

# Datalogic Safety Light Curtains

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



# Datalogic Safety Light Curtains

## Base Series, Hand-safe



### Safety light curtain with 30mm resolution

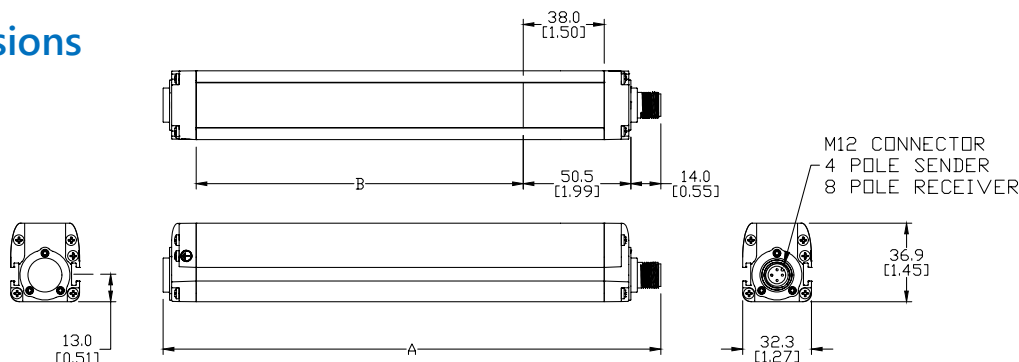
- Includes both sender and receiver
- Integrated light curtain for hand protection
- Operating distance up to 19m
- Protected heights ranging from 300 to 1800 mm (11.81 to 70.87 in)
- Selectable EDM (external device monitoring)
- Selectable manual / automatic restart
- IP65 rated
- Type 4, PLe, SIL3
- UL, CE, TUV and RoHS compliant

### SG4-30 Base Series with EDM Selection Table

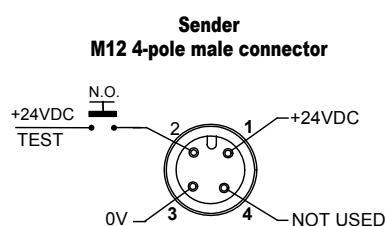
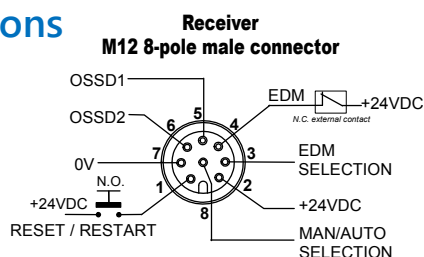
| Part Number                     | Price      | Protected Height<br>B<br>mm[in] | Total Height<br>A<br>mm[in] | Number<br>of Beams | Response Time<br>[ms] | Approximate<br>Product Weight<br>per Unit - kg [lb] |
|---------------------------------|------------|---------------------------------|-----------------------------|--------------------|-----------------------|-----------------------------------------------------|
| <a href="#">SG4-30-030-OO-E</a> | \$653.00   | 300 [11.81]                     | 383.2 [15.09]               | 16                 | 11                    | 2.10 [4.63]                                         |
| <a href="#">SG4-30-045-OO-E</a> | \$779.00   | 450 [17.72]                     | 533.2 [20.99]               | 24                 | 13                    | 2.60 [5.73]                                         |
| <a href="#">SG4-30-060-OO-E</a> | \$903.00   | 600 [23.62]                     | 683.2 [26.90]               | 32                 | 14                    | 3.00 [6.61]                                         |
| <a href="#">SG4-30-075-OO-E</a> | \$1,004.00 | 750 [29.53]                     | 833.2 [32.80]               | 40                 | 16                    | 4.00 [8.82]                                         |
| <a href="#">SG4-30-090-OO-E</a> | \$1,107.00 | 900 [35.43]                     | 983.2 [38.71]               | 48                 | 18                    | 4.30 [9.48]                                         |
| <a href="#">SG4-30-105-OO-E</a> | \$1,236.00 | 1050 [41.34]                    | 1133.2 [44.61]              | 56                 | 19                    | 5.00 [11.02]                                        |
| <a href="#">SG4-30-120-OO-E</a> | \$1,320.00 | 1200 [47.24]                    | 1283.3 [50.52]              | 64                 | 21                    | 5.40 [11.91]                                        |
| <a href="#">SG4-30-135-OO-E</a> | \$1,454.00 | 1350 [53.15]                    | 1433.2 [56.43]              | 72                 | 23                    | 6.20 [13.67]                                        |
| <a href="#">SG4-30-150-OO-E</a> | \$1,578.00 | 1500 [59.05]                    | 1583.3 [62.33]              | 80                 | 25                    | 7.00 [15.43]                                        |
| <a href="#">SG4-30-165-OO-E</a> | \$1,720.00 | 1650 [64.96]                    | 1733.3 [68.24]              | 88                 | 26                    | 7.50 [16.54]                                        |
| <a href="#">SG4-30-180-OO-E</a> | \$1,868.00 | 1800 [70.87]                    | 1883.3 [74.15]              | 96                 | 28                    | 8.00 [17.64]                                        |

### Dimensions

mm [in]



### Connections



| Assignment             | Function                               | Pins on Sender |
|------------------------|----------------------------------------|----------------|
|                        |                                        | <b>M12</b>     |
| <b>Reset / Restart</b> | Automatic / Manual reset / Restart     | 1              |
| <b>Supply Voltage</b>  | +24VDC                                 | 2              |
| <b>EDM</b>             | EDM Activation                         | 3              |
| <b>EDM</b>             | EDM                                    | 4              |
| <b>Output</b>          | OSSD1 (Output Single Switching Device) | 5              |
| <b>Output</b>          | OSSD2 (Output Single Switching Device) | 6              |
| <b>0V</b>              | 0V                                     | 7              |
| <b>Reset Selection</b> | Select Automatic / Manual reset        | 8              |

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

Note: Confirm the specific color to each pinout based on the cable used during installation.

# Datalogic Safety Light Curtains

## Base Series

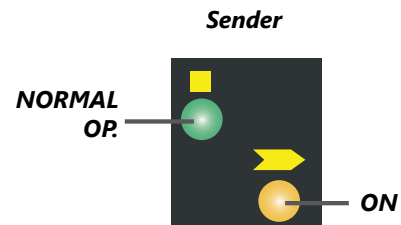
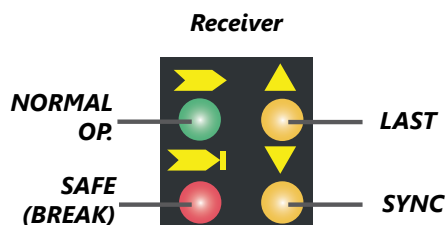


### SG4-14 and SG4-30 Base Series with EDM Specifications

| 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<br>(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<br>(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](http://www.AutomationDirect.com)

## Status Indicators



# 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.*

*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.*