MEDITECNA
Instrumentación | Proyectos | Servicios

S7

DATALOGIC



Fiber optic amplifiers in a DIN rail compatible format for small object detection in limited spaces

- High-resolution models with integrated display
- 12 bit resolution and 50 µs response time
- Trimmer or teach-in models
- Wide range of accessory fiber optics
- 4 wire NO/NC output or Remote teach input

APPLICATIONS

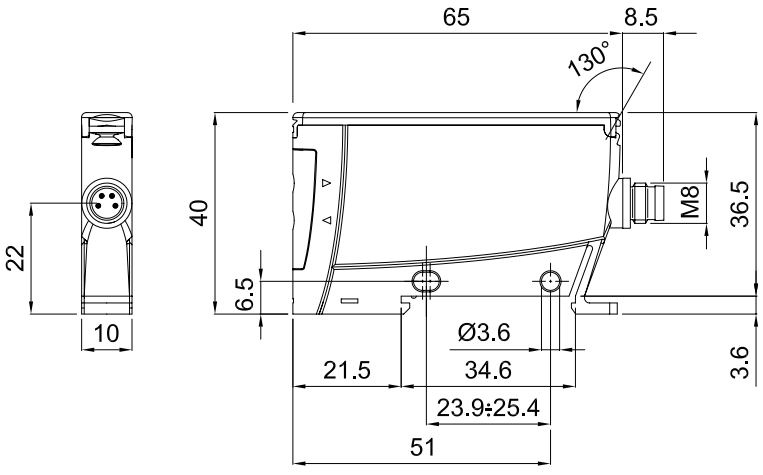
- Processing and Packaging machinery
- Electronics assembling
- Pharmaceutical industry

S7		
Through beam with fiber optic		0...300 mm
		0...150 mm
		0...75 mm
Diffuse proximity with fiber optic		0...100 mm
		0...50 mm
		0...25 mm
Power supply	Vdc	12...24 V
	Vac	
	Vac/dc	
Output	PNP	•
	NPN	•
	NPN/PNP	
	relay	
	other	
Connection	cable	•
	connector	•
	pig-tail	
Approximate dimensions (mm)		10x65x40
Housing material		ABS
Mechanical protection		IP65, IP60 (trimmer vers.)

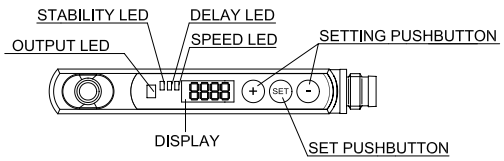
TECHNICAL DATA

Power supply	12 ... 24 Vdc ± 10% (reverse polarity protection)
Ripple	2 Vpp max.
Consumption (output current excluded)	50 mA max. (mod. S7-1/2/4/5) 40 mA (mod. S7-3/6) 30 mA max. (mod. S7-7/8)
Light emission	red 670 nm (mod. S7-2/3/5/6/7/8) white 400-700 nm (mod. S7-1/4)
Setting	SET pushbutton, + pushbutton, - pushbutton (mod. S7-1/2/4/5) 1 SET pushbutton (mod. S7-3/6) 12 multiturn trimmer (mod. S7-7/8)
Indicators	yellow OUTPUT LED green STABILITY LED, DELAY LED and SPEED LED (mod. S7-1/2/4/5) green/red READY/ERROR LED (mod. S7-3/6/7/8)
Output	PNP or NPN
Output current	100 mA max.
Saturation voltage	1,2 V max. (mod. S7-3/6/7/8) 2 V max. (mod. S7-1/2/4/5)
Response time	500 µs max. (at low speed for mod. S7-1/2/7/8) 100 µs max. (at fast speed for mod. S7-2/5) 50 µs max. (at fast speed for mod. S7-1/4)
Switching frequency	1 kHz (at low speed for mod. S7-1/2/7/8) 5 kHz (at fast speed for mod. S7-2/5) 10 kHz (at fast speed for mod. S7-1/4)
Connection	2 m Ø 4 mm cable (S7-1/2/3/7), M8 4-pole connector (S7-4/5/6/8)
Dielectric strength	500 Vac, 1 min between electronics and housing
Insulating resistance	>20 MΩ, 500 Vdc between electronics and housing
Electrical protection	class 2
Mechanical protection	IP65 IP60 (mod. S7-7/8)
Ambient light rejection	according to EN 60947-5-2
Vibrations	0,5 mm amplitude, 10 ... 55 Hz frequency, for every axis (EN60068-2-6)
Shock resistance	11 ms (30 G) 6 shock for every axis (EN60068-2-27)
Housing material	ABS
Operating temperature	-10 ... 55 °C
Storage temperature	-25 ... 70 °C
Weight	115 g max. cable vers., 30 g max. conn. vers.

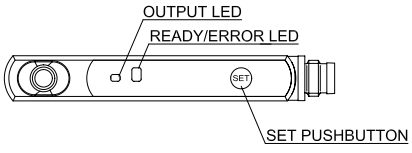
DIMENSIONS



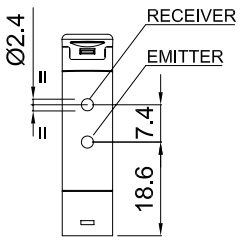
S7-1/2/4/5

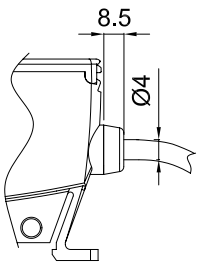


S7-3/6

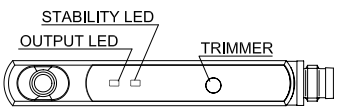


CABLE VERSION

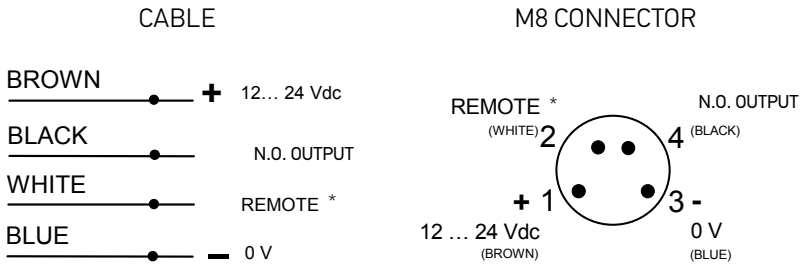




S7-7/8

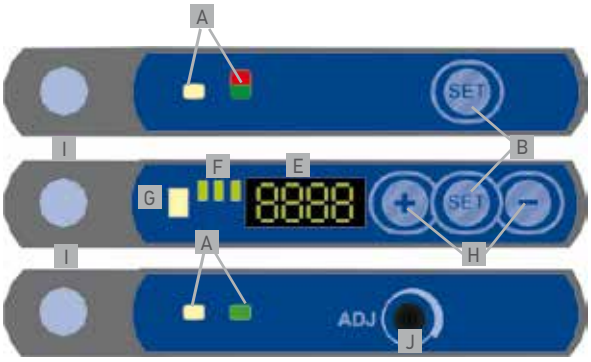


CONNECTIONS



* N.C. OUTPUT on S7-7/8 models

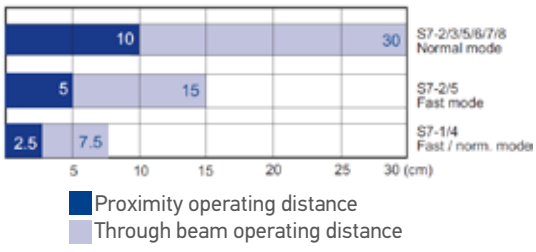
INDICATOR AND SETTINGS



- A OUTPUT status and READY/ERROR LEDs
- B Teach-in push-button
- C M8 connector output
- D Cable output
- E 4 digit display
- F STATUS signalling LEDs
- G OUTPUT status LED
- H '+' e '–' buttons
- I Fiber lock/unlock button
- J Multiturn trimmer

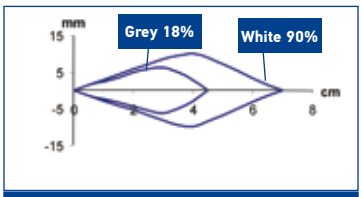
Teach-in button for setting.
EASYtouch™ provides two setting modes: standard or fine.
Please refer to instructions manual for operating details

DETECTION DIAGRAMS

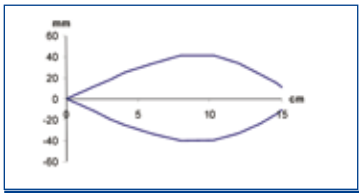


High efficiency Fiber-optics or accessory lenses can be used to obtain larger operating distances.

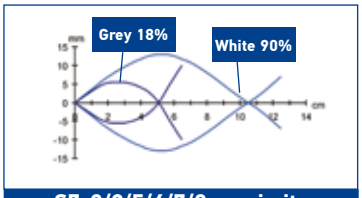
Note: the detection diagrams of the S7-1/4 models in normal and fast mode, corresponds to the values of the S7-2/5 models in fast mode, but with half the operating distance



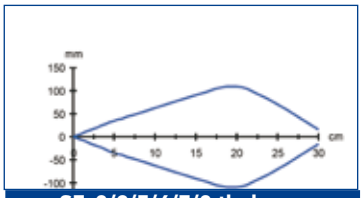
S7-2/5 proximity - Fast mode *



S7-2/5 through beam Fast mode *



S7-2/3/5/6/7/8 proximity Normal mode *



S7-2/3/5/6/7/8 th. beam Normal mode*

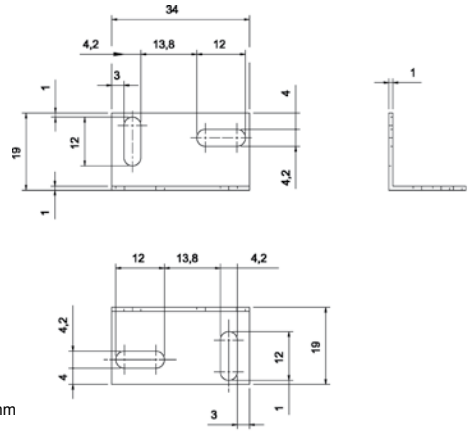
MODEL SELECTION AND ORDER INFORMATION

OPTIC FUNCTION	SETTING	CONNECTION	OUTPUT	MODEL	ORDER No.
OPTIC FIBER (white LED)	display, push-button	2m Cable	PNP	S7-1-E-P	950551090
			NPN	S7-1-E-N	950551080
		M8 Connector	PNP	S7-4-E-P	950551110
			NPN	S7-4-E-N	950551100
OPTIC FIBER (red LED)	display, push-button	2m Cable	PNP	S7-2-E-P	950551010
			NPN	S7-2-E-N	950551000
	push-buttons		PNP	S7-3-E-P	950551050
			NPN	S7-3-E-N	950551040
	display, push-buttons	M8 Connector	PNP	S7-5-E-P	950551030
			NPN	S7-5-E-N	950551020
	push-buttons	M8 Connector	PNP	S7-6-E-P	950551070
			NPN	S7-6-E-N	950551060
	trimmer	2m Cable	PNP	S7-7-E-P	950551120
			NPN	S7-7-E-N	950551130
		M8 Connector	PNP	S7-8-E-P	950551140
			NPN	S7-8-E-N	950551150

Datalogic Automation offers a wide range of fiber optic cables available in two different lines: OF series for standard applications and OFA series for specialistic applications, such as 90° optics as well as fixed focus optics. These accessories allow to carry out the diffuse proximity and through beam detection of small object in difficult point of the machine. Refer to the next page for the complete list.

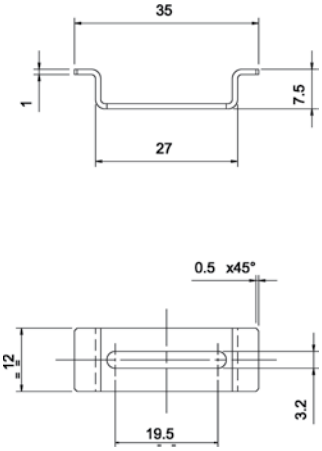
ACCESSORIES

ST-505



mm

CRD-5000



mm

MODEL	DESCRIPTION	ORDER No.
ST -505	L-shaped mounting bracket	95ACC 2800
CRD -5000	DIN rail mounting bracket	95ACC 2790

CABLES

TYPE	DESCRIPTION	LENGTH	MODEL	ORDER No.
Axial M8 Connector	4-pole, grey, P.V.C.	3 m	CS-B1-02-G-03	95A251420
		5 m	CS-B1-02-G-05	95A251430
		7 m	CS-B1-02-G-07	95A251440
		10 m	CS-B1-02-G-10	95A251480
	4-pole, P.U.R.	2 m	CS-B1-02-R-02	95A251620
		5 m	CS-B1-02-R-05	95A251640
Radial M8 Connector	4-pole, grey, P.V.C.	3 m	CS-B2-02-G-03	95A251450
		5 m	CS-B2-02-G-05	95A251460
		7 m	CS-B2-02-G-07	95A251470
		10 m	CS-B2-02-G-10	95A251530
	4-pole, P.U.R.	2 m	CS-B2-02-R-02	95A251630
		5 m	CS-B2-02-R-05	95A251650

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