

# Datasensing Safety Light Curtains Basic Models, Hand Protection



## 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             |
|---------------------------------|------------|-------------------|-------------------|-----------------|--------------------|---------------------|
| <a href="#">SH4-30-0300-B-5</a> | \$602.00   | 300 mm [11.8 in]  | 309 mm [12.2 in]  | 12              | 7                  | <a href="#">PDF</a> |
| <a href="#">SH4-30-0450-B-5</a> | \$726.00   | 450 mm [17.7 in]  | 459 mm [18.1 in]  | 18              | 8                  | <a href="#">PDF</a> |
| <a href="#">SH4-30-0600-B-5</a> | \$849.00   | 600 mm [23.6 in]  | 609 mm [24 in]    | 24              | 9                  | <a href="#">PDF</a> |
| <a href="#">SH4-30-0750-B-5</a> | \$899.00   | 750 mm [29.5 in]  | 759 mm [29.9 in]  | 30              | 9                  | <a href="#">PDF</a> |
| <a href="#">SH4-30-0900-B-5</a> | \$1,014.00 | 900 mm [35.4 in]  | 909 mm [35.8 in]  | 36              | 10                 | <a href="#">PDF</a> |
| <a href="#">SH4-30-1050-B-5</a> | \$1,128.00 | 1050 mm [41.3 in] | 1059 mm [41.7 in] | 42              | 11                 | <a href="#">PDF</a> |
| <a href="#">SH4-30-1200-B-5</a> | \$1,245.00 | 1200 mm [47.2 in] | 1209 mm [47.6 in] | 48              | 12                 | <a href="#">PDF</a> |
| <a href="#">SH4-30-1350-B-5</a> | \$1,359.00 | 1350 mm [53.1 in] | 1359 mm [53.5 in] | 54              | 12                 | <a href="#">PDF</a> |
| <a href="#">SH4-30-1500-B-5</a> | \$1,475.00 | 1500 mm [59.1 in] | 1509 mm [59.4 in] | 60              | 13                 | <a href="#">PDF</a> |
| <a href="#">SH4-30-1650-B-5</a> | \$1,589.00 | 1650 mm [65 in]   | 1659 mm [65.3 in] | 66              | 14                 | <a href="#">PDF</a> |
| <a href="#">SH4-30-1800-B-5</a> | \$1,705.00 | 1800 mm [70.9 in] | 1809 mm [71.2 in] | 72              | 14                 | <a href="#">PDF</a> |

## Connections

### Receiver



5-pin M12 Connector

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

### Transmitter (Sender)



5-pin M12 Connector

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

| 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        |

| 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

## Safety Light Curtains

### 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<br>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) / PL <sub>e</sub> (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<br>14mm [0.55 in]                                                   | Hand<br>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**



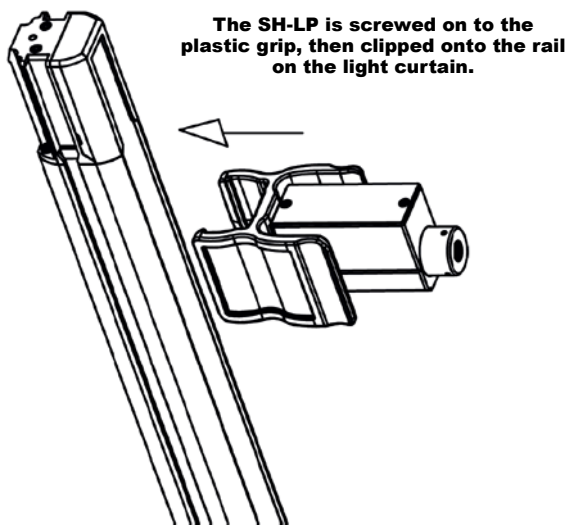
**SH-PLUG-5**



**SH-PLUG-8**

| Datasensing Safety Light Curtains Accessories |          |                                                                                       |                                                                                              |
|-----------------------------------------------|----------|---------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------|
| Part Number                                   | Price    | Description                                                                           | Use With                                                                                     |
| <b><u>SH-LP</u></b>                           | \$264.00 | Laser alignment tool for class 2 laser, range up to 50 meters, 1 AAA battery included | SH4 series light curtain models                                                              |
| <b><u>SH-PLUG-5</u></b>                       | \$53.00  | Replacement cable, 5-pin M12 quick disconnect                                         | SH4 Basic Models transmitter<br>SH4 Basic Models receiver<br>SH4 Standard Models transmitter |
| <b><u>SH-PLUG-8</u></b>                       | \$85.00  | 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                    |
|------------------------------------|---------|-----------------------|---------------------------------------|-----------------|----------------------------|
| <a href="#"><u>ST-K4ROT</u></a>    | \$20.00 | Rotational            | SG4 Base Series (-E) light curtains   | 4               | <a href="#"><u>PDF</u></a> |
| <a href="#"><u>ST-K4ROT-SH</u></a> | \$66.00 | Rotational            | All SH4 Series light curtains         | 4               | <a href="#"><u>PDF</u></a> |
| <a href="#"><u>ST-KSTD</u></a>     | \$10.00 | Standard              | All SG4 and SH4 Series light curtains | 4               | <a href="#"><u>PDF</u></a> |
| <a href="#"><u>ST-K4OR</u></a>     | \$47.00 | Lateral orientable    | All SG4 and SH4 Series light curtains | 4               | <a href="#"><u>PDF</u></a> |
| <a href="#"><u>ST-K4AV</u></a>     | \$20.00 | Anti-vibration        | All SG4 and SH4 Series light curtains | 4               | <a href="#"><u>PDF</u></a> |



**[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                                                                          |
| <u><b>TP-14</b></u>               | \$23.50 | Test rod for 14mm resolution finger detection light curtains, plastic, 14mm diameter |
| <u><b>TP-30</b></u>               | \$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.*

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