

TC 596 ANALOG LINEAR RATEMETER



The TENNELEC TC 596 is an analog linear ratemeter that accepts either positive or negative inputs with a wide choice of ranges and versatile time constant selection.

Zero suppression for background subtraction is also provided using a unique method of setting. Depressing a front-panel pushbutton drives the meter full scale and a 25-turn potentiometer allows one to set the zero level by referring to the meter.

The TC 596 accepts either positive or negative input pulses. The positive input has an internal discriminator that covers a 0.2V to 10V range and is front-panel adjustable. The negative input is fixed at -250mV.

SPECIFICATIONS

OPERATING TEMPERATURE: 0° to 50°C.

INPUTS:

- Positive - 0.2V to 10V adjustable threshold, 1k Ω impedance, dc-coupled, 20 nsec minimum width at threshold.
- Negative - -250mV threshold, 50 Ω impedance, dc-coupled, 20 nsec minimum width at threshold.

LINEAR SECTION

RANGES: 10 to 300K cps in ten ranges in 1-3-10 sequence.

COUNT RATE LOSSES: Count rate losses due to ratemeter dead time are:

- Less than 0.2% of full scale at full scale with no zero suppression.
- Less than 0.8% of full scale at full scale with (100%) zero suppression.

OVERLOAD: Maintains full scale deflection up to 20 MHz on any range.

TEMPERATURE STABILITY: <0.05%/°C.

INTEGRAL NONLINEARITY: $\pm 0.5\%$ of full scale.

TIME CONSTANTS: 0.03 to 30 seconds in seven steps in 1-3-10 sequence.

ZERO SUPPRESSION: 0 to 100% of full scale.

RECORDER OUTPUT: 100mV at full scale nominal, 100 Ω source impedance.

METER ACCURACY: $\pm 2\%$ of full scale.

CONTROLS AND CONNECTORS:

- RANGE - Ten-position rotary switch, front-panel.
- ZERO SUPPRESSION - 25-turn screwdriver adjustable control, front-panel.
- TIME CONSTANT - Seven-position rotary switch, front-panel.
- SET ZERO SUPPRESSION - Momentary pushbutton, front-panel.
- POSITIVE THRESHOLD - 25-turn screwdriver adjustable control, front-panel.
- Positive Input - BNC, front panel.
- Negative Input - BNC, front panel.
- Recorder Output - Standard binding posts and BNC, rear panel.
- Power - NIM standard power connector (rear panel).