



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  $\mu$ s 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

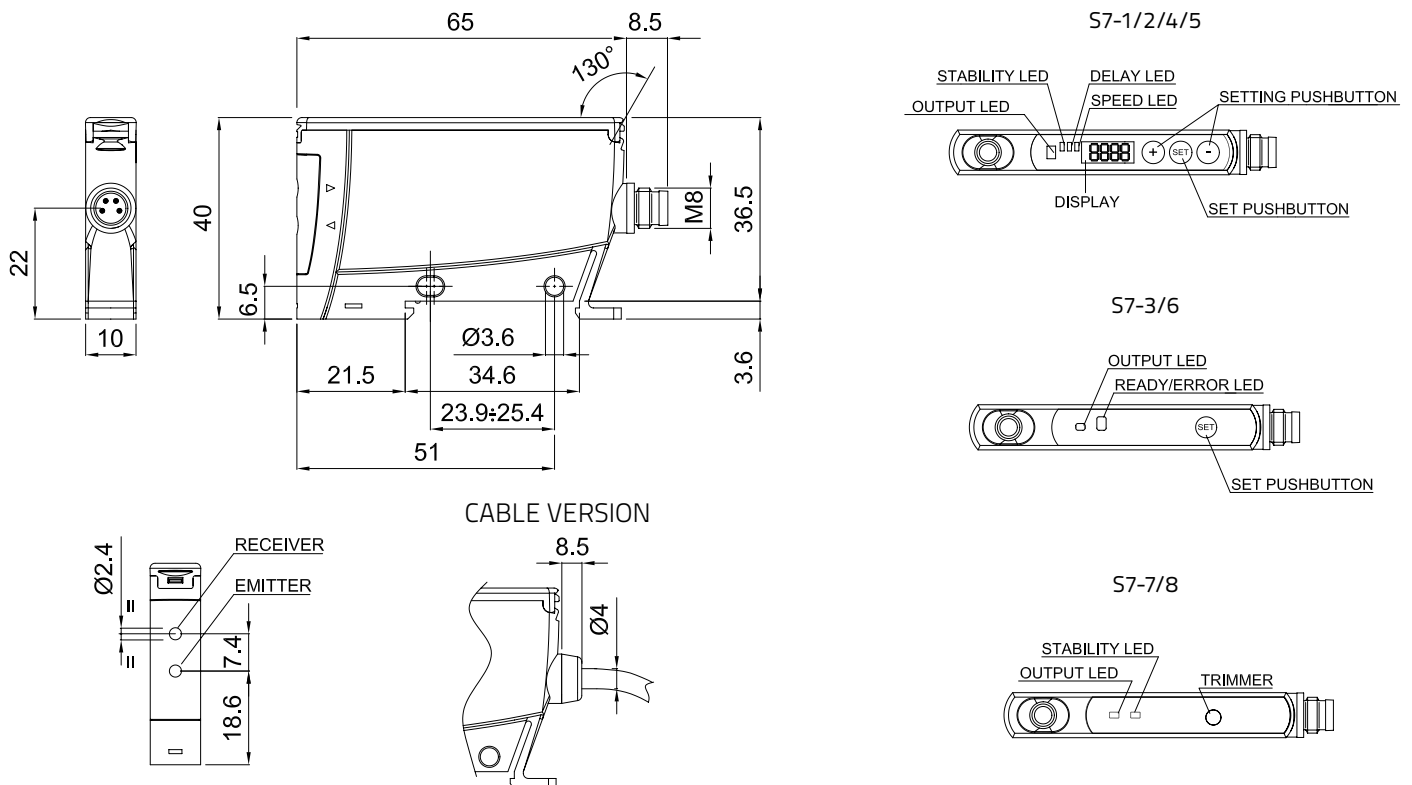


S7		
<b>Through beam with fiber optic</b>	0...300 mm	
	0...150 mm	
	0...75 mm	
<b>Diffuse proximity with fiber optic</b>	0...100 mm	
	0...50 mm	
	0...25 mm	
<b>Power supply</b>	Vdc	12...24 V
	Vac	
	Vac/dc	
<b>Output</b>	PNP	•
	NPN	•
	NPN/PNP	
	relay	
	other	
<b>Connection</b>	cable	•
	connector	•
	pig-tail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

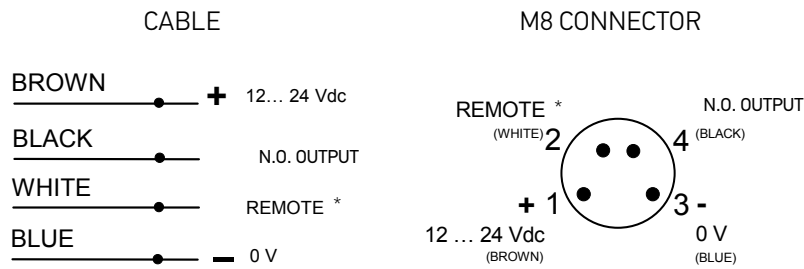
# TECHNICAL DATA

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

# DIMENSIONS

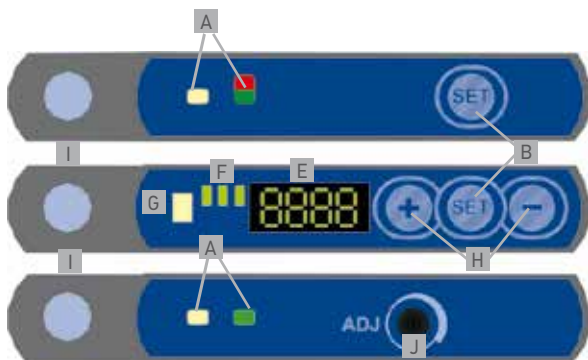


# CONNECTIONS



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

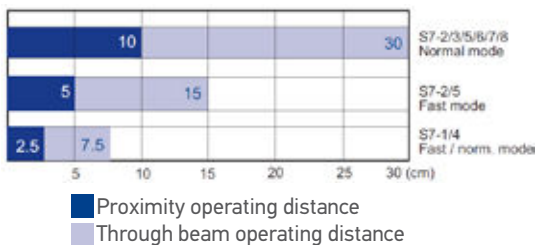
# INDICATOR AND SETTINGS



- 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

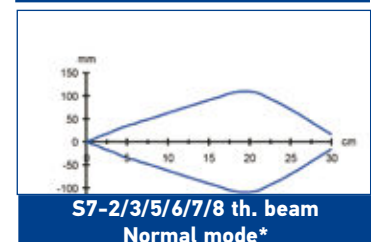
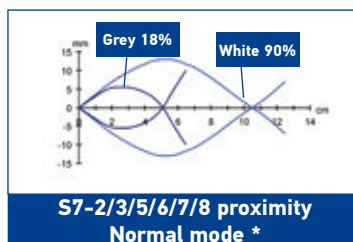
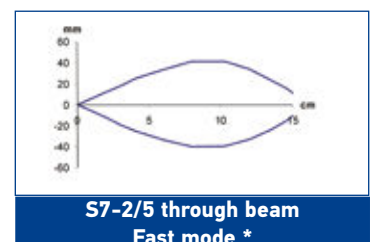
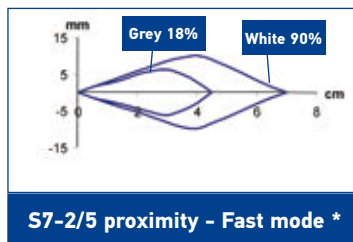
Teach-in button for setting.  
EASytouch™ provides two setting modes: standard or fine.  
Please refer to instructions manual for operating details

# 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



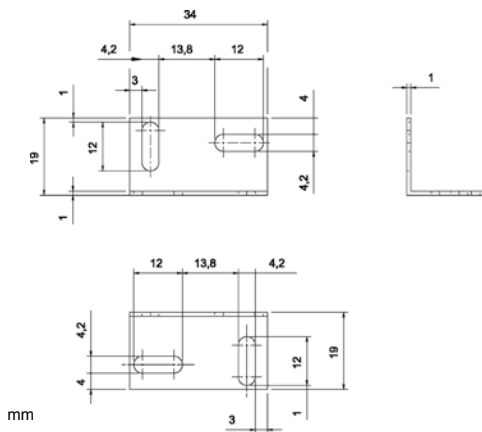
# MODEL SELECTION AND ORDER INFORMATION

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	

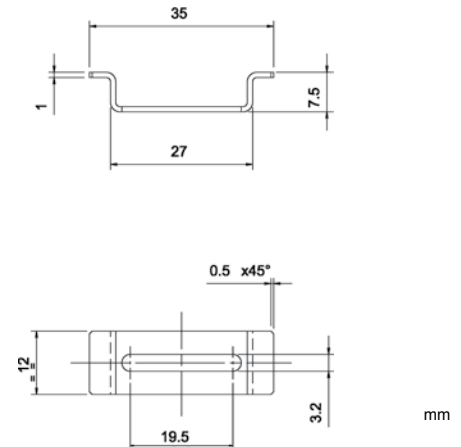
Datalogic Automation offers a wide range of fiber optic cables available in two different lines: OF series for standard applications and OFA series for specialistic applications, such as 90° optics as well as fixed focus optics. These accessories allow to carry out the diffuse proximity and through beam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

## ACCESSORIES

**ST-505**



**CRD-5000**



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
Radial M8 Connector	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