FEATURES
* Linear or Logic Fan-Out of Four per Channel
* Wideband - DC to 250 MHz
* Bipolar Operation to ±2.5 Volts
* DC Offset Control per Channel
* Reliable - Both Inputs and Outputs are Protected

DESCRIPTION
The Model 748 is an eight-channel, direct-coupled linear fan-out packaged in a single width NIM module. It provides four unity gain outputs from a single input to easily fan-out detector signals to simultaneously drive discriminators, converters, transient recorders or other signal conditioning and data acquisition instruments.

INPUT CHARACTERISTICS
General : One LEMO input connector per channel; bipolar input, accepts positive or negative voltages.
Impedance : 50 Ω ± 2% direct coupled input.
Protection : Protected with clamping diodes, no damage will occur from transients of ±100Volts (±2 Amps) for 1μSec or less duration.
Reflections : Less than ±4% for input risetime of 1nSec.
Overdrive Response : Recovery time of 20nSec for a ±10 Volt input.

OUTPUT CHARACTERISTICS
General : Four bridged LEMO output connectors per channel. Low impedance voltage source output stage.
Protection : Outputs can be continuously shorted to ground without damage.
Output Voltage Swing : Bipolar outputs deliver over ±2Volts across four 50Ω loads.
DC Offset : A front panel fifteen-turn potentiometer provides ±250mVolt adjustment. A front panel test point allows easy monitoring of the DC offset.
GENERAL PERFORMANCE

Gain : Fixed gain of 1.0 ±5%, non-inverting.

Stability : Better than ±50 µVolt/°C from DC to 1 MHz, and ±0.05%/°C above 1 MHz.

Linearity : ±0.1% for ±2 Volts across two 50 Ω output loads or ±1.5 Volts across four 50 Ω loads.

Bandwidth : DC to 250 MHz, 3 db point for 1 Volt peak to peak.

Wideband Noise : Less than 350 µVolts RMS, referred to the input. (25nV/√Hz)

Risetime : Typically 1.3nSec, for a 1 Volt output excursion.

Insertion Delay : Typically 3.0nSec.

Crosstalk : Greater than 60 db, DC to 100 MHz.

Power Supply Requirements:
+12V @ 160 mA  +24V @ 75 mA  115 VAC @ 20mA
-12V @ 160 mA  -24V @ 75 mA

Note: All currents are within NIM power supply limits for a single width NIM module.

Operating Temperature : 0°C to 70°C ambient.

Packaging : Standard single width NIM module in accordance with TID-20893 and section ND-524.

Quality Control : Standard 36 hour, cycled burn-in with switched power cycles.