

MODEL C 467

16 CHANNEL NIM-ECL TRANSLATOR

FEATURES

- One unit wide CAMAC module.
- Two 8-channel sections.
- DC coupled channels.
- Working frequency up to 150 MHz.
- Low power consumption.

DESCRIPTION

The CAEN Model C 467 16 CHANNEL NIM-ECL TRANSLATOR is a one unit wide CAMAC module provided with two identical 8-channel translation sections.

Through the relevant LEMO 00 type connectors, each section can accept up to eight NIM inputs to be converted and the corresponding ECL outputs are available at a 2x8 pin flat-cable connector.

All the module's channels are DC coupled.

SPECIFICATIONS

CONNECTORS (each section):

- 8 "1..8", LEMO 00 type, Input connectors 1 to 8.
- 1 2x8 pin flat-cable connector. Output connector (1 to 8 outputs).

CHARACTERISTICS OF THE SIGNALS

INPUTS:

- NIM level on 50 Ω impedance.
- Minimum pulse width: 7 ns (FWHM).
- Dc coupled.

OUTPUTS:

- ECL differential level.
- Risetimes and Falltimes: <3 ns.
- DC coupled.

(This Model is an ISN GRENOBLE design)



GENERAL:

- I/O delay: <7 ns.
- Maximum frequency: >100 MHz, with an output signal attenuation <10%;
> 150 MHz, with an output signal attenuation <50%.

POWER REQUIREMENTS:

- 6 V 550 mA.



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1. DESCRIPTION

1.1 FUNCTIONAL DESCRIPTION

The CAEN Model C 467 16-CHANNEL NIM-ECL TRANSLATOR is a 1-unit wide CAMAC module provided with two identical 8-channel translation sections.

Through the relevant LEMO 00 type connectors, each section can accept up to eight NIM inputs to be translated and the corresponding ECL outputs are available at a 2x8 pin flat-cable connector.

The 1 to 4 and 5 to 8 output groups of each section are equipped with a 470 Ω resistor termination pack (one per output group).

All the module's channels are DC coupled.

2. SPECIFICATIONS

2.1 PACKAGING

1-unit wide CAMAC module.

2.2 EXTERNAL COMPONENTS

CONNECTORS (per section):

- No. 8 LEMO 00 type "1..8". Input connectors 1 to 8.
- No. 1 2x8 pin flat-cable connector. Output connector (1 to 8 outputs).

2.3 CHARACTERISTICS OF THE SIGNALS

INPUTS:

- DC-coupled.
- NIM level.
- Impedance: $50 \Omega \pm 5\%$.
- Minimum pulse width: 7 ns (FWHM).

OUTPUTS:

- DC-coupled.
- ECL differential level.
- Risetimes and Falltimes: < 3 ns, 10% to 90%.

GENERAL:

- I/O delay: < 7 ns.
- Maximum frequency:
 - ◊ > 100 MHz, with an output signal attenuation of 10%;
 - ◊ > 150 MHz, with an output signal attenuation of 50%.

2.4 POWER REQUIREMENTS

- 6 V 500 mA.

3. OPERATING MODE

3.1 GENERAL INFORMATION

The Model C 467 16-CHANNEL NIM-ECL TRANSLATOR has two NIM-ECL translation sections, each one with eight inputs and eight outputs.
Both the inputs and outputs are DC coupled.

3.2 OPERATIONS TO BE PERFORMED

CAUTION: *turn OFF the CAMAC crate before inserting or removing the module.*

1. Insert the C 467 module into the CAMAC crate.
2. Connect the signal sources to the selected input connectors.
3. Connect the module's outputs corresponding to the selected inputs to the ECL devices to be used.
4. Turn on all the equipment devices.

4. TEST PROCEDURE

4.1 INTRODUCTION

The operations to be performed to test the C 467 module are listed in the procedure below and have to be carried out according to their numerical sequence. None of the procedural step can be omitted. Each procedural step contains the operation to be performed and the corresponding effect or the verification to be accomplished.

4.2 SUGGESTED INSTRUMENTS

- No. 1 Oscilloscope (200 MHz minimum bandwidth).
- No. 1 Signal Generator capable of producing Std. NIM level signals on 50 Ω (7 ns minimum pulse width).
- No. 1 CAEN model N 105 Dual Fan-Out 1x16.
- No. 1 CAMAC crate.
- No. 1 NIM crate.

4.3 PROCEDURE

The C 467 module comes from CAEN fully tested and calibrated. This procedure allows the user to accomplish a functional test of the module.

CAUTION: Turn OFF the crate before inserting or removing the module.

1. Insert the C 467 into the CAMAC crate and the N 105 into the NIM crate.
2. Connect the outputs of one of the N 105 sections to the C 467 inputs.
3. Turn ON the crates.
4. Via Signal Generator, supply the input of the selected N 105 section with a Std. NIM level signal.
5. WITH THE Oscilloscope, verify that an ECL signal is present at each output channel of the C 467 module.

THE MODULE IS TESTED AND OPERATES CORRECTLY.