



FE 261 COINCIDENCE

Triple 2 Fold

Purpose

Three individual twofold coincidences are provided.

Logic pulses are required for coincidence operation, complementary logic pulses for anticoincidence operation.

The individual sections can be gated by a common gate signal.

General Features

The Coincidence with LEMO connectors is built in a single-width NIM module. With BNC connectors it is a double-width module.

Each input can be activated by a front panel switch.

The output width is fixed.

BNC — Connectors: The same module is available with BNC connectors instead of LEMO connectors. The ordering number is **FE 261/B**

Produced on the basis of documents and drawings designed and developed by the European Organisation for Nuclear Research (CERN) which has no intention of giving, in any case, any guarantee whatsoever regarding the quality or the performances of the items produced.

SPECIFICATIONS

INPUT (for each individual section)

Number	2
Impedance	50 ohms
Voltage	Logic, -800mV for coincidence Complementary logic for anti-coincidence
Width	Minimum width or overlap (at -12mA) to produce outputs $\leq 1.5\text{ns}$ Maximum : DC

OUTPUT (for each individual section)

Number	3 logic, 1 complementary logic
Impedance	High, current source. Unused outputs need not be terminated.
Rise and Fall Time	Logic $T_{01} \leq 1.5\text{ns}$ $T_{10} \leq 2.0\text{ns}$ Complementary $T_{10} \leq 1.5\text{ns}$ $T_{01} \leq 2.0\text{ns}$
Width	Logic $8.5 \pm 0.75\text{ns}$ (at -12mA = min. "I") Complementary $8.75 \pm 0.75\text{ns}$ (at -4mA = max. "O")
Max. Rate	$\geq 50\text{Mc/s}$
Propagation Delay	$10.0 \pm 1.5\text{ns}$ (between min. input and output "I")

GATE

Front panel switch controlled. In position ON outputs are produced on the application of input signals, without the necessity of a gate signal. In position GATED inputs will produce outputs only if the logic level (min. -600mV) -- DC or pulse -- is present at the gate input.

Impedance	50 ohms
Voltage	Logic, -800mV, for ON gating Complementary logic for OFF gating
Width	Shortest pulse to open or close gate $\leq 2.5\text{ns}$ (at -12mA = min. "I"). Minimum overlap to make with inputs to produce outputs $\leq 3.5\text{ns}$ (at -12mA = min. "I"). Maximum : DC
Max. Rate	$\geq 50\text{Mc/s}$, determined by output specifications.
Propagation Delay	Delays of INPUT and GATE are equalized up to input AND gate.

POWER CONSUMPTION	-24V $510 \pm 30\text{mA}$	+24V $330 \pm 20\text{mA}$
-------------------	----------------------------	----------------------------

N.B. 1) Rise (T_{01}) and fall times (T_{10}) are measured between output "O" (-100mV) and minimum output "I" (-700mV).

2) All parameters have been determined with input signals having rise and fall times of 0.7 ns.

Specifications subject to minor changes without notice.