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CANBERRA

Features

- Two full scale log ranges
- Ten full scale linear ranges
- Large panel meter
- Alarm relay

Model 1481LA LIN/LOG Ratemeter

Description



The Model 1481LA LIN/LOG Ratemeter NIM module offers the user a choice of either linear or logarithmic presentation of the average number of pulses per second being received.

In the linear mode, the Model 1481LA features ten full-scale ranges, from 10 to 500 x 10^3 counts per second, permitting accurate reading at any range, or the choice of an extremely wide dynamic input range. In this mode, the input pulse rate may be integrated over any one of four switch-selectable time constants, from 0.5 to 40 seconds.

In the logarithmic mode, the Model 1481LA features two three-decade ranges, from 10 to 10^4 counts per second, and from 10^2 to 10^5 counts per second, allowing a wide dynamic input range to be monitored without changing the control settings.

The Model 1481LA's alarm relay is energized whenever the count rate exceeds a pre-selected linear percentage of any full scale range.

The Model 1481LA offers ±0.5% linearity, a rear panel 0-100 mV recorder output, and a 3% precision analog front panel meter.

Specifications

INPUTS

- SIGNAL INPUT – 1 to 10 V, positive or negative, unipolar or bipolar; minimum width 150 ns; Z_{in} = 1 kΩ; front panel BNC connector.

OUTPUTS

- READOUT – Front panel 6.4 cm (2.5 in.) analog meter; ten full-scale linear ranges from 10 to 500 x 10^3 counts per second; two 3-decade log ranges, 10 to 10^4 counts per second, and 100 to 10^5 counts per second.
- RECORDER OUTPUT – 0-100 mV; rear panel BNC connector.

CONTROLS

- LINEAR RANGE – Front panel rotary switch selects Linear Range of 10^1, 10^2, 10^3, 10^4 or 10^5 counts per second.
- LINEAR RANGE MULTIPLIER – Front panel toggle switch allows multiplication of selected LINEAR RANGE by a factor of 1 or 5.
- TIME CONSTANT – Front panel rotary switch selects 0.5, 2, 10, or 40 second time constant; operative in linear mode only (in LOG mode, time constant is composite, dependent upon input count rate).
- INPUT POS/NEG – Front panel toggle switch selects positive or negative input polarity.
- LOG/LIN – Front panel toggle switch selects LINear or LOGarithmic mode.
- LOG RANGE – Front panel toggle switch selects full scale log range of 10^4 or 10^5.
- RECORDER RANGE – Rear panel single-turn screwdriver adjust potentiometer adjusts recorder full scale output over a range of 0-100 mV.

Phone contact information

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Model 1481LA LIN/LOG Ratemeter

- 10 kHz CAL – Front panel pushbutton permits instantaneous check on accuracy of meter reading.
- CAL ADJ – Front panel single-turn screwdriver adjust potentiometer calibrates front panel meter.
- ALARM RELAY – Rear panel 10-turn precision potentiometer selects a rate above which a relay will be energized. Contacts are accessible on the rear panel. Contact Ratings: Form C, UL Recognized, 33 VA max, (110 V ac at 0.3 A); IEC 664 rating, 30 V rms (max).

PERFORMANCE

- RANGE – Ten full-scale linear range steps from 10 to 500 x 10^3 counts per second; two full scale log ranges of 10^4 and 10^5 counts per second.
- LINEARITY – ±0.5% of selected full scale range.
- READOUT ACCURACY – Meter 3%; Recorder Output 1%.
- PULSE PAIR RESOLUTION – <200 ns for 500 x 10^3 counts per second range; <2 ms for 10 counts per second range.
- TEMPERATURE STABILITY – <±0.1%/°C drift, 0 to 50 °C.

CONNECTORS

- All signal connectors are BNC type.

POWER

+12 V – 100 mA

–12 V – 100 mA

PHYSICAL

- SIZE – Standard double width NIM module 6.86 x 22.12 cm (2.70 x 8.71 in.) per DOE/ER-0457T.
- NET WEIGHT – 1.9 kg (4.2 lb).
- SHIPPING WEIGHT – 4.2 kg (9.2 lb).

ENVIRONMENTAL

- OPERATING TEMPERATURE – 0 to 50 °C.
- OPERATING HUMIDITY – 0-80% relative, non-condensing. Meets the environmental conditions specified by EN 61010, Installation Category I, Pollution Degree 2.

CE

ISO 9001 SYSTEM CERTIFIED

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