DAYTRONIC

QUALITY, TRUSTED PRODUCTS SINCE 1954

3KPLUS-70

DC STRAIN GAGE PANEL INSTRUMENT
[3KPLUS SERIES]



MODULAR PANEL METER USING PROVEN 5D SIGNAL CONDITIONING FOR DC STRAIN GAGE TRANSDUCERS - COMBINES SIGNAL CONDITIONER WITH DISPLAY, CONTROL AND COMPUTER INTERFACE

Incorporating the 5D70 Signal Conditioner Modules, the **3KPLUS-70** 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 5D70 module, the **3KPLUS-70** maintains analog signal integrity to deliver accurately scaled ±5 VDC, ±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-70** 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 5D70 Series conditioner.

The installed - 5D70 conditioner delivers filtered analog output of ±5 VDC. Advanced analog design directly addresses the problem of measurement inaccuracy in industrial environments of high electromechanical noise. Exceptional signal stability and accuracy over a remarkably wide range of sensor inputs are achieved through...

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

THE 5D70 OVERCOMES ERRORS THAT TRADITIONALLY PLAGUE THE STRAIN-GAGE MEASUREMENT PROCESS.

MODEL 3KPLUS-70

DC STRAIN GAGE PANEL INSTRUMENT
[3KPLUS SERIES]

SPECIFICATIONS

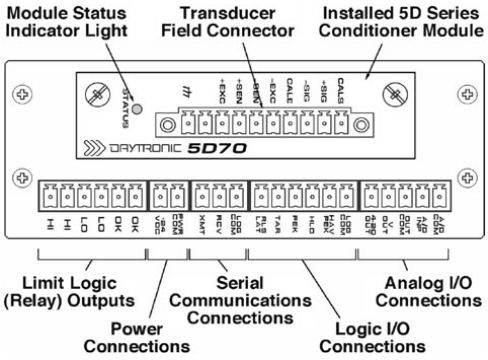
Case: Each unit is housed in a single piece of heavy gage aluminum (1.7" H x 4.41" W x 7.0" D); a simple reassembly procedure allows mounting in the user's precut panel; the Model 3004 Rackmount Adaptor permits secure mounting of up to four units in a standard 19-inch rack. Wiring is by rear connections via screw terminals
Power Requirements: 24 VDC ± 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) ±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 ± 0 to 5 VDC, ± 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"); ±25 V without damage; noise immunity 1 V; internal pull-down nom. 4.7 kΩ; 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 5D70 Data Sheet for conditoner specifications

Transducer Types: Conventional 4-arm strain gage bridges, 120 Ω to 10 kΩ; zero range is 20% of the stated full scale; a screw terminal is provided for user-supplied shunt calibration resistor
Input Ranges (Nominal, Full-Scale): 0.1 to 16.0 mV/V; selectable when configured (NOTE: the highest range selection accommodates actual inputs as high as 25 mV/V)
Excitation: Nominal 2.00 VDC @ 50 mA, 5.00 VDC @ 60 mA, or 10.00 VDC @ 90 mA; selectable when configured
Analog Filters: 0.2, 2, 20, 200, or 2000 Hz, selectable





AGT Absolute Gauge Technologies™
Presented by: Absolute Gauge Technologies
sales@absolutegauge.com; www.absolutegauge.com,
Toronto: 416 754 3168, Montreal: 514 695 5147, Toll Free: 1 888 754 7008