

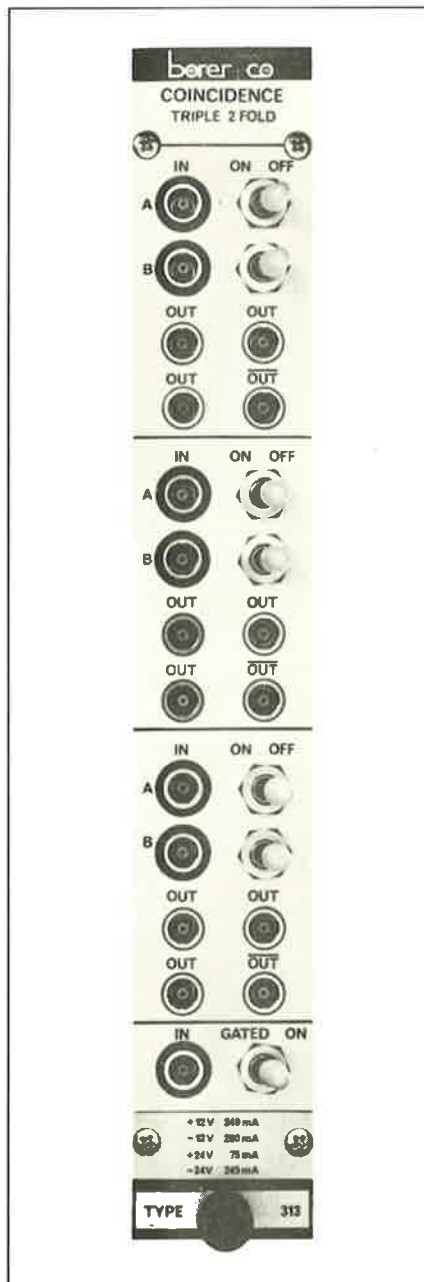
TYPE 313

Ref: 602.3.030.6.72

- CONSTANT WIDTH OUTPUTS
- 1,5ns MINIMUM OVERLAP
- RATES IN EXCESS OF 50MHz
- COMMON GATE
- NIM-BIN COMPATIBLE

COINCIDENCE

TRIPLE 2-FOLD



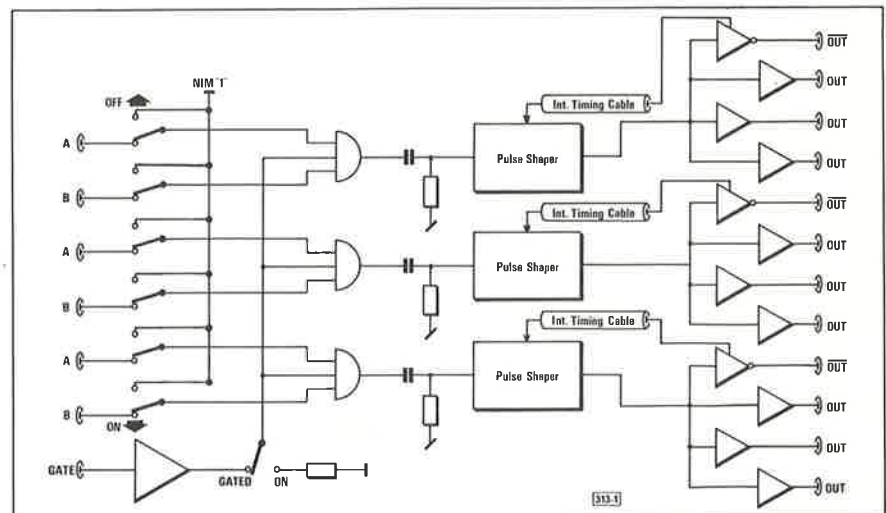
Module Type 313 contains three identical independent 2-fold coincidence circuits which can, when required, be controlled by a single common gate. Outputs are produced of predetermined and constant width for each coincidence present at the corresponding activated inputs.

Designed to accept NIM-standard signals, each of the 50 Ω inputs is provided with a switch to render it inactive for timing purposes etc. The instrument may operate as a coincidence or as an anti-coincidence unit by the application of logic or complementary input signals respectively. Coincidences from as little as 1,5ns will produce full amplitude NIM-standard outputs at rates of 50MHz or more. Each of the three sections provides three logic outputs of 8,5ns duration and a complementary output of 8,75ns duration.

The gate input will accept NIM-

standard signals at rates of up to 50MHz: minimum pulse width to open or close the gate is 2,5ns and to overlap an input pulse is 3,5ns. A front panel switch is provided to enable the module in the absence of gate signals. The propagation delays between each input, the gate and the coincidence stage are all accurately equalized.

This instrument is an industrialized version of the CERN Type N6235 made suitable for housing in a conventional NIM-Bin. The instrument has been 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. Manufacturing quality and the operational performance are, however, covered in full by the normal Borer guarantee.



TYPE 313

borer

SPECIFICATIONS

Inputs:	2 per section
Impedance	50 Ω
Reflections in ON state	20% max (capacitive) at $t_r = 0,7ns$
in OFF state	15% max (inductive) at $t_r = 0,7ns$
Level	NIM-Standard
Overload protection	$\pm 5V$ dc, $\pm 50V$ for 100ns
Pulse width	1,5ns min, dc max
Maximum rate	50MHz min
Outputs:	3 NIM, 1 \overline{NIM} per section
Impedance	High, 16mA current sources
Pulse width	8,5ns typ (logic):
	8,75ns typ (complementary)
Propagation delay	10,0ns typ
Gate:	1 input, common to all sections
Impedance	50 Ω
Reflections	15% max at $t_r = 0,7ns$
Level	NIM-standard: "1" = ON, "0" = OFF
Pulse width	2,5ns min to open or close gate,
	3,5ns min to overlap input, dc max
Maximum rate	50MHz
Physical dimensions	1 x NIM-Norm
Power requirements	+12V, 240mA max -12V, 260mA max +24V, 75mA max -24V, 245mA max
Temperature range	+5 $^{\circ}$ to 60 $^{\circ}C$
Compatibility	All standard NIM-Bins such as Borer Type 573a