

N844

8 Channel Low Threshold Discriminator



Features



- Individually programmable thresholds
- Programmable output width
- TEST and VETO inputs
- OR and Current Sum outputs
- High sensitivity on small signals
- 4-digit Led display

Description

The CAEN **Mod. N844** is an 8 **Channel Low Threshold** (leading edge type) Discriminator housed in a one unit wide NIM module. The module accepts 8 negative inputs and produces 2x8 NIM outputs (NIM outputs are provided with a fan-out of two) +8 /NIM outputs (negated) on front panel LEMO 00 connectors. The pulse forming stage of the discriminator produces an output pulse whose width is adjustable in a range from 6 to 95 ns. The discriminator thresholds are individually settable in a range from -1 mV to -255 mV (1 mV step), via an 8-bit DAC; a positive input version (Model N844P), with the thresholds settable in the 1 mV to 255 mV range, is also available. The minimum detectable signal is -3 mV. The back panel houses VETO and TEST inputs, the logical OR output (the relevant OR LED lights up if at least one channel is over threshold) and the Current Sum output, which generates a current proportional to the input multiplicity, i. e. to the number of channels over threshold, at a rate of -1.0 mA per hit (-50 mV per hit into a 50 Ω load) $\pm 20\%$.

Technical Specifications

Packaging

1U-wide NIM unit

Input Channels

8 inputs, negative polarity (positive on N844 P), 50 ohm impedance, DC coupling

Max. input voltage

-400 mV (+400 mV on N844 P)

Max input frequency

60 MHz (8 ns output pulse width)

Double pulse resolution

16 ns (8 ns output pulse width)

Threshold range

-1 mV to -255 mV, 1 mV step (1 mV to 255 mV on N844 P)

Output channels

16 NIM (bridged) + 8 /NIM (single) (50 Ohm)

Input/output delay

10.5 ± 1.5 ns

Output width

Programmable from 6 ns to 106 ns

Output rise/fall time

OUT: 1.2 ns; /OUT: 2.5 ns

Interchannel insulation

45 dB for 2.5 ns rise time input signals

Control inputs

NIM signals, high impedance:
VETO: allows vetoing of all channels simultaneously
TEST: triggers all the enabled channels at once

Control outputs

OR: standard NIM signal, 50 Ohm impedance; logic OR of outputs. Current proportional to input multiplicity (-1 mA \square 20% per hit), high impedance

Display

INPUTS: 16 [8] red LEDs; they light up when the channel is being programmed or when it is inhibited

4-DIGIT DISPLAY: it indicates the channels' status and programmed parameters' values

OR: green LED; it lights up if at least one output signal is present

Ordering Options

Code	Description	
WN844POLEXCH	N844 Polarity Exchange	RoHS
WN844PXAAAAA	N844P - 8 Channel Low Threshold Discriminator 50 Ohm Positive Inputs	RoHS
WN844XAAAAAA	N844 - 8 Channel Low Threshold Discriminator 50 Ohm Negative Inputs	RoHS

Accessories

A385



Adapter 2.54mm 34-pin female to 16x LEMO 00 female (or MCX male) - 50 cm / 1 m

Related Products

NIM8302P



5U 5 slot 150 W Portable Crate

NIM8306



2 Slot Switching 750 W Mini Crate

NV8020A



7U CRATE VME/NIM 8 slot VME64 365W, 5 slot NIM 150W

NIM8303



5U 12 slot 300/600 W Crate

NIM8304



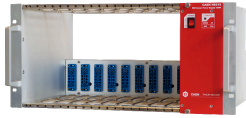
7U 12 slot smart fan unit Switching 2000 W Crate

NIM8305



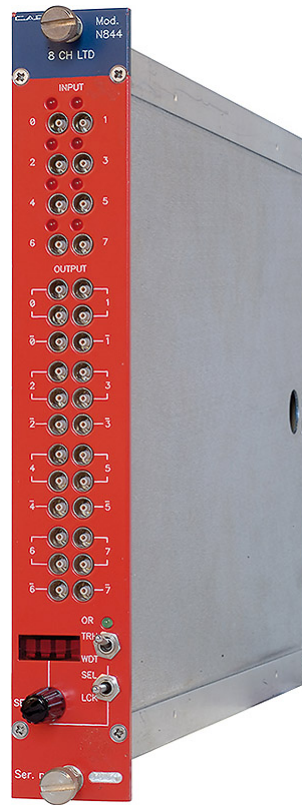
2 Slot Switching 450 W Mini Crate

NIM8302



5U 10 slot 150 W Compact Crate

Gallery



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