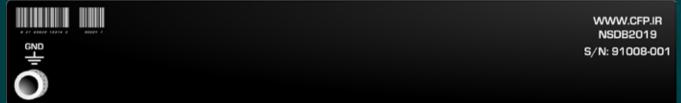
MODEL NSDB2019

NANO SECOND DELAY BOX DESKTOP





Features:

- Switch controlled time delays
- 0 to 63.5 ns dela
 0.5 ns resolution 0 to 63.5 ns delay range
- Low reflections and feed-through

Description:

The CFP Model 2019 Coax Delay Box provides switch-controlled delays from 0 to 63.5 ns with 0.5 ns resolution. Applications include the timing of photomultiplier coincidences, set-up of time-toamplitude converters, adjustment of signal phase, or any application which requires an adjustable, highbandwidth analog delay.

The interchangeable inputs/outputs are on BNC connectors. Internally, the delay line segments consist of accurate lengths of RG58A/U coax cable with 50 Ω characteristic impedance. DPDT switches are used to insert or remove delay segments. Careful component selection, mechanical design, and PCB layout ensure low reflections and low switch feedthrough for high speed signals

Specifications:

INPUTS

SIGNAL INPUT Accepts positive or negative Slow/Fast NIM logic or linear pulses, ± 700 volts maximum; Zin = 50 Ω ; isolated front panel BNC connector.

OUTPUTS

SIGNAL OUTPUT Provides delayed pulse, amount of delay being equal to sum of DELAY IN switches; $Zout = 50 \Omega$; isolated front panel BNC connector.



CONTROLS

DELAY IN/OUT - Seven front panel toggle switches to select delay of 0.5, 1, 2, 4, 8, 16 or 32 ns; may be added in any combination up to 63.5 ns beyond minimum delay of 2.5 ns.

PERFORMANCE

CONNECTORS: BNC CHARACTERISTIC Impedance: 50 Ω DELAY LINE CABLE: RG58A/U (Belden 8259) **INSERTION DELAY: 2.5 ns** DELAY RANGE: 0 to 63.5 ns **DELAY RESOLUTION: 0.5 ns** DELAY ERROR: <100ps + 0.5 % of delay SIGNAL REFLECTION: <3 % SWITCH FEED Through: <0.8 pF MAXIMUM Voltage: 250Vrms MAXIMUM Current: 2 A TEMPERATURE OPERATING RANGE: 0-50 °C.

ELECTRICAL AND MECHANICAL POWER REQUIRED

POWER REQUIRED No power required for operation. WEIGHT Net 1.1 kg (2.5 lb). Shipping 2.25 kg (5.0 lb). DIMENSIONS 8.3" \times 1.5" \times 8.0" (WHL) NSDB2019A Rev 1.0 91009

MODEL NSDB2019A

NANO SECOND DELAY BOX

Features:

- Switch controlled time delays
- O to 63.5 ns delay range
- 0.5 ns resolution
- Low reflections and feed-through

Description:

The CFP Model 2019A Coax Delay Box provides switch-controlled delays from 0 to 63.5 ns with 0.5 ns resolution. Applications include the timing of photomultiplier coincidences, set-up of time-to-amplitude converters, adjustment of signal phase, or any application which requires an adjustable, high-bandwidth analog delay.

The interchangeable inputs/outputs are on BNC connectors. Internally, the delay line segments consist of accurate lengths of RG58A/U coax cable with 50Ω characteristic impedance. DPDT switches are used to insert or remove delay segments. Careful component selection, mechanical design, and PCB layout ensure low reflections and low switch feed-through for high speed signals

Specifications:

INPUTS

SIGNAL INPUT Accepts positive or negative Slow/Fast NIM logic or linear pulses, ± 700 volts maximum; Zin = 50 Ω ; isolated front panel BNC connector.

OUTPUTS

SIGNAL OUTPUT Provides delayed pulse, amount of delay being equal to sum of DELAY IN switches; Zout = 50 Ω ; isolated front panel BNC connector. CONTROLS

DELAY IN/OUT - Seven front panel toggle switches to select delay of 0.5, 1, 2, 4, 8, 16 or 32 ns; may be added in any combination up to 63.5 ns beyond minimum delay of 2.5 ns

PERFORMANCE

CONNECTORS: BNC CHARACTERISTIC Impedance: 50Ω DELAY LINE CABLE: RG58A/U (Belden 8259) INSERTION DELAY: 2.5 ns DELAY RANGE: 0 to 63.5 ns DELAY RESOLUTION: 0.5 ns DELAY RESOLUTION: 0.5 ns DELAY ERROR: <100ps + 0.5 % of delay SIGNAL REFLECTION: <3 % SWITCH FEED Through: <0.8 pF MAXIMUM Voltage: 250Vrms MAXIMUM Current: 2 A TEMPERATURE OPERATING RANGE: 0-50 °C.

ELECTRICAL AND MECHANICAL POWER REQUIRED

POWER REQUIRED No power required for operation. WEIGHT Net 1.1 kg (2.5 lb). Shipping 2.25 kg (5.0 lb). DIMENSIONS NIM-standard single-width module 3.43 X 22.13 cm (1.35 X 8.714 in.) per DOE/ER-0457T. NSDB2019A Rev 1.0 91009

D



Ś

VA/

