

CAMAC Model 4418 16-Channel Programmable Logic Delay Fan-Out



For the first time in a single-width CAMAC module, the new LeCroy ECLine Model 4418 Logic Delay/Fan-Out combines the advantages of unprecedented 16-channel density, computer program- mability, and deadtimeless solid-state reliability-all at a lower per-channel cost than conventional "delay boxes"!

The 16 independent delay lines, each with a fan-out of three, are individually programmable via CAMAC in steps of one or two nanoseconds (other options available for large quantities). Power supply backup ensures that delay settings are retained even when CAMAC crate power goes down. The use of ECL gates instead of mechanical switches and relays eliminates the reliability problems associated with conventional delay boxes. Because all delay components are passive, deadtimeless operation up to 100 MHz and above is ensured. CAMAC control of delay lines permits computerization of such routine tasks as coincidence curve- taking, one of the main uses of delay units. The Model 4418 is compatible with all other LeCroy ECLine CAMAC modules.

SPECIFICATIONS CAMAC Model 4418

INPUT CHARACTERISTICS

Number of Inputs: 16; all identical.
 100 Ohm direct-coupled; high impedance by simple user option.
 Reflections <10% for complementary ECL signals of 2 nsec risetime.
 Minimum width: 5 nsec.

Input Sensitivity: +/-200 mV differential.

OUTPUT CHARACTERISTICS

Complementary Outputs: Three per channel.
 ECL levels (-0.8 and -1.7 V).
 Capable of driving 100 Ohm twisted pair cable.
 Duration equal to input pulse duration. +/-1 nsec (4418/16) or +/-1.2 nsec (4418/32).
 Risetimes and falltimes, 2.5 nsec into 100 Ohm termination.

CAMAC COMMANDS

X, Q: An X and Q-response are generated when a valid N, A, F command is recognized.

F16-(A0 to A15): Load delay time setting on write lines W1 to W4. One subaddress for each channel.

GENERAL

Double-Pulse Resolution: <10 nsec.

Maximum Rate: >100 MHz.

Input-Output Delay: (15+/-1) nsec + (0-15) nsec in step of 1 nsec, option 4418/
 + (0-30) nsec in step of 2 nsec, option 4418/32.

Precision on total +/-2% +/- 150 psec, option 4418/16.
 delay increment: +/- 200 psec, option 4418/32.

Power Requirements: +6 V at 50 mA.

-6 V at 2.5 A.

Power Off Memory: 2 hours min. (typical 10 hours).

Crosstalk: If adjacent channels get synchronous pulses, then the measured channel can be affected by +/-1 nsec, typical.

ALSO AVAILABLE A LONG RANGE OPTION:

Input-Output Delay: (15+/-1) nsec + (0-120) nsec in step of 8 nsec, option 4418

Maximum Rate: >35 MHz.

Minimum Input Width: <25 nsec.

Double-Pulse Resolution: <30 nsec.

Precision on total

delay increment: +/-2% +/- 0,8 nsec.

Output width equal to input width +/-4 nsec.

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