SG2 MUTING
SG4 EXTENDED

◆DATALOGIC

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

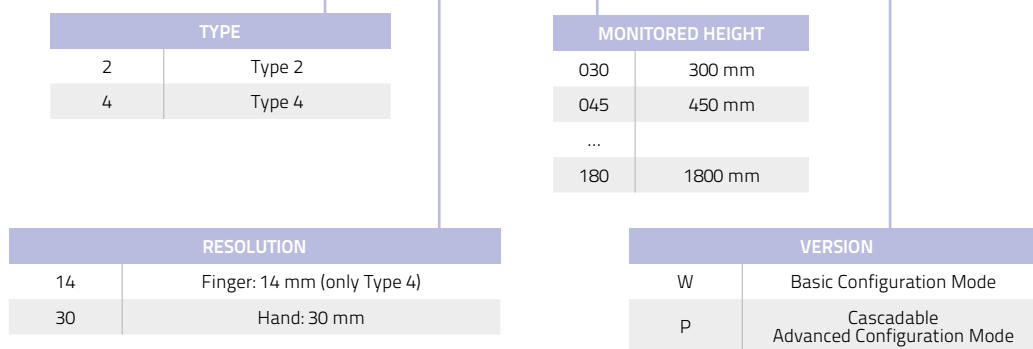## INDUSTRIES

Food & Beverage, Metalworking, Automotive, Wood, Ceramics

	FINGER	HAND	ARM	BODY
TYPE 2		▪		
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-OO-W]	SG4 EXTENDED [SG4-xx-xxx-OO-P]
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 [B]
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 [A]	13 … 33 ms depending on model [A]
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	---	5
	---	Reduced Resolution

NOTES

[A] 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.

[B] 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)

CONNECTIONS

	SG2 MUTING [SG2-30-XXX-OO-W]	SG4 EXTENDED [SG4-XX-XXX-OO-P]	SG4 EXTENDED [SG4-XX-XXX-OO-P]
		CONFIGURATION FOR MUTING	CONFIGURATION FOR BLANKING
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 		---

[A] 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

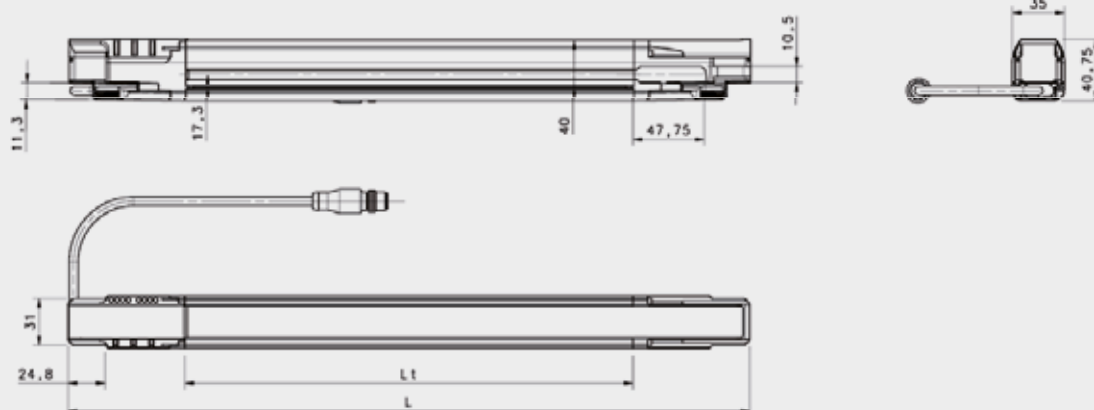|	SG2 MUTING [SG2-30-XXX-OO-W]	SG4 EXTENDED [SG4-XX-XXX-OO-P]
BRACKETS		
Standard angled brackets (included)	ST-KSTD	
Antivibration support (4 pcs/6 pcs) ᴬ	ST-K4AV ST-K6AV	
Plastic brackets (4 pcs/6 pcs) ᴬ	ST-KP4MP ST-KP6MP	
Orientable brackets (4 pcs/6 pcs) ᴬ	ST-K4OR ST-K6OR	
STANDS		
Protective Stands	SG-PSB series	
Stand Plate for SG-PSB	SG-P	
Protective Stands Mounting Brackets (4 pcs/6 pcs) ᴬ	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 ᴮ	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 ᶜ	SG EXTENDED Graphic User Interface ᶜ	
MUTING ACCESSORIES		
External muting lamps	LMS series	
Muting arms, brackets and cables	See muting accessories section	

NOTES

ᴬ Use 6 brackets for light curtains with length ≥ 1200 mm

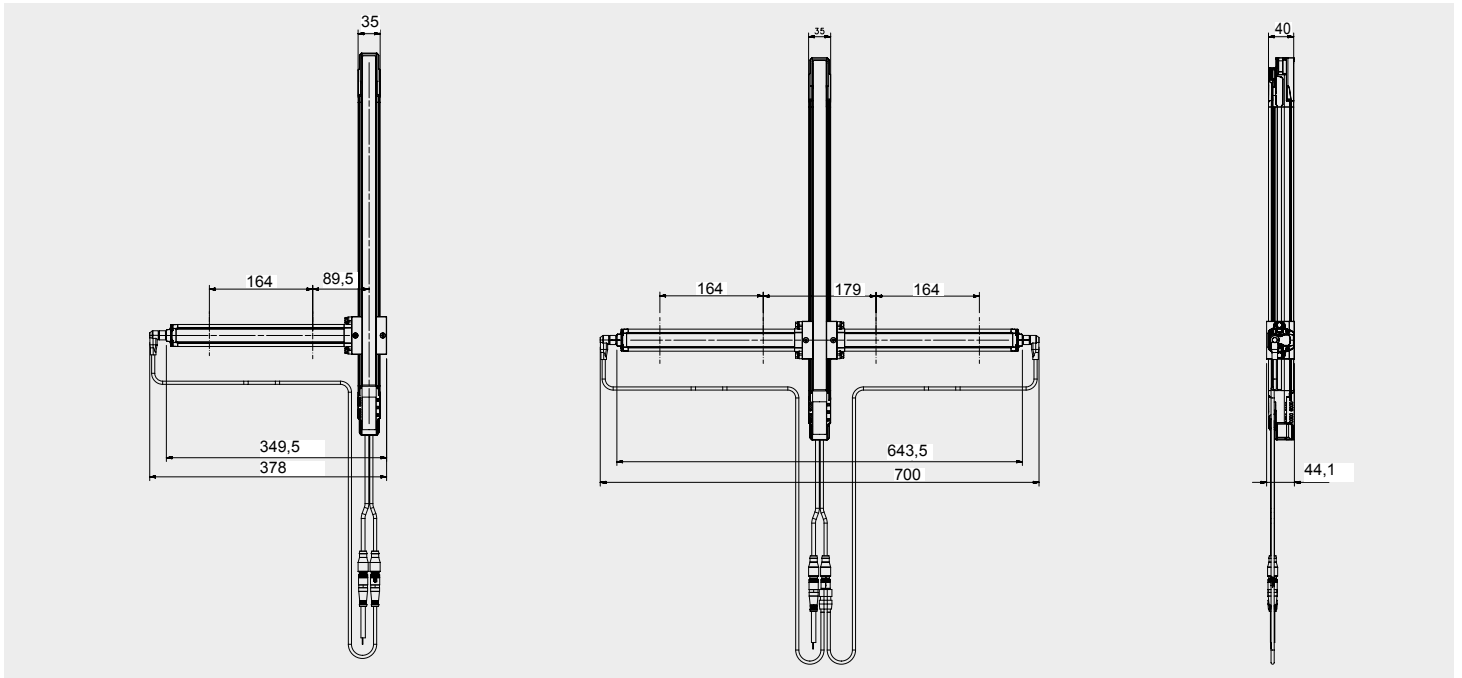ᴮ When using EDM Relay Box, connect EDM input, and be sure EDM function is active on the safety light curtain

ᶜ SG EXTENDED GUI is available from DATALOGIC website
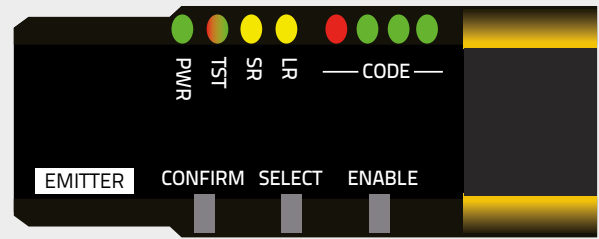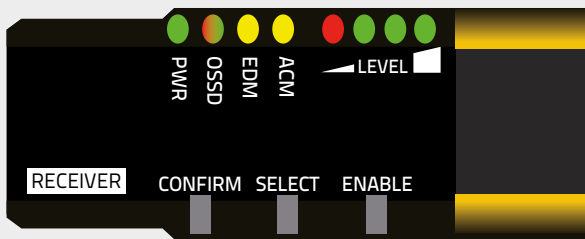
DIMENSIONS

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

INDICATORS

RECEIVER — PWR OSSD EDM ACM — LEVEL — CONFIRM SELECT ENABLE

EMITTER — PWR TST SR LR — CODE — CONFIRM SELECT ENABLE

AVAILABLE MODELS AND ORDER CODES

	SG2 MUTING [SG2-30-XXX-OO-W]	ORDER NUMBER	SG4 EXTENDED [SG4-XX-XXX-OO-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
	---		SG4-14-180-00-P	957901340
HAND PROTECTION	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 avilable to connect the cascaded units: refer to the accessories table.

CABLE ORDER CODES

PIGTAIL CABLES/INTERFACE SELECTION TABLE				
		PIGTAIL CABLE/INTERFACE	LENGTH (m)	ORDER CODE
SG2 MUTING [SG2-30-XXX-OO-W]	TRANSMITTER	CS-G1-50-B-002	0.2	95A252820
	RECEIVER	CS-R1-75-B-002	0.2	95A252810
SG4 EXTENDED [SG4-XX-XXX-OO-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
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

SG2 MUTING [SG2-30-xxx-OO-W]

SG4 EXTENDED [SG4-xx-xxx-OO-P]

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