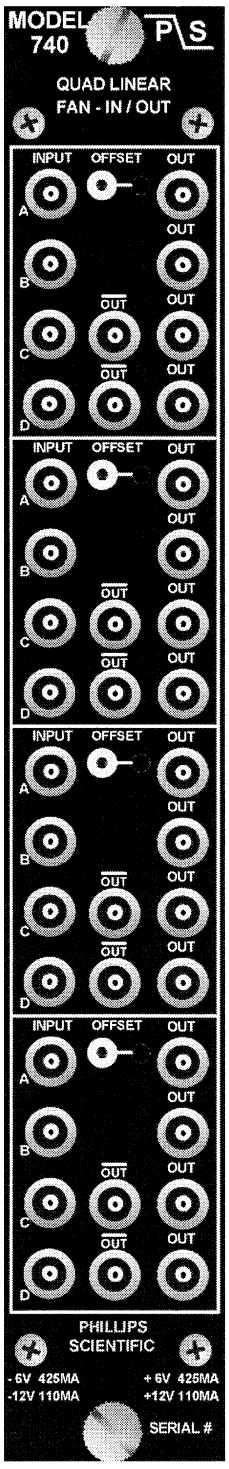
Phillips Scientific

Quad Linear/Logic Fan-In/Out

NIM MODEL 740

FEATURES

- *Four Independent Channels*
- *Linear or Logic Fan-In of Four and Fan-Out of Six per Channel*
- *Wideband - DC to 250 MHz*
- *Fully Bipolar Operation to ±2.5 Volts*
- *DC Offset Control per Channel of ±500 mVolts*
- *Reliable - Both Inputs and Outputs are Protected*



DESCRIPTION

The Model 740 is a four channel, unity gain linear or logic Fan-In/Fan-Out packaged in a single width NIM module. Four linear inputs allow summing of linear levels or pulses. Both inverted and non-inverted output levels are produced simultaneously allowing very complex triggers to be fast and easy to develop. Direct coupling of all inputs and outputs eliminates the baseline shifts due to rate or duty cycle affects, while making the device useful for performing logic functions.

INPUT CHARACTERISTICS

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

OUTPUT CHARACTERISTICS

General	:	*Six bridged LEMO output connectors per channel. Four non-inverted outputs and two inverted outputs; low impedance voltage source output stage.*
Protection	:	*Outputs can be continuously shorted to ground without suffering damage.*
Output Voltage Swing	:	*Bipolar outputs delivery over ±2 Volts across four 50 ohm loads.*
DC Offset	:	*A front panel 15-turn potentiometer provides ±500 mVolt 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 ±2% both inverted and non-inverted.*
Stability	**:**	*Better than ±50 µVolt/°C from DC to 1 MHz, and ±.05%/°C above 1 MHz.*
Linearity	**:**	*±0.2% for ±2 Volts across two 50 ohm loads or ±1.5 Volts across four 50 ohm loads.*
Bandwidth	**:**	*DC to 250 MHz, 3 db point 1 Volt peak to peak.*
Wideband Noise	**:**	*Less than 400 µVolts RMS, referred to the input (25 nV/ ÖHz).*
Risetime	**:**	*Typically 1.3 nSec, for a 1 Volt output excursion.*
Insertion Delay	**:**	*Typically 3.5 nSec.*
Crosstalk	**:**	*Greater than 60 db, DC to 100 MHz.*
Power Supply Requirements	**:**	*+6 V @ 425 mA +12 V @ 110 mA* *- 6 V @ 425 mA - 12 V @ 110 mA* *Note: All currents are within NIM specification limits allowing a full powered bin to be operated without overloading.*
Operating Temperature	**:**	*0 °C to 70 °C ambient.*
Packaging	**:**	*Standard single width NIM module in accordance with TID-20893 and Section 524.*
Quality Control	**:**	*Standard 36 hour cycled burn-in with switched power cycles.*

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