



# SH4 Cascade

957920114

SH4-30-0450-C-5-5

TYPE 4 SAFETY LIGHT CURTAIN FOR SERIES  
CONNECTION WITH SH4 STANDARD MUTING OR SH4  
ADVANCED

## OVERVIEW

- Cascade model, to be used with SH4 STANDARD MUTING or SH4 ADVANCED
- Hand protection (30 mm)
- Improved operating range: 20 m
- Basic functions: alignment, automatic restart
- Extended monitored height up to 2250 mm
- Compact profile (35 x 40 mm), common to all SH4 line
- Installation eased by LEDs indications of beam intensity
- Optical synchronization with 2 beams
- IP67 Protection
- -30 ... +55 °C Operating temperature
- Zero dead zone
- Complete couple and angular bracket included in the package
- Anti-interference codes
- Cascade cables up to 10 m

## TECHNICAL FEATURES

### Detection properties

|                          |              |
|--------------------------|--------------|
| Nominal sensing distance | 0.2 ... 20 m |
| Resolution               | 30 mm        |
| controlled height        | 450 mm       |

|                          |                      |
|--------------------------|----------------------|
| number of rays           | 18                   |
| Effective Aperture Angle | $\leq \pm 2.5^\circ$ |

### Application

|                     |                                                                         |
|---------------------|-------------------------------------------------------------------------|
| Function Principle  | Emitter + Receiver                                                      |
| Available functions | Cascade Slave Unit, to be used with SH4 STANDARD MUTING or SH4 ADVANCED |
| Description         | Compact no-dead-zone CASCADE                                            |
| Functions           | Finger protection res. 14 mm slave                                      |

### Safety parameters

|       |                                  |
|-------|----------------------------------|
| Type  | Type 4 safety light curtain (SI) |
| SIL   | 3                                |
| SILCL | 3                                |
| PL    | e                                |
| MTTFd | 43 years                         |
| SFF   | 99,50%                           |

### Outputs

|               |      |
|---------------|------|
| Response time | 8 ms |
|---------------|------|

### Electrical data

|                   |                  |
|-------------------|------------------|
| Operating Voltage | 24 Vdc $\pm$ 20% |
|                   |                  |

|                                                |                                  |
|------------------------------------------------|----------------------------------|
| Load current                                   | ≤ 250mA each output              |
| Emission                                       | Infrared LED (850 nm wavelength) |
| Interference to external light                 | According to IEC 61496-2         |
| Power Consumption - Receiver                   | ≤ 4W (no load)                   |
| Power Consumption - Emitter                    | ≤ 3,5W                           |
| Capacitive Load                                | ≤ 1μF                            |
| Cabel Length (Power Supply/Output)             | ≤ 30 m                           |
| Cable Length for Master Slave Interconnections | ≤ 10 m                           |

Mechanical data

|                     |                                                                                 |
|---------------------|---------------------------------------------------------------------------------|
| Material            | Painted aluminum / MAKROLON AR 7099 Clear PC / PBT                              |
| Connections         | M12-5 poles pigtail (emitter) M12-5 poles pigtail (receiver)                    |
| Storage temperature | -30 ...+70 °C                                                                   |
| Vibrations          | 10 mm / 3 g, 5 ... 150 Hz frequency (EN 60068-2-6 / Class 3M7 IEC TR 60721-4-3) |
| Shocks              | 25 g x 6 ms x 600 (EN 60068-2-27 / Class 3M7 IEC TR 60721-4-3)                  |

Test/Approvals

|                       |                                                                                                                                              |
|-----------------------|----------------------------------------------------------------------------------------------------------------------------------------------|
| Approvals             | CE, cULus, TÜV, UKCA                                                                                                                         |
| EMC compatibility     | According to 2014/30/EU Directive                                                                                                            |
| Shocks and vibrations | 10 mm / 3g, 5 to 150 Hz frequency (EN 60068-2-6 / Class 3M7 IEC TR 60721-4-3); 25g x 6 ms x 600 (EN 60068-2-27 / Class 3M7 IEC TR 60721-4-3) |

## Accessories

|                      |                                           |
|----------------------|-------------------------------------------|
| Supplied Accessories | Standard "L" Mounting Brackets: 4 pcs kit |
|----------------------|-------------------------------------------|

|                                      |                                                  |
|--------------------------------------|--------------------------------------------------|
| Accessories to be ordered separately | Top-bottom rotating mounting bracket ST-K4ROT-SH |
|--------------------------------------|--------------------------------------------------|

## Generical Data

|            |              |
|------------|--------------|
| Dimensions | 35x40x459 mm |
|------------|--------------|

|                       |             |
|-----------------------|-------------|
| Operating Temperature | -30...+55°C |
|-----------------------|-------------|

|          |                               |
|----------|-------------------------------|
| Humidity | 15 ... 95 % (no condensation) |
|----------|-------------------------------|

|                       |                        |
|-----------------------|------------------------|
| Mechanical Protection | IP65, IP 67 (EN 60529) |
|-----------------------|------------------------|

## UNASSIGNED

|                |          |
|----------------|----------|
| Disegno 2D PDF | 2,62E-08 |
|----------------|----------|

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**date of  
printing**  
10/08/2026  
04:17:29