

NCB221 - 8 CHANNELS DISCRIMINATOR

The one wide NIM module NCB221 is an 8 channels Leading Edge discriminator.

The module accepts 8 negative inputs and has 2x8 NIM outputs, on front panel LEMO 00 connectors.

The pulse output width is adjustable in a range from 25ns to 400ns. The discriminator

thresholds are individually settable in a range from -1 mV to -255 mV (1 mV step), via an 8-bit DAC and displayed by 4 digit led display. The minimum detectable signal is -1mV (see note 1). On the front panel there are SUM_OR, SUM_AND and SUM_I (input currents) of all 8 channels. During VETO signal all channels are disabled.

PERFORMANCE

Input	50 Ω impedance, negative polarity, DC coupled
Rise time	< 3 ns
Threshold range	-1 mV to -255 mV (1 mV step) (Optional version up to 1 V range).
Output Width	25 ns to 400 ns
Maximum dynamic input range	5 V (with 50 Ω termination)
Input/output delay	11 ns
Input -OR output	12 ns
Input -AND output	12 ns
Pulse Resolution	7 ns
Channels output	Double NIM logic signal
Veto	Veto outputs of all channels, 1 k Ω input
I Sum out	Analogue output of the SUM input signals, output resistor 100 Ω
Sum OR	Output function OR all 8 channels, NIM standard
Sum AND	Output function AND all 8 channels, NIM standard

Note1: For low threshold (less than 3 mV) very important avoid DC input offset from detector by using decoupling capacitance.

SET UP MODULE PARAMETERS

The module has 4 keys, 4 digits LED display and rotate switch to set all settable parameters of module.

- CH** select channel
- T** set threshold
- W** set width output pulse
- R** revers key

The last working value thresholds and output pulse widths always are saved in memory of module. These parameters will be installed after power on.

On the LED display the text **Run** is appeared. Select channel by **CH** key and press **T** (or **W**) key to install a threshold (a output pulse width) of selected channel.

Press **T** key to increase or **R** key to decrease threshold by step one.

Press **W** key to change output pulse width and **R** key to decrease it. The first value is actual installed threshold or pulse width. Escape without change press **CH** and **R**.

The rotated switch has used to increase or decrease settable value more then step 1 of selected channel. Select channel by **CH**, select T or W key. After moving the rotated switch press **T**, **R** or **W**, **R** key to increase/decrease value by step 1. After key press **R** or **CH** the rotated switch is disabled to avoid missing setup.

POWER SUPPLY REQUIREMENTS

The module has NIM standard power supply.

P. Voltage (V)	Current/ch (mA)
+6	280
-6	1430
+12	21
-12	20

DIMENSIONS

dimensions	3,43x22,13 cm per DOE/ER-0457T
weight	0,91 kg

