

NCB237 - GATE AND DELAY GENERATOR

The module NCB237 Gate and Delay generator accepts input logic pulse, provides a delay of up to 150µs.

The combination of two functions provided by this module various logic requirements, such

as gating multichannel analyzers and alignment of coincidence timing between two channels. The module can be started by standard NIM signal and output signals can be used as logical interface between different other equipments.

PERFORMANCE

Delay nonlinearity	$\leq \pm 2\%$
Delay temperature instability	$\leq \pm 0,03\%$ of adjusted delay per °C
Delay generator dead time	Adjusted delay from 100 ns up to 150 µs.
Output generator dead time	Adjusted width plus 0,1 µs
Delay jitter	$\leq 0,02\%$ of selected range

CONTROLS

Delay

10-turn locking potentiometer adjustment within the range selected by the locking 10-position switch:

Switch position	Min delay	Range	Max Delay
1	100 ns	100 ns - 400 ns	1 µs
2	100 ns	400 ns - 700 ns	2 µs
3	120 ns	700 ns - 1 µs	2,5 µs
4	150 ns	1 µs - 2 µs	5 µs
5	200 ns	2 µs - 4 µs	7,5 µs
6	400 ns	3 µs - 5 µs	12 µs
7	400 ns	5 µs - 10 µs	20 µs
8	400 ns	10 µs - 20 µs	40 µs
9	400 ns	20 µs - 50 µs	80 µs
10	400 ns	50 µs - 100 µs	160 µs

Ampl.

Output pulse amplitude can be adjusted in the range of 2 to 10V by front-panel screwdriver control

Width

Output pulses to be adjusted in the range of 400 ns to 4 µs is changed by front panel screwdriver control

INPUT/OUTPUT

Input

POS: +2 V pulse minimum, 12 V maximum; 50 ns minimum width, DC-coupled; impedance 1500 Ω.
NEG: connector accepts NIM-standard fast negative logic pulses; 5 ns minimum width, DC-coupled; impedance 50 Ω

Outputs

Delayed period: two BNC connector provides positive and negative pulses width equal to the adjusted delay; amplitude ±5 V (can be adjusted by internal trimmer); rise time ≤20 ns.
Delayed marker: NIM-standard fast negative logic pulse at the end of delay time. Amplitude, -0,7 V into 50 Ω load; rise time ≤10 ns; width ≤25 ns.
Delayed gate: Two BNC connectors. Positive and negative GATE signals. Positive and negative amplitude can be regulated by front panel trimmer from 2 Volt up to 10 Volt. The width of these signals regulated second trimmer on the front panel of module.

POWER SUPPLY REQUIREMENTS

The module has NIM standard power supply.

P. Voltage (V)	Current/ch (mA)
+24	80
-24	50
+12	60
-12	54
+6	5
-6	186

DIMENSIONS

dimensions	3,43x22,13 cm per DOE/ER-0457T
weight	0,77 kg

