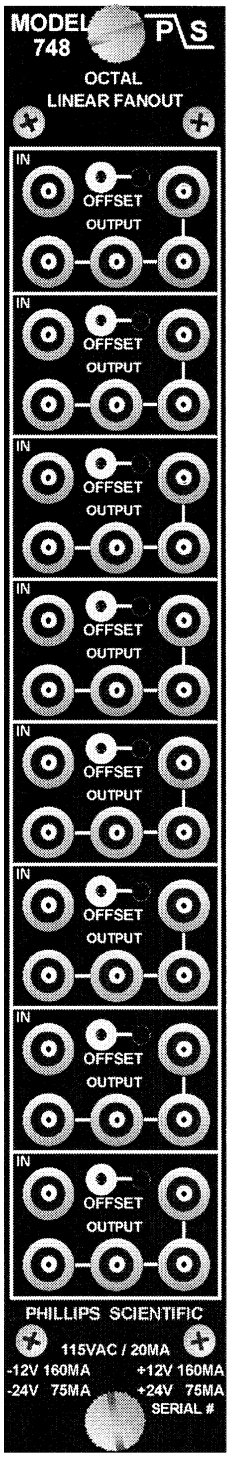
Phillips Scientific

Octal Linear/Logic Fan-Out

NIM MODEL 748

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 W ± 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 50W loads.
DC Offset	: A front panel fifteen-turn potentiometer provides ±250mVolt adjustment. A front panel test point allows easy monitoring of the DC offset.

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GENERAL PERFORMANCE

Gain	**:**	*Fixed gain of 1.0 ±5%, non-inverting.*
Stability	**:**	*Better than ±50 µVolt/ °C from DC to 1 MHz, and ±.05%/ °C above 1 MHz.*
Linearity	**:**	*±0.1% for ±2 Volts across two 50 W output loads or ±1.5 Volts across four 50 W 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/ÖHz)*
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.*

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