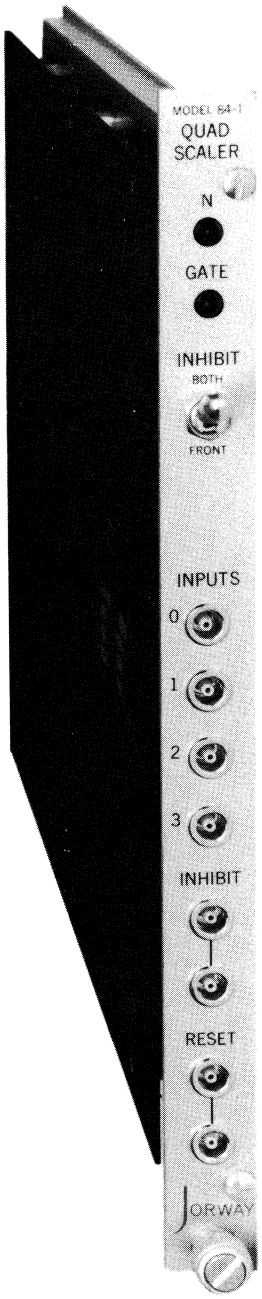

Model 84-1 Quad Scaler

GENERAL DESCRIPTION

The Jorway Model 84 QUAD Scaler is a single-width, high-speed CAMAC compatible module which meets the requirements of EUR 4100e. It features a discriminator front-end to provide reliable counting, independent of input waveshape. Inputs are fully protected against transients, and the Scaler will count pulses as narrow as 3 nsec, at rates in excess of 100 MHz (125MHz typical). Buffered, open-collector, carry outputs are provided which may be wired to patch pins if desired. Data is read out on the CAMAC dataway upon receipt of appropriate command.

All functions are fully decoded to provide unique responses to commands. A Q response is generated for each Read, Clear and Test command. Scaler input gating is controlled by either the dataway Inhibit or via a front panel, high-speed inhibit input. The latter inputs are bridged to permit "daisey chaining" between scalers. Under no circumstances will an inhibit signal cause the scalers to count. Front panel lights indicate when the module is addressed (N) and when the scaler gate is open.

Several options are available which enable the Model 84 to perform a number of additional functions.

1. Overflow flip-flops for each channel can be added. These allow an overflow flip-flop to be triggered at either the overflow of bit 15 or bit 23, and be read out on the Dataway on the appropriate read line (R16 or R24). These overflows may also be wired to open collector buffers for readout on patch pins.

2. The unit may be used as a 4-channel time interval meter by simply adding a jumper, which allows the inhibit input to function as a count input. Thus, by applying the signal to be timed to one of the channel inputs, and injecting the clock into the inhibit input (common to all channels), each channel will now count the clock as long as its input signal is present. A clock as high as 100 MHz may be used, providing a resolution of 10 nsec.

3. The Q response for Clear (F9) and Test (F25) commands may be disabled.

4. Two bridged, front panel LEMO connectors for reset input can be supplied in lieu of the manual reset pushbutton.

APPENDIX A

Model 84-1

The Model 84-1 is basically a Model 84 with the following exceptions:

1. The overflow flip flops for each channel are provided (IC 70, IC 71) and their resets are connected. However, their input trigger and outputs are left for the user to connect as desired (see OPTION section for complete description of optional wiring).

2. The Manual Reset button on the front panel has been removed and replaced by a pair of LEMO connectors. This allows the "daisy chaining" of electrical resets to the scalers. The input is biased to a CAMAC logic zero (approx. +3.5V) and a ground, or a current sink of 10 ma will reset all four scaler channels to zero.

All other features are identical to the Model 84 and information about these can be obtained from this manual.