

# DC VOLTAGE, CURRENT, STRAIN GAUGES OR PROCESS SIGNALS

**MODEL  
HI-QDPM**

## FEATURES:

- **Multi-range at dedicated meter prices:**  
DC and AC Volts and Amps, Strain, Process, RTD's, Thermocouples
- **60 conversions per second for:**  
Fast control response  
True peak reading  
Analog outputs that track the input
- **Scaleable to 5 Digits:**  
Engineering Units to +/-99,999  
Set up by front panel pushbuttons
- **Worldwide input power:**  
85 to 264 VAC and 90 to 370 VDC
- **Isolated 5, 10 or 24 VDC output:**  
Powers up to 4 load cells or transmitter
- **Peak hold and auto tare**
- **Automatic, adaptive digital filter**



The HI-QDPM is a low cost solution to a wide range of monitoring and control applications. By simple front panel push-button setup, one meter with a DC signal conditioner can be programmed to display DC voltage, current, strain gauges or process signals. The temperature signal conditioner allows the user to select between 6 popular thermocouples or 2 RTD types. All at the price of a single function meter! Plug-in signal conditioners for AC (True RMS) voltage and current or low level load cells are available.

Input signals may be displayed as voltage or current, or scaled five full digits from 0 to 99,999 to read directly in engineering units, such as ft./lbs, rpm, psi, etc. No calibration equipment is required when changing ranges; all ranges are digitally pre-calibrated at the factory. Temperature scales (Celsius or Fahrenheit) are selectable from the front panel.

## PLUG-IN OPTIONS

- **Dual setpoint Controller:**  
10 Amp, 250VAC relays or isolated transistor outputs
- **Isolated Linearized Analog Outputs:**  
0 to 10VDC and 0 to 20mA
- **Isolated Digital Communications:**  
RS-232 for interface and meter setup  
RS-485 to interface with multiple meters  
Baud rates from 300 to 19,200
- **Isolated Low Voltage Power Supply:**  
9 to 37VDC and 8 to 28VAC inputs  
Isolated 5, 10 or 24VDC output

The HI-QDPM makes 60 readings per second (50 for 50Hz operation) for fast control response, true peak reading capability and an analog output that accurately tracks the signal input. The meter has an adaptive digital filter that can automatically select the best time constant for minimum noise, but yet responds rapidly to an actual change in signal level. The peak value of the input signal can be displayed by a push of a button on the front panel. Auto tare allows the meter display to be set to zero for any input signal level.

The HI-QDPM provides an isolated 5, 10 or 24VDC output to power strain gauges and transmitters, eliminating the need for an external supply.

The meter has two alarm indicators with the set points programmed by front panel push-button. Transistors or dual 10 amp relays may be included to provide control outputs. The output can be set to operate above or below the set point and in a latched or non-latching mode.

0 to 10V and 0 to 20mA analog outputs are available to drive chart recorders, remote displays or for transmission to a central control room. The outputs are scaled through the front panel push-button.

Adding RS-232 or RS-495 enables the HI-QDPM to communicate with PLC's or computers. Baud rates can be set from 300 to 19,200. Software provided by OTEK with these options makes meter setup even easier.

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## SPECIFICATIONS

<p>Display Type: ..... 5 LED, 7-segment, 14.2mm (.56") high digits and 3 LED indicators Color ..... Red or green Range ..... -99990 to +99990 -99990 to +99990</p> <p>A to D Conversion Technique (Pat. 5,262,780) ..... Concurrent Slope Rate ..... 60/s at 60Hz operation 50/s at 50Hz operation Output Update Rate ..... 56/s at 60Hz 47/s at 50Hz Display Update Rate ..... 3.5/s at 60Hz 3/s at 50Hz</p>	<p>Accuracy at 25°C DC Volts, Amps, Ratio ..... 0.01%FS +/- 1 Ct Thermocouple ..... 0.3°C max. RTD ..... 0.06°C max. True RMS (1 to 100%) ..... 0.1%FS, 10Hz to 10kHz Load Cell Meter ..... 0.01FS +/- 1 Ct. Span Tempco ..... 0.003% of reading/°C Load Cell Meter ..... 0.0015% of reading/°C Zero Tempco ..... 0.1 Cts./°C Reference Junction ..... 0.03 degree/degree Noise Rejection CMV from DC to 60Hz ..... Safety-rated to 250VAC, 4.2kVp per High Voltage Test CMR from DC to 60Hz ..... 130dB NMR to 50/60Hz Line ..... 90dB with minimum filtering</p>	<p>Environmental Operating Temperature ..... 0° C to 55°C Storage Temperature ..... -40°C to 85°C Relative Humidity ..... 95% at 40°C, noncondensing NEMA4X ..... when mounted in panel</p> <p>Operating Power Voltage (std.) ..... 85 to 264VAC, 90 to 370VDC Voltage (opt) ..... 8 to 28VAC, 9 to 37VDC Frequency ..... DC and 47 to 440Hz Excitation Power Supplies Outputs ..... 5VDC, 5%, 100mA max. 10VDC, 5%, 120mA max. 24VDC, 5%, 50mA max.</p>
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### ORDERING INFORMATION (3-23-09)

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