

Model 10881A

Fiber-Optic to Logic Adapter

Operating Instructions



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Introduction

The Model 10881A Fiber-Optic to Logic Adapter converts a 820 nm light wave digital signal to TTL/CMOS, electrical signal. The Model 10881A uses an ST fiber-optic connector at the input and either BNC or pluggable-terminal strip at the output.

Features

- Field Installable: optional DIN Rail mounting
- Simple Installation: BNC electrical and Type ST fiber-optic connections
- Powered by external +9.0 Vdc to +13.5 Vdc source
- 820 nm Wavelength Technology
- Compatible with 50/125 μm , 62.5/125 μm , 100/140 μm , and 200 μm PCS Fiber

Applications

- For new installations of any Arbiter GPS clock, connect the Model 10881A to the desired end of a fiber-optic link from any digital signal, especially unmodulated (or demodulated) IRIG-B timing signal.
- For existing GPS clock installations using a fiber-optic link to remote devices. Connect the Model 10881A to the end of a fiber-optic cable link, to convert and distribute electrical timing signals.

General Description

The Model 10881A Fiber-Optic to Logic Adapter allows transmission of a digital signal over several kilometers¹ of multimode fiber-optic cable. The connected 10881A converts the 820 nm light wave to a +5 V CMOS logic level output signal. The 10881A receives the optical signal and simultaneously sends it as an electrical signal on two separate, individually-buffered BNC or Terminal connectors. Figure 1 provides an illustration of the Model 10881A configurations. The signal logic level is HI whenever the optical signal is ON. Whenever optical data is received the Data LED illuminates (flashes).

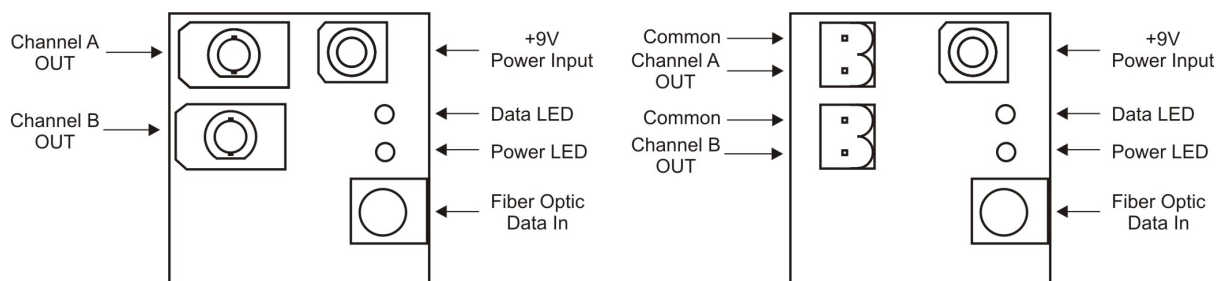


Figure 1: 10881A with BNC and Terminal Output Connectors

¹Refer to Application Note 101 at www.arbiter.com/ftp/datasheets, download appnote101.pdf

Specifications

Input:	Fiber-optic signal via a 62.5/125 μm fiber; -10 dB to -20 dB input level Compatible with 50/125 μm , 62.5/125 μm , 100/140 μm , and 200 μm PCS Fiber
Connector:	One type ST fiber optic connector
Output:	+5 V CMOS signal
Connectors:	Two (2) standard BNC connectors or two (2) pluggable terminal strips
Impedance:	10 Ω
Current:	$\pm 75\text{ mA}$ maximum
Power Input:	+9 Vdc to +13.5 Vdc, 6 mA (no load) to 70 mA (with load)
Power Connector:	3.5 mm male miniplug, tip positive
Size:	50 mm \times 38 mm \times 50 mm (2.0 in \times 1.5 in \times 2.0 in), overall dimensions including connectors
Weight:	94 g (3.30 oz)
Temperature:	
Operating:	$-10\text{ }^{\circ}\text{C}$ to $+50\text{ }^{\circ}\text{C}$
Non-operating:	$-40\text{ }^{\circ}\text{C}$ to $+75\text{ }^{\circ}\text{C}$