Model 10888A

Fiber-Optic Transmitter

Operating Instructions

Document No. PD0031200H

Arbiter Systems, Inc.
1324 Vendels Circle, Suite 121
Paso Robles, CA 93446 U.S.A.
(805) 237-3831, (800) 321-3831
http://www.arbiter.com
mailto: techsupport@arbiter.com

Introduction

The Model 10888A Fiber-Optic Transmitter converts a TTL/CMOS, electrical signal to 820 nm light wave for transmission over multimode fiber. This product provides GPS clock users with another option for connecting to fiber for transmission of digital timing signals. The Model 10888A uses a BNC connector for the electrical connection and Type ST connector to the fiber-optic cable.

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
- Link distances up to 2.7 km[1]
- Compatible with 50/125 µm, 62.5/125 µm, 100/140 µm, and 200 µm PCS Fiber

Applications

- New installations of any Arbiter GPS clock, connect the Model 10888A to the desired TTL output and connect the ST connector to the fiber link.
- Existing GPS clock installations with no available space in the GPS clock for the Option 20 (Model 1084A/B/C only) or Option 20A. Connect the Model 10888A to any available TTL/CMOS output.

General Description

The Model 10888A uses an Agilent Model HFBR-1414T fiber-optic transmitter to drive the fiber-optic cable and is capable of link distances of 2.7 km. Internal drive circuitry compensates for over temperature drift. A common BNC connector is used for the electrical input connection and Type ST connector used for the fiber-optic connection. High impedance input allows connection to any TTL/CMOS GPS clock-timing output.

Operation

Connect the CMOS timing output from the clock to the BNC connector of the Model 10888A, and connect the fiber cable to the Type ST connector. Connect mini plug from the power supply to the connector on the Model 10888A. The green Power LED should light up immediately when the mini plug is connected. The signal logic level is HI whenever the optical signal is ON. Whenever optical data is transmitted, the green data LED illuminates (flashes).

[1]Refer to Application Note 101 at www.arbiter.com, check under Resources, Documentation; download appnote101.pdf

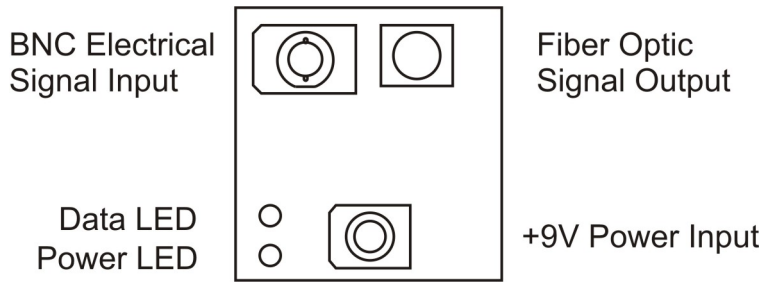

Figure 1: Outline of Model 10888A Fiber-Optic Transmitter

Specifications

Input Signal Type:	+5 V CMOS signal via standard BNC Connector; maximum input current is less than 0.1 A
Connector:	One type BNC connector
Output Signal Type:	Fiber-optic signal via 50/125 µm, 62.5/125 µm, 100/140 µm, or 200 µm PCS Fiber
Connector:	One type ST fiber optic connector
Power Input:	+9.0 Vdc to +13.5 Vdc, 1 mA
Power Connector:	3.5 mm male miniplug, tip positive
Size:	50 mm × 38 mm × 50 mm (2.0 in × 1.5 in × 2.0 in), overall dimensions including connector
Weight:	94 g (3.30 oz)
Temperature:	
Operating:	−10 °C to +50 °C
Non-operating:	−40 °C to +75 °C

Indicator Lights

Power LED:	indicates that power is applied to the 10888A
Data LED:	indicates that data is being transmitted