

CERN N9053

Delay Unit

DELAY UNIT, TYPE N 9053

SPECIFICATION

DELAY RANGE:

2.5 to 66 ns, adjustable in steps of 0.5, 1.0, 2.0, 4.0, 8.0, 16.0 and 32.0 ns.

Calibration is better than 50 ps (75) for the minimum delay of 2.5 ns and is

50 ps (50)	for the switch position of 0.5 ns
50 ps (80)	" " " " 1.0 ns
50 ps (100)	" " " " 2.0 ns
50 ps (150)	" " " " 4.0 ns
75 ps (150)	" " " " 8.0 ns
100 ps (250)	" " " " 16.0 ns
200 ps (300)	" " " " 32.0 ns

(Values in brackets will apply from ser. ns. 001 to 134)

IMPEDANCE:

$50 \pm 2 \Omega$ (manufacturers quoted tolerance). Cable is Suhner G03232.1. This tolerance in impedance can cause up to 4% ohmic reflections.

REFLECTIONS:

$\leq 5\%$ for pulses with $tr = 0.3$ ns and for pulses from a 56 AVP photomultiplier ($tr = 2.5$ ns).

ATTENUATION OF PEAK AMPLITUDE:

When full delay (66 ns) is switched in

17.5%	for 56 AVP pulses.
8%	" a 10 ns square pulse.
15%	" a 5 ns square pulse.

RISETIME DEGRADATION:

Full delay switched in:

Negligible for 56 AVP pulses. An input step with a 5-50% risetime of 0.2 ns becomes a risetime of 0.5 ns.

FEEDTHROUGH:

Via switch capacities.

$\leq 2.5\%$	for 56 AVP pulses.
$\leq 1\%$	" a pulse with 0.3 ns risetime.

