Phillips Scientific

16 Channel Logic Level Translator

NIM MODEL 726

FEATURES

* Converts TTL, NIM and ECL Logic Families
* High Density - 16 Independent Channels
* DC - 150 MHz for NIM and ECL Translation
* DC - 100 MHz for TTL Translation
* Low Power - Meets Requirements for Single NIM Slot
* Available in CAMAC Packaging Model 7126

DESCRIPTION

The model 726 is a 16-channel level translator packaged in a single width NIM module. It simultaneously converts in any direction between NIM, TTL and ECL logic families. In addition, a logical "OR" is possible for the ECL input and the NIM/TTL input. The input to output is direct coupled with the output duration equal to the input duration. Each channel has a single input connector which accepts a fast negative NIM level with 50 ohm input impedance and a positive TTL level with 1000 ohms impedance. This produces a positive TTL output capable of driving a 50 ohm load and a bridged NIM output that drives two 50 ohm loads. The NIM output stage is current-switching which allows pulse clipping and is protected from damage due to shorted cables.

INPUT CHARACTERISTICS

NIM/TTL : 16 inputs, one per channel, LEMO style connector; accepts both negative NIM or positive TTL pulses or levels.

NIM: 50 ohms impedance ±10%; -500mV threshold; input protected to ±8 VDC.

TTL: 1000 ohms impedance ±10%; +1.2Volt threshold; input protected to ±8 VDC.

ECL Input : 16 inputs, one per channel; 2 x 17 pin header with lock and eject feature; accepts complementary ECL inputs; removable 110 ohm input termination; 200mV differential threshold.

OUTPUT CHARACTERISTICS

NIM Outputs : Two NIM outputs per channel; bridged -32mA current switching, LEMO style connectors; delivers one double amplitude NIM level or two normal NIM levels into 50 ohms; 1.5 nSec rise and fall times.
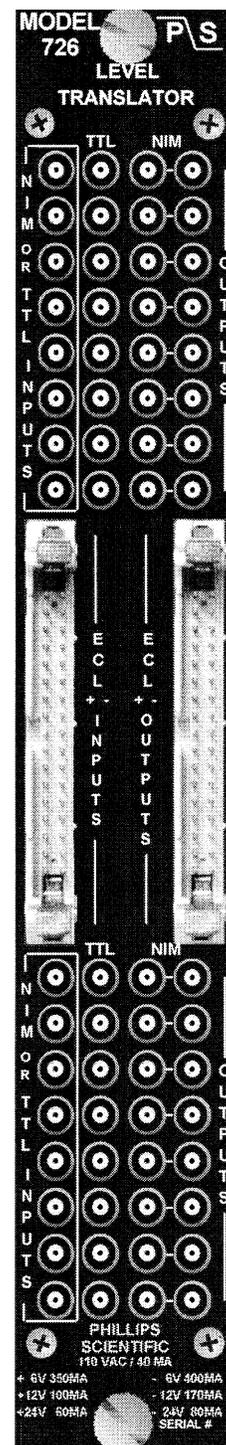
OUTPUT CHARACTERISTICS *(continued)*

TTL Output : One TTL output per channel, LEMO style connector; sources 45mA to drive 50 ohm load or 1000 standard TTL loads, sink current of 100mA; able to drive 100 standard TTL loads. 3.5nSec rise and fall times.

ECL Output : Complementary ECL, one per channel; 2 x 17 pin header with lock and eject feature; drives two 110 ohm ECL loads or up to 30 daisy-chained loads. Normal ECL levels of -800mV and -1.7Volts, 2nSec rise and fall times.

GENERAL PERFORMANCE

Rate : DC to 150 MHz for NIM and ECL translation;
DC to 100 MHz for TTL translation.

Minimum Pulse Widths : 4nSec for NIM and ECL translation;
7nSec for TTL translation.

Insertion Delay : NIM, TTL or ECL input to NIM or ECL output = 5nSec.
NIM, TTL or ECL input to TTL output = 10nSec.

Power Requirements :
+ 6 V @ 350 mA	- 6 V @ 400 mA
+12 V @ 100 mA	-12 V @ 170 mA
+24 V @ 60 mA	-24 V @ 80 mA
110 VAC @ 40 mA	

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

Packaging : Standard single width NIM module in accordance with TID-20893 (Rev). and Section ND-524.

BLOCK DIAGRAM OF ONE CHANNEL