

SG2 MUTING SG4 EXTENDED



State-of-the-art technology and versatility
 Easily adaptable to the machine structure
 Maximum application flexibility with configurable advanced functions
 Complete diagnostic and monitoring online

- No dead zone
- Pigtail cable with M12 connector
- Cascade connection of up to 3 units
- Up to 20m operating range and 1800m protected height
- Compact dimensions (35 x 41 mm section)
- Anti-interference coding
- Integrated Muting function
- Floating Blanking, Fixed Blanking and Reduced Resolution
- Configurable with:
 - Autoteaching
 - Pushbuttons for common configuration
 - Graphic User Interface for complete parametrisation
- Ethernet Interface for programming, monitoring and error logging



APPLICATIONS

- Automatic machines Robots
- Automatic assembling lines
- Palletizers and Depalletizers

INDUSTRIES

- Food & Beverage
- Metalworking
- Automotive
- Wood
- Ceramics

| | FINGER | HAND | ARM | BODY |
|--------|--------|------|-----|------|
| Type 2 | | x | | |
| Type 4 | x | x | | |

SG4-14-030-00-P

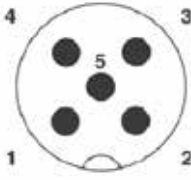
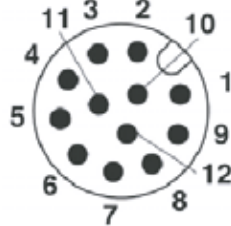
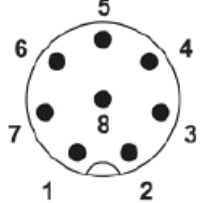
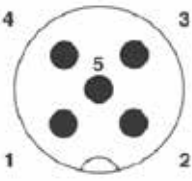
| TYPE | | MONITORED HEIGHT | | VERSION | |
|------|--------|------------------|---------|---------|--|
| 2 | Type 2 | 030 | 300 mm | W | Basic Configuration Mode |
| 4 | Type 4 | 045 | 450 mm | P | Cascadable Advanced Configuration Mode Programmable with GUI |
| | | ... | | N | SG4-N: muting function with single main connector |
| | | 180 | 1800 mm | | |

| RESOLUTION | |
|------------|-----------------------------|
| 14 | Finger: 14 mm (only Type 4) |
| 30 | Hand: 30 mm |

TECHNICAL DATA

| | SG2 MUTING [SG2-30-xxx-00-W] | SG4 EXTENDED [SG4-xx-xxx-00-P] | SG4-N [SG4-xx-xxx-00-N] |
|--|---|---|-----------------------------------|
| GENERAL DATA | | | |
| Type (EN61496-1-2) | 2 | | 4 |
| PL (EN ISO 13849-1) | c | | e |
| SIL (IEC 61508) | 1 | | 3 |
| Resolution | 30 mm | | 14, 30 mm |
| Protected height | 300 ... 1800 mm (with 150 mm steps) | | |
| Operating distance | 0.2 ... 20 m | 0.2 ... 7 m (14 mm resolution) 0.2 ... 20 m (30 mm resolution) | |
| Dead Zone | No dead zone | | |
| Cascade connection | --- | Up to 3 units | --- |
| ELECTRICAL DATA | | | |
| Power supply (Vdd) | 24 Vdc ± 20 | | |
| Outputs | 2 PNP, with short circuit protection 2 PNP | | |
| Output current | 0.5 A max/each output | | |
| Capacitive load | 2.2 uF @ 24Vdc max | | |
| Response time | 13 ... 22 ms depending on model * | 13 ... 33 ms depending on model * | 15 ... 33 ms depending on model * |
| Cables length (for power supply) | 50 m max | | |
| MECHANICAL AND ENVIRONMENTAL DATA | | | |
| Operating temperature | 0 ...+50 °C | | |
| Humidity | 15 ... 95 % (no condensation) | | |
| Mechanical protection | IP 65 (EN 60529) | | |
| FUNCTIONS | | | |
| | Test input | | |
| | Manual/Automatic Restart | | |
| | External Device Monitoring (EDM) | | |
| | Anti-interference coding | | |
| | Range reduction | | |
| | T Muting/L Muting | | |
| | --- | Partial Muting | |
| | --- | Filter on muting signals | |
| | Muting dependent Override | | |
| | Floating Blanking | | --- |
| | Fixed Blanking | | --- |
| Max. Number of Blanking Areas | 2 | 5 | --- |
| | --- | Reduced Resolution | --- |
| NOTES | | | |
| * The response time depends on model; when a cascaded system is used, depends also on the number of units connected. For detailed informations refer to related Product Datasheet or Manual. | | | |
| 1) The use of any type of blanking is not compatible with the use of Muting and Muting dependent Override. | | | |
| 2) In order to use Muting or Blanking with SG4 EXTENDED, the correct pigtail cable must be used (see accessories table) | | | |

CONNECTIONS

| | SG2 MUTING [SG2-30-XXX-00-W] | SG4 EXTENDED [SG4-XX-XXX-00-P] CONFIGURATION FOR MUTING | SG4 EXTENDED [SG4-XX-XXX-00-P] CONFIGURATION FOR BLANKING | SG4-N [SG4-XX-XXX-00-N] |
|------------------------------------|--|--|---|----------------------------|
| | PIGTAIL CABLE FOR EMITTER* | CS-G1-50-B-002 (Order Number 95A252820) | | |
| EMITTER | M12, 5 poles, male 1 = brown = 24Vdc; 2 = white = TEST; 3 = blue = 0V; 4 = black = EARTH; 5 = grey = RANGE REDUCTION. | | | |
| |  | | | |
| PIGTAIL CABLE FOR RECEIVER A | CS -R1-75-B-002 (Order Number 95A252810) | CS -G1-70-B-002 (Order Number 95A252830) | CS -G1-60-B-002 (Order Number 95A252910) | |
| RECEIVER MAIN CONNECTOR | M12, 12 poles, male 1 = brown = 24Vdc 2 = blue = 0V 3 = white = RESET/RESTART/ALIGN 4 = green = OVERRIDE1 5 = pink = OSSD2 6 = yellow = EDM 7 = black = MUTING DISABLE 8 = grey = OSSD1 9 = red = OVERRIDE2 10 = violet = MUTING LAMP 11 = grey-pink = OVERRIDE STATUS 12 = red-blue = EARTH | M12, 12 poles, male 1 = brown = 24Vdc 2 = blue = 0V 3 = white = RESET/RESTART/ALIGN 4 = green = TEACH IN 5 = pink = OSSD2 6 = yellow = EDM 8 = grey = OSSD1 9 = red = TOLERANCE 10 = violet = LAMP 12 = red-blue = EARTH | M12, 8 poles, male 1 = white = RESTART/RESET/EDM/ OVERRIDE 2 = brown = +24Vdc 3 = green = MUTING1 4 = yellow = MUTING2 5 = grey = OSSD1 6 = pink = OSSD2 7 = blue = 0Vdc 8 = red = MUTING LAMP | |
| |  | |  | |
| RECEIVER SECONDARY CONNECTOR | --- | M12, 5 poles, male 1 = brown = 24Vdc 2 = white = MUTING2 3 = blue = 0V 4 = black = MUTING1 | --- | |
| | --- |  | --- | |

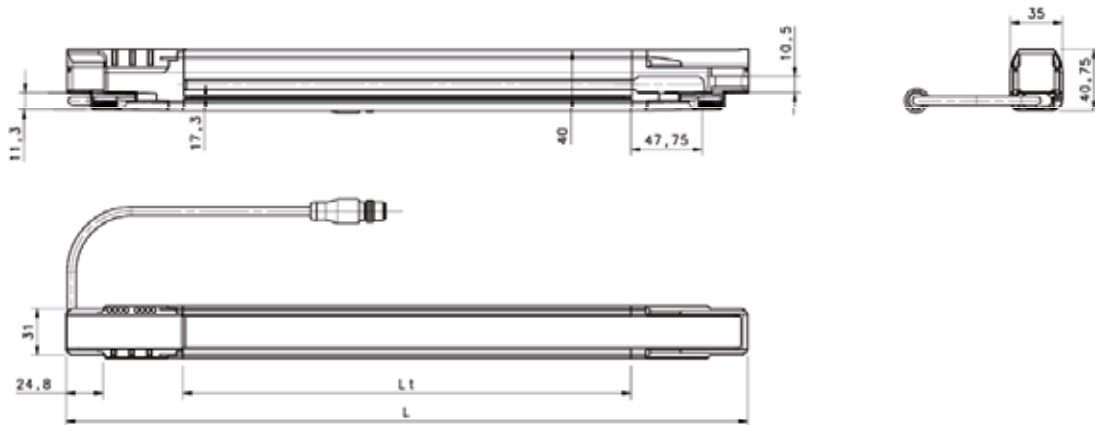
IMPORTANT NOTES

1) The light curtain SG4 EXTENDED and SG2 MUTING are sold without pigtail cables : they must be ordered separately for Transmitter and Receiver : see the cable order codes table for further informations.
SG4-N are sold with pigtail cables included.

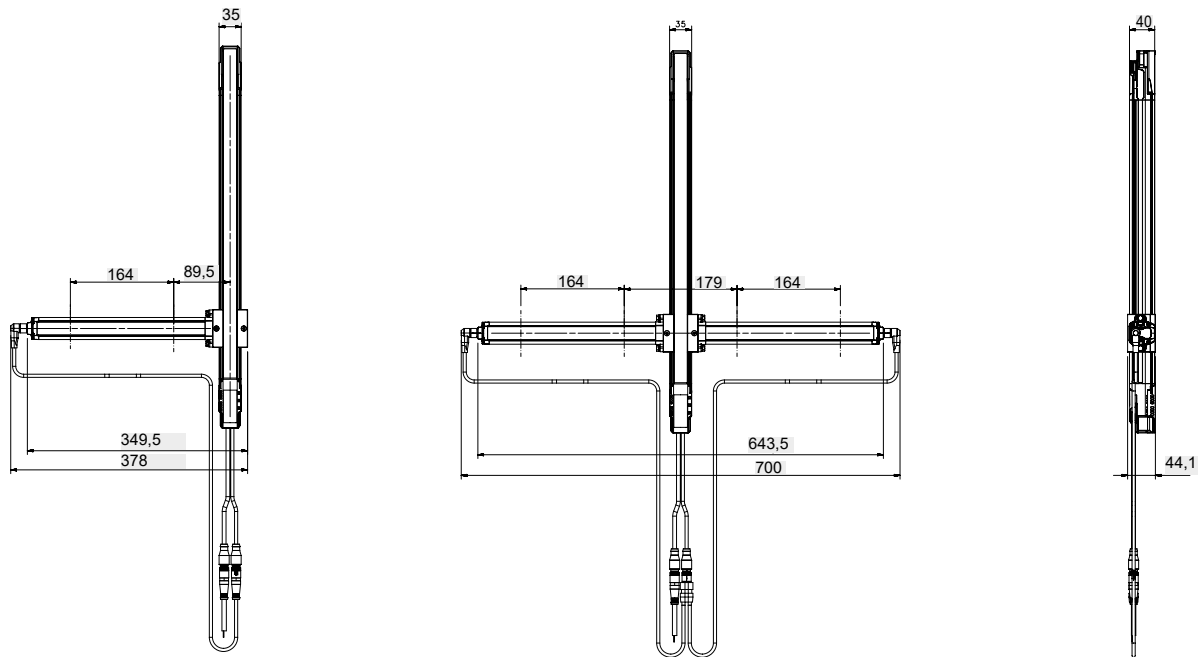
ACCESSORIES

| | SG2 MUTING [SG2-30-XXX-00-W] | SG4 EXTENDED [SG4-XX-XXX-00-P] | SG4-N [SG4-XX-XXX-00-N] |
|--|---------------------------------|--|----------------------------|
| BRACKETS | | | |
| Standard angled brackets (included) | | ST-KSTD | |
| Antivibration support (4 pcs/6 pcs) * | | ST-K4AV ST-K6AV | |
| Plastic brackets (4 pcs/6 pcs) * | | ST-KP4MP ST-KP6MP | |
| Orientable brackets (4 pcs/6 pcs) * | | ST-K4OR ST-K6OR | |
| STANDS | | | |
| Protective Stands | | SG-PSB series | |
| Stand Plate for SG-PSB | | SG-P | |
| Protective Stands Mounting Brackets (4 pcs/6 pcs) * | | ST-PS4-SG-SE ST-PS6-SG-SE | |
| Floor columns | | SE-S Series | |
| MIRRORS | | | |
| Deviating Mirrors | | SG-DM Series | |
| Deviating Mirrors mounting kit for SG-PSB | | ST-PS-DM | |
| Mirror Mounting Bracket | | ST-DM | |
| SAFETY UNITS | | | |
| Safety Unit | | SE-SR2 | |
| EDM Relay Box ** | | CS ME-03VU24-Y14 | |
| Safety control unit for single beams and SLC | | SG-BWS-T4-MT | |
| ALIGNMENT TOOL | | | |
| LASER Pointer | | SG-LP | |
| COMMUNICATION TOOLS | | | |
| Ethernet Adaptor (Dongle) | --- | SG4-DONGLE | --- |
| Ethernet Cable | --- | CAB-ETH-M01 | --- |
| CONFIGURATION SOFTWARE | | | |
| Monitoring and Programming Software *** | | SG EXTENDED Graphic User Interface *** | |
| MUTING ACCESSORIES | | | |
| External muting lamps | | LMS series | |
| NOTES | | | |
| * Use 6 brackets for light curtains with length ≥ 1200 mm | | | |
| ** When using EDM Relay Box, connect EDM input, and be sure EDM function is active on the safety light curtain | | | |
| *** SG EXTENDED GUI is available from DATALOGIC website | | | |

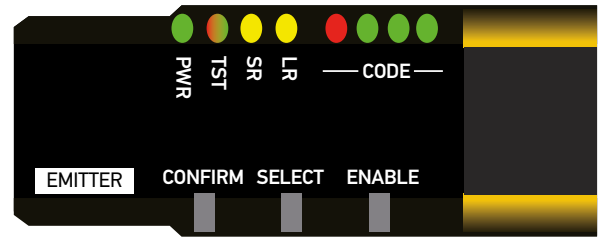
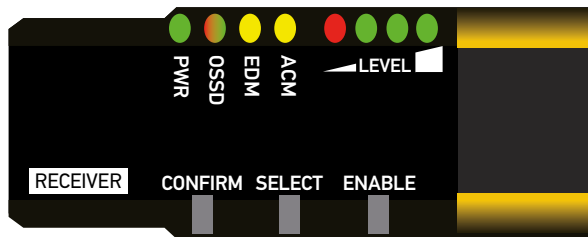
DIMENSIONS



| SG2 MUTING | SG4 EXTENDED | SG4-N | Lt (mm) | L (mm) |
|-----------------|-----------------|-----------------|---------|--------|
| SG2-xx-030-00-W | SG4-xx-030-00-P | SG4-xx-030-00-N | 150 | 306,3 |
| SG2-xx-045-00-W | SG4-xx-045-00-P | SG4-xx-045-00-N | 300 | 456,3 |
| SG2-xx-060-00-W | SG4-xx-060-00-P | SG4-xx-060-00-N | 450 | 606,3 |
| SG2-xx-075-00-W | SG4-xx-075-00-P | SG4-xx-075-00-N | 600 | 756,3 |
| SG2-xx-090-00-W | SG4-xx-090-00-P | SG4-xx-090-00-N | 750 | 906,3 |
| SG2-xx-105-00-W | SG4-xx-105-00-P | SG4-xx-105-00-N | 900 | 1056,3 |
| SG2-xx-120-00-W | SG4-xx-120-00-P | SG4-xx-120-00-N | 1050 | 1206,3 |
| SG2-xx-135-00-W | SG4-xx-135-00-P | SG4-xx-135-00-N | 1200 | 1356,3 |
| SG2-xx-150-00-W | SG4-xx-150-00-P | SG4-xx-150-00-N | 1350 | 1506,3 |
| SG2-xx-165-00-W | SG4-xx-165-00-P | SG4-xx-165-00-N | 1500 | 1656,3 |
| SG2-xx-180-00-W | SG4-xx-180-00-P | SG4-xx-180-00-N | 1650 | 1806,3 |



INDICATORS



AVAILABLE MODELS AND ORDER CODES

| | SG2 MUTING [SG2-30-XXX-00-W] | ORDER NUMBER | SG4 EXTENDED [SG4-XX-XXX-00-P] | ORDER NUMBER | SG4-N [SG4-XX-XXX-00-N] | ORDER NUMBER |
|-------------------|---------------------------------|-----------------|-----------------------------------|-----------------|----------------------------|-----------------|
| FINGER PROTECTION | --- | | SG4-14-030-00-P | 957901240 | SG4-14-030-00-N | 957902350 |
| | --- | | SG4-14-045-00-P | 957901250 | SG4-14-045-00-N | 957902360 |
| | --- | | SG4-14-060-00-P | 957901260 | SG4-14-060-00-N | 957902370 |
| | --- | | SG4-14-075-00-P | 957901270 | SG4-14-075-00-N | 957902380 |
| | --- | | SG4-14-090-00-P | 957901280 | SG4-14-090-00-N | 957902390 |
| | --- | | SG4-14-105-00-P | 957901290 | SG4-14-105-00-N | 957902400 |
| | --- | | SG4-14-120-00-P | 957901300 | SG4-14-120-00-N | 957902410 |
| | --- | | SG4-14-135-00-P | 957901310 | SG4-14-135-00-N | 957902420 |
| | --- | | SG4-14-150-00-P | 957901320 | SG4-14-150-00-N | 957902430 |
| HAND PROTECTION | --- | | SG4-14-165-00-P | 957901330 | SG4-14-165-00-N | 957902440 |
| | --- | | SG4-14-180-00-P | 957901340 | SG4-14-180-00-N | 957902450 |
| | SG2-30-030-00-W | 957801700 | SG4-30-030-00-P | 957901350 | SG4-30-030-00-N | 957902460 |
| | SG2-30-045-00-W | 957801710 | SG4-30-045-00-P | 957901360 | SG4-30-045-00-N | 957902470 |
| | SG2-30-060-00-W | 957801720 | SG4-30-060-00-P | 957901370 | SG4-30-060-00-N | 957902480 |
| | SG2-30-075-00-W | 957801730 | SG4-30-075-00-P | 957901380 | SG4-30-075-00-N | 957902490 |
| | SG2-30-090-00-W | 957801740 | SG4-30-090-00-P | 957901390 | SG4-30-090-00-N | 957902500 |
| | SG2-30-105-00-W | 957801750 | SG4-30-105-00-P | 957901400 | SG4-30-105-00-N | 957902510 |
| | SG2-30-120-00-W | 957801760 | SG4-30-120-00-P | 957901410 | SG4-30-120-00-N | 957902520 |
| | SG2-30-135-00-W | 957801770 | SG4-30-135-00-P | 957901420 | SG4-30-135-00-N | 957902530 |
| SG2-30-150-00-W | 957801780 | SG4-30-150-00-P | 957901430 | SG4-30-150-00-N | 957902540 | |
| SG2-30-165-00-W | 957801790 | SG4-30-165-00-P | 957901440 | SG4-30-165-00-N | 957902550 | |
| SG2-30-180-00-W | 957801800 | SG4-30-180-00-P | 957901450 | SG4-30-180-00-N | 957902560 | |

NOTES

* The light curtain SG4 EXTENDED and SG2 MUTING are sold without pigtail cables : they must be ordered separately for Transmitter and Receiver.
 In case of SG4 EXTENDED, the choice of the Receiver pigtail determines in Muting configuration or Blanking configuration.
 For cascade configurations, other cables are available to connect the cascaded units: refer to accessories table.

CABLE ORDER CODES

PIGTAIL CABLES/INTERFACE SELECTION TABLE

| | | PIGTAIL CABLE/INTERFACE | LENGTH (m) | ORDER CODE |
|-----------------------------------|----------------|-------------------------|------------|------------|
| SG2 MUTING [SG2-30-XXX-00-W] | TRANSMITTER | CS-G1-50-B-002 | 0.2 | 95A252820 |
| | RECEIVER | CS-R1-75-B-002 | 0.2 | 95A252810 |
| SG4 EXTENDED [SG4-XX-XXX-00-P] | TRANSMITTER | CS-G1-50-B-002 | 0.2 | 95A252820 |
| | RECEIVER | BLANKING CONFIGURATION | | |
| | | CS-G1-70-B-002 | 0.2 | 95A252830 |
| | | MUTING CONFIGURATION | | |
| | CS-R1-75-B-002 | 0.2 | 95A252810 | |
| | DONGLE | | | |
| | | SG4-DONGLE | --- | 95ASE2080 |

NOTES

- 1) The light curtain is sold without pigtail cables: they must be ordered separately for Transmitter and Receiver.
- 2) For SG4 EXTENDED, the pigtail cable used determines if the light curtain will work in Muting configuration or in Blanking configuration. If, in place of the pigtail cable, the Dongle is used for receiver, the light curtain can work in both configurations. When muting and blanking are not needed, Dongle or pigtail cable CS-G1-70-B-002 are suggested.
- 3) If SG4 EXTENDED receiver is connected to the programming and monitoring interface (DONGLE), the pigtail cable for Receiver isn't needed.
- 4) In order to install SG4 EXTENDED or SG2 MUTING in place of SE series safety light curtains, without changing any wiring, it can be used the cable CS-G1-60-B-002 (order n. 95A252910) for receiver. All functions of SE will be available, except Override.



CS-G1-50-B-002



CS-G1-70-B-002



CS-R1-75-B-002

CABLES SELECTION TABLE

| | TRANSMITTER/RECEIVER SECONDARY CONNECTOR | LENGTH (m) | ORDER CODE | |
|--|--|---------------|------------|------------|
| SG2 MUTING [SG2-30-xxx-00-W] SG4 EXTENDED [SG4-xx-xxx-00-P] | 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 | |
| | 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 | |

CASCADE CABLES

| MODEL | LENGTH (m) | ORDER CODE |
|-----------------|------------|------------|
| CS-F1-80-B-01 | 1 | 95A252840 |
| CS-F1-80-B-005 | 0.5 | 95A252850 |
| CS-F1-80-B-0005 | 0.05 | 95A252860 |



ETHERNET CABLES

| MODEL | LENGTH (m) | ORDER CODE |
|----------------------|------------|------------|
| CAB-ETH-M01 M12-IP67 | 1 | 93A051346 |
| CAB-ETH-M03 M12-IP67 | 3 | 93A051347 |
| CAB-ETH-M05 M12-IP67 | 5 | 93A051348 |



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