DAYTRONIC

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3163/3263/3363

DC VOLTAGE PANEL
INSTRUMENT [3000 SERIES]

PROVEN PANEL METER FOR SIGNAL CONDITIONING OF DC VOLTAGE SENSORS - COMBINES TRANSDUCER SIGNAL CONDITIONER (3163) WITH DISPLAY (3263) & LIMIT CONTROL (3363)

The Models **3163**, **3263**, and **3363** Analog Input Instruments accept inputs from various analog voltage sources, including DC-to-DC LVDT's, potentiometer-type sensors, Hall-Effect devices, photocells, current shunts, and the outputs of other instrument systems with various grounding configurations and voltage/ impedance levels. The Model **3163** Analog Input Conditioner is the basic Form 1 instrument. The Model **3263** Analog Input Conditioner/ Indicator is the Form 2 instrument, providing vivid front panel digital indication of measured values, scalable in desired engineering units.

The Model **3363** Analog Input Conditioner/Indicator/Controller is the Form 3 instrument, and includes HI/LO limit detection with control output. The signal source can be grounded or floating, and may use 2-, 3-, or 4- wire cabling. A regulated 10-V supply is provided for excitation of potentiometers, DC-to- DC sensors, and similar devices. Full-scale sensitivity is continuously adjustable in four jumper-selectable ranges. Three standard 5-V outputs are produced (see Specifications). With a sensitive, high-impedance, floating differential input, wide common-mode range, and exceptional common-mode rejection, these models can be used to obtain difficult low-level signals from highly off-ground sources, without common- mode AC or DC offset problems. Selectable low-pass active filtering allows the smoothing of unwanted normal-mode dynamic components that might prevent stable digital conversion or control action.

3000 Series options applying to the analog input instruments include

- Analog Peak Capture (Models 3263 and 3363)
- 4-20 mA Current Output (Models 3163, 3263, and 3363)
- 0-10 V-DC Dual Galvanic Isolated Outputs (Models 3163 and 3263)
- Internal Electromechanical Relays (Model 3363)
- Internal Solid-State Relays (Model 3363)
- 12 V-DC Battery-Powered Operation or Nominal 230 V-AC Operation (Models 3163, 3263, and 3363)

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DC VOLTAGE PANEL
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SPECIFICATIONS

Input Type: 2-, 3-, or 4-wire DC voltage source, floating or grounded

Input Ranges (full-scale): Full-scale sensitivity continuously adjustable in jumper-selectable ranges of 50 to 500 mV, 500 mV to 5 V, 5 to 50 V, and 50 to 250 V

Excitation Supplied: Regulated 10V ±0.02%, 20 mA max., for excitation of potentiometers, DC-to-DC sensors, and similar devices

Analog Outputs (±5 V Full-Scale): Three outputs, each ±5 V full-scale with 50% overrange, 5 mA max.; low-pass corner frequencies of 2 Hz, 200 Hz, and 2 kHz, respectively

Common-Mode Range: ±100 V-DC

Common-Mode Rejection Ratio: -70 dB, DC to 60 Hz Input Impedance: 1 M Ohms (all ranges)

Analog Filtering: Active low-pass filters provide -60 dB per decade above cutoff frequency ("f"); full-scale slew time is 1.4/f sec

Output Ripple and Noise: 0.15% of full scale (rms) max. for 200-Hz and 2-kHz outputs; 0.02% of full scale (rms) max. for 2-Hz output

Accuracy (typical, following calibration): 0.1% of full scale for 60 days ("hands off") following initial calibration

Display Resolution (Models 3263 and 3363): 0.02% of full scale

Physical / Environmental

Case: Each unit is housed in a single piece of heavy gage aluminum (1.7" H x 4.41" W x 7.0" D); a simple reassembly procedure allows mounting in the user's precut panel; the Model 3004 Rackmount Adaptor permits secure mounting of up to four units in a standard 19-inch rack

Operating Temperature Range: 0° F to +130° F (-18°C to +55° C); assumes dry, noncondensing ambient atmosphere

Weight: Instrument: approximately 2.0 lb (0.9 kg) maximum; Shipping: approximately 3.5 lb (1.6 kg) maximum

Power Voltage: 105-135 V-AC; 210-260 V-AC optional (add suffix "F" to model number); any model not employing the solid-state relay ("S") option may be powered by battery (11.5-15 V-DC, 500 mA max.; add suffix "B" to model number)

Frequency: 50-400 Hz

Consumption: 5 W max. (for Form 1 instruments), 8 W max. (for Form 2 instruments), or 9 W max. (for Form 3 instruments) Display (Form 2 and Form 3 instruments only)

Display: Orange LED's, six digits with polarity sign, 0.4" (1.0 cm) height; Most Significant Digit of display is either unlit or reads "1," and in either case contains polarity sign; Least Significant Digit is a dummy zero which may be lit or unlit, as desired

Scaling: Selectable at rear panel; full-scale values of ±5000 counted by "1's," ±10000 counted by "2's," or ±20000 counted by "5's," with selectable decimalpoint locations (along with dummy zero) to give decade multiplier factors of 10, 1.0, 0.1, 0.01, 0.001, or 0.0001

Display Sampling Update Rate: 3 samples per second

Limit Logic Outputs (Form 3 instruments only) Both true and complement available for each limit condition (LOW, OK, HIGH); TTL-compatible, wire- ORable; 10-mA sink, 0.5-mA source (max.); normally nonlatching, but latching outputs are also available