Technical Information Manual

Revision n.0
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MOD. N108 A

DUAL DELAY

NPO:
00102/02:N108A.MUTx/00

CAEN will repair or replace any product within the guarantee period if the Guarantor declares that the product is defective due to workmanship or materials and has not been caused by mishandling, negligence on behalf of the User, accident or any abnormal conditions or operations.

CAEN declines all responsibility for damages or injuries caused by an improper use of the Modules due to negligence on behalf of the User. It is strongly recommended to read thoroughly the CAEN User's Manual before any kind of operation.

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CAEN reserves the right to change partially or entirely the contents of this Manual at any time and without giving any notice.

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1. General description

1.1 Overview

The Model N108 A is a passive dual section delay unit housed in a single unit NIM module; the module does not require any power supply since it is made up of calibrated coaxial cable stubs for high accuracy delay.

Delay ranges from 0 to 63.5 ns for each section (0.5 ns steps). Each section has a 1.6 ns offset, so the actual delay ranges from 1.6 ns to 65.1 ns. In order to add a delay, the relevant toggle switch must be pulled towards right.

The delay sections (called “A” and “B”) are provided with two LEMO 00 connectors each, which are bi-directional: each connector can be used either as input or as output. Input impedance is 50 Ohm. Seven toggle switches per section allow the delay setting.

2. Technical specifications

2.1 Packaging

The Model N108 A is housed in a one unit standard NIM unit. The module is made up of calibrated coaxial cable stubs for high accuracy delay, and do not require power supply.

2.2 Front panel

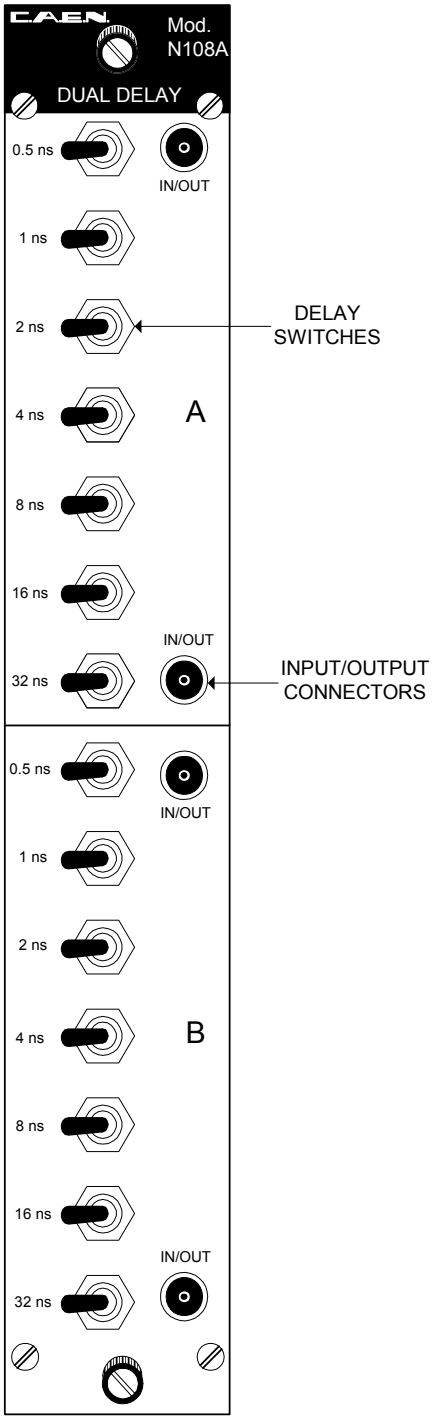

Fig. 2.1: Mod. N108 A Front Panel

2.3 External components

INPUT/OUTPUT CONNECTORS: 2 LEMO 00 connectors per section

DELAY SWITCHES: 7 Toggle Switches per section

2.4 Technical specification table

Table 2.1: Mod. N108 A Technical Features

Packaging	One unit wide NIM unit
Number of sections	2
Delay	0 to 63.5 ns (+ 1.6 ns offset)
Resolution	0.5 ns
Input impedance	50 ± 2 Ω
Accuracy	±100 ps (for delay steps 0.5 ns through 8 ns) ±200 ps (for 16 ns and 32 ns delay steps)
Max attenuation[1]	≤ 2.5 dB
VSWR[2]	< 1.15

[1] Measured with a 100 MHz sine wave input and delay set at 63.5 ns.

[2] Measured with a square wave input (0.8 ns rise/fall time).