



# SH4

## TYPE 4 SAFETY LIGHT CURTAINS



- Complete type 4 safety light curtains line
- Finger (14 mm), hand (30 mm), or body protection
- Improved performance and features
- Compact profile (35 x 40 mm)
- Wide range scalable in Base, Standard and Advanced models
- Simultaneous muting and blanking
- Innovative wireless monitoring and configuration system
- Optical two beams synchronization and anti-interference coding
- Base functions: alignment, automatic restart
- Standard functions: manual restart, EDM
- Standard Muting functions: 2-signals mono and bidirectional muting, override
- Advanced functions: partial muting, dynamic partial muting, 4-signals muting, reduced resolution, multiple fixed or floating blanking zones
- Active/Passive version for body protection



## CODE DESCRIPTION

|                              | SH   | 4                                            | - | 14 | - | 0300 | - | SM | - | AP | - | 8 | - | 5 |
|------------------------------|------|----------------------------------------------|---|----|---|------|---|----|---|----|---|---|---|---|
| series                       | SH   | Safety light curtain                         |   |    |   |      |   |    |   |    |   |   |   |   |
| type                         | 4    | Type 4                                       |   |    |   |      |   |    |   |    |   |   |   |   |
| detection capability         | 14   | Finger: 14 mm                                |   |    |   |      |   |    |   |    |   |   |   |   |
|                              | 30   | Hand: 30 mm                                  |   |    |   |      |   |    |   |    |   |   |   |   |
|                              | 2    | Body: 2 Beams                                |   |    |   |      |   |    |   |    |   |   |   |   |
|                              | 3    | Body: 3 Beams                                |   |    |   |      |   |    |   |    |   |   |   |   |
|                              | 4    | Body: 4 Beams                                |   |    |   |      |   |    |   |    |   |   |   |   |
| monitored height             | 0300 | 300 mm                                       |   |    |   |      |   |    |   |    |   |   |   |   |
|                              | ...  |                                              |   |    |   |      |   |    |   |    |   |   |   |   |
|                              | 2250 | 2250 mm                                      |   |    |   |      |   |    |   |    |   |   |   |   |
| functionality                | B    | Base                                         |   |    |   |      |   |    |   |    |   |   |   |   |
|                              | S    | Standard                                     |   |    |   |      |   |    |   |    |   |   |   |   |
|                              | SM   | Standard muting                              |   |    |   |      |   |    |   |    |   |   |   |   |
|                              | A    | Advanced                                     |   |    |   |      |   |    |   |    |   |   |   |   |
|                              | C    | Cascade                                      |   |    |   |      |   |    |   |    |   |   |   |   |
| optical structure            |      | Emitter and receiver                         |   |    |   |      |   |    |   |    |   |   |   |   |
|                              | AP   | Active side and retroreflective passive side |   |    |   |      |   |    |   |    |   |   |   |   |
| receiver main connector      | 5    | 5-pins male M12                              |   |    |   |      |   |    |   |    |   |   |   |   |
|                              | 8    | 8-pins male M12                              |   |    |   |      |   |    |   |    |   |   |   |   |
|                              | 12   | 12-pins male M12                             |   |    |   |      |   |    |   |    |   |   |   |   |
| receiver secondary connector |      | No connector                                 |   |    |   |      |   |    |   |    |   |   |   |   |
|                              | 5    | 5-pin female M12                             |   |    |   |      |   |    |   |    |   |   |   |   |

## TECHNICAL FEATURES

|                                                                            | SH4-14-****-**-**                                                                                                                                                                                                                                                                                                                                                                                                                                               | SH4-30-****-**-**                                                                   |
|----------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
|                                                                            |                                                                                                                                                                                                                                                                                                                                                                                |  |
| Protection                                                                 | finger                                                                                                                                                                                                                                                                                                                                                                                                                                                          | hand                                                                                |
| Type ( EN61496-1 )                                                         | 4                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                                                                     |
| PL ( EN ISO 13849-1 )                                                      | e                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                                                                     |
| SIL ( IEC 61508 )                                                          | 3                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                                                                     |
| Optical structure                                                          | Emitter and Receiver                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                                                                     |
| Protected height                                                           | 300...2250 mm (with 150 mm steps)                                                                                                                                                                                                                                                                                                                                                                                                                               |                                                                                     |
| Detection capability                                                       | 14 mm                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 30 mm                                                                               |
| Operating range                                                            | 0.2 ... 10 m                                                                                                                                                                                                                                                                                                                                                                                                                                                    | 0.2 ... 20 m                                                                        |
| Operating distance using muting arms (SG-F1/G1-ARMS and SG-F2/G2-ARMS)     | 0.5 ... 7 m                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                                                                     |
| Operating distance using reflective muting arms (SH4-T-ARMS or SH4-L-ARMS) | 0.5 ... 3 m                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                                                                     |
| Dead Zone                                                                  | No dead zone                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                                                                     |
| Cascade connection                                                         | Up to 3 units                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                                                                     |
| Power supply (Vdc)                                                         | 24 Vdc ± 20%                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                                                                     |
| Transmitter consumption                                                    | 3.5 W max                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                                                                     |
| Receiver consumption                                                       | 5.5 W max (without load)                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                                                                     |
| Safe Outputs                                                               | 2 OSSD, with short circuit protection                                                                                                                                                                                                                                                                                                                                                                                                                           |                                                                                     |
| Auxiliary Outputs                                                          | 2 PNP, with short circuit protection                                                                                                                                                                                                                                                                                                                                                                                                                            |                                                                                     |
| Output current                                                             | 250 mA max / each output, 500 mA max total outputs                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                     |
| Capacitive load                                                            | 1 uF @ 24Vdc max                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                     |
| Leakage current                                                            | < 1 mA                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                                                                                     |
| Response time                                                              | from 12 to 30 ms (14 mm res)                                                                                                                                                                                                                                                                                                                                                                                                                                    | from 10 to 19 ms (30 mm res)                                                        |
| Cables length                                                              | 30 m                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                                                                     |
| Electrical protection                                                      | Class III                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                                                                     |
| Light source                                                               | Infrared LED (850 nm wavelength)                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                     |
| Effective aperture angle (EAA)                                             | < ± 2.5° at 3 m                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                     |
| Operating temperature                                                      | -30 ... +55 °C                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                                                                     |
| Storage temperature                                                        | -30 ... +70 °C                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                                                                     |
| Temperature class                                                          | T6                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                     |
| Humidity                                                                   | 15 ... 95 % (no condensation)                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                                                                     |
| Mechanical protection                                                      | IP65, IP 67 (EN 60529)                                                                                                                                                                                                                                                                                                                                                                                                                                          |                                                                                     |
| Vibrations resistance                                                      | 10 mm / 3 g, 5 ... 150 Hz frequency (EN 60068-2-6 / Class 3M7 IEC TR 60721-4-3)                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                     |
| Shock resistance                                                           | 25 g x 6 ms x 600 (EN 60068-2-27 / Class 3M7 IEC TR 60721-4-3)                                                                                                                                                                                                                                                                                                                                                                                                  |                                                                                     |
| Weight                                                                     | 1.4 Kg/m (single bar, without package)                                                                                                                                                                                                                                                                                                                                                                                                                          |                                                                                     |
| Housing Material                                                           | Painted aluminium (yellow RAL 1003)                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                     |
| Caps and covers material                                                   | PBT                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                     |
| Window material                                                            | MAKROLON AR 7099 Clear PC                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                                                                     |
| Functions BASE models (SH4-*-B-*)                                          | Automatic Restart                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                                                                     |
| Functions STANDARD models (SH4-*-S-*)                                      | Manual / Automatic Restart, Reset, External Device Monitoring (EDM), Alignment mode                                                                                                                                                                                                                                                                                                                                                                             |                                                                                     |
| Functions STANDARD MUTING models (SH4-*-SM-*)                              | Manual / Automatic Restart, Reset, External Device Monitoring (EDM), Alignment mode, 2-signals T Muting / L Muting, Muting dependent Override, Partial muting (half protection height), Muting input filtering and timeout setting, Anti-interference coding                                                                                                                                                                                                    |                                                                                     |
| Functions ADVANCED models (SH4-*-A-*)                                      | Manual / Automatic Restart, Reset, External Device Monitoring (EDM), Alignment mode, 2-signals T Muting / L Muting, Muting dependent Override, Partial muting (half protection height), Muting input filtering and timeout setting, Anti-interference coding, 4-signals Muting, Dynamic partial muting, Partial Muting (at beams level), Fixed Blanking, External signal fixed blanking teach-in, Floating Blanking, Reduced resolution, Integrated laser aimer |                                                                                     |
| Functions CASCADE models (SH4-*-C-*)                                       | Cascade models acquire the same functions of the main unit to which they are connected (STANDARD MUTING or ADVANCED)                                                                                                                                                                                                                                                                                                                                            |                                                                                     |
| Configuration BASE models (SH4-*-B-*) and STANDARD models (SH4-*-S-*)      | By Wiring                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                                                                     |
| Configuration STANDARD MUTING models (SH4-*-SM-*)                          | By DIP-Switches                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                     |
| Configuration ADVANCED models (SH4-*-A-*)                                  | By DATASENSING SH4 DESIGNER and wi-fi connection                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                     |

|                                                                            | SH4-2-0500-*-*-*                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | SH4-3-0800-*-*-* | SH4-4-****-*-*-* |
|----------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------|------------------|
|                                                                            |                                                                                                                                                                                                                                                                                                                                                                                                 |                  |                  |
| Protection                                                                 | body                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                  |                  |
| Type ( EN61496-1 )                                                         | 4                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                  |                  |
| PL ( EN ISO 13849-1 )                                                      | e                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                  |                  |
| SIL ( IEC 61508 )                                                          | 3                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                  |                  |
| Optical structure                                                          | Emitter and Receiver                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                  |                  |
| Protected height                                                           | 500 mm                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 800 mm           | 900 or 1200 mm   |
| Detection capability                                                       | 500 mm                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 400 mm           | 300 or 400 mm    |
| Operating range                                                            | Short range: 0.5 ... 15 m (default value); Long range: 5 ... 70 m (selectable)                                                                                                                                                                                                                                                                                                                                                                                                   |                  |                  |
| Operating distance using muting arms (SG-F1/G1-ARMS and SG-F2/G2-ARMS)     | 0.5 ... 7 m                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                  |                  |
| Operating distance using reflective muting arms (SH4-T-ARMS or SH4-L-ARMS) | 0.5 ... 3 m                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                  |                  |
| Dead Zone                                                                  | 130 mm Distance from bottom to first beam                                                                                                                                                                                                                                                                                                                                                                                                                                        |                  |                  |
| Cascade connection                                                         | Not possible                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                  |                  |
| Power supply (Vdc)                                                         | 24 Vdc $\pm$ 20%                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                  |                  |
| Transmitter consumption                                                    | 3.5 W max                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                  |                  |
| Receiver consumption                                                       | 5.5 W max (without load)                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                  |                  |
| Safe Outputs                                                               | 2 OSSD, with short circuit protection                                                                                                                                                                                                                                                                                                                                                                                                                                            |                  |                  |
| Auxiliary Outputs                                                          | 2 PNP, with short circuit protection                                                                                                                                                                                                                                                                                                                                                                                                                                             |                  |                  |
| Output current                                                             | 250 mA max / each output, 500 mA max total outputs                                                                                                                                                                                                                                                                                                                                                                                                                               |                  |                  |
| Capacitive load                                                            | 1 $\mu$ F @ 24Vdc max                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                  |                  |
| Leakage current                                                            | < 1 mA                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                  |                  |
| Response time                                                              | from 12 to 15 ms                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                  |                  |
| Cables length                                                              | 30 m receiver; 50 m transmitter                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                  |                  |
| Electrical protection                                                      | Class III                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                  |                  |
| Light source                                                               | Infrared LED (850 nm wavelength)                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                  |                  |
| Effective aperture angle (EAA)                                             | < $\pm$ 2.5° at 3 m                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                  |                  |
| Operating temperature                                                      | -30 ...+55 °C                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                  |                  |
| Storage temperature                                                        | -30 ...+70 °C                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                  |                  |
| Temperature class                                                          | T6                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                  |                  |
| Humidity                                                                   | 15 ... 95 % (no condensation)                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                  |                  |
| Mechanical protection                                                      | IP65, IP 67 (EN 60529)                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                  |                  |
| Vibrations resistance                                                      | 10 mm / 3 g, 5 ... 150 Hz frequency (EN 60068-2-6 / Class 3M7 IEC TR 60721-4-3)                                                                                                                                                                                                                                                                                                                                                                                                  |                  |                  |
| Shock resistance                                                           | 25 g x 6 ms x 600 (EN 60068-2-27 / Class 3M7 IEC TR 60721-4-3)                                                                                                                                                                                                                                                                                                                                                                                                                   |                  |                  |
| Weight                                                                     | 1.4 Kg/m (single bar, without package)                                                                                                                                                                                                                                                                                                                                                                                                                                           |                  |                  |
| Housing Material                                                           | Painted aluminium (yellow RAL 1003)                                                                                                                                                                                                                                                                                                                                                                                                                                              |                  |                  |
| Caps and covers material                                                   | PBT                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                  |                  |
| Window material                                                            | MAKROLON AR 7099 Clear PC                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                  |                  |
| Functions BASE models (SH4-*B-*)                                           | Automatic Restart                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                  |                  |
| Functions STANDARD models (SH4-*S-*)                                       | Manual / Automatic Restart, Reset, External Device Monitoring (EDM), Alignment mode                                                                                                                                                                                                                                                                                                                                                                                              |                  |                  |
| Functions STANDARD MUTING models (SH4-*SM-*)                               | Manual / Automatic Restart, Reset, External Device Monitoring (EDM), Alignment mode, 2-signals T Muting / L Muting, Muting dependent Override, Partial muting (half protection height), Muting input filtering and timeout setting, Anti-interference coding                                                                                                                                                                                                                     |                  |                  |
| Functions ADVANCED models (SH4-*A-*)                                       | Manual / Automatic Restart, Reset, External Device Monitoring (EDM), Alignment mode, 2-signals T Muting / L Muting, Muting dependent Override, Partial muting (half protection height), Muting input filtering and timeout setting, Anti-interference coding, 4-signals Muting, Dynamic partial muting, Partial Muting (at beams level), Fixed Blanking, External signal fixed blanking teach-in, Floating Blanking, Reduced resolution, Integrated red LED aimers for each beam |                  |                  |
| Configuration BASE models (SH4-*B-*) and STANDARD models (SH4-*S-*)        | By Wiring                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                  |                  |
| Configuration STANDARD MUTING models (SH4-*SM-*)                           | By DIP-Switches                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                  |                  |
| Configuration ADVANCED models (SH4-*A-*)                                   | By DATESENSING SH4 DESIGNER and wi-fi connection                                                                                                                                                                                                                                                                                                                                                                                                                                 |                  |                  |

|                                                                                  | SH4-2-0500-*AP-***                                                                                                                                                                                                                                                                                                                                      | SH4-3-0800-*AP-*** | SH4-4-****-*AP-***                                               |
|----------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------|------------------------------------------------------------------|
| Protection                                                                       | <br>body                                                                                                                                                                                                                                                               |                    |                                                                  |
| Type ( EN61496-1 )                                                               | 4                                                                                                                                                                                                                                                                                                                                                       |                    |                                                                  |
| PL ( EN ISO 13849-1 )                                                            | e                                                                                                                                                                                                                                                                                                                                                       |                    |                                                                  |
| SIL ( IEC 61508 )                                                                | 3                                                                                                                                                                                                                                                                                                                                                       |                    |                                                                  |
| Optical structure                                                                | Active Side and Retroreflective Passive Side                                                                                                                                                                                                                                                                                                            |                    |                                                                  |
| Protected height                                                                 | 500 mm                                                                                                                                                                                                                                                                                                                                                  | 800 mm             | 900 or 1200 mm                                                   |
| Detection capability                                                             | 500 mm                                                                                                                                                                                                                                                                                                                                                  | 400 mm             | 300 mm                                                           |
| Operating range                                                                  | 0.5 ... 8 m                                                                                                                                                                                                                                                                                                                                             | 0.5 ... 8 m        | 0.5 ... 6.5 m (SH4-4-0900-AP-*)<br>0.5 ... 8 m (SH4-4-1200-AP-*) |
| Operating distance using<br>reflective muting arms (SH4-T-ARMS<br>or SH4-L-ARMS) | 0.5 ... 3 m                                                                                                                                                                                                                                                                                                                                             |                    |                                                                  |
| Dead Zone                                                                        | 130 mm Distance from bottom to first beam                                                                                                                                                                                                                                                                                                               |                    |                                                                  |
| Cascade connection                                                               | Not possible                                                                                                                                                                                                                                                                                                                                            |                    |                                                                  |
| Power supply (Vdc)                                                               | 24 Vdc $\pm$ 20%                                                                                                                                                                                                                                                                                                                                        |                    |                                                                  |
| Active unit consumption                                                          | 2 W max (without load)                                                                                                                                                                                                                                                                                                                                  |                    |                                                                  |
| Safe Outputs                                                                     | 2 OSSD, with short circuit protection                                                                                                                                                                                                                                                                                                                   |                    |                                                                  |
| Auxiliary Outputs                                                                | 2 PNP, with short circuit protection                                                                                                                                                                                                                                                                                                                    |                    |                                                                  |
| Output current                                                                   | 250 mA max / each output, 500 mA max total outputs                                                                                                                                                                                                                                                                                                      |                    |                                                                  |
| Capacitive load                                                                  | 1 $\mu$ F @ 24Vdc max                                                                                                                                                                                                                                                                                                                                   |                    |                                                                  |
| Leakage current                                                                  | < 1 mA                                                                                                                                                                                                                                                                                                                                                  |                    |                                                                  |
| Response time                                                                    | 15 ms                                                                                                                                                                                                                                                                                                                                                   |                    |                                                                  |
| Cables length                                                                    | 30 m                                                                                                                                                                                                                                                                                                                                                    |                    |                                                                  |
| Electrical protection                                                            | Class III                                                                                                                                                                                                                                                                                                                                               |                    |                                                                  |
| Light source                                                                     | Infrared LED (850 nm wavelength)                                                                                                                                                                                                                                                                                                                        |                    |                                                                  |
| Effective aperture angle (EAA)                                                   | < $\pm$ 2.5° at 3 m                                                                                                                                                                                                                                                                                                                                     |                    |                                                                  |
| Operating temperature                                                            | -30 ...+55 °C                                                                                                                                                                                                                                                                                                                                           |                    |                                                                  |
| Storage temperature                                                              | -30 ...+70 °C                                                                                                                                                                                                                                                                                                                                           |                    |                                                                  |
| Temperature class                                                                | T6                                                                                                                                                                                                                                                                                                                                                      |                    |                                                                  |
| Humidity                                                                         | 15 ... 95 % (no condensation)                                                                                                                                                                                                                                                                                                                           |                    |                                                                  |
| Mechanical protection                                                            | IP65, IP 67 (EN 60529)                                                                                                                                                                                                                                                                                                                                  |                    |                                                                  |
| Vibrations resistance                                                            | 10 mm / 3 g, 5 ... 150 Hz frequency (EN 60068-2-6 / Class 3M7 IEC TR 60721-4-3)                                                                                                                                                                                                                                                                         |                    |                                                                  |
| Shock resistance                                                                 | 25 g x 6 ms x 600 (EN 60068-2-27 / Class 3M7 IEC TR 60721-4-3)                                                                                                                                                                                                                                                                                          |                    |                                                                  |
| Weight                                                                           | 1.4 Kg/m (single bar, without package)                                                                                                                                                                                                                                                                                                                  |                    |                                                                  |
| Housing Material                                                                 | Painted aluminium (yellow RAL 1003)                                                                                                                                                                                                                                                                                                                     |                    |                                                                  |
| Caps and covers material                                                         | PBT                                                                                                                                                                                                                                                                                                                                                     |                    |                                                                  |
| Window material                                                                  | MAKROLON AR 7099 Clear PC                                                                                                                                                                                                                                                                                                                               |                    |                                                                  |
| Functions BASE models (SH4-*B-*)                                                 | Automatic Restart                                                                                                                                                                                                                                                                                                                                       |                    |                                                                  |
| Functions STANDARD models<br>(SH4-*S-*)                                          | Manual / Automatic Restart, Reset, External Device Monitoring (EDM), Alignment mode                                                                                                                                                                                                                                                                     |                    |                                                                  |
| Functions STANDARD MUTING models<br>(SH4-*SM-*)                                  | Manual / Automatic Restart, Reset, External Device Monitoring (EDM), Alignment mode, 2-signals T Muting / L Muting, Muting dependent Override, Partial muting (half protection height), Muting input filtering and timeout setting, Anti-interference coding                                                                                            |                    |                                                                  |
| Functions ADVANCED models<br>(SH4-*A-*)                                          | Manual / Automatic Restart, Reset, External Device Monitoring (EDM), Alignment mode, 2-signals T Muting / L Muting, Muting dependent Override, Partial muting (half protection height), Muting input filtering and timeout setting, Anti-interference coding, 4-signals Muting, Dynamic partial muting, Partial Muting (at beams level), Fixed Blanking |                    |                                                                  |
| Configuration BASIC models<br>(SH4-*B-*) and STANDARD models<br>(SH4-*S-*)       | By Wiring                                                                                                                                                                                                                                                                                                                                               |                    |                                                                  |
| Configuration STANDARD MUTING<br>models (SH4-*SM-*)                              | By DIP-Switches                                                                                                                                                                                                                                                                                                                                         |                    |                                                                  |
| Configuration ADVANCED models<br>(SH4-*A-*)                                      | By DATASENSING SH4 DESIGNER and wi-fi connection                                                                                                                                                                                                                                                                                                        |                    |                                                                  |

## AVAILABLE MODELS

| Capability | Range        | Functionality | Receiver connector | Protected height (mm) | Beams | Response time (ms) with Anti-Interference code disabled | Model                                 |
|------------|--------------|---------------|--------------------|-----------------------|-------|---------------------------------------------------------|---------------------------------------|
| 14 mm      | 0.2 ... 10 m | basic         | 5 poles            | 300                   | 30    | 9                                                       | <b>SH4-14-0300-B-5</b><br>(957920001) |
|            |              |               |                    | 450                   | 45    | 10                                                      | <b>SH4-14-0450-B-5</b><br>(957920002) |
|            |              |               |                    | 600                   | 60    | 12                                                      | <b>SH4-14-0600-B-5</b><br>(957920003) |
|            |              |               |                    | 750                   | 75    | 13                                                      | <b>SH4-14-0750-B-5</b><br>(957920004) |
|            |              |               |                    | 900                   | 90    | 15                                                      | <b>SH4-14-0900-B-5</b><br>(957920005) |
|            |              |               |                    | 1050                  | 105   | 16                                                      | <b>SH4-14-1050-B-5</b><br>(957920006) |
|            |              |               |                    | 1200                  | 120   | 18                                                      | <b>SH4-14-1200-B-5</b><br>(957920007) |
|            |              |               |                    | 1350                  | 135   | 20                                                      | <b>SH4-14-1350-B-5</b><br>(957920008) |
|            |              |               |                    | 1500                  | 150   | 21                                                      | <b>SH4-14-1500-B-5</b><br>(957920009) |
|            |              |               |                    | 1650                  | 165   | 23                                                      | <b>SH4-14-1650-B-5</b><br>(957920010) |
|            |              |               |                    | 1800                  | 180   | 24                                                      | <b>SH4-14-1800-B-5</b><br>(957920011) |
|            |              |               |                    | 1950                  | 195   | 26                                                      | <b>SH4-14-1950-B-5</b><br>(957920012) |
|            |              |               |                    | 2100                  | 210   | 27                                                      | <b>SH4-14-2100-B-5</b><br>(957920013) |
| 14 mm      | 0.2 ... 10 m | standard      | 8 poles            | 2250                  | 225   | 29                                                      | <b>SH4-14-2250-B-5</b><br>(957920014) |
|            |              |               |                    | 300                   | 30    | 9                                                       | <b>SH4-14-0300-S-8</b><br>(957920015) |
|            |              |               |                    | 450                   | 45    | 10                                                      | <b>SH4-14-0450-S-8</b><br>(957920016) |
|            |              |               |                    | 600                   | 60    | 12                                                      | <b>SH4-14-0600-S-8</b><br>(957920017) |
|            |              |               |                    | 750                   | 75    | 13                                                      | <b>SH4-14-0750-S-8</b><br>(957920018) |
|            |              |               |                    | 900                   | 90    | 15                                                      | <b>SH4-14-0900-S-8</b><br>(957920019) |
|            |              |               |                    | 1050                  | 105   | 16                                                      | <b>SH4-14-1050-S-8</b><br>(957920020) |
|            |              |               |                    | 1200                  | 120   | 18                                                      | <b>SH4-14-1200-S-8</b><br>(957920021) |
|            |              |               |                    | 1350                  | 135   | 20                                                      | <b>SH4-14-1350-S-8</b><br>(957920022) |
|            |              |               |                    | 1500                  | 150   | 21                                                      | <b>SH4-14-1500-S-8</b><br>(957920023) |
|            |              |               |                    | 1650                  | 165   | 23                                                      | <b>SH4-14-1650-S-8</b><br>(957920024) |
|            |              |               |                    | 1800                  | 180   | 24                                                      | <b>SH4-14-1800-S-8</b><br>(957920025) |
|            |              |               |                    | 1950                  | 195   | 26                                                      | <b>SH4-14-1950-S-8</b><br>(957920026) |
|            |              |               |                    | 2100                  | 210   | 27                                                      | <b>SH4-14-2100-S-8</b><br>(957920027) |
|            |              |               |                    | 2250                  | 225   | 29                                                      | <b>SH4-14-2250-S-8</b><br>(957920028) |

For units in cascade, the overall response time is given by this formula. 2 units: (sum of units response time + 1 ms); 3 units: (sum of units response time - 1 ms)

| Capability | Range       | Functionality   | Receiver connector | Protected height (mm) | Beams | Response time (ms) with Anti-Interference code disabled | Response time (ms) with Anti-Interference code enabled | Model                                    |
|------------|-------------|-----------------|--------------------|-----------------------|-------|---------------------------------------------------------|--------------------------------------------------------|------------------------------------------|
| 14 mm      | 0.2 ... 10m | standard muting | 8 poles            | 300                   | 30    | 9                                                       | 14                                                     | <b>SH4-14-0300-SM-8</b><br>(957920043)   |
|            |             |                 |                    | 450                   | 45    | 10                                                      | 18                                                     | <b>SH4-14-0450-SM-8</b><br>(957920044)   |
|            |             |                 |                    | 600                   | 60    | 12                                                      | 22                                                     | <b>SH4-14-0600-SM-8</b><br>(957920045)   |
|            |             |                 |                    | 750                   | 75    | 13                                                      | 26                                                     | <b>SH4-14-0750-SM-8</b><br>(957920046)   |
|            |             |                 |                    | 900                   | 90    | 15                                                      | 30                                                     | <b>SH4-14-0900-SM-8</b><br>(957920047)   |
|            |             |                 |                    | 1050                  | 105   | 16                                                      | 33                                                     | <b>SH4-14-1050-SM-8</b><br>(957920048)   |
|            |             |                 |                    | 1200                  | 120   | 18                                                      | 37                                                     | <b>SH4-14-1200-SM-8</b><br>(957920049)   |
|            |             |                 |                    | 1350                  | 135   | 20                                                      | 41                                                     | <b>SH4-14-1350-SM-8</b><br>(957920050)   |
|            |             |                 |                    | 1500                  | 150   | 21                                                      | 45                                                     | <b>SH4-14-1500-SM-8</b><br>(957920051)   |
|            |             |                 |                    | 1650                  | 165   | 23                                                      | 49                                                     | <b>SH4-14-1650-SM-8</b><br>(957920052)   |
|            |             |                 |                    | 1800                  | 180   | 24                                                      | 52                                                     | <b>SH4-14-1800-SM-8</b><br>(957920053)   |
|            |             |                 |                    | 1950                  | 195   | 26                                                      | 56                                                     | <b>SH4-14-1950-SM-8</b><br>(957920054)   |
|            |             |                 |                    | 2100                  | 210   | 27                                                      | 60                                                     | <b>SH4-14-2100-SM-8</b><br>(957920055)   |
|            |             |                 |                    | 2250                  | 225   | 29                                                      | 64                                                     | <b>SH4-14-2250-SM-8</b><br>(957920056)   |
| 14 mm      | 0.2 ... 10m | standard muting | 8 and 5 poles      | 300                   | 30    | 9                                                       | 14                                                     | <b>SH4-14-0300-SM-8-5</b><br>(957920565) |
|            |             |                 |                    | 450                   | 45    | 10                                                      | 18                                                     | <b>SH4-14-0450-SM-8-5</b><br>(957920566) |
|            |             |                 |                    | 600                   | 60    | 12                                                      | 22                                                     | <b>SH4-14-0600-SM-8-5</b><br>(957920567) |
|            |             |                 |                    | 750                   | 75    | 13                                                      | 26                                                     | <b>SH4-14-0750-SM-8-5</b><br>(957920568) |
|            |             |                 |                    | 900                   | 90    | 15                                                      | 30                                                     | <b>SH4-14-0900-SM-8-5</b><br>(957920569) |
|            |             |                 |                    | 1050                  | 105   | 16                                                      | 33                                                     | <b>SH4-14-1050-SM-8-5</b><br>(957920570) |
|            |             |                 |                    | 1200                  | 120   | 18                                                      | 37                                                     | <b>SH4-14-1200-SM-8-5</b><br>(957920571) |
|            |             |                 |                    | 1350                  | 135   | 20                                                      | 41                                                     | <b>SH4-14-1350-SM-8-5</b><br>(957920572) |
|            |             |                 |                    | 1500                  | 150   | 21                                                      | 45                                                     | <b>SH4-14-1500-SM-8-5</b><br>(957920573) |
|            |             |                 |                    | 1650                  | 165   | 23                                                      | 49                                                     | <b>SH4-14-1650-SM-8-5</b><br>(957920574) |
|            |             |                 |                    | 1800                  | 180   | 24                                                      | 52                                                     | <b>SH4-14-1800-SM-8-5</b><br>(957920575) |
|            |             |                 |                    | 1950                  | 195   | 26                                                      | 56                                                     | <b>SH4-14-1950-SM-8-5</b><br>(957920576) |
|            |             |                 |                    | 2100                  | 210   | 27                                                      | 60                                                     | <b>SH4-14-2100-SM-8-5</b><br>(957920577) |
|            |             |                 |                    | 2250                  | 225   | 29                                                      | 64                                                     | <b>SH4-14-2250-SM-8-5</b><br>(957920578) |

For units in cascade, the overall response time is given by this formula. 2 units: (sum of units response time + 1 ms); 3 units: (sum of units response time - 1 ms)

| Capability | Range        | Functionality | Receiver connector | Protected height (mm) | Beams | Response time (ms) with Anti-Interference code disabled | Response time (ms) with Anti-Interference code enabled | Model                                    |
|------------|--------------|---------------|--------------------|-----------------------|-------|---------------------------------------------------------|--------------------------------------------------------|------------------------------------------|
| 14 mm      | 0.2 ... 10 m | advanced      | 12 poles           | 300                   | 30    | 9                                                       | 14                                                     | <b>SH4-14-0300-A-12</b><br>(957920147)   |
|            |              |               |                    | 450                   | 45    | 10                                                      | 18                                                     | <b>SH4-14-0450-A-12</b><br>(957920148)   |
|            |              |               |                    | 600                   | 60    | 12                                                      | 22                                                     | <b>SH4-14-0600-A-12</b><br>(957920149)   |
|            |              |               |                    | 750                   | 75    | 13                                                      | 26                                                     | <b>SH4-14-0750-A-12</b><br>(957920150)   |
|            |              |               |                    | 900                   | 90    | 15                                                      | 30                                                     | <b>SH4-14-0900-A-12</b><br>(957920151)   |
|            |              |               |                    | 1050                  | 105   | 16                                                      | 33                                                     | <b>SH4-14-1050-A-12</b><br>(957920152)   |
|            |              |               |                    | 1200                  | 120   | 18                                                      | 37                                                     | <b>SH4-14-1200-A-12</b><br>(957920153)   |
|            |              |               |                    | 1350                  | 135   | 20                                                      | 41                                                     | <b>SH4-14-1350-A-12</b><br>(957920154)   |
|            |              |               |                    | 1500                  | 150   | 21                                                      | 45                                                     | <b>SH4-14-1500-A-12</b><br>(957920155)   |
|            |              |               |                    | 1650                  | 165   | 23                                                      | 49                                                     | <b>SH4-14-1650-A-12</b><br>(957920156)   |
|            |              |               |                    | 1800                  | 180   | 24                                                      | 52                                                     | <b>SH4-14-1800-A-12</b><br>(957920157)   |
|            |              |               |                    | 1950                  | 195   | 26                                                      | 56                                                     | <b>SH4-14-1950-A-12</b><br>(957920158)   |
|            |              |               |                    | 2100                  | 210   | 27                                                      | 60                                                     | <b>SH4-14-2100-A-12</b><br>(957920159)   |
|            |              |               |                    | 2250                  | 225   | 29                                                      | 64                                                     | <b>SH4-14-2250-A-12</b><br>(957920160)   |
| 14 mm      | 0.2 ... 10 m | advanced      | 12 and 5 poles     | 300                   | 30    | 9                                                       | 14                                                     | <b>SH4-14-0300-A-12-5</b><br>(957920161) |
|            |              |               |                    | 450                   | 45    | 10                                                      | 18                                                     | <b>SH4-14-0450-A-12-5</b><br>(957920162) |
|            |              |               |                    | 600                   | 60    | 12                                                      | 22                                                     | <b>SH4-14-0600-A-12-5</b><br>(957920163) |
|            |              |               |                    | 750                   | 75    | 13                                                      | 26                                                     | <b>SH4-14-0750-A-12-5</b><br>(957920164) |
|            |              |               |                    | 900                   | 90    | 15                                                      | 30                                                     | <b>SH4-14-0900-A-12-5</b><br>(957920165) |
|            |              |               |                    | 1050                  | 105   | 16                                                      | 33                                                     | <b>SH4-14-1050-A-12-5</b><br>(957920166) |
|            |              |               |                    | 1200                  | 120   | 18                                                      | 37                                                     | <b>SH4-14-1200-A-12-5</b><br>(957920167) |
|            |              |               |                    | 1350                  | 135   | 20                                                      | 41                                                     | <b>SH4-14-1350-A-12-5</b><br>(957920168) |
|            |              |               |                    | 1500                  | 150   | 21                                                      | 45                                                     | <b>SH4-14-1500-A-12-5</b><br>(957920169) |
|            |              |               |                    | 1650                  | 165   | 23                                                      | 49                                                     | <b>SH4-14-1650-A-12-5</b><br>(957920170) |
|            |              |               |                    | 1800                  | 180   | 24                                                      | 52                                                     | <b>SH4-14-1800-A-12-5</b><br>(957920171) |
|            |              |               |                    | 1950                  | 195   | 26                                                      | 56                                                     | <b>SH4-14-1950-A-12-5</b><br>(957920172) |
|            |              |               |                    | 2100                  | 210   | 27                                                      | 60                                                     | <b>SH4-14-2100-A-12-5</b><br>(957920173) |
|            |              |               |                    | 2250                  | 225   | 29                                                      | 64                                                     | <b>SH4-14-2250-A-12-5</b><br>(957920174) |

For units in cascade, the overall response time is given by this formula. 2 units: (sum of units response time + 1 ms); 3 units: (sum of units response time - 1 ms)

| Capability | Range        | Functionality | Receiver connector | Protected height (mm) | Beams | Response time (ms) with Anti-Interference code disabled | Response time (ms) with Anti-Interference code enabled | Model                                   |
|------------|--------------|---------------|--------------------|-----------------------|-------|---------------------------------------------------------|--------------------------------------------------------|-----------------------------------------|
| 14 mm      | 0.2 ... 10 m | cascade       | 5 and 5 poles      | 300                   | 30    | 9                                                       | 14                                                     | <b>SH4-14-0300-C-5-5</b><br>(957920029) |
|            |              |               |                    | 450                   | 45    | 10                                                      | 18                                                     | <b>SH4-14-0450-C-5-5</b><br>(957920030) |
|            |              |               |                    | 600                   | 60    | 12                                                      | 22                                                     | <b>SH4-14-0600-C-5-5</b><br>(957920031) |
|            |              |               |                    | 750                   | 75    | 13                                                      | 26                                                     | <b>SH4-14-0750-C-5-5</b><br>(957920032) |
|            |              |               |                    | 900                   | 90    | 15                                                      | 30                                                     | <b>SH4-14-0900-C-5-5</b><br>(957920033) |
|            |              |               |                    | 1050                  | 105   | 16                                                      | 33                                                     | <b>SH4-14-1050-C-5-5</b><br>(957920034) |
|            |              |               |                    | 1200                  | 120   | 18                                                      | 37                                                     | <b>SH4-14-1200-C-5-5</b><br>(957920035) |
|            |              |               |                    | 1350                  | 135   | 20                                                      | 41                                                     | <b>SH4-14-1350-C-5-5</b><br>(957920036) |
|            |              |               |                    | 1500                  | 150   | 21                                                      | 45                                                     | <b>SH4-14-1500-C-5-5</b><br>(957920037) |
|            |              |               |                    | 1650                  | 165   | 23                                                      | 49                                                     | <b>SH4-14-1650-C-5-5</b><br>(957920038) |
|            |              |               |                    | 1800                  | 180   | 24                                                      | 52                                                     | <b>SH4-14-1800-C-5-5</b><br>(957920039) |
|            |              |               |                    | 1950                  | 195   | 26                                                      | 56                                                     | <b>SH4-14-1950-C-5-5</b><br>(957920040) |
|            |              |               |                    | 2100                  | 210   | 27                                                      | 60                                                     | <b>SH4-14-2100-C-5-5</b><br>(957920041) |
|            |              |               |                    | 2250                  | 225   | 29                                                      | 64                                                     | <b>SH4-14-2250-C-5-5</b><br>(957920042) |
| 30 mm      | 0.2 ... 20 m | base          | 5 poles            | 300                   | 12    | 7                                                       | -                                                      | <b>SH4-30-0300-B-5</b><br>(957920057)   |
|            |              |               |                    | 450                   | 18    | 8                                                       | -                                                      | <b>SH4-30-0450-B-5</b><br>(957920058)   |
|            |              |               |                    | 600                   | 24    | 9                                                       | -                                                      | <b>SH4-30-0600-B-5</b><br>(957920059)   |
|            |              |               |                    | 750                   | 30    | 9                                                       | -                                                      | <b>SH4-30-0750-B-5</b><br>(957920060)   |
|            |              |               |                    | 900                   | 36    | 10                                                      | -                                                      | <b>SH4-30-0900-B-5</b><br>(957920061)   |
|            |              |               |                    | 1050                  | 42    | 11                                                      | -                                                      | <b>SH4-30-1050-B-5</b><br>(957920062)   |
|            |              |               |                    | 1200                  | 48    | 12                                                      | -                                                      | <b>SH4-30-1200-B-5</b><br>(957920063)   |
|            |              |               |                    | 1350                  | 54    | 12                                                      | -                                                      | <b>SH4-30-1350-B-5</b><br>(957920064)   |
|            |              |               |                    | 1500                  | 60    | 13                                                      | -                                                      | <b>SH4-30-1500-B-5</b><br>(957920065)   |
|            |              |               |                    | 1650                  | 66    | 14                                                      | -                                                      | <b>SH4-30-1650-B-5</b><br>(957920066)   |
|            |              |               |                    | 1800                  | 72    | 14                                                      | -                                                      | <b>SH4-30-1800-B-5</b><br>(957920067)   |
|            |              |               |                    | 1950                  | 78    | 15                                                      | -                                                      | <b>SH4-30-1950-B-5</b><br>(957920068)   |
|            |              |               |                    | 2100                  | 84    | 16                                                      | -                                                      | <b>SH4-30-2100-B-5</b><br>(957920069)   |
|            |              |               |                    | 2250                  | 90    | 17                                                      | -                                                      | <b>SH4-30-2250-B-5</b><br>(957920070)   |

For units in cascade, the overall response time is given by this formula. 2 units: (sum of units response time + 1 ms); 3 units: (sum of units response time - 1 ms)

| Capability | Range        | Functionality   | Receiver connector | Protected height (mm) | Beams | Response time (ms) with Anti-Interference code disabled | Response time (ms) with Anti-Interference code enabled | Model                                  |
|------------|--------------|-----------------|--------------------|-----------------------|-------|---------------------------------------------------------|--------------------------------------------------------|----------------------------------------|
| 30 mm      | 0.2 ... 20 m | standard        | 8 poles            | 300                   | 12    | 7                                                       | -                                                      | <b>SH4-30-0300-S-8</b><br>(957920071)  |
|            |              |                 |                    | 450                   | 18    | 8                                                       | -                                                      | <b>SH4-30-0450-S-8</b><br>(957920072)  |
|            |              |                 |                    | 600                   | 24    | 9                                                       | -                                                      | <b>SH4-30-0600-S-8</b><br>(957920073)  |
|            |              |                 |                    | 750                   | 30    | 9                                                       | -                                                      | <b>SH4-30-0750-S-8</b><br>(957920074)  |
|            |              |                 |                    | 900                   | 36    | 10                                                      | -                                                      | <b>SH4-30-0900-S-8</b><br>(957920075)  |
|            |              |                 |                    | 1050                  | 42    | 11                                                      | -                                                      | <b>SH4-30-1050-S-8</b><br>(957920076)  |
|            |              |                 |                    | 1200                  | 48    | 12                                                      | -                                                      | <b>SH4-30-1200-S-8</b><br>(957920077)  |
|            |              |                 |                    | 1350                  | 54    | 12                                                      | -                                                      | <b>SH4-30-1350-S-8</b><br>(957920078)  |
|            |              |                 |                    | 1500                  | 60    | 13                                                      | -                                                      | <b>SH4-30-1500-S-8</b><br>(957920079)  |
|            |              |                 |                    | 1650                  | 66    | 14                                                      | -                                                      | <b>SH4-30-1650-S-8</b><br>(957920080)  |
|            |              |                 |                    | 1800                  | 72    | 14                                                      | -                                                      | <b>SH4-30-1800-S-8</b><br>(957920081)  |
|            |              |                 |                    | 1950                  | 78    | 15                                                      | -                                                      | <b>SH4-30-1950-S-8</b><br>(957920082)  |
|            |              |                 |                    | 2100                  | 84    | 16                                                      | -                                                      | <b>SH4-30-2100-S-8</b><br>(957920083)  |
|            |              |                 |                    | 2250                  | 90    | 17                                                      | -                                                      | <b>SH4-30-2250-S-8</b><br>(957920084)  |
| 30 mm      | 0.2 ... 20 m | standard muting | 8 poles            | 300                   | 12    | 7                                                       | 10                                                     | <b>SH4-30-0300-SM-8</b><br>(957920099) |
|            |              |                 |                    | 450                   | 18    | 8                                                       | 12                                                     | <b>SH4-30-0450-SM-8</b><br>(957920100) |
|            |              |                 |                    | 600                   | 24    | 9                                                       | 13                                                     | <b>SH4-30-0600-SM-8</b><br>(957920101) |
|            |              |                 |                    | 750                   | 30    | 9                                                       | 15                                                     | <b>SH4-30-0750-SM-8</b><br>(957920102) |
|            |              |                 |                    | 900                   | 36    | 10                                                      | 17                                                     | <b>SH4-30-0900-SM-8</b><br>(957920103) |
|            |              |                 |                    | 1050                  | 42    | 11                                                      | 18                                                     | <b>SH4-30-1050-SM-8</b><br>(957920104) |
|            |              |                 |                    | 1200                  | 48    | 12                                                      | 20                                                     | <b>SH4-30-1200-SM-8</b><br>(957920105) |
|            |              |                 |                    | 1350                  | 54    | 12                                                      | 22                                                     | <b>SH4-30-1350-SM-8</b><br>(957920106) |
|            |              |                 |                    | 1500                  | 60    | 13                                                      | 23                                                     | <b>SH4-30-1500-SM-8</b><br>(957920107) |
|            |              |                 |                    | 1650                  | 66    | 14                                                      | 25                                                     | <b>SH4-30-1650-SM-8</b><br>(957920108) |
|            |              |                 |                    | 1800                  | 72    | 14                                                      | 27                                                     | <b>SH4-30-1800-SM-8</b><br>(957920109) |
|            |              |                 |                    | 1950                  | 78    | 15                                                      | 28                                                     | <b>SH4-30-1950-SM-8</b><br>(957920110) |
|            |              |                 |                    | 2100                  | 84    | 16                                                      | 30                                                     | <b>SH4-30-2100-SM-8</b><br>(957920111) |
|            |              |                 |                    | 2250                  | 90    | 17                                                      | 32                                                     | <b>SH4-30-2250-SM-8</b><br>(957920112) |

For units in cascade, the overall response time is given by this formula. 2 units: (sum of units response time + 1 ms); 3 units: (sum of units response time - 1 ms)

| Capability | Range        | Functionality   | Receiver connector | Protected height (mm) | Beams | Response time (ms) with Anti-Interference code disabled | Response time (ms) with Anti-Interference code enabled | Model                                    |
|------------|--------------|-----------------|--------------------|-----------------------|-------|---------------------------------------------------------|--------------------------------------------------------|------------------------------------------|
| 30 mm      | 0.2 ... 20 m | standard muting | 8 and 5 poles      | 300                   | 12    | 7                                                       | 10                                                     | <b>SH4-30-0300-SM-8-5</b><br>(957920085) |
|            |              |                 |                    | 450                   | 18    | 8                                                       | 12                                                     | <b>SH4-30-0450-SM-8-5</b><br>(957920086) |
|            |              |                 |                    | 600                   | 24    | 9                                                       | 13                                                     | <b>SH4-30-0600-SM-8-5</b><br>(957920087) |
|            |              |                 |                    | 750                   | 30    | 9                                                       | 15                                                     | <b>SH4-30-0750-SM-8-5</b><br>(957920088) |
|            |              |                 |                    | 900                   | 36    | 10                                                      | 17                                                     | <b>SH4-30-0900-SM-8-5</b><br>(957920089) |
|            |              |                 |                    | 1050                  | 42    | 11                                                      | 18                                                     | <b>SH4-30-1050-SM-8-5</b><br>(957920090) |
|            |              |                 |                    | 1200                  | 48    | 12                                                      | 20                                                     | <b>SH4-30-1200-SM-8-5</b><br>(957920091) |
|            |              |                 |                    | 1350                  | 54    | 12                                                      | 22                                                     | <b>SH4-30-1350-SM-8-5</b><br>(957920092) |
|            |              |                 |                    | 1500                  | 60    | 13                                                      | 23                                                     | <b>SH4-30-1500-SM-8-5</b><br>(957920093) |
|            |              |                 |                    | 1650                  | 66    | 14                                                      | 25                                                     | <b>SH4-30-1650-SM-8-5</b><br>(957920094) |
|            |              |                 |                    | 1800                  | 72    | 14                                                      | 27                                                     | <b>SH4-30-1800-SM-8-5</b><br>(957920095) |
|            |              |                 |                    | 1950                  | 78    | 15                                                      | 28                                                     | <b>SH4-30-1950-SM-8-5</b><br>(957920096) |
|            |              |                 |                    | 2100                  | 84    | 16                                                      | 30                                                     | <b>SH4-30-2100-SM-8-5</b><br>(957920097) |
|            |              |                 |                    | 2250                  | 90    | 17                                                      | 32                                                     | <b>SH4-30-2250-SM-8-5</b><br>(957920098) |
| 30 mm      | 0.2 ... 20 m | advanced        | 12 poles           | 300                   | 12    | 7                                                       | 10                                                     | <b>SH4-30-0300-A-12</b><br>(957920189)   |
|            |              |                 |                    | 450                   | 18    | 8                                                       | 12                                                     | <b>SH4-30-0450-A-12</b><br>(957920190)   |
|            |              |                 |                    | 600                   | 24    | 9                                                       | 13                                                     | <b>SH4-30-0600-A-12</b><br>(957920191)   |
|            |              |                 |                    | 750                   | 30    | 9                                                       | 15                                                     | <b>SH4-30-0750-A-12</b><br>(957920192)   |
|            |              |                 |                    | 900                   | 36    | 10                                                      | 17                                                     | <b>SH4-30-0900-A-12</b><br>(957920193)   |
|            |              |                 |                    | 1050                  | 42    | 11                                                      | 18                                                     | <b>SH4-30-1050-A-12</b><br>(957920194)   |
|            |              |                 |                    | 1200                  | 48    | 12                                                      | 20                                                     | <b>SH4-30-1200-A-12</b><br>(957920195)   |
|            |              |                 |                    | 1350                  | 54    | 12                                                      | 22                                                     | <b>SH4-30-1350-A-12</b><br>(957920196)   |
|            |              |                 |                    | 1500                  | 60    | 13                                                      | 23                                                     | <b>SH4-30-1500-A-12</b><br>(957920197)   |
|            |              |                 |                    | 1650                  | 66    | 14                                                      | 25                                                     | <b>SH4-30-1650-A-12</b><br>(957920198)   |
|            |              |                 |                    | 1800                  | 72    | 14                                                      | 27                                                     | <b>SH4-30-1800-A-12</b><br>(957920199)   |
|            |              |                 |                    | 1950                  | 78    | 15                                                      | 28                                                     | <b>SH4-30-1950-A-12</b><br>(957920200)   |
|            |              |                 |                    | 2100                  | 84    | 16                                                      | 30                                                     | <b>SH4-30-2100-A-12</b><br>(957920201)   |
|            |              |                 |                    | 2250                  | 90    | 17                                                      | 32                                                     | <b>SH4-30-2250-A-12</b><br>(957920202)   |

For units in cascade, the overall response time is given by this formula. 2 units: (sum of units response time + 1 ms); 3 units: (sum of units response time - 1 ms)

| Capability | Range        | Functionality | Receiver connector | Protected height (mm) | Beams | Response time (ms) with Anti-Interference code disabled | Response time (ms) with Anti-Interference code enabled | Model                                    |
|------------|--------------|---------------|--------------------|-----------------------|-------|---------------------------------------------------------|--------------------------------------------------------|------------------------------------------|
| 30 mm      | 0.2 ... 20 m | advanced      | 5 and 12 poles     | 300                   | 12    | 7                                                       | 10                                                     | <b>SH4-30-0300-A-12-5</b><br>(957920203) |
|            |              |               |                    | 450                   | 18    | 8                                                       | 12                                                     | <b>SH4-30-0450-A-12-5</b><br>(957920204) |
|            |              |               |                    | 600                   | 24    | 9                                                       | 13                                                     | <b>SH4-30-0600-A-12-5</b><br>(957920205) |
|            |              |               |                    | 750                   | 30    | 9                                                       | 15                                                     | <b>SH4-30-0750-A-12-5</b><br>(957920206) |
|            |              |               |                    | 900                   | 36    | 10                                                      | 17                                                     | <b>SH4-30-0900-A-12-5</b><br>(957920207) |
|            |              |               |                    | 1050                  | 42    | 11                                                      | 18                                                     | <b>SH4-30-1050-A-12-5</b><br>(957920208) |
|            |              |               |                    | 1200                  | 48    | 12                                                      | 20                                                     | <b>SH4-30-1200-A-12-5</b><br>(957920209) |
|            |              |               |                    | 1350                  | 54    | 12                                                      | 22                                                     | <b>SH4-30-1350-A-12-5</b><br>(957920210) |
|            |              |               |                    | 1500                  | 60    | 13                                                      | 23                                                     | <b>SH4-30-1500-A-12-5</b><br>(957920211) |
|            |              |               |                    | 1650                  | 66    | 14                                                      | 25                                                     | <b>SH4-30-1650-A-12-5</b><br>(957920212) |
|            |              |               |                    | 1800                  | 72    | 14                                                      | 27                                                     | <b>SH4-30-1800-A-12-5</b><br>(957920213) |
|            |              |               |                    | 1950                  | 78    | 15                                                      | 28                                                     | <b>SH4-30-1950-A-12-5</b><br>(957920214) |
|            |              |               |                    | 2100                  | 84    | 16                                                      | 30                                                     | <b>SH4-30-2100-A-12-5</b><br>(957920215) |
|            |              |               |                    | 2250                  | 90    | 17                                                      | 32                                                     | <b>SH4-30-2250-A-12-5</b><br>(957920216) |
| 30 mm      | 0.2 ... 20 m | cascade       | 5 and 5 poles      | 300                   | 12    | 7                                                       | 10                                                     | <b>SH4-30-0300-C-5-5</b><br>(957920113)  |
|            |              |               |                    | 450                   | 18    | 8                                                       | 12                                                     | <b>SH4-30-0450-C-5-5</b><br>(957920114)  |
|            |              |               |                    | 600                   | 24    | 9                                                       | 13                                                     | <b>SH4-30-0600-C-5-5</b><br>(957920115)  |
|            |              |               |                    | 750                   | 30    | 9                                                       | 15                                                     | <b>SH4-30-0750-C-5-5</b><br>(957920116)  |
|            |              |               |                    | 900                   | 36    | 10                                                      | 17                                                     | <b>SH4-30-0900-C-5-5</b><br>(957920117)  |
|            |              |               |                    | 1050                  | 42    | 11                                                      | 18                                                     | <b>SH4-30-1050-C-5-5</b><br>(957920118)  |
|            |              |               |                    | 1200                  | 48    | 12                                                      | 20                                                     | <b>SH4-30-1200-C-5-5</b><br>(957920119)  |
|            |              |               |                    | 1350                  | 54    | 12                                                      | 22                                                     | <b>SH4-30-1350-C-5-5</b><br>(957920120)  |
|            |              |               |                    | 1500                  | 60    | 13                                                      | 23                                                     | <b>SH4-30-1500-C-5-5</b><br>(957920121)  |
|            |              |               |                    | 1650                  | 66    | 14                                                      | 25                                                     | <b>SH4-30-1650-C-5-5</b><br>(957920122)  |
|            |              |               |                    | 1800                  | 72    | 14                                                      | 27                                                     | <b>SH4-30-1800-C-5-5</b><br>(957920123)  |
|            |              |               |                    | 1950                  | 78    | 15                                                      | 28                                                     | <b>SH4-30-1950-C-5-5</b><br>(957920124)  |
|            |              |               |                    | 2100                  | 84    | 16                                                      | 30                                                     | <b>SH4-30-2100-C-5-5</b><br>(957920125)  |
|            |              |               |                    | 2250                  | 90    | 17                                                      | 32                                                     | <b>SH4-30-2250-C-5-5</b><br>(957920126)  |

For units in cascade, the overall response time is given by this formula. 2 units: (sum of units response time + 1 ms); 3 units: (sum of units response time - 1 ms)

| Capability     | Range        | Functionality   | Receiver connector | Protected height (mm) | Beams | Response time (ms) with Anti-Interference code disabled | Response time (ms) with Anti-Interference code enabled | Model                                   |
|----------------|--------------|-----------------|--------------------|-----------------------|-------|---------------------------------------------------------|--------------------------------------------------------|-----------------------------------------|
| body detection | 0.5 ... 70 m | base            | 5 poles            | 500                   | 2     | 12                                                      | -                                                      | <b>SH4-2-0500-B-5</b><br>(957920127)    |
|                |              |                 |                    | 800                   | 3     | 15                                                      | -                                                      | <b>SH4-3-0800-B-5</b><br>(957920128)    |
|                |              |                 |                    | 900                   | 4     | 15                                                      | -                                                      | <b>SH4-4-0900-B-5</b><br>(957920129)    |
|                |              |                 |                    | 1200                  | 4     | 15                                                      | -                                                      | <b>SH4-4-1200-B-5</b><br>(957920130)    |
|                |              | standard        | 8 poles            | 500                   | 2     | 12                                                      | -                                                      | <b>SH4-2-0500-S-8</b><br>(957920131)    |
|                |              |                 |                    | 800                   | 3     | 15                                                      | -                                                      | <b>SH4-3-0800-S-8</b><br>(957920132)    |
|                |              |                 |                    | 900                   | 4     | 15                                                      | -                                                      | <b>SH4-4-0900-S-8</b><br>(957920133)    |
|                |              |                 |                    | 1200                  | 4     | 15                                                      | -                                                      | <b>SH4-4-1200-S-8</b><br>(957920134)    |
|                |              | standard muting | 8 poles            | 500                   | 2     | 12                                                      | 23                                                     | <b>SH4-2-0500-SM-8</b><br>(957920139)   |
|                |              |                 |                    | 800                   | 3     | 15                                                      | 27                                                     | <b>SH4-3-0800-SM-8</b><br>(957920140)   |
|                |              |                 |                    | 900                   | 4     | 15                                                      | 29                                                     | <b>SH4-4-0900-SM-8</b><br>(957920141)   |
|                |              |                 |                    | 1200                  | 4     | 15                                                      | 29                                                     | <b>SH4-4-1200-SM-8</b><br>(957920142)   |
|                |              | standard muting | 8 and 5 poles      | 500                   | 2     | 12                                                      | 23                                                     | <b>SH4-2-0500-SM-8-5</b><br>(957920135) |
|                |              |                 |                    | 800                   | 3     | 15                                                      | 27                                                     | <b>SH4-3-0800-SM-8-5</b><br>(957920136) |
|                |              |                 |                    | 900                   | 4     | 15                                                      | 29                                                     | <b>SH4-4-0900-SM-8-5</b><br>(957920137) |
|                |              |                 |                    | 1200                  | 4     | 15                                                      | 29                                                     | <b>SH4-4-1200-SM-8-5</b><br>(957920138) |
|                |              | advanced        | 12 and 5 poles     | 500                   | 2     | 12                                                      | 23                                                     | <b>SH4-2-0500-A-12-5</b><br>(957920231) |
|                |              |                 |                    | 800                   | 3     | 15                                                      | 27                                                     | <b>SH4-3-0800-A-12-5</b><br>(957920232) |
|                |              |                 |                    | 900                   | 4     | 15                                                      | 29                                                     | <b>SH4-4-0900-A-12-5</b><br>(957920233) |
|                |              |                 |                    | 1200                  | 4     | 15                                                      | 29                                                     | <b>SH4-4-1200-A-12-5</b><br>(957920234) |

For units in cascade, the overall response time is given by this formula. 2 units: (sum of units response time + 1 ms); 3 units: (sum of units response time - 1 ms)

| Capability     | Range       | Functionality   | Receiver connector | Protected height (mm) | Beams | Response time (ms) with Anti-Interference code disabled | Response time (ms) with Anti-Interference code enabled | Model                                      |
|----------------|-------------|-----------------|--------------------|-----------------------|-------|---------------------------------------------------------|--------------------------------------------------------|--------------------------------------------|
| body detection | 0.5 ... 8 m | basic           | 5 poles            | 500                   | 2     | 15                                                      | -                                                      | <b>SH4-2-0500-B-AP-5</b><br>(957920143)    |
|                | 0.5 ... 6.5 |                 |                    | 800                   | 4     | 15                                                      | -                                                      | <b>SH4-3-0800-B-AP-5</b><br>(957920144)    |
|                | 0.5 ... 8 m |                 |                    | 900                   | 4     | 15                                                      | -                                                      | <b>SH4-4-0900-B-AP-5</b><br>(957920145)    |
|                | 0.5 ... 8 m |                 |                    | 1200                  | 4     | 15                                                      | -                                                      | <b>SH4-4-1200-B-AP-5</b><br>(957920146)    |
|                | 0.5 ... 8 m | standard muting | 8 poles            | 500                   | 2     | 15                                                      | -                                                      | <b>SH4-2-0500-SM-AP-8</b><br>(957920561)   |
|                | 0.5 ... 6.5 |                 |                    | 800                   | 4     | 15                                                      | -                                                      | <b>SH4-3-0800-SM-AP-8</b><br>(957920562)   |
|                | 0.5 ... 8 m |                 |                    | 900                   | 4     | 15                                                      | -                                                      | <b>SH4-4-0900-SM-AP-8</b><br>(957920563)   |
|                | 0.5 ... 8 m |                 |                    | 1200                  | 4     | 15                                                      | -                                                      | <b>SH4-4-1200-SM-AP-8</b><br>(957920564)   |
|                | 0.5 ... 8 m | advanced        | 12 and 5 poles     | 500                   | 2     | 15                                                      | -                                                      | <b>SH4-2-0500-A-AP-12-5</b><br>(957920239) |
|                | 0.5 ... 6.5 |                 |                    | 800                   | 4     | 15                                                      | -                                                      | <b>SH4-3-0800-A-AP-12-5</b><br>(957920240) |
|                | 0.5 ... 8 m |                 |                    | 900                   | 4     | 15                                                      | -                                                      | <b>SH4-4-0900-A-AP-12-5</b><br>(957920241) |
|                | 0.5 ... 8 m |                 |                    | 1200                  | 4     | 15                                                      | -                                                      | <b>SH4-4-1200-A-AP-12-5</b><br>(957920242) |

For units in cascade, the overall response time is given by this formula. 2 units: (sum of units response time + 1 ms); 3 units: (sum of units response time - 1 ms)

## CONNECTION DIAGRAMS (RECEIVER MAIN CONNECTOR)

| SH4 BASE (SH4-**-****-B(-AP)-5): M12 male 5-poles                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | SH4 STANDARD (SH4-**-****-S-8): M12 male 8-poles                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
|-------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|    | 1 — BROWN — 24 Vdc — POWER<br>2 — WHITE — OSSD1 — SAFE OUTPUT<br>3 — BLUE — 0 Vdc — POWER<br>4 — BLACK — OSSD2 — SAFE OUTPUT<br>5 — GREY — COM — COM                                                                                                                                                                                                                                                                                                                                                               |    | 1 — WHITE — RESTART/RESET — INPUT<br>2 — BROWN — 24Vdc — POWER<br>3 — GREEN — EDM / SELECTION — INPUT<br>4 — YELLOW — EDM — INPUT<br>5 — GREY — OSSD1 — SAFE OUTPUT<br>6 — PINK — OSSD2 — SAFE OUTPUT<br>7 — BLUE — 0 Vdc — POWER<br>8 — RED — MAN/AUTO SELECTION — INPUT                                                                                                                                                                                                                 |
| SH4 ST. MUTING (SH4-**-****-SM(-AP)-8): M12 male 8-poles                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | SH4 STAND. MUTING (SH4-**-****-A(-AP)-12-5): M12 male 8-poles                        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
|   | 1 — WHITE — RESTART/RESET/EDM/OVERRIDE — INPUT<br>2 — BROWN — 24Vdc — POWER<br>3 — GREEN — MUTING1 — INPUT<br>4 — YELLOW — MUTING2 — INPUT<br>5 — GREY — OSSD1 — SAFE OUTPUT<br>6 — PINK — OSSD2 — SAFE OUTPUT<br>7 — BLUE — 0 Vdc — POWER<br>8 — RED — MUTING LAMP — OUTPUT                                                                                                                                                                                                                                       |   | 1 — WHITE — RESTART/RESET — INPUT<br>2 — BROWN — 24Vdc — POWER<br>3 — GREEN — EDM / SELECTION — INPUT<br>4 — YELLOW — EDM — INPUT<br>5 — GREY — OSSD1 — SAFE OUTPUT<br>6 — PINK — OSSD2 — SAFE OUTPUT<br>7 — BLUE — 0 Vdc — POWER<br>8 — RED — OVRER-RIDE 2 — INPUT                                                                                                                                                                                                                       |
| SH4 ADVANCED (SH4-**-****-A-12): M12 male 12-poles                                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | SH4 ADVANCED (SH4-**-****-A(-AP)-12-5): M12 male 12-poles                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
|  | 1 — BROWN — 24 Vdc — POWER<br>2 — BLUE — 0 Vdc — POWER<br>3 — WHITE — CONFIG-URABLE INPUT — INPUT<br>4 — GREEN — CONFIG-URABLE INPUT — INPUT<br>5 — PINK — OSSD2 — SAFE OUTPUT<br>6 — YELLOW — CONFIG-URABLE INPUT — INPUT<br>7 — BLACK — CONFIG-URABLE INPUT/OUTPUT — INPUT/OUTPUT<br>8 — GREY — OSSD1 — SAFE OUTPUT<br>9 — RED — CONFIG-URABLE INPUT — INPUT<br>10 — VIOLET — CONFIG-URABLE INPUT/OUTPUT — INPUT/OUTPUT<br>11 — GREY/PINK — OVRER-RIDE 2 — OUTPUT<br>12 — RED/BLUE — CONFIG-URABLE INPUT — INPUT |  | 1 — BROWN — 24 Vdc — POWER<br>2 — BLUE — 0 Vdc — POWER<br>3 — WHITE — CONFIG-URABLE INPUT — INPUT<br>4 — GREEN — CONFIG-URABLE INPUT — INPUT<br>5 — PINK — OSSD2 — SAFE OUTPUT<br>6 — YELLOW — CONFIG-URABLE INPUT — INPUT<br>7 — BLACK — CONFIG-URABLE INPUT — INPUT<br>8 — GREY — OSSD1 — SAFE OUTPUT<br>9 — RED — OVRER-RIDE 2 — INPUT<br>10 — VIOLET — CONFIG-URABLE INPUT/OUTPUT — INPUT/OUTPUT<br>11 — GREY/PINK — CONFIG-URABLE INPUT/OUTPUT — INPUT/OUTPUT<br>12 — RED/BLUE — N/A |

### NOTES:

Inputs and Outputs of SH4 ADVANCED can be reconfigured with DATASENSING SH4 DESIGNER APP between the following:

| INPUTS    |           |                 |                  | OUTPUTS           |  |
|-----------|-----------|-----------------|------------------|-------------------|--|
| • Reset   | • EDM     | • Muting3       | • Override1      | • Lamp            |  |
| • Restart | • Muting1 | • Muting4       | • Teach in       | • Override status |  |
| • Align   | • Muting2 | • Muting Enable | • Beam Tolerance |                   |  |

## CONNECTION DIAGRAMS (RECEIVER SECONDARY CONNECTOR)

| SH4 STANDARD MUTING (SH4-**-****-S-8-5): M12 female 5-poles  |   |       |         |              |
|--------------------------------------------------------------|---|-------|---------|--------------|
| SH4 ADV.MUTING (SH4-**-****-A(-AP)-12-5): M12 female 5-poles |   |       |         |              |
|                                                              | 1 | BROWN | 24 Vdc  | POWER OUTPUT |
|                                                              | 2 | WHITE | MUTING2 | SAFE OUTPUT  |
|                                                              | 3 | BLUE  | 0 Vdc   | POWER OUTPUT |
|                                                              | 4 | BLACK | MUTING1 | SAFE OUTPUT  |
|                                                              | 5 | GREY  | COM     | COM          |

## CONNECTION DIAGRAMS (TRANSMITTER MAIN CONNECTOR)

| SH4 BASE (SH4-**-****-B-5): M12 male 5-poles |   |       |        |       | SH4 STANDARD (SH4-**-****-S-8): M12 male 5-poles         |   |       |        |       |
|----------------------------------------------|---|-------|--------|-------|----------------------------------------------------------|---|-------|--------|-------|
|                                              |   |       |        |       | SH4 STANDARD MUTING (SH4-**-****-SM-*): M12 male 5-poles |   |       |        |       |
|                                              | 1 | BROWN | 24 Vdc | POWER |                                                          | 1 | BROWN | 24 Vdc | POWER |
|                                              | 2 | WHITE | N/A    |       |                                                          | 2 | WHITE | TEST   | INPUT |
|                                              | 3 | BLUE  | 0 Vdc  | POWER |                                                          | 3 | BLUE  | 0 Vdc  | POWER |
|                                              | 4 | BLACK | N/A    |       |                                                          | 4 | BLACK | CODE   | INPUT |
|                                              | 5 | GREY  | N/A    |       |                                                          | 5 | GREY  | N/A    |       |

| SH4 ADVANCED (SH4-**-****-A-*): M12 male 5-poles |   |       |               |       |
|--------------------------------------------------|---|-------|---------------|-------|
|                                                  | 1 | BROWN | 24 Vdc        | POWER |
|                                                  | 2 | WHITE | TEST/ POINTER | INPUT |
|                                                  | 3 | BLUE  | 24 Vdc        | POWER |
|                                                  | 4 | BLACK | CODE          | INPUT |
|                                                  | 5 | GREY  | COM           | COM   |

## CONNECTION DIAGRAMS (TRANSMITTER SECONDARY CONNECTOR)

| SH4 STANDARD MUTING (SH4-**-****-SM-8-5): M12 female 5-poles |   |       |        |       | SH4 ADVANCED (SH4-**-****-A-12-5): M12 female 5-poles |   |       |               |       |
|--------------------------------------------------------------|---|-------|--------|-------|-------------------------------------------------------|---|-------|---------------|-------|
|                                                              | 1 | BROWN | 24 Vdc | POWER |                                                       | 1 | BROWN | 24 Vdc        | POWER |
|                                                              | 2 | WHITE | TEST   | INPUT |                                                       | 2 | WHITE | TEST/ POINTER | INPUT |
|                                                              | 3 | BLUE  | 0 Vdc  | POWER |                                                       | 3 | BLUE  | 0 Vdc         | POWER |
|                                                              | 4 | BLACK | CODE   | INPUT |                                                       | 4 | BLACK | CODE          | INPUT |
|                                                              | 5 | GREY  | COM    | COM   |                                                       | 5 | GREY  | COM           | COM   |

NOTE: PIN2 on transmitter main connector of body resolution models (SH4-2/3/4-\*-\*-\*) can be used for selection of short or long range.

## DIMENSIONS (FINGER)

**SH4-14-\*\*\*\_\*\*\_\*\_\***

LASER AIMER

(mm)

| Model               | L (mm) |
|---------------------|--------|
| SH4-14-0300-**-**-* | 309    |
| SH4-14-0450-**-**-* | 459    |
| SH4-14-0600-**-**-* | 609    |
| SH4-14-0750-**-**-* | 759    |
| SH4-14-0900-**-**-* | 909    |
| SH4-14-1050-**-**-* | 1059   |
| SH4-14-1200-**-**-* | 1209   |
| SH4-14-1300-**-**-* | 1359   |
| SH4-14-1500-**-**-* | 1509   |
| SH4-14-1650-**-**-* | 1659   |
| SH4-14-1800-**-**-* | 1809   |
| SH4-14-1950-**-**-* | 1959   |
| SH4-14-2100-**-**-* | 2109   |
| SH4-14-2250-**-**-* | 2259   |

## DIMENSIONS (HAND)

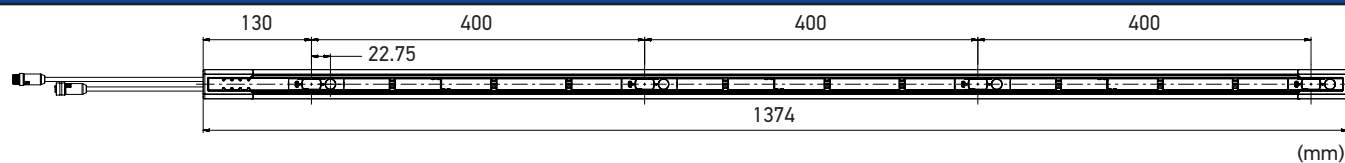
**SH30-30-\*\*\*-\*\*-\*\*-\***

| Model               | L (mm) |
|---------------------|--------|
| SH4-30-0300-**-**-* | 309    |
| SH4-30-0450-**-**-* | 459    |
| SH4-30-0600-**-**-* | 609    |
| SH4-30-0750-**-**-* | 759    |
| SH4-30-0900-**-**-* | 909    |
| SH4-30-1050-**-**-* | 1059   |
| SH4-30-1200-**-**-* | 1209   |
| SH4-30-1300-**-**-* | 1359   |
| SH4-30-1500-**-**-* | 1509   |
| SH4-30-1650-**-**-* | 1659   |
| SH4-30-1800-**-**-* | 1809   |
| SH4-30-1950-**-**-* | 1959   |
| SH4-30-2100-**-**-* | 2109   |
| SH4-30-2250-**-**-* | 2259   |

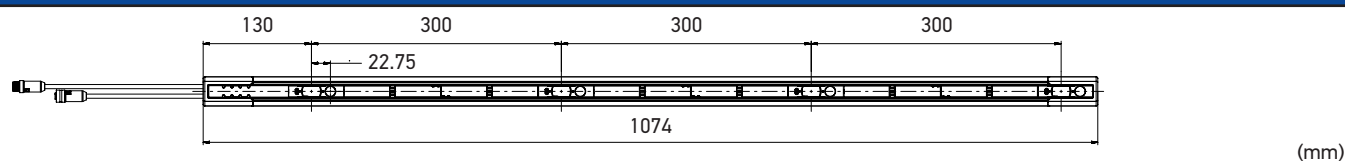
(mm)

## DIMENSIONS (BODY)

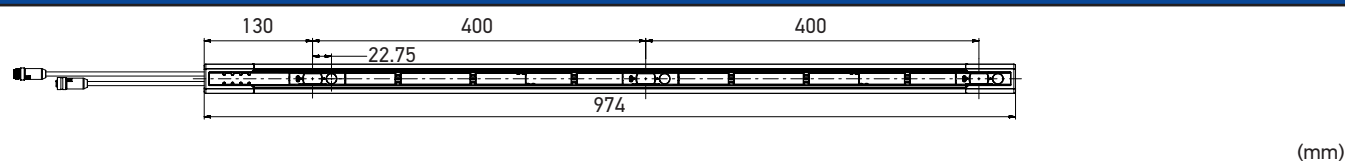
SH4-4-1200-\*\*-\*\*-\*



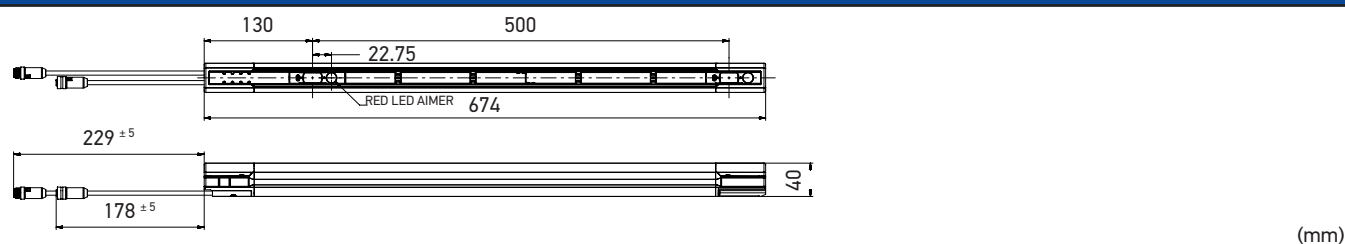
SH4-4-0900-\*\*-\*\*-\*



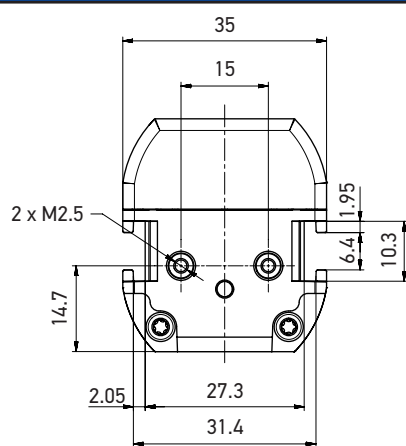
SH4-3-0800-\*\*-\*\*-\*



SH4-2-0500-\*\*-\*\*-\*

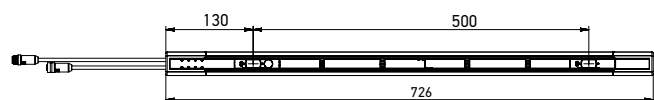


SH4-\*-\*-\*-\*\*-\*\*-\*

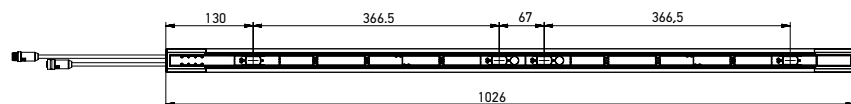


## DIMENSIONS (AP)

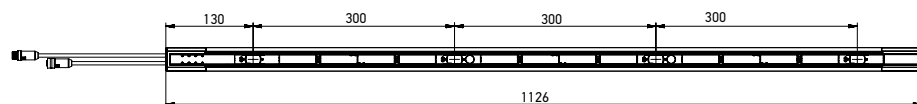
SH4-\*-\*-\*-(-AP)-\*\*



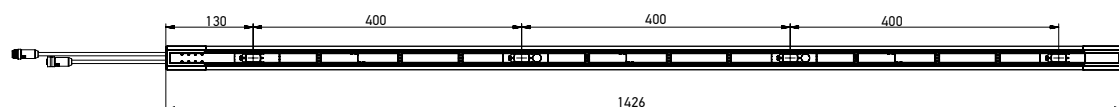
SH4-2-0500-...-AP-...  
(active unit)



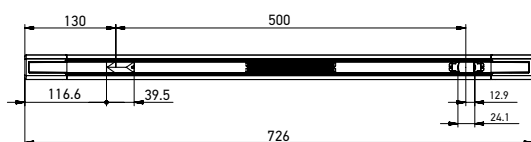
SH4-3-0800-...-AP-...  
(active unit)



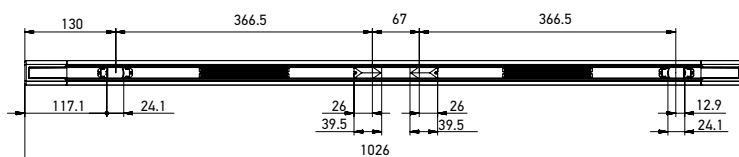
SH4-4-0900-...-AP-...  
(active unit)



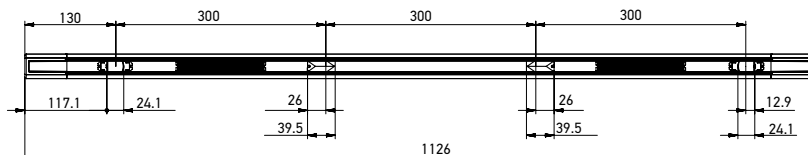
SH4-4-1200-...-AP-...  
(active unit)



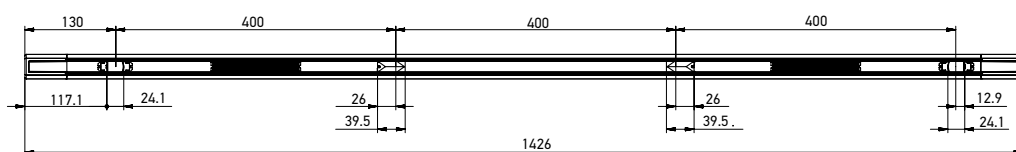
SH4-2-0500-...-AP-...  
(passive unit)



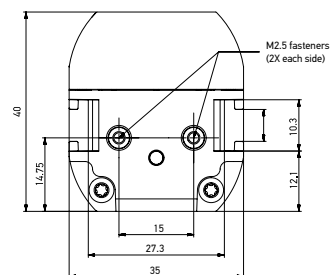
SH4-3-0800-...-AP-...  
(passive unit)



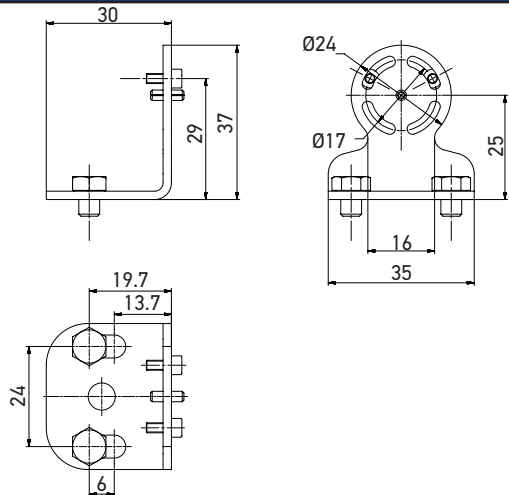
SH4-4-0900-...-AP-...  
(passive unit)

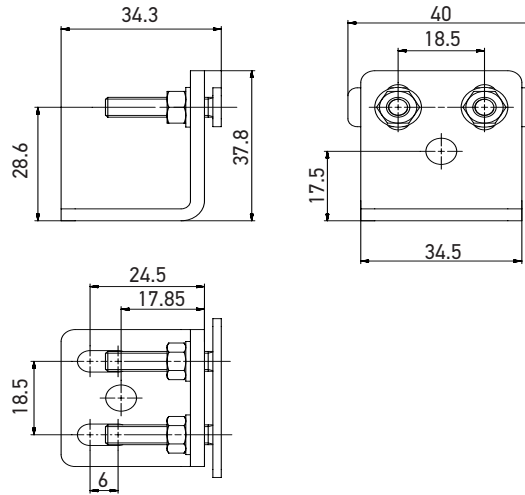


SH4-4-1200-...-AP-...  
(passive unit)



ACCESSORIES: BRACKETS

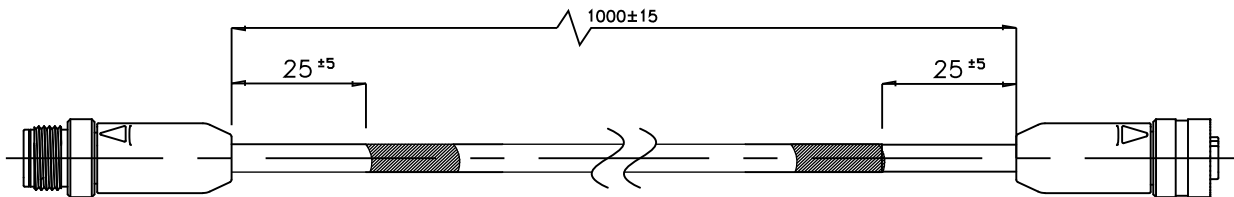
| ST-K4ROT-SH                                                                                   |  |                                                                          |           |               |
|-----------------------------------------------------------------------------------------------|--|--------------------------------------------------------------------------|-----------|---------------|
|                                                                                               |  | Model                                                                    | Order nr. | Compatibility |
|  <p>(mm)</p> |  | Metal top-bottom rotating fixing<br>brackets kit (4<br>brackets) for SH4 | 95ASE0042 | SH4           |

| ST-KSTD                                                                                        |  |                                                       |           |                                            |                                                                                                                |
|------------------------------------------------------------------------------------------------|--|-------------------------------------------------------|-----------|--------------------------------------------|----------------------------------------------------------------------------------------------------------------|
|  <p>(mm)</p> |  | Model                                                 | Order nr. | Compatibility                              | Notes                                                                                                          |
|                                                                                                |  | Metal angled fixing brackets kit (4 brackets) for SH4 | 95ACC1670 | SH4, SG2/SG4, SG BODY COMPACT, SG BODY BIG | The angled fixing bracket is included in the package of SH4 but it can be ordered separately for substitutions |

## ACCESSORIES: TRANSMITTER AND RECEIVER CABLES

| SH4 BASE (SH4-**-****-B(-AP)-5)                                    |            |                |
|--------------------------------------------------------------------|------------|----------------|
| Receiver main connector                                            | Length (m) | Order code     |
| CS-A1-03-U-03                                                      | 3          | 95ASE1170      |
| CS-A1-03-U-05                                                      | 5          | 95ASE1180      |
| CS-A1-03-U-10                                                      | 10         | 95ASE1190      |
| CS-A1-03-U-15                                                      | 15         | 95ASE1200      |
| CS-A1-03-U-25                                                      | 25         | 95ASE1210      |
| CS-A1-03-U-50                                                      | 50         | 95A252700      |
| SH4 STANDARD AND SH4 STANDARD MUTING (SH4-**-****-S/SM(-AP)-8(-5)) |            |                |
| Receiver main connector                                            | Length (m) | Order code     |
| CS-A1-06-U-03                                                      | 3          | 95ASE1220      |
| CS-A1-06-U-05                                                      | 5          | 95ASE1230      |
| CS-A1-06-U-10                                                      | 10         | 95ASE1240      |
| CS-A1-06-U-15                                                      | 15         | 95ASE1250      |
| CS-A1-06-U-25                                                      | 25         | 95ASE1260      |
| CS-A1-06-U-50                                                      | 50         | 95A252710      |
| SH4 ADVANCED (SH4-**-****-A(-AP)-12(-5))                           |            |                |
| Receiver main connector                                            | Length (m) | Order code     |
| CS-A1-10-U-03                                                      | 3          | 95A252720      |
| CS-A1-10-U-05                                                      | 5          | 95A252730      |
| CS-A1-10-U-10                                                      | 10         | 95A252740      |
| CS-A1-10-U-15                                                      | 15         | 95A252750      |
| CS-A1-10-U-25                                                      | 25         | 95A252760      |
| CS-A1-10-U-50                                                      | 50         | 95A252770      |
| SH4 all models                                                     |            |                |
| Transmitter main connector                                         | Length (m) | Order code     |
| CS-A1-03-U-03                                                      | 3          | 95ASE1170      |
| CS-A1-03-U-05                                                      | 5          | 95ASE1180      |
| CS-A1-03-U-10                                                      | 10         | 95ASE1190      |
| CS-A1-03-U-15                                                      | 15         | 95ASE1200      |
| CS-A1-03-U-25                                                      | 25         | 95ASE1210      |
| CS-A1-03-U-50                                                      | 50         | 95A252700      |
| SH4 all Muting models (SH4-**-****-SM/A-**-5)                      |            |                |
| Receiver/Transmitter secondary connector                           | Length (m) | Order code     |
| CD12M/0B-050B1                                                     | 5          | CD12M/0B-050B1 |
| CD12M/0B-100B1                                                     | 10         | CD12M/0B-100B1 |

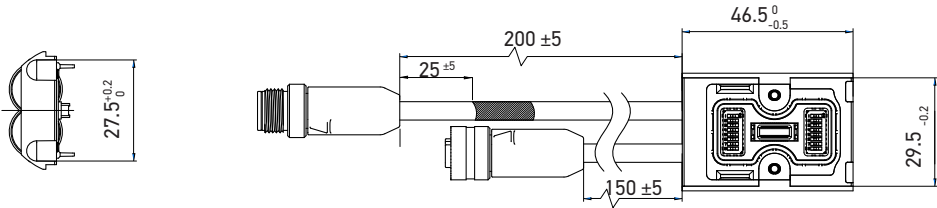
## ACCESSORIES: CASCADE CABLES

| CS-H2-03-B-**                                                                      |            |            |
|------------------------------------------------------------------------------------|------------|------------|
|  |            |            |
| Model                                                                              | Length (m) | Order code |
| CS-H2-03-B-01                                                                      | 1 m        | 95ASE0031  |
| CS-H2-03-B-03                                                                      | 3 m        | 95ASE0032  |
| CS-H2-03-B-10                                                                      | 10 m       | 95ASE0033  |

Cascade cables have 5 poles, M12 male connector on one side, and M12 female connector on the opposite side. They can be used to cascade SH4 safety light curtains (refer to manual for technical details)

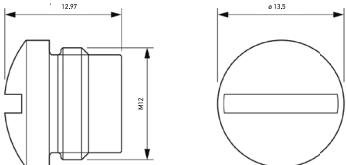
## ACCESSORIES: PLUGS

The following are spare parts that can be ordered in substitution of the parts included in SH4 family safety light curtains.

| SH-PLUG-**-*                                                                         |                 |                     |            |
|--------------------------------------------------------------------------------------|-----------------|---------------------|------------|
|  |                 |                     |            |
| Model                                                                                | Main connector  | Secondary connector | Order code |
| SH-PLUG-5                                                                            | 5-pin M12 male  | none                | 95ASE0047  |
| SH-PLUG-8                                                                            | 8-pin M12 male  | none                | 95ASE0048  |
| SH-PLUG-12                                                                           | 12-pin M12 male | none                | 95ASE0049  |
| SH-PLUG-5-5                                                                          | 5-pin M12 male  | 5-pin M12 female    | 95ASE0050  |
| SH-PLUG-8-5                                                                          | 8-pin M12 male  | 5-pin M12 female    | 95ASE0051  |
| SH-PLUG-12-5                                                                         | 12-pin M12 male | 5-pin M12 female    | 95ASE0052  |

## ACCESSORIES: SCREW

The following are spare parts that can be ordered in substitution of the parts included in SH4 family safety light curtains.

| SH-SP                                                                               |                                                         |            |
|-------------------------------------------------------------------------------------|---------------------------------------------------------|------------|
|  |                                                         |            |
| Model                                                                               | Description                                             | Order code |
| SH-SP                                                                               | Kit of screw plugs for SH4 female connectors (2 pieces) | 95ASE0043  |

When female secondary connector of SH4 are not used, use a SH-SP plug to isolate them

## ACCESSORIES: SH-TARGET

| SH-TARGET |                                              |            |  |
|-----------|----------------------------------------------|------------|--|
| Model     | Description                                  | Order code |  |
| SH-TARGET | Retroreflector target for SH4 BODY alignment | 95ASE0046  |  |

■ Removable adhesive area  
 ■ Prismatic reflective area

(mm)

## ACCESSORIES: M12 MALE-MALE ADAPTER

| SH-MMA |                       |            |                                                                                                                                                                                                            |
|--------|-----------------------|------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Model  | Description           | Order code | Notes                                                                                                                                                                                                      |
| SH-MMA | M12 Male-Male Adapter | 95ASE0044  | SH-MMA can be used to convert the SH4 secondary connector (M12 female) in a M12 male, in order to reuse SG muting accessories and cables. It is not needed when using muting accessories designed for SH4. |

(mm)

## ACCESSORIES: LASER POINTER

| SH-LP |                       |            |                                                                                                                                                                                       |
|-------|-----------------------|------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Model | Description           | Order code | Notes                                                                                                                                                                                 |
| SH-LP | Laser pointer class 2 | 95ASE0030  | SH-LP is a laser pointer with a plastic bracket that can be quickly connected to the profile of SH4 safety light curtains in order to ease the alignment of transmitter and receiver. |

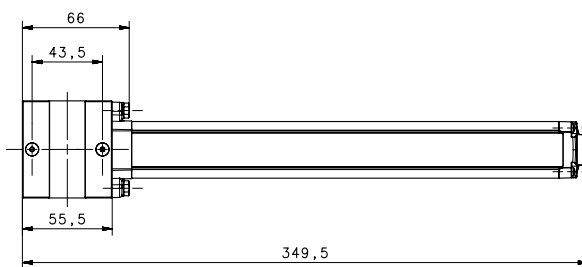
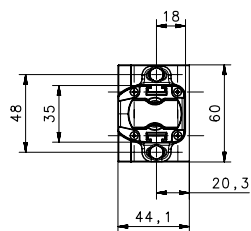
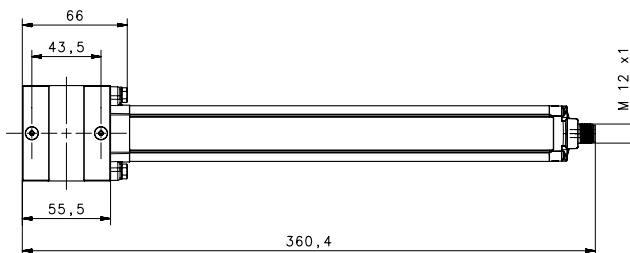
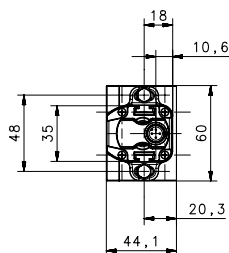
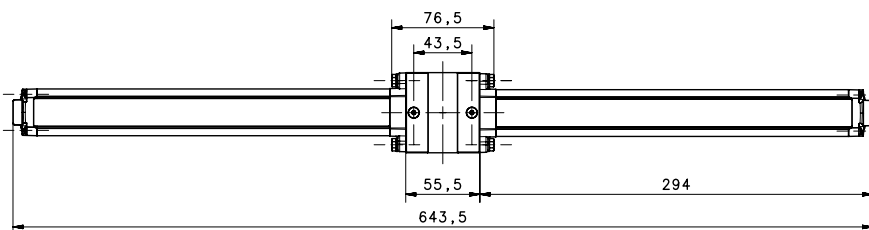
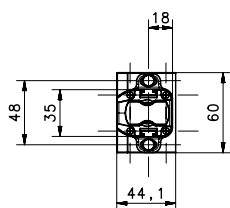
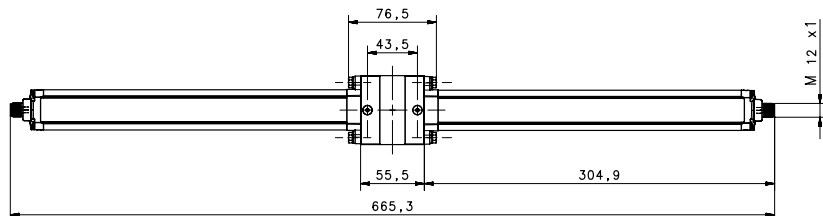
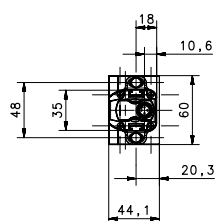
(mm)

## ACCESSORIES: MUTING ARMS FOR 2-SIGNALS T AND L MUTING

SH-T-ARMS and SH-L-ARMS are ready to install kits composed of:

1. active arm, with retroreflective polarized photocells: 1 for SH-L-ARMS, 2 for SH-T-ARMS
2. passive arm, with corresponding reflectors: 1 for SH-L-ARMS, 2 for SH-T-ARMS
3. 2 brackets to connect arms to SH4
4. 1 muting cable CV-Y4-02-B-007 (for SH-T -ARMS) or CV-L2-02-B-007 (for SH-L-ARMS) to connect the active arms to the secondary 5-poles connector of SH4 STANDARD MUTING, or SH4 ADVANCED.

### SH-T/L-ARMS



| Model     | Description                             | Order number |
|-----------|-----------------------------------------|--------------|
| SH-T-ARMS | Active/Passive arms Couple for T muting | 95ASE0035    |
| SH-L-ARMS | Active/Passive arms Couple for L muting | 95ASE0036    |

**IMPORTANT NOTICE:** For safety reasons, L muting arms should be used only for openings through which goods must exit from the dangerous area: for openings in which goods must enter the dangerous area, as well as for bi-directional movements, use T muting arms.

# ACCESSORIES: CABLES FOR MUTING ACTUATORS

| CV-**-02-B-007 |                                    |            |  |
|----------------|------------------------------------|------------|--|
| Model          | Description                        | Order code |  |
| CV-Y4-02-B-007 | M12 4-poles T muting cable for SH4 | 95ASE0037  |  |
| CV-L2-02-B-007 | M12 4-poles L muting cable for SH4 | 95ASE0038  |  |

# ACCESSORIES: SH MUTING CONNECTION BOX

| SH-M-CB     |                           |            |  |
|-------------|---------------------------|------------|--|
| Model       | Description               | Order code |  |
| SH-M-CB     | SH Muting connection box  | 95ASE0039  |  |
| SG-M-CB-KIT | Muting connection box kit | 95ASE2830  |  |

The SH-M-CB connection box has 4 M12 connectors on board, one for each muting sensor to be connected to an SH4 light curtain. Unused connectors need to be covered by a cap, in order to maintain IP67 protection. A green LED indicator signals when the muting sensor is generating the corresponding muting signal towards the safety light curtain. Inside the connection box, signals are put in parallel: A1 with A2 and B1 with B2, and forwarded to the pigtail connector, that has to be inserted into the muting connector of the light curtain. This means that muting function of SH4 for which SH-M-CB is compatible are 2-signals T muting and 2-signals L muting. In order to attach SH-M-CB to the housing grooves of SH-M-CB, order SG-M-CB-KIT.