

# 9820 & 9860 High Bandwidth Digital Panel Meters

- Digital setup with FAST DIRECT analog output
- Rugged aluminum housing
- Bright 5-digit bipolar display
- Plug-in power cord



## SPECIFICATIONS

PERFORMANCE	
Maximum Display Range	+/-99,999
Signal Input Range – mV	+/-25 or +/-50
Maximum Error	0.01% reading +/-1 count
CMR - dB	120
Display update rate – Hz	2.5 or 5
EXCITATION	
Excitation Voltage – VDC	5 or 10, switch selectable
Excitation Current – mA	60 or 120 respectively
ENVIRONMENTAL	
Operating Temperature - °F ( °C)	14 to 122 (-10 to 50)
Relative Humidity – MAX % at 104°F	90, non-condensing
POWER	
AC	100 / 250 VAC, 50-60 Hz
Power Consumption – watt	6
MECHANICAL	
Size	1/8 DIN
Dimensions – WxHxD – Inch (mm)	3.78x1.89x5.75 (96x48x146)
Weight – lb (kg)	1.3 (575)
Display	LED 14 segment, 0.4" H
Panel Cutout – WxH – Inch (mm)	3.62x1.77 (92x45)

## OPTIONS & ACCESSORIES

- Plexiglass bench-top tilt stand
- Bench-top enclosure with bayonet sensor connector
- HIGH LEVEL +/-5 or +/-10V input (9864)
- TSA-101 9-pin screw-terminal adapter
- System Setup or Full System Calibration
- Voltage & mA input versions available with TEDS

## STANDARD CONFIGURATIONS

Model	Description
9820-000-1	General Purpose panel meter
9860-1	High speed panel meter with TEDS

## FEATURE COMPARISON

FEATURE	9820 General Purpose Indicator	9860 TEDS High Speed Indicator
<b>FAST DIRECT HIGH-BANDWIDTH ANALOG OUTPUT</b> - Direct analog output bypasses the A/D converter. Competing digital panel meters convert the sensor signal to digital and then back to analog for the output, severely limiting its bandwidth and usefulness.	1000 Hz bandwidth Preset analog output based on 2.5 or 5.0 mV/V input for ±10 V and 4-20 mA	1000 Hz bandwidth Self-calibrating to sensor Full Scale +/-10V and 4-20mA
<b>CALIBRATION METHOD</b>	Shunt Resistor or Known Load	mV/V entry, TEDS, Shunt Resistor or Known Load
<b>TEDS support</b>		SELF-CALIBRATES from data stored on optional TEDS chip
<b>DISPLAY DIGITS</b>	+/-99999	+/-99999 plus ability to add a zero as fixed 6 <sup>th</sup> digit. Useful for displaying large values such as 100,000 lbf.
<b>INTERNAL RESOLUTION</b>	+/-19,999 counts	+/-32,768 counts
<b>INTERNAL CONVERSION RATE</b> – Affects Peak and Valley and Limit Setpoints	2.5 samples/sec	230 samples/sec
<b>PEAK AND VALLEY DISPLAY</b>	Displayed momentarily after press of STEP button. Tare button resets peak and valley.	Displayed value can be Toggled using the DISP button RESET button resets peak and valley.
<b>LIMIT SETPOINTS (2 HIGH / 2 LOW)</b>		Front Panel indicators and Open Collector Outputs (Solid State Relays)
<b>RS232</b>		Bi-directional ASCII
<b>DIGITAL FILTER</b>	Not required – Stable, low-noise display	User adjustable and collapses for fast step-response
<b>SENSOR CONNECTION</b>	Screw-terminal	9-pin DSUB or optional screw-terminal adapter (TSA-101)
<b>EXCITATION SENSE</b>		Yes, compensates for cable length effects

9820, 9860  
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