

# 5-DIGIT PRECISION STRAIN GAGE INDICATORS WITH EXCITATION SUPPLY

## DP80 Series



DP87, \$729, shown smaller than actual size, with LC101, load cell, \$305, page F-51, and PX610, pressure transducer, \$515, page B-44. Transducers sold separately.

Starts at  
**\$729**



DP80 Series meters are available in single and dual width, and benchtop configurations.

- ✓ High Accuracy: 0.01% FS
- ✓ Precise Digital Scaling on Front-Panel Keypad
- ✓ 3-Character Alphanumeric Display of Engineering Units
- ✓ Plug-In Options Include Alarms, Math, Analog Outputs, RS232C/20 mA, and DC Power
- ✓ Up to 1  $\mu\text{V}/\text{Count}$  Sensitivity
- ✓ Lockout Switch Prevents Unauthorized Program Tampering
- ✓ Power Cord Included

The TRODEKS® DP80 Series digital strain gage indicators demonstrate impressive compatibility with lower-output, bonded-foil-type transducers, as well as with higher-output semiconductor-type transducers (up to 1000 mV). The user can select 1 of 4 input ranges. The front-panel membrane keypad facilitates accurate digital scaling, eliminating any DIP switches, pot adjustments, or reference standards. This allows for drift-free scaling to precise engineering units and decimal location. The display features 3 alphanumeric LED digits for engineering units (e.g., psi, kg, lb), which can be assigned as dead zeros.

The DP80 also has primary and secondary engineering units displays, both of which can be selected on the front panel. If alarm points are set up in pounds (lb) on the primary display, the instrument will convert the alarm point to kilograms (kg) if the secondary display is active. The system can be calibrated by using 3-point "live" load (actual weight on scale) or by entering the appropriate transducer sensitivity (mV/V). Programmable functions include voltmeter conversion; auto-zero; and rounding of digits by 1, 2, 5, 10, or 100 counts. Optional features include alarms, math, analog outputs, RS232C/20 mA, and DC power.

# ACCURATELY MEASURE PRESSURE, STRAIN, FORCE, LOAD, THRUST, AND TORQUE

## SPECIFICATIONS

### Excitation Supplies:

**DP87:** 5, 10 and 15V; switch selectable, isolated; drives 2 parallel 350 Ω strain gages @ 15V (90 mA)

**DP88:** 5, 10, 15 and 20V; switch selectable, isolated; drives 8 parallel 350 Ω strain gages @ 15V (350 mA)

**Accuracy:** 0.01% FS, ±1 digit

**Repeatability:** ±1 digit

**Zero Offset:** Entire input range

**Zero Stability:** 0.5 μV/°C; no measurable drift with time

**Span Stability:** 0.005% of reading/°C; 0.1% of reading per year

**Normal-Mode Noise Rejection:** >60 dB @ 50/60 Hz

**Common-Mode Noise Rejection:** >120 dB @ 50/60 Hz input impedance; >10 MΩ to 500 MΩ depending on range

**Display:** 8-digit, 14-segment, alphanumeric LEDs; 14 mm (0.54") high; one negative (-) LED digit at left

**Display Count Rate:** ±100,000 active

**Reading Rate:** 2 readings per second

**Overload Protection:** 270 Vdc/Vac RMS across inputs and input to ground; power lead to ground 1500 Vdc/Vac RMS

**Ambient Operating Conditions:** 0 to 50°C (32 to 122°F); 0 to 90% RH, non-condensing

**Storage Temperature:** -40 to 65°C (-40 to 149°F)

**Input Connections:** AC power, quick-connect; DC power and sensors, screw terminals; RS232C, DB25 connector

**Case Construction:** Metal, black anodized, extruded aluminum

**Power:** 90 to 132 Vac; 48 to 400 Hz

**Weight:** DP87, 1.8 kg (4 lb); DP88/DP89, 2.7 kg (6 lb) without options

### Dimensions:

**DP87:** 67 H x 136 W x 250 mm D (2.64 x 5.35 x 9.84"), cutout 68 H x 138 mm W (2.67 x 5.43"), bezel 72 x 142.5 mm (2.83 x 5.61")

**DP88/DP89:** 67 H x 272 W x 250 mm D (2.6 x 10.71 x 9.84"), cutout 68 H x 274 mm W (2.67 x 10.79"), bezel 72 x 284 mm (2.83 x 11.18")

**AVAILABLE FOR FAST DELIVERY!**

### To Order (Specify Model Number)

MODEL NO.	DESCRIPTION	PRICE	SELECTABLE INPUT RANGE	FULL SCALE DISPLAY	
				MIN GAIN	MAX GAIN
DP87*	Single width	\$729	-15 to 100 mV	0.01 cts/mV	1000 cts/mV
DP88*	Double width panel mount	899	-30 to 200 mV	0.05 cts/mV	500 cts/mV
DP89*	Double width benchtop	899	-75 to 500 mV	0.02 cts/mV	200 cts/mV
			-150 to 1000 mV	0.01 cts/mV	100 cts/mV

Comes complete with power cord and operator's manual.

\* DP87 can accommodate 1 additional option. DP88 and DP89 can accommodate up to 4 additional options.

## OPTIONS

### To Order (Specify Model Number)

MODEL NO.	PRICE	DESCRIPTION
DP80-ALM	\$169	Alarms, dual limits (up to 2 per unit), selectable hysteresis and alarm delay
DP80-AOV	189	Analog output, 0 to 10 Vdc isolated, linearized and scalable (N/A DP80-AOC)
DP80-AOC	189	Analog output, 4 to 20 mA isolated, linearized and scalable (N/A DP80-AOV)
DP80-MTH	99	Math, min, max, average, rate of change
DP80-SER**	189	RS232C/20 mA serial output

Recommended Reference Book: Handbook of Systems Engineering, **EE-2530, \$255**  
See Section Y For Additional Books

