Datalogic Safety Light Curtains ◆DATALOGIC

Specification	SG4-14 Base Series	SG4-30 Base Series	SG4-14 Advanced Series	SG4-30 Advanced Series
Description	Finger Protection, 14mm resolution	Hand Protection, 30mm resolution	Finger Protection, 14mm resolution	Hand Protection, 30mm resolution
Protected Height	150 to 900mm (5.91 to 35.43 in)	300 to 1800mm (11.81 to 70.81 in)	300 to 750mm (11.81 to 29.52 in) (No Dead Zone)	300 to 1800mm (11.81 to 70.87 in) (No Dead Zone)
Safety Level	Cat.4, PLe (EN/ISO 13849-1) Type 4 (IEC 61496-1/2)	Cat.4, PLe (EN/ISO 13849-1) Type 4 (IEC 61496-1/2)	Cat.4, PLe (EN/ISO 13849-1) Type 4 (IEC 61496-1/2)	Cat.4, PLe (EN/ISO 13849-1) Type 4 (IEC 61496-1/2)
Operating Range	0.2 to 6m (0.66 to 19.68 ft)	0.2 to 19m (0.66 to 63.34 ft)	0.2 to 4m (0.66 to 13.12 ft) 0.2 to 7m (0.66 to 22.97 ft) (Selectable)	0.2 to 12m (0.66 to 39.32 ft) 0.2 to 20m (0.66 to 65.62 ft) (Selectable)
Output State	N.C.	N.C.	N.C.	N.C.
Logic Output	Dual PNP outputs, short-circuit protected	Dual PNP outputs, short-circuit protected	Dual PNP / NPN configurable outputs short-circuit protected	Dual PNP / NPN configurable outputs short-circuit protected
Connection Type	Sender: 4-pole, M12 connector Receiver: 8-pole, M12 connector	Sender: 4-pole, M12 connector Receiver: 8-pole, M12 connector	Sender: M12 5-pole connector Receiver: M12 12 poles + M12 5 poles for muting applications M12 12 poles for blanking applications	Sender: M12 5-pole connector Receiver: M12 12 poles + M12 5 poles for muting applications M12 12 poles for blanking applications
Supply Voltage	24VDC ± 20%	24VDC ± 20%	24VDC ± 20%	24VDC ± 20%
Rating	IEC IP65	IEC IP65	IEC IP65	IEC IP65

Datalogic Safety Light Curtains Base Series, Finger-safe

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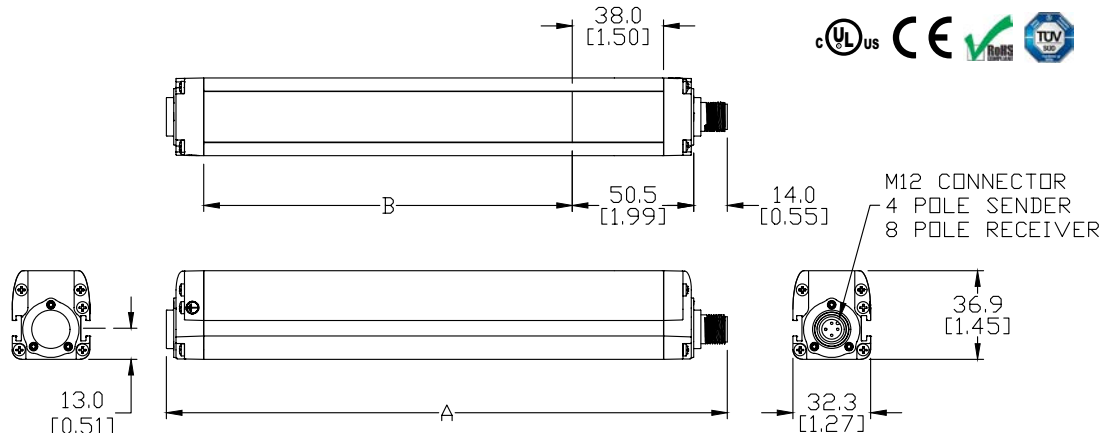## Safety light curtain with 14mm resolution

- Includes both sender and receiver
- Integrated light curtain for finger protection
- Operating distance up to 6m
- Protected heights ranging from 150 to 900 mm (5.91 to 35.43 in)
- Compact 32 x 37 mm (1.25 x 1.46 in) profile

- Selectable EDM (external device monitoring)
- Selectable manual / automatic restart
- IP65 rated
- Type 4, PLe, SIL3
- UL, CE, TUV and RoHS compliant

SG4-14 Base Series with EDM Selection Table

Part Number	Price	Protected Height B mm[in]	Total Height A mm[in]	Number of Beams	Response Time [ms]	Approximate Product Weight per Unit - kg [lb]
SG4-14-015-OO-E	$551.00	150 [5.91]	233.3 [9.81]	16	11	1.40 [3.09]
SG4-14-030-OO-E	$730.00	300 [11.81]	383.2 [15.09]	32	15	2.10 [4.63]
SG4-14-045-OO-E	$947.00	450 [17.72]	533.2 [20.99]	48	18	2.60 [5.73]
SG4-14-060-OO-E	$1,162.00	600 [23.62]	683.2 [26.90]	64	22	3.00 [6.61]
SG4-14-075-OO-E	$1,354.00	750 [29.53]	833.2 [32.80]	80	25	4.00 [8.82]
SG4-14-090-OO-E	$1,579.00	900 [35.43]	983.2 [38.71]	96	29	4.30 [9.48]

Dimensions
mm [in]

38.0 [1.50]

B

50.5 [1.99]

14.0 [0.55]

M12 CONNECTOR
4 POLE SENDER
8 POLE RECEIVER

36.9 [1.45]

13.0 [0.51]

A

32.3 [1.27]

Connections

Receiver
M12 8-pole male connector

OSSD1
OSSD2
0V
+24VDC
RESET / RESTART
EDM
N.C. external contact
+24VDC
EDM SELECTION
+24VDC
MAN/AUTO SELECTION
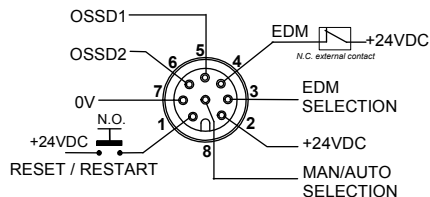
Sender
M12 4-pole male connector

N.O.
+24VDC
TEST
0V
+24VDC
NOT USED

NEED CABLES?
See Cables/Connectors in Wiring (WD) section
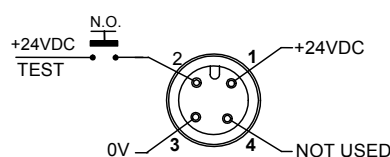
Assignment	Function	Pins on Sender
		M12
Reset / Restart	Automatic / Manual reset / Restart	1
Supply Voltage	+24VDC	2
EDM	EDM Activation	3
EDM	EDM	4
Output	OSSD1 (Output Single Switching Device)	5
Output	OSSD2 (Output Single Switching Device)	6
0V	0V	7
Reset Selection	Select Automatic / Manual reset	8

Assignment	Function	Pins on Sender
		M12
Supply Voltage	+24VDC	1
Test	Test	2
0V	0V	3
N/A	Not Used	4

Note: Confirm the specific color to each pinout based on the cable used during installation.
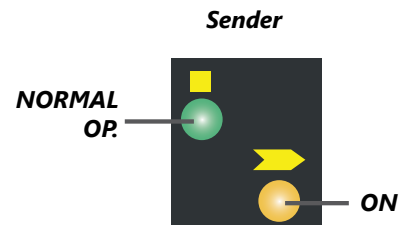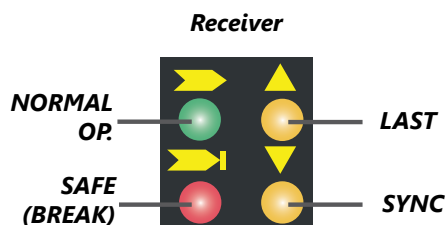
Datalogic Safety Light Curtains Base Series

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SG4-14 and SG4-30 Base Series with EDM Specifications		
Model	*SG4-14 Base Series (finger protection)*	*SG4-30 Base Series (hand protection)*
Electrical Data		
Supply Voltage	24VDC ± 20%	
Current Consumption (Sender)	2.5 W maximum	
Current Consumption (Receiver)	3.5 W maximum (without load)	
OSSD Outputs	2 PNP	
Short Circuit Protection	1.4 A maximum	
Output Current	0.5 amps maximum on each output	
Output Voltage – ON status:	Vdd-1V minimum	
Output Voltage – OFF status:	0.2 V maximum	
Leakage Current	< 1mA	
Compacitive Load	2.2 uF @ 24VDC (if a longer cable must be used, verify that the capacitive load specifications are respected)	
Protected Height	150 - 900 mm (5.91 - 35.43 in)	300 - 1800 mm (11.81 - 70.87 in)
Safety Category	Type 4, IEC 61496-1	
Auxiliary Functions	Reset / Test	
	Selectable Manual / Automatic Reset	
	Selectable EDM	
Electrical Protection	Class I / Class III	
Electrical Connections	M12 4-pole for sender	
	M12 8-pole for receiver	
Cable Length (for supply power)	50m (164ft) maximum (if a longer cable must be used, verify that the capacitive load specifications are respected)	
Optical Data		
Light Emission	Infared LED (950nm)	
Resolution	14mm	30mm
Operating Distance	0.2 - 6 m	0.2 - 19 m
Aperature Angle (EAA)	±2.5° maximum	
Ambient Light Rejection	IEC 61496-2	
Mechanical and Environmental Data		
Operating Temperature	0 to 55°C (32 to 131°F)	
Storage Temperature	-25 to 70°C (-13 to 158°F)	
Temperature Class	T6	
Humidity	15 - 95% (non-condensing)	
Mechanical Protection	IP65 (EN 60529)	
Vibrations	Width 0.35 mm	
	Frequency 10 - 55 Hz 20 sweep per axis	
	1 octave / min (EN 60068-2-6)	
Housing Material	Painted aluminum (yellow RAL 1003) front screen	
Protective Shield Material	PMMA (Polymethylmethacrylate [acrylic])	
Cap Material	PC MAKROLON	
Weight	1.3 Kg / m	
Agency Approvals	UL E226479, CE, TUV, RoHS	

To obtain the most current agency approval information, see the Agency Approval Checklist section on the specific part number's web page at www.AutomationDirect.com

Status Indicators

Receiver

NORMAL OP.
SAFE (BREAK)
LAST
SYNC

Sender

NORMAL OP.
ON

Safety Electrical Components

Datalogic Safety Light Curtains ◆DATALOGIC
Accessories

Mounting Brackets

Datalogic Safety Light Curtains Mounting Brackets Selection Guide					
Part Number	Price	Mounting Bracket Type	For Use With	Qty Per Package	Drawing
ST-K4ROT	$20.00	Rotational	SG4 Base Series (-E) light curtains	4	PDF
ST-K4ROT-SH	$66.00	Rotational	All SH4 Series light curtains	4	PDF
ST-KSTD	$10.00	Standard	All SG4 and SH4 Series light curtains	4	PDF
ST-K4OR	$47.00	Lateral orientable	All SG4 and SH4 Series light curtains	4	PDF
ST-K4AV	$20.00	Anti-vibration	All SG4 and SH4 Series light curtains	4	PDF

ST-K4ROT

ST-K4ROT-SH

ST-KSTD

ST-K4OR

ST-K4AV

Datalogic Safety Light Curtains Accessories

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Test Pieces

TP-14 and TP-30 test pieces are used to verify if the resolution of safety light curtains is maintained inside the entire detection field. TP-14 has a diameter of 14mm [0.55 in] and TP-30 has a diameter of 30mm [1.18 in]. Both models have an overall length of 300mm [11.81 in].

Safety Light Curtains Test Pieces		
Part Number	Price	Description
TP-14	$23.50	Test rod for 14mm resolution finger detection light curtains, plastic, 14mm diameter
TP-30	$25.50	Test rod for 30mm resolution hand detection light curtains, plastic, 30mm diameter

TP-14

TP-30

Safety Products

Warning: Safety products sold by AutomationDirect are Safety components only. The purchaser/installer is solely responsible for the application of these components and ensuring all necessary steps have been taken to assure each application and use meets all performance and applicable safety requirements and/or local, national and/or international safety codes as required by the application. AutomationDirect cannot certify that our products, used solely or in conjunction with other AutomationDirect or other vendors' products, will assure safety for any application. Any person using or applying any products sold by AutomationDirect is responsible for learning the safety requirements for their individual application and applying them, and therefore assumes all risks, and accepts full and complete responsibility, for the selection and suitability of the product for their respective application.

AutomationDirect does not provide design or consulting services, and cannot advise whether any specific application or use of our products would ensure compliance with the safety requirements for any application.