Fiber Optic Sensor Amplifier Type FA1



FA1 is also equipped with

a 3-ways adjuster switch to

adjust sensitivity and different

The sensor output is either NPN or PNP and is select-

able to be light on or dark on.

There is also a timer for the

output which can be selected

to be on delay, off delay, on

one shot and off one shot to

suit most applications' needs.

response time.

Product Description

FA1 series amplifier is a fiber optic amplifier most suitable to be used with FUR/FUT fibers to achieve various detection distance.

FA1 has a 2 x 4 digits LED display to show the signal level and threshold respectively. Display direction can be inverted to suit different installation needs.

Type Selection

Type Selection		
Housing W x H x D	Ordering no. NPN	Ordering no. PNP
	Light on or dark on switching	Light on or dark on switching
10 x 33 x 80 mm	FA1-N	FA1-P

Specifications

Rated operating distance (S _n)	Fiber dependant Please see FUR, FUT	Output function Light on or dark on	NPN or PNP Selected via switch
Sensitivity	datasheet Increase or decrease by 3-ways adjuster switch. Switch left/right to +/- and	Timer Type Bange	On, off, on one shot, off one shot 0-9999 ms
	press down to confirm		< 40 mA @ 24 VDC
Sensitivity Range	Depends on selected response time	Voltage drop (U _d) FA1-N FA1-P	≤1V (100 mA Load) ≤1.5V (100 mA Load)
	27-3991 @200µs 27-3982 @500µs	Protection	Short-circuit, reverse pola rity, transients
	27-9988 @1000µs	Light source	Red LED 660 nm
Temperature drift Hysteresis (H)	27-9990 @5000µs < 0.2%/C° < 20% of sensing distance	Ambient light Incandescent light Sunlight	10'000 Lux 20'000 Lux
Rated operational volt. (U _R)	12 to 24 VDC	Operating frequency	Max. 2.5 kHz
Ripple (U _{rpp})	≤ 10%	Response time	Selectable 200, 500, 1000
Output current Continuous (I _e)	100 mA		5000µs

- Distance range is fiber dependent Please see the FUR, FUT datasheet
- Easy set-up using 3-ways adjustment switch
- 2 X 4 digits display to show signal level and threshold

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- Display direction can be inverted to suit different mounting
- Output 100mA NPN or PNP
- Light on and dark on switching selectable
- Operational voltage 12 to 24 VDC
- On, off, on one shot, off one shot delay timer
- Response time 200, 500, 1000, 5000µS



Ordering Key FA 1-N

Type______ Series ______ Output _____

Specifications are subject to change without notice (28.08.2015)



Specifications (cont.)

Power ON delay (t _v)	< 150 ms
Indication Output Sensitivity	Red LED 2 X 4 digits display Red – signal level Green - threshold
Temperature Operating	0° to +60°C (32° to +140°F)

Housing material Body	ABS
Connection Cable	PVC, black, 2m, 3 wires
Weight	Approx. 65g
Approvals	CE, cULus (UL508)
Environment Degree of protection	IP40

Operation Diagram



Wiring Diagram



Dimensions



LED and Operation Panel



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Block Diagram - Programming Settings



Programming Functions - Example



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Fig. 4 With target

Installation Hints



Delivery Contents

- Amplifier: FA1...
- Installation manual
- Packaging: Cardboard box

Accessories

• Fiber optic plastic type FUR, FUT

For further information refer to Fiber Optic Plastic Type FUR, FUT datasheets.

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Carlo Gavazzi: FA1-P FA1-N