

SG4 FIELDBUS



First safety light curtain with integrated openSAFETY over POWERLINK

Fast and easy installation, configuration and maintenance

Complete diagnostic and monitoring available over the communication bus

Basic models: classic functions available

Advanced models: each beam status safe information available

- Two M12 connectors on receiver side for POWERLINK connection
- M8 connectors on emitter and receiver for power supply
- Up to 19m operating range and 1800m protected height
- Finger, hand and body protection
- Compact dimensions (35 x 42 mm section)
- POWERLINK node address configurable with selector switches
- Functions available in combination with B&R safety controller SL and SLX: auto/manual restart, EDM, Muting, Override
- Functions available for advanced models in combination with B&R safety controller SL: fixed blanking, floating blanking, partial and dynamic muting, warning areas, measurement



APPLICATIONS

- Automatic and semi-automatic machines and lines
- Primary packaging machinery (packing, filling, labelling, etc...)
- Cutting machinery
- Bending and metal-working machines
- Material handling machinery
- Palletizers and depalletizers
- Material handling
- Robots cells

INDUSTRIE

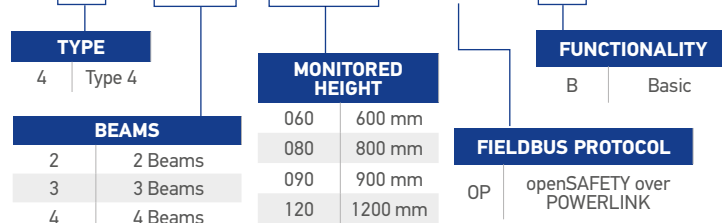
- Food & Beverage, Metalworking, Automotive, Wood, Ceramics

	FINGER	HAND	ARM	BODY
Type 2				
Type 4	x	x		x

SG4-14-015-OP-A



SG4-S2-060-OP-B



TECHNICAL DATA

SG4 FIELDBUS

	Finger and Hand resolution [SG4-xx-xxx-OP-x]	Body detection [SG4-Sx-xxx-OP-x]
GENERAL DATA		
Type (EN61496-1)		4
PL (EN ISO 13849-1)		e
SIL (IEC 61508)		3
Resolution	14 mm [SG4-14-xxx-OP-x] 30 mm [SG4-30-xxx-OP-x]	2 beams [SG4-S2-xxx-OP-x] 3 beams [SG4-S3-xxx-OP-x] 4 beams [SG4-S4-xxx-OP-x]
Protected height	150 ... 1800 mm (with 150 mm steps)	600 / 800 / 900 / 1200 mm
Operating distance	0.2 ... 6 m [SG4-14-xxx-OP-x] 0.2 ... 19 m [SG4-30-xxx-OP-x]	0.2 ... 19 m
ELECTRICAL DATA		
Power supply (Vdd)		24 Vdc ± 20%
Consumption (Transmitter)		3 W max
Consumption (Receiver)		5 W max
Response time		see response time table
Power supply cable length		50 m max
Ethernet cable length		100 m max
MECHANICAL AND ENVIRONMENTAL DATA		
Operating temperature		0 ... +50 °C
Humidity		15 ... 95 % (no condensation)
Mechanical protection		IP 65 (EN 60529)
Housing material		Painted aluminium, Polycarbonate
Window material		PMMA

FUNCTIONS

SG4 FIELDBUS can only be used in combination with a safety PLC to which it transmits safety information about its status through openSAFETY over POWERLINK. BASE models transmit only their ON/OFF status, ADVANCED models transmit also each beam status. Using appropriate functional blocks or instructions inside the safety PLC it is possible to implement the following functions:

BASE MODELS [SG4-xx-xxx-OP-B] ADVANCED MODELS [SG4-xx-xxx-OP-A]	Automatic/Manual restart
	External Device Monitoring
ADVANCED MODELS [SG4-xx-xxx-OP-A]	Total Muting
	Partial muting
	Auto dynamic Partial muting
	Fixed Blanking
	Floating Blanking
	Measurement

MODEL	RESPONSE TIME (ms)
SG4-14-015-OP-B	19
SG4-14-030-OP-B	22
SG4-14-045-OP-B	25
SG4-14-060-OP-B	29
SG4-14-075-OP-B	31
SG4-14-090-OP-B	35
SG4-14-105-OP-B	38
SG4-14-120-OP-B	41
SG4-14-135-OP-B	44
SG4-14-150-OP-B	47
SG4-14-165-OP-B	51
SG4-14-180-OP-B	54
SG4-30-015-OP-B	19
SG4-30-030-OP-B	21
SG4-30-045-OP-B	22
SG4-30-060-OP-B	24
SG4-30-075-OP-B	25
SG4-30-090-OP-B	27
SG4-30-105-OP-B	29
SG4-30-120-OP-B	31
SG4-30-135-OP-B	32
SG4-30-150-OP-B	34
SG4-30-165-OP-B	36
SG4-30-180-OP-B	38
SG4-S2-060-OP-B	24
SG4-S3-080-OP-B	27
SG4-S4-090-OP-B	27
SG4-S4-120-OP-B	31

NOTE

The response time reported in this table is the part of the communication time depending only by the light curtain. Additional time must be added, depending on configurable parameters of the POWERLINK network and safety PLC.

MODEL SELECTION AND ORDER INFORMATION

	Basic functionality [SG4-xx-xxx-OP-B] [SG4-Sx-xxx-OP-B]	Order Number	Advanced functionality [SG4-xx-xxx-OP-A]	Order Number
FINGER PROTECTION	SG4-14-015-OP-B	957901770	SG4-14-015-OP-A	957902050
	SG4-14-030-OP-B	957901780	SG4-14-030-OP-A	957902060
	SG4-14-045-OP-B	957901790	SG4-14-045-OP-A	957902070
	SG4-14-060-OP-B	957901800	SG4-14-060-OP-A	957902080
	SG4-14-075-OP-B	957901810	SG4-14-075-OP-A	957902090
	SG4-14-090-OP-B	957901820	SG4-14-090-OP-A	957902100
	SG4-14-105-OP-B	957901830	SG4-14-105-OP-A	957902110
	SG4-14-120-OP-B	957901840	SG4-14-120-OP-A	957902120
	SG4-14-135-OP-B	957901850	SG4-14-135-OP-A	957902130
	SG4-14-150-OP-B	957901860	SG4-14-150-OP-A	957902140
	SG4-14-165-OP-B	957901870	SG4-14-165-OP-A	957902150
	SG4-14-180-OP-B	957901880	SG4-14-180-OP-A	957902160
HAND PROTECTION	SG4-30-015-OP-B	957901890	SG4-30-015-OP-A	957902170
	SG4-30-030-OP-B	957901900	SG4-30-030-OP-A	957902180
	SG4-30-045-OP-B	957901910	SG4-30-045-OP-A	957902190
	SG4-30-060-OP-B	957901920	SG4-30-060-OP-A	957902200
	SG4-30-075-OP-B	957901930	SG4-30-075-OP-A	957902210
	SG4-30-090-OP-B	957901940	SG4-30-090-OP-A	957902220
	SG4-30-105-OP-B	957901950	SG4-30-105-OP-A	957902230
	SG4-30-120-OP-B	957901960	SG4-30-120-OP-A	957902240
	SG4-30-135-OP-B	957901970	SG4-30-135-OP-A	957902250
	SG4-30-150-OP-B	957901980	SG4-30-150-OP-A	957902260
	SG4-30-165-OP-B	957901990	SG4-30-165-OP-A	957902270
	SG4-30-180-OP-B	957902000	SG4-30-180-OP-A	957902280
BODY PROTECTION	SG4-S2-060-OP-B	957902010	--	--
	SG4-S3-080-OP-B	957902020	--	--
	SG4-S4-090-OP-B	957902030	--	--
	SG4-S4-120-OP-B	957902040	--	--

CABLES

POWER SUPPLY CABLES			
	MODEL	LENGTH (m)	ORDER CODE
M8 AXIAL CONNECTOR	CS-B1-02-G-03	3	95A251420
	CS-B1-02-G-05	5	95A251430
	CS-B1-02-G-07	7	95A251440
	CS-B1-02-G-10	10	95A251480
M8 RADIAL CONNECTOR	CS-B2-02-G-03	3	95A251450
	CS-B2-02-G-05	5	95A251460
	CS-B2-02-G-07	7	95A251470
	CS-B2-02-G-10	10	95A251530
POWERLINK CABLES			
M12 AXIAL - RJ45	CAB-ETH-M01	1	93A051346
	CAB-ETH-M03	3	93A051347
	CAB-ETH-M05	5	93A051348
	CAB-ETH-M10	10	93A051391
M12 AXIAL - M12	ETH CABLE M12-M12 1M	1	93A050065
	ETH CABLE M12-M12 3M	3	93A050066
	ETH CABLE M12-M12 5M	5	93A050067