

Datasensing Safety Light Curtains Standard Models, Finger Protection



Safety light curtain with 14mm resolution

Features

- Includes both sender and receiver
- Integrated light curtain for finger protection
- No dead zone
- Operating distance up to 10m [32.8 ft]
- Protected heights ranging from 300 to 1200 mm [11.8 to 47.2 in]
- Compact 35 x 40 mm [1.4 x 1.6 in] profile
- Manual/automatic restart
- Reset input
- External device monitoring (EDM)
- Alignment mode
- IP65/IP67 rated
- Type 4, PLe, SIL3
- UL, CE and TUV certification



Datasensing Safety Light Curtains SH4 Standard Models Selection Chart

Part Number	Price	Protected Height	Overall Height	Number of Beams	Response Time (ms)	Drawing
SH4-14-0300-S-8	\$06g6s:	300mm [11.8 in]	309mm [12.2 in]	30	9	PDF
SH4-14-0450-S-8	\$,06g6t:	450mm [17.7 in]	459mm [18.1 in]	45	10	PDF
SH4-14-0600-S-8	\$,006g6u:	600mm [23.6 in]	609mm [24 in]	60	12	PDF
SH4-14-0750-S-8	\$,006g6v:	750mm [29.5 in]	759mm [29.9 in]	75	13	PDF
SH4-14-0900-S-8	\$,006g6x:	900mm [35.4 in]	909mm [35.8 in]	90	15	PDF
SH4-14-1050-S-8	\$,006g6y:	1050mm [41.3 in]	1059mm [41.7 in]	105	16	PDF
SH4-14-1200-S-8	\$,006g6z:	1200mm [47.2 in]	1209mm [47.6 in]	120	18	PDF

Connections

Receiver



8-pin M12 Connector

1	WHITE	RESTART/RESET	INPUT
2	BROWN	24Vdc	POWER
3	GREEN	EDM / SELECTION	INPUT
4	YELLOW	EDM	INPUT
5	GREY	OSSD1	SAFE OUTPUT
6	PINK	OSSD2	SAFE OUTPUT
7	BLUE	0 Vdc	POWER
8	RED	MAN/AUTO SELECTION	INPUT

Transmitter (Sender)



5-pin M12 Connector

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

Pin	Description	292 Cable	295 Cable	Pin on Receiver
1	Restart/Reset	White	Brown	1
2	+24VDC	Brown	White	2
3	EDM selection	Green	Blue	3
4	EDM signal	Yellow	Black	4
5	OSSD 1 (Output Signal Switching Device)	Grey	Grey	5
6	OSSD 2 (Output Signal Switching Device)	Pink	Pink	6
7	0VDC	Blue	Violet	7
8	Manual/Auto reset function	Red	Orange	8

Pin	Description	Wire Color	Pin on Receiver
1	+24VDC	Brown	1
2	TEST signal	White	2
3	0VDC	Blue	3
4	Not used	Black	4
5	Not used	Grey	5

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

Datasensing Safety Light Curtains Standard Models



SH4-14, SH4-30, and SH4 Body Standard Models			
Model	SH4-14 Standard Models (Finger Protection)	SH4-30 Standard Models (Hand Protection)	SH4-3-0800 or SH4-4-xxxx (Body 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 (configured by wiring)	Reset/test Selectable manual/automatic restart Selectable EDM Alignment mode		
Electrical Protection	Class III		
Electrical Connections	M12 5-pole for sender		
	M12 8-pole for receiver		
Cable Length	30m [98ft] maximum		30m [98ft] maximum for receiver 50m [164ft] maximum for transmitter
Optical Data			
Light Emission	Infrared LED (850nm wavelength)		
Resolution	Finger 14mm [0.55 in]	Hand 30mm [1.18 in]	Body SH4-4-1200-xx-x-x = 400mm [15.75 in] SH4-4-0900-xx-x-x = 300mm [11.81 in] SH4-3-0800-xx-x-x = 400mm [15.75 in]
Operating Distance	0.2 - 10 m [0.7 - 32.8 ft]	0.2 - 20 m [0.7 - 65.6 ft]	Short range (default) = 0.5 to 15 m [2 to 49 ft] Long range (selectable) = 5 to 70 m [15 to 229 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



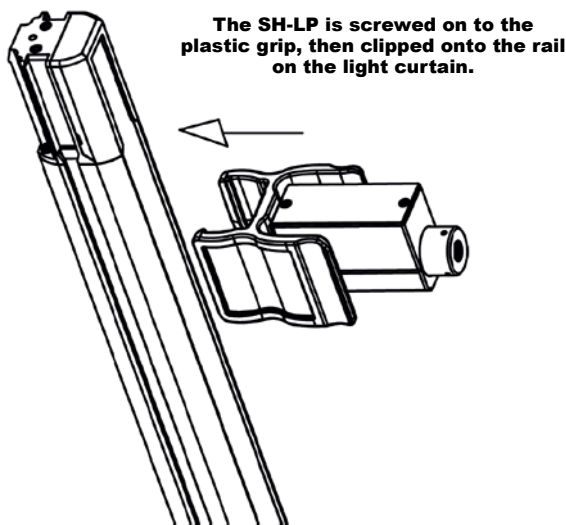
SH-PLUG-5



SH-PLUG-8

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

Installing the SH-LP



Datalogic Safety Light Curtains

Accessories

Mounting Brackets

Datalogic Safety Light Curtains Mounting Brackets Selection Guide

Part Number	Price	Mounting Bracket Type	For Use With	Qty Per Package	Drawing
<u>ST-K4ROT</u>	\$10ba:	Rotational	SG4 Base Series (-E) light curtains	4	<u>PDF</u>
<u>ST-K4ROT-SH</u>	\$6g7a:	Rotational	All SH4 Series light curtains	4	<u>PDF</u>
<u>ST-KSTD</u>	\$10bb:	Standard	All SG4 and SH4 Series light curtains	4	<u>PDF</u>
<u>ST-K4OR</u>	\$10b9:	Lateral orientable	All SG4 and SH4 Series light curtains	4	<u>PDF</u>
<u>ST-K4AV</u>	\$10b8:	Anti-vibration	All SG4 and SH4 Series light curtains	4	<u>PDF</u>



[ST-K4ROT](#)



[ST-K4ROT-SH](#)



[ST-KSTD](#)



[ST-K4OR](#)



[ST-K4AV](#)

Datalogic Safety Light Curtains Accessories



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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