4½ Digit Digit DC-Powered
1/16 DIN Case, Strain/Microvoltmeter

2520-PA

2520-PA shown actual size.

- **±19,999 Count Display Span**
- **True-Differential Input**
- **3-Wire Ratio Measurement**
- **Serial BCD Output**
- **Bright, 14 mm (0.56")**
- **LED Display**
- **Automatic Zero and Polarity**
- **Display Hold and Test**
- **5 Vdc Power**
- **Low-Profile 1/16 DIN Case**

The 2520-PA is an economical 5-volt powered, high-resolution, high-accuracy 4½ digit dc microvoltmeter in a compact 1/16 DIN case. The height of the panel cutout is 22 mm (0.88"), and the depth required behind the panel is only 72 mm (2.83").

Low cost, small size, low power consumption at 5 Vdc and exceptional power-supply noise rejection make the 2520-PA ideal for demanding OEM and portable-instrument applications.

Microvolt Preamplifier

The 2520-PA incorporates a preamplifier, which can be programmed for resolution from 1 to 25 µV/count and for a zero offset up to ±0.6 mV (RTI) ±21% of full-scale readout (RTO).

The 2520-PA can be configured for use with load cells and pressure gauges, which require zero and span adjustment for readout in engineering units. Bridge excitation may be provided by the same 5 Vdc supply that powers the meter, or by an external, isolated 10 or 15 Vdc power supply.

The 2520-PA can also be configured as a microvoltmeter using an internal reference, or in a ratiometric mode using an external reference.

Serial BCD

Non-isolated, character-serial BCD output is standard to allow the 2520-PA to be interfaced to other instrumentation.

Model 2520-PA provides a differential programmable preamplifier for use with low-level bridge circuits. Bridge excitation can be provided by the same 5 Vdc power supply that powers the meter.

Specifications

Noise Rejection

NMR, SIG HI to SIG LO: 60 dB, 50/60 Hz
CMR, SIG GND to SIG LO: 86 dB, DC to 60 Hz
CMV, SIG GND to SIG LO: -1 to 2.5 Vdc
Power Supply Rejection: 86 dB at 50/60 Hz

Conversion

Technique: Dual-slope, average-value
Signal Integration Period: 100 msec
Read Rate: 2.5/sec

Analog Input

Input Configuration: Differential, ratiometric
Coarse-Span Adjustment: Jumper-selectable gain ranges
Fine-Span Adjustment: Front-panel accessible precision potentiometer
Zero Adjustment (RTI or Deadload): ±0.6 mV
Zero Adjustment (RTO or Tare): ±20.9% of full-scale display
Bias Current: 10 nA typ, 20 nA max

Accuracy At 25°C Error

Max: ±0.01% of reading ±2 counts
Span Tempco, Typ: ±0.003% of reading/°C
Zero Tempco, Typ: ±0.3 µV/°C
Step Response: 2 sec to 99.9% of span
Warmup to Rated Accuracy: 30 min

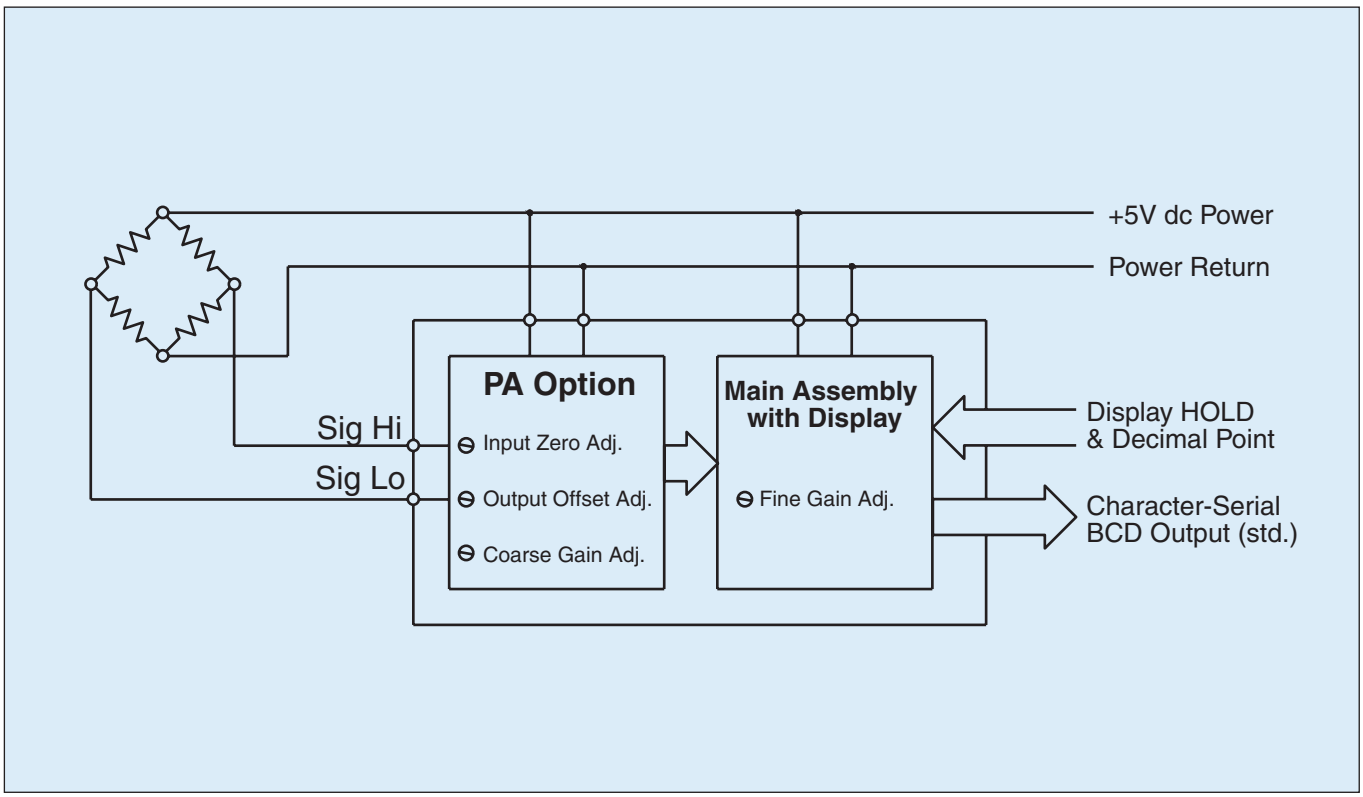
Digital Signals

Output Signals: TTL-compatible
HOLD Input: TTL or 5V CMOS compatible
BLANKING Input: Open-collector compatible

Power
Voltage: 5 to 5.25 Vdc
Current: 170 to 230 mA
Power Consumption: 1 W (nominal)

Environmental
Operating Temperature:
0 to 55°C (32 to 122°F)
Storage Temperature:
-40 to 85°C (-40 to 184°F)
Relative Humidity:
95% at 40°C (104°F) (non-condensing)

Mechanical
Dimensions: 24 H x 96 W x 72 mm D
(0.94 x 3.77 x 2.82")
Panel Cutout: 22.2 x 92 mm
(0.874 x 3.622")
Weight: 145 g (5 oz)
Case Material: 94 V-0 UL-rated
polycarbonate



Analog Input

	Signal Range	Display Range	Resolution	Preamplifier Gain
Most Sensitive Scaling	±20 mV	±19,999	1 µV/count	100
Least Sensitive Scaling	±500 mV	±19,999	25 µV/count	4

To Order *Visit newportUS.com/2520-pa for Pricing and Details*

Model No.				Description
2520-PA				4½ digit, 5 Vdc powered voltmeter
	*			(Nothing, leave field blank) Spring clamp, standard case mounting
	,UC			U-shaped mounting clamp (not compatible with F2M)
		*		(Nothing, leave field blank) Standard (±0.005% of reading/°C) span tempco
		,LT		High-stability (±0.001% of reading/°C) span tempco
			*	(Nothing, leave field blank) Red LED display
			,G	Green LED display

NOTE: *All combinations may not be valid, check spec sheet for valid part numbers.*
Ordering Example: 2520-PA, *for 4½ digit dc strain/micro voltmeter, 5 vdc powered.*