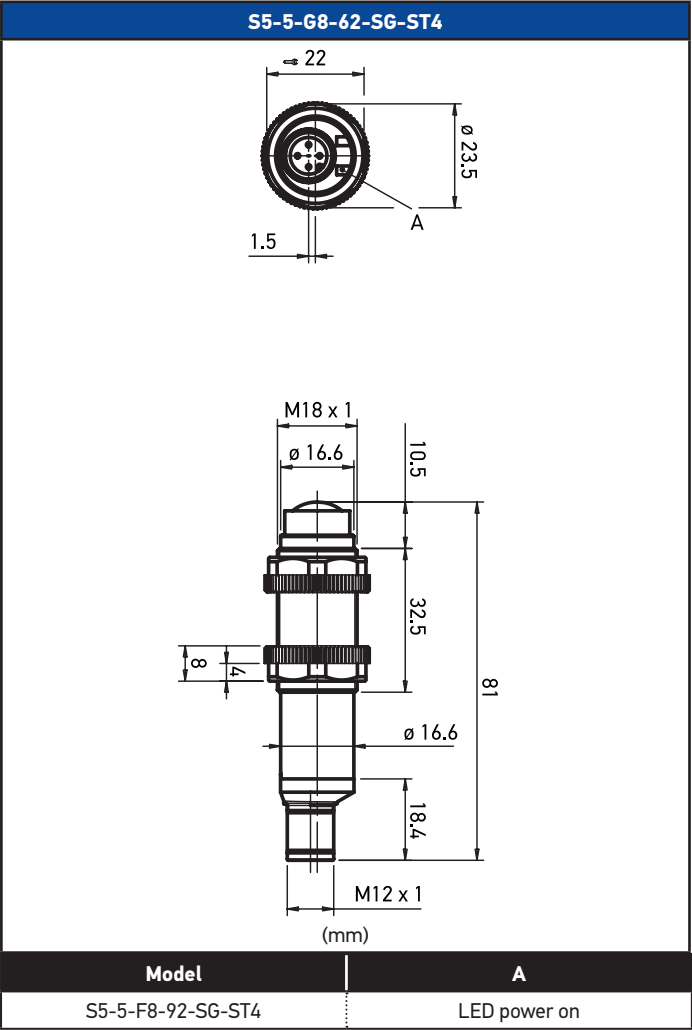
S*5-5-F-92-SG-ST* (Receiver)			
	1	Brown	24 Vdc
	2	White	NOT USED
	3	Blue	0 V
	4	Black	PNP 100 mA
	MALE M12 4 pins Safety Single Beam Receiver		

MECHANICAL DRAWINGS

S5-5-G8-62-SG-ST2	
	
Model	A
S5-5-G8-62-SG-ST2	LED power on

S5-5-F8-92-SG-ST2		
		
Model	A	B
S5-5-F8-92-SG-ST2	LED stability	LED power on

MECHANICAL DRAWINGS



## SAFETY SENSORS

Technical drawing of the SL5-5-F-92-SG-ST4 LED strip light, showing dimensions in millimeters (mm).

**Top View Dimensions:**

- Overall width: 22 mm
- Distance from top edge to center of LED chip: 23.5 mm
- Distance from bottom edge to center of LED chip: 1.5 mm
- Labels A and B indicate specific points on the top view.

**Side View Dimensions:**

- Top mounting hole: M18 x 1
- Top mounting hole diameter:  $\varnothing 16.6$
- Distance from top mounting hole to first LED chip: 10.5 mm
- Distance between LED chips: 42.5 mm
- Distance from bottom of LED chip to bottom mounting hole: 18.4 mm
- Bottom mounting hole: M12 x 1
- Overall length: 91 mm
- Distance from bottom mounting hole to bottom of LED chip: 4 mm
- Distance from bottom mounting hole to top of LED chip: 8 mm

	Model	Description	Article code
Cables	CS-A1-02-U-03	Cable M12 4 poles axial female unshielded 3m UL 2464	95ASE1120
	CS-A1-02-U-05	Cable M12 4 poles axial female unshielded 5m UL 2464	95ASE1130
	CS-A1-02-U-10	Cable M12 4 poles axial female unshielded 10m UL 2464	95ASE1140
	CS-A1-02-U-15	Cable M12 4 poles axial female unshielded 15m UL 2464	95ASE1150
	CS-A1-02-U-25	Cable M12 4 poles axial female unshielded 25m UL 2464	95ASE1160
Mounting brackets	SP-40	SP-40 = Tubular mounting bracket	95ACC1370
	ST 18-C	Bracket M18 90°	ST 18-C
	MICRO-18	MICRO-18 = M18 support with micrometric regulation for tubular M18 sensors	95ACC1380
	SWING-18	SWING-18 = adjustable support for M18 tubular sensors	895000006

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