Datasensing
Safety Light Curtains
Basic Models, Hand Protection

DATASENSING
easing automation challenges

Safety light curtain with 30mm resolution

Features

- Includes both sender and receiver
- Integrated light curtain for hand protection
- No dead zone
- Operating distance up to 20m [65.6 ft]
- Protected heights ranging from 300 to 1800 mm [11.8 to 70.9 in]
- Compact 35 x 40 mm [1.4 x 1.6 in] profile
- Automatic restart
- IP65/IP67 rated
- Type 4, PLe, SIL3
- UL, CE and TUV Certification

Datasensing Safety Light Curtains SH4 Basic Models Selection Chart						
Part Number	Price	Protected Height	Overall Height	Number of Beams	Response Time [ms]	Drawing
SH4-30-0300-B-5	$06g6a:	300 mm [11.8 in]	309 mm [12.2 in]	12	7	PDF
SH4-30-0450-B-5	$06g6b:	450 mm [17.7 in]	459 mm [18.1 in]	18	8	PDF
SH4-30-0600-B-5	$06g6c:	600 mm [23.6 in]	609 mm [24 in]	24	9	PDF
SH4-30-0750-B-5	$-06g6i:	750 mm [29.5 in]	759 mm [29.9 in]	30	9	PDF
SH4-30-0900-B-5	$;-006g6j:	900 mm [35.4 in]	909 mm [35.8 in]	36	10	PDF
SH4-30-1050-B-5	$;006g6k:	1050 mm [41.3 in]	1059 mm [41.7 in]	42	11	PDF
SH4-30-1200-B-5	$;-006g6l:	1200 mm [47.2 in]	1209 mm [47.6 in]	48	12	PDF
SH4-30-1350-B-5	$;006g6n:	1350 mm [53.1 in]	1359 mm [53.5 in]	54	12	PDF
SH4-30-1500-B-5	$;006g6o:	1500 mm [59.1 in]	1509 mm [59.4 in]	60	13	PDF
SH4-30-1650-B-5	$;006g6p:	1650 mm [65 in]	1659 mm [65.3 in]	66	14	PDF
SH4-30-1800-B-5	$;006g6q:	1800 mm [70.9 in]	1809 mm [71.2 in]	72	14	PDF

Connections

Receiver

Pin	1 BROWN	24 Vdc	POWER
2	WHITE	OSSD1	SAFE OUTPUT
3	BLUE	0 Vdc	POWER
4	BLACK	OSSD2	SAFE OUTPUT
5	GREY	N/A	

5-pin M12 Connector

Pin	Description	Cable Color
1	+24VDC	Brown
2	OSSD 1 (Output Signal Switching Device)	White
3	0VDC	Blue
4	OSSD 1 (Output Signal Switching Device)	Black
5	Communications (not used with these models)	Grey

Transmitter (Sender)

1	BROWN	24 Vdc	POWER
2	WHITE	N/A	
3	BLUE	0 Vdc	POWER
4	BLACK	N/A	
5	GREY	N/A	

5-pin M12 Connector

Pin	Description	Cable Color
1	+24VDC	Brown
2	Not used	White
3	0VDC	Blue
4	Not used	Black
5	Not used	Grey

Note: Cable color represents standard industrial pinout. Confirm the specific color and pinout during installation.

Datasensing
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Basic Models

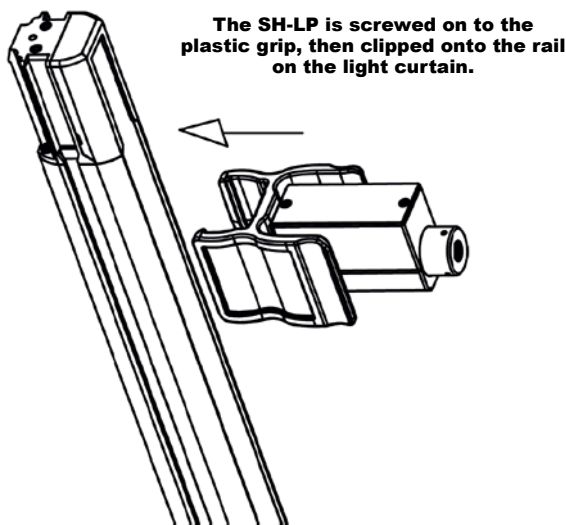| SH4-14 and SH4-30 Basic Models		
Model	**SH4-14 Basic Models (Finger Protection)**	**SH4-30 Basic Models (Hand Protection)**
Electrical Data		
Supply Voltage	24VDC ± 20%	
Current Consumption (Sender)	3.5 W maximum	
Current Consumption (Receiver)	5.5 W maximum (without load)	
OSSD Outputs	2, with short-circuit protection	
Short Circuit Protection	Self-resetting	
Output Current	0.25 amps max on each output 0.5 A max total outputs	
Output Voltage – ON status:	1V minimum	
Output Voltage – OFF status:	0.2 V maximum	
Leakage Current	< 1mA	
Capacitive Load	1 uF @ 24VDC	
Safety Category	Type 4 (IEC 61496-1) / PLe (EN ISO13849-1) / SIL 3 (IEC 61508)	
Auxiliary Functions	Automatic restart	
Electrical Protection	Class III	
Electrical Connections	M12 5-pole for transmitter	
	M12 5-pole for receiver	
Cable Length (for supply power)	30m [98ft] maximum	
Optical Data		
Light Emission	Infrared LED (850nm wavelength)	
Resolution	Finger 14mm [0.55 in]	Hand 30mm [1.18 in]
Operating Distance	0.2 - 10 m [0.7 - 32.8 ft]	0.2 - 20 m [0.7 - 65.6 ft]
Aperture Angle (EAA)	< ± 2.5° maximum @ 3m [3.8 ft]	
Mechanical and Environmental Data		
Operating Temperature	-30 to 55°C [-22 to 131°F]	
Storage Temperature	-30 to 70°C [-22 to 158°F]	
Temperature Class	T6	
Humidity	15 - 95% (non-condensing)	
Mechanical Protection	IP65/IP67 (EN 60529)	
Vibration Resistance	10mm/3g with a frequency of 5 to 150 Hz	
Housing Material	Painted aluminum (yellow RAL 1003)	
Window Material	MAKROLON AR 7099 clear PC	
Cap Material	PBT (polybutylene terephthalate)	
Weight	1.4 Kg/m [0.94 lb/ft] (single bar weight)	
Agency Approvals	UL, CE, TUV	

Datasensing Safety Light Curtains Accessories

SH-LP

SH-PLUG-5

SH-PLUG-8

Datasensing Safety Light Curtains Accessories			
Part Number	Price	Description	Use With
SH-LP	$06g77:	Laser alignment tool for class 2 laser, range up to 50 meters, 1 AAA battery included	SH4 series light curtain models
SH-PLUG-5	$6g78:	Replacement cable, 5-pin M12 quick disconnect	SH4 Basic Models transmitter SH4 Basic Models receiver SH4 Standard Models transmitter
SH-PLUG-8	$6g79:	Replacement cable, 8-pin M12 quick disconnect	SH4 Standard Models receiver

Installing the SH-LP

The SH-LP is screwed on to the plastic grip, then clipped onto the rail on the light curtain.

Safety Electrical Components

Datalogic Safety Light Curtains Accessories ◆DATALOGIC

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	$10ba:	Rotational	SG4 Base Series (-E) light curtains	4	PDF
ST-K4ROT-SH	$6g7a:	Rotational	All SH4 Series light curtains	4	PDF
ST-KSTD	$10bb:	Standard	All SG4 and SH4 Series light curtains	4	PDF
ST-K4OR	$10b9:	Lateral orientable	All SG4 and SH4 Series light curtains	4	PDF
ST-K4AV	$10b8:	Anti-vibration	All SG4 and SH4 Series light curtains	4	PDF

ST-K4ROT

ST-K4ROT-SH

ST-KSTD

ST-K4OR

ST-K4AV

For the latest prices, please check AutomationDirect.com.

Datalogic Safety Light Curtains Accessories

◇DATALOGIC

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	$;10bf:	Test rod for 14mm resolution finger detection light curtains, plastic, 14mm diameter
TP-30	$10bg:	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.*

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