

8 channel gated integrator

Model 224900

SPECIFICATIONS

- Sensitivity: 10^7 to 10^{10} volts /coulomb.
- Sensitivity selection: 2 ranges, TTL control input.
- Input signal dynamic range: +/- 300 microamperes.
- Source impedance: 0 ohms to open circuit
- Input impedance: <40 K ohms (integrate or hold mode).
- Output dynamic range: +/- 10 volts.
- Output drive: +/- 2 ma.
- Drift: +/- 10 mv/sec ($Z_s > 10^8$ ohms);
- Drift: +/- 10 mv/100 usec ($Z_s = 0$ to 10^8 ohms).
- Crosstalk: -50 db, 0 to 1 MHz.
- Control signals: TTL level.
- Power supply: +5 vdc, +/- 15 vdc.



APPLICATIONS

The 8 channel gated integrator was designed for low level charge integration. The extremely wide source impedance range provides great latitude in the use of the module with conditioned and unconditioned signals. It can also be used in flexible configurations in conjunction with the 32 channel multiplexer. The integrator can be used to integrate signals from loss monitors, beam transformers, SWIC'S, beam detectors, ionization chambers, SEC'S and Faraday cup amplifiers.

CONSTRUCTION

The gated integrator is fabricated using a 5 signal layer multilayer printed circuit board. Controlled impedance traces, and effective guarding and shielding provide uniform characteristics across all channels.

Control and signal lines are segregated to minimize interaction. The board is coated with a high impedance, low loss material with a low absorption characteristic. All power supply lines are filtered, and active IC's are bypassed. The multiplexer is housed in a 6U X 7HP X 220 mm aluminum enclosure with integral shielding.

CUSTOMIZATION

ATL can provide customization of its products, or the development of new instruments and systems to meet specific customer requirements. Form factor, panel nomenclature, control strategy and system integration are but a few examples of what changes can be requested. ATL is prepared to provide these services in a cost-effective manner and in a timely fashion.



ATL applies tomorrow's technology today

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