

# DAYTRONIC

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## 3KPLUS-64

DC VOLTAGE PANEL INSTRUMENT

[3KPLUS SERIES]



### MODULAR PANEL METER USING PROVEN 5D SIGNAL CONDITIONING FOR DC VOLTAGE GENERATING SENSORS - COMBINES SIGNAL CONDITIONER WITH DISPLAY, CONTROL AND COMPUTER INTERFACE

Incorporating the 5D64 Signal Conditioner Modules, the **3KPLUS-64** Panel Meter continues Daytronic's half-century tradition of signal conditioning expertise. It's a field-scalable indicator featuring operator-programmable signal processing and PC/PLC communications. With a durable front panel and secure screw terminals for all power and I/O connections, this mechanically and electrically rugged instrument is ideal for pump, motor, hydraulic, and other high-noise monitoring applications. Accepting the fully conditioned output of the 5D64 module, the **3KPLUS-64** maintains analog signal integrity to deliver accurately scaled  $\pm 5$  VDC,  $\pm 10$  VDC, or 4-20 mA output, while sampling all data at 16-bit resolution. The data display provides selectable digital filtering for even greater readout stability. The meter's "auxiliary" analog output is used for

- HI/OK/LO limit monitoring with selectable hysteresis windows, front-panel annunciation, and TTL-level relay outputs for local process control
- high-speed positive or negative peak capture with "have peak" logic output, selectable "peak defeat" and "backout" thresholds, and user-adjustable leak rate
- automatic application of a desired tare offset
- a signal hold to allow captured peaks and other values to be transferred to computer for processing

You can quickly set up the **3KPLUS-64** via the simple front-panel button menu or the configuration software supplied with the unit. Operator-entered ranges, filters, calibration points, and other setup parameters that are specific to the 5D64 Series conditioner.

The installed - 5D64 conditioner delivers filtered analog output of  $\pm 5$  VDC. The DC input may be either differential (floating) or grounded (single-ended). Exceptional signal stability and accuracy over an unusually widerange of voltage input levels and grounding configurations are achieved through...

- precisely regulated, remotely sensed excitation
- chopper-stabilized low-drift amplification
- configurable low-pass active filtering
- "absolute" software-based calibration
- effective signal isolation & ESD protection

# MODEL 3KPLUS-64

## DC VOLTAGE PANEL INSTRUMENT

### [3KPLUS SERIES]

## SPECIFICATIONS

**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. Wiring is by rear connections via screw terminals

**Power Requirements:** 24 VDC  $\pm$  10%; 300 mA nom.; 350 mA max.; 8.4 W; optional AC adaptor available

**Operating Temperature Range:** 0° to 130° F (-18° to 55° C)

**Operating Relative Humidity:** 10% to 95% noncondensing

**Instrument Weight:** 1lb., 10 oz. with 5D module installed  
A/D Conversion: 16-bit

**Sample Rate:** 10 kHz; delay of 20-25 msec for limit evaluation of DAC output

**Data Display:** 6-digit red LED; count by 1, 2, or 5 resolution to maximum count of 199990; selectable digital filtering

**Displayable Data Channels:** (1)  $\pm$ 5 VDC Scaled Output; (2) Auxiliary DAC Output; (3) "Raw" Volts Output; selectable via front panel Programmable Processing of Auxiliary DAC Output (Channel 2):

**Limit Logic:** Three limit zones (LOW/OK/HIGH), with front-panel annunciation and corresponding contact relay outputs; latching or nonlatching limits; user-adjustable hysteresis windows; selectable relay polarity

**Positive and Negative Peak Capture:** Controlled by logic input; selectable "peak defeat" and "backout" thresholds; user-adjustable leak rate

**Tare Offset:** User-adjustable offset applied and released via logic input

**Hold Command:** Applied and released via logic input

**Analog Output (Channel 2):** Selectable  $\pm$  0 to 5 VDC,  $\pm$  0 to 10 VDC, or 4-20 mA, single-ended; 14-bit resolution; 47-Hz filter; update rate of 20 msec

**Logic Inputs (UNLATCH, TARE, PEAK, HOLD) and Outputs (HAVE PEAK; LIMIT HI, LIMIT OK, LIMIT LO):** Nominal 0 - 5 V, where 5 V = Logic 1 ("true");  $\pm$ 25 V without damage; noise immunity 1 V; internal pull-down nom. 4.7 k $\Omega$ ; all inputs assume Logic 0 state in the absence of connection

**Communications:** Three-wire RS232 at fixed 19,200 Baud, 8 Data Bits, 1 Stop Bit, No Parity; for setup and data transfer

**Front-Panel Instrument Indication:** Limit status, displayed channel, setup stage, and overrange (flashing display)

**Rear-Panel Module Status Indication:** Green/Yellow/Red; indicates conditioner module input and communications status

**Refer to 5D64 Data Sheet for conditioner specifications**

**Transducer Types:** Virtually any transducer producing DC output, either externally powered or with power requirement of 10 V @ 80 mA or less

**Input Ranges (Nominal, Full-Scale):** 50 mV to 150 VDC ; selectable when configured (NOTE: the highest range selection accommodates actual inputs as high as 240 VDC)

**Excitation:** Sensed 10 VDC (=  $\pm$ 5 VDC)  $\pm$  0.02% @ up to 80 mA

**Analog Filters:** 0.2, 2, 20, 200, or 2000 Hz, selectable

