

# 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



SAFETY

## APPLICATIONS

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

## INDUSTRIES

Food & Beverage, Metalworking, Automotive,  
Wood, Ceramics



	FINGER	HAND	ARM	BODY
TYPE 2		•		
TYPE 4	•	•		

# SG4-14-030-00-P

TYPE	
2	Type 2
4	Type 4

MONITORED HEIGHT	
030	300 mm
045	450 mm
...	
180	1800 mm

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

VERSION	
W	Basic Configuration Mode
P	Cascadable Advanced Configuration Mode

## TECHNICAL DATA

	SG2 MUTING [ SG2-30-xxx-00-W ]	SG4 EXTENDED [ SG4-xx-xxx-00-P ]
<b>GENERAL DATA</b>		
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 <sup>B</sup>
<b>ELECTRICAL DATA</b>		
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 µF @ 24Vdc max	
Response time	13 ... 22 ms depending on model <sup>A</sup>	13 ... 33 ms depending on model <sup>A</sup>
Cables length (for power supply)	50 m max	
<b>MECHANICAL AND ENVIRONMENTAL DATA</b>		
Operating temperature	0 ...+50 °C	
Humidity	15 ... 95 % (no condensation)	
Mechanical protection	IP 65 (EN 60529)	
<b>FUNCTIONS</b>		
	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	---	5
	---	Reduced Resolution

### NOTES

<sup>A</sup> 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.

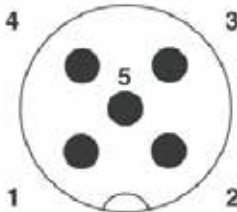
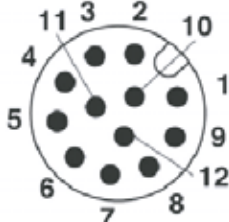
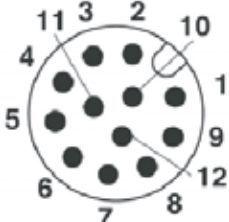

<sup>B</sup> The three units can be one "master" and two "slaves". The maximum "slaves" length can't exceed 1200 mm. The maximum number of beams of the overall system is 160 beams for 30 mm resolution, and 320 beams for 14 mm resolution.

### IMPORTANT NOTES:

- 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)

# SG2 MUTING SG4 EXTENDED

## CONNECTIONS

	SG2 MUTING [ SG2-30-XXX-00-W ]	SG4 EXTENDED [ SG4-XX-XXX-00-P ] <b>CONFIGURATION FOR MUTING</b>	SG4 EXTENDED [ SG4-XX-XXX-00-P ] <b>CONFIGURATION FOR BLANKING</b>
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)
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 
RECEIVER SECONDARY CONNECTOR	M12, 5 poles, male 1 = brown = 24Vdc 2 = white = MUTING2 3 = blue = 0V 4 = black = MUTING1 		---

### <sup>A</sup> IMPORTANT NOTES

- 1) The light curtain is sold without pigtail cables: they must be ordered separately for Transmitter and Receiver.
- 2) In case of SG4 EXTENDED, the choice of the Receiver pigtail determines if it will work in Muting configuration or in Blanking configuration.
- 3) In case the SG4 EXTENDED will be installed together with the programming and monitoring interface (DONGLE), the pigtail cable for Receiver isn't needed.  
See accessories table for more informations about DONGLE

## ACCESSORIES

	SG2 MUTING [ SG2-30-XXX-00-W ]	SG4 EXTENDED [ SG4-XX-XXX-00-P ]
<b>BRACKETS</b>		
Standard angled brackets (included)		ST-KSTD
Antivibration support (4 pcs/6 pcs) <sup>A</sup>		ST-K4AV ST-K6AV
Plastic brackets (4 pcs/6 pcs) <sup>A</sup>		ST-KP4MP ST-KP6MP
Orientable brackets (4 pcs/6 pcs) <sup>A</sup>		ST-K4OR ST-K6OR
<b>STANDS</b>		
Protective Stands		SG-PSB series
Stand Plate for SG-PSB		SG-P
Protective Stands Mounting Brackets (4 pcs/6 pcs) <sup>A</sup>		ST-PS4-SG-SE ST-PS6-SG-SE
Floor columns		SE-S Series
<b>MIRRORS</b>		
Deviating Mirrors		SG-DM Series
Deviating Mirrors mounting kit for SG-PSB		ST-PS-DM
Mirror Mounting Bracket		ST-DM
<b>SAFETY UNITS</b>		
Safety Unit		SE-SR2
EDM Relay Box <sup>B</sup>		CS ME-03VU24-Y14
Safety control unit for single beams and SLC		SG-BWS-T4-MT
<b>ALIGNMENT TOOL</b>		
LASER Pointer		SG-LP
<b>COMMUNICATION TOOLS</b>		
Ethernet Adaptor (Dongle)	---	SG4-DONGLE
Ethernet Cable	---	CAB-ETH-M01
<b>CONFIGURATION SOFTWARE</b>		
Monitoring and Programming Software <sup>C</sup>		SG EXTENDED Graphic User Interface <sup>C</sup>
<b>MUTING ACCESSORIES</b>		
External muting lamps		LMS series
Muting arms, brackets and cables		See muting accessories section

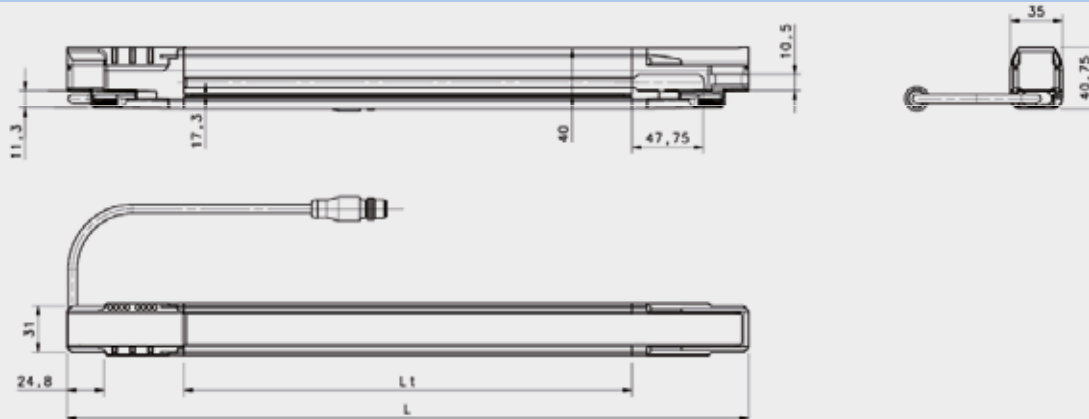
### NOTES

<sup>A</sup> Use 6 brackets for light curtains with length  $\geq 1200$  mm

<sup>B</sup> When using EDM Relay Box, connect EDM input, and be sure EDM function is active on the safety light curtain

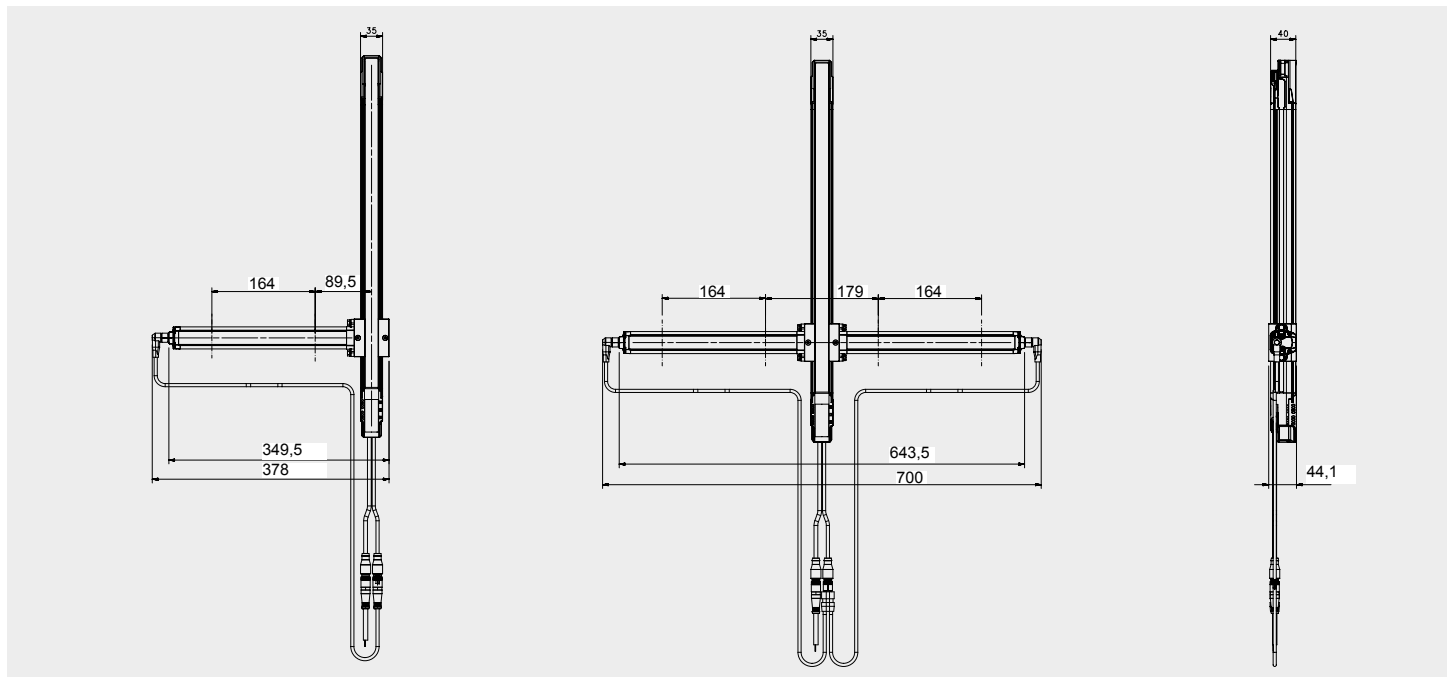
<sup>C</sup> SG EXTENDED GUI is available from DATALOGIC website

## DIMENSIONS

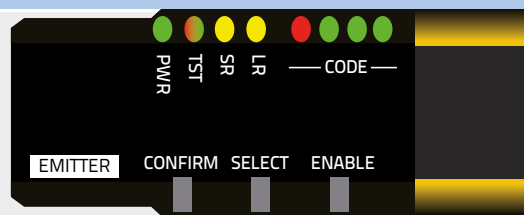
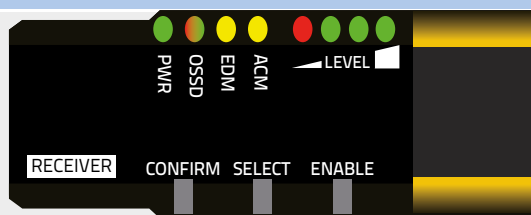


SG2 MUTING	SG4 EXTENDED	Lt (mm)	L (mm)
SG2-xx-030-00-W	SG4-xx-030-00-P	150	306,3
SG2-xx-045-00-W	SG4-xx-045-00-P	300	456,3
SG2-xx-060-00-W	SG4-xx-060-00-P	450	606,3
SG2-xx-075-00-W	SG4-xx-075-00-P	600	756,3
SG2-xx-090-00-W	SG4-xx-090-00-P	750	906,3
SG2-xx-105-00-W	SG4-xx-105-00-P	900	1056,3
SG2-xx-120-00-W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

# SG2 MUTING SG4 EXTENDED



## INDICATORS



## AVAILABLE MODELS AND ORDER CODES

	SG2 MUTING [ SG2-30-XXX-00-W ]	ORDER NUMBER	SG4 EXTENDED [ SG4-XX-XXX-00-P ]	ORDER NUMBER
FINGER PROTECTION	---		SG4-14-030-00-P	957901240
	---		SG4-14-045-00-P	957901250
	---		SG4-14-060-00-P	957901260
	---		SG4-14-075-00-P	957901270
	---		SG4-14-090-00-P	957901280
	---		SG4-14-105-00-P	957901290
	---		SG4-14-120-00-P	957901300
	---		SG4-14-135-00-P	957901310
	---		SG4-14-150-00-P	957901320
	---		SG4-14-165-00-P	957901330
HAND PROTECTION	---		SG4-14-180-00-P	957901340
	SG2-30-030-00-W	957801700	SG4-30-030-00-P	957901350
	SG2-30-045-00-W	957801710	SG4-30-045-00-P	957901360
	SG2-30-060-00-W	957801720	SG4-30-060-00-P	957901370
	SG2-30-075-00-W	957801730	SG4-30-075-00-P	957901380
	SG2-30-090-00-W	957801740	SG4-30-090-00-P	957901390
	SG2-30-105-00-W	957801750	SG4-30-105-00-P	957901400
	SG2-30-120-00-W	957801760	SG4-30-120-00-P	957901410
	SG2-30-135-00-W	957801770	SG4-30-135-00-P	957901420
	SG2-30-150-00-W	957801780	SG4-30-150-00-P	957901430
SG2-30-165-00-W	957801790	SG4-30-165-00-P	957901440	
SG2-30-180-00-W	957801800	SG4-30-180-00-P	957901450	

### NOTES

A The light curtain is 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 the accessories table.

# SG2 MUTING SG4 EXTENDED

## 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 ]	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
SG4 EXTENDED [ SG4-xx-xxx-00-P ]	RECEIVER MAIN CONNECTOR		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

