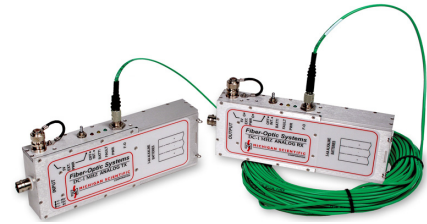


Fiber-Optic Systems - 1 MHz ANALOG LINK

Model FO-HBST/HBSR

- Monitor / Stimulate equipment under test (EUT) at Bandwidths from DC to 1 MHz
- RFI/EMI validated for EMC at 200V/m (46dBV/m) from 500 kHz to 18 GHz and 600V/m (pulsed 5% duty-cycle & 5 μ s rise-time) 1GHz to 2.5 GHz
- Low-Power circuitry for operating >16 hours with 3 alkaline 'AA' batteries
- TX slide-switch provides full-scale input ranges of ± 8 , ± 16 , and ± 48 VDC
- RX jumpers provides full-scale output ranges of ± 4 , ± 8 , and ± 16 VDC



Description

The *FO-HBST* and *FO-HBSR* form a versatile Fiber-Optic Analog Signal TX/RX pair. Input signals at pre-selected full-scale input levels and at bandwidths from DC to 1 MHz may be transmitted fiber-optically in either direction by transposing the module .

The tester can externally access a 3-position slide switch to select the transmitter module full-scale input level of ± 8 , ± 16 , or ± 48 VDC. Internal gain jumpers in the receiver module are factory configured for full-scale output levels of ± 4 , ± 8 or ± 16 VDC with ± 16 VDC standard. Systems may be configured to other user defined full-scale inputs and outputs on request.

The satellite modules have shielding and special input/output filtering that provides high immunity from electromagnetic interference (EMI), electromagnetic pulse (EMP) or high voltages associated with plasma research. This allows for rigorous electromagnetic compatibility (EMC) testing/engineering. The satellite modules are validated for EMC up to 200 V/m (46 dB V/m) at 500 kHz to 18 GHz and 600 V/m (pulsed 5% duty-cycle & 5 μ s rise-time) 1GHz to 2.5 GHz.

Three 'AA' batteries provide power for up to 25-hours. The supplied AC adapter is used for external power in place of batteries.

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Rev: 1/9/12

Fiber-Optic Systems - 1 MHz ANALOG LINK

SPECIFICATIONS

PARAMETER	SPECIFICATION
SYSTEM CHARACTERISTICS AND PERFORMANCE	
GENERAL	
TX/RX Signal Type	differential input / single-ended output
TX Full-Scale Ranges	slide-switch selectable for ± 8 , ± 16 , ± 48 VDC
RX Full-Scale Ranges	jumper configurable for ± 4 , ± 8 , ± 16 VDC
Bandwidth (± 4 / ± 8 V Range ONLY)	1 MHz (-3 dB) <i>typical</i>
Flatness (± 4 / ± 8 V Range ONLY)	± 1 dB to 500 kHz <i>typical</i>
Rise/Fall Times	~ 300 ns (20-80%) <i>typical</i>
End to End Delay	< 1.8 μ s <i>typical</i>
Output Noise	< 10 mV rms
Resolution (± 8 , ± 16 , ± 48 V Full-Scale)	> 4 mV/ 8 mV/ 24 mV
DC Gain Adjustment (Receiver)	-10% to +25% of scale
DC Offset Adjustment (Receiver)	± 1 VDC
DC Offset Drift	$< 0.5\%$ drift through temp. range
Over-Range Protection	± 100 V continuous and ± 350 V transient protection
Transmitter Input Impedance	
@ ± 8 , ± 16 , ± 48 V	$> 72.5k / 145k / 435k\Omega$
Receiver Output Impedance	100 Ω
Maximum Recommended External Load	1 K Ω (16mA)
Power Source	3-AA alkaline batteries or external adapter
Battery Life	
Transmitter	> 25 Hours
Receiver (load and frequency dependent)	> 16 Hours (use high-impedance load for max run time)
PHYSICAL	
Dimensions (L x W x H)	6.8 x 3.0 x 1.0 in (172 x 76 x 25 mm)
Weight [w/o Batteries]	13 oz (368.5 g) [10 oz (283.5 g)]
Input / Output Connector	BNC
Optical Connectors	ST
Optical Cables	multimode graded-index 62.5/125 μ m or 100/140 μ m
Optical Cable Length	1640 ft (500 m) max.
ENVIRONMENTAL	
Operating Temperature	-10° F to $+185^{\circ}$ F (-12° to $+85^{\circ}$ C)
Operating Humidity	95% R.H. max. non-condensing
EMC	300 V/m at 500 kHz to 1 GHz, 200 V/m at 1 GHz to 18 GHz and 600 V/m (pulsed 5% duty-cycle & 5 μ s rise-time) 1 GHz to 2.5GHz
QUALITY AND SAFETY	
CE Mark	Declaration of Conformity provided
RoHS & WEEE	Compliant

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