

MODEL 10888A

EXTERNAL FIBER OPTIC TRANSMITTER

FOR USE WITH ALL ARBITER GPS CLOCKS

INTRODUCTION

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

FEATURES

- Field Installable
- Simple Installation: BNC electrical and Type ST fiber optic connections.
- Uses wall-mount transformer or DC-DC (72-140 Vdc to 12 Vdc) converter.
- 820 nm Wavelength Technology
- Link distances up to 2.7 km¹.
- Specified with 50/125 μm , 62.5/125 μm , 100/140 μm , and 200 μm HCS 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. Use the Model 10888A from any available TTL I/O connector.

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. Common BNC connectors are used for the input electrical connection and Type ST connector used for the fiber optic connection. Choose with either a 120 Vac to 9 Vdc wall-mount transformer, or 72-140 Vdc to 12 Vdc converter, to furnish power to the transmitter. High impedance input allows connection to any TTL/CMOS GPS clock-timing output.

¹ Refer to Application Note 101

SPECIFICATIONS

Input Signal Type: +5V CMOS signal via standard BNC Connector; maximum input current is less than 0.1 μ A.

Output Signal Type: Fiber-optic signal via 62.5/125 μ m² fiber

Power Input: +8 to +15 Vdc

Available Power Sources:

1. AP0004200 Wall-mount Transformer (unregulated power supply included for 120 Vac, 60 Hz)
2. AP0006200 DC-DC Converter (72-140 Vdc to 12 Vdc), includes power cord with exposed leads for connection between IEC-320 connector and DC source.

Indicator Lights:

Power LED; indicates that power is applied to the 10888A

Data LED; indicates that data is being transmitted

Size 50 x 38 x 50 mm (2.0 x 1.5 x 2.0") overall dimensions, including connectors.

Weight: 94 g (3.30 oz.)

Temperature:

Operating: -10° to +50° C

Non-operating: -40° to +75° C

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 wall-mount transformer (or DC-DC converter) to the power supply and then 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).

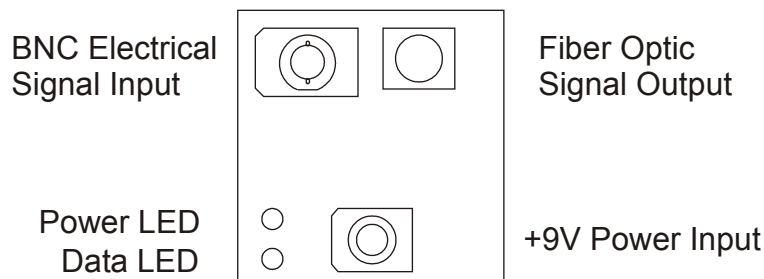


Figure 1. Model 10888A Fiber Optic Transmitter

² Also usable with 50/125 μ m, 100/140 μ m, and 200 μ m HCS Fiber