

Gate and delay generator

Model NCB237.

WARRANTY

NAICAM S.R.L. warrants this product to be free from defects in material and workmanship for a period of 1 year from date of shipment from headquarter in Italy.

NAICAM SRL warrants the following items for one year from the date of shipment: probes, cables, and documentation of specified equipment.

During the warranty period, we will, at our option, either repair or replace any product that proves to be defective.

To exercise this warranty, write or call your local NAICAM SRL representative, or contact NAICAM SRL headquarters in Italy. You will be given prompt assistance and return instructions. Send the product, transportation prepaid, to the indicated service facility. Repairs will be made and the product returned, transportation prepaid. Repaired or replaced products are warranted for the balance of the original warranty period.

LIMITATION OF WARRANTY

This warranty does not apply to defects resulting from product modification without NAICAM SRL express written consent, or misuse of any product or part.

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1. GENERAL DESCRIPTION.

1.1 DESCRIPTION.

The module NCB237 Gate and Delay generator accepts input logic pulse, provides a delay of up to 110 µs. 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 equipment's.

1.2 FUNCTIONAL BLOCK DIAGRAM

1.3 PERFORMANCE.

DELAY NONLINEARITY $\leq \pm 2\%$.

DELAY TEMPERATURE INSTABILITY ≤±0.03% of adjusted delay per °C.

DELAY GENERATOR DEAD TIME Adjusted delay from 200 ns up to 200 us.

OUTPUT GENERATOR DEAD TIME Adjusted width plus 0.2 µs.

DELAY JITTER ≤0.02% of selected range.

2. TECHNICAL SPECIFICATIONS.

2.1 OPERATING INSTRUCTIONS

CONTROLS:

DELAY 10-turn locking potentiometer adjustment within the range selected by the locking 10-12-position toggle switch:

1.1 μ s selects a 0.1 to 1.1 μ s.

11 µs selects a 1 to 11 µs range.

110 μ s selects a 10 to 110 μ s range.

AMPL. Output pulse amplitude can be adjusted in the range of 2 to 10 V 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:

INPUT POS +2 V pulse minimum, 12 V maximum; 100-ns minimum width, dc-coupled; impedance



1000 **Ω**.

INPUT NEG connector accepts NIM-standard fast negative logic pulses; 5 ns minimum width, dc-coupled; impedance 50 Ω .

2.2 INPUT/OUTPUT CONNECTIONS AND SIGNAL CHARACTERISTIC

OUTPUTS:

DELAYED PERIOD, two front-panel BNC connector provides positive and negative pulses width equal to the adjusted delay; amplitude +5 V/-5V (can be adjusted by internal trimmer); rise time \leq 50 ns.

DLY'D 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 OUTPUT, Two output Gate signal positive and negative polarity. Amplitude can be regulated from 2 volt up to 10 Volt.

2.3 INTERNAL HARDWARE SETTINGS

2.4 POWER REQUIREMENTS

The module has NIM standard power supply.

P. Voltage (V)	Current (mA)
+24	70
-24	70
+12	95
-12	95

2.5 DIMENSION AND WEIGHT

DIMENSIONS NIM-standard single-width module 3.43 X 22.13 cm per DOE/ER-0457T.

WEIGHT Net 1,5 kg. NAICAM

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