HIGH-SPEED LOAD/STRAIN METERS AND PROCESS/VOLT METERS

DUAL DIFFERENTIAL INPUTS AVAILABLE

DP7600 Series

1 YEAR WARRANTY

DP7600, shown actual size, with LC105, load cell

- 1000 Readings per Second Maximum
- 5-Digit Display
- Dual Inputs Optional (Serial Interface Required)
- All Programming and Calibrating via 5 Front-Panel Switches
- Programmable Digital Filter, 1 to 500 Hz Cutoff
- 16-Bit A/D Converter (65,000 Counts)
- Tare (Zero) Up to 50% of Span with Single Pushbutton
- Peak and Runout Modes
- 115/230 Vac Power

The DP7600 is a high-speed load/strain meter that performs 1000 conversions per second. It does limit checking and peak/runout tracking at a user-selectable rate (from 1 to 500 Hz), with data displayed at the push of a button. The tare function, up to 50% of span, has absolute and relative reading modes. LEDs clearly indicate limit status and display mode settings. Five front-panel switches allow easy programming, and a security code prevents unwanted corruption of calibration data. Excitation voltage of 5 or 10 Vdc is standard.

The text at the top of the switch (NORMAL, PEAK, RUNOUT, TARE, ABS/REL) indicates its normal function. The text at the lower half of the switch (ENTER, UP, DOWN, NEXT, EXIT) indicates the switch's function during setup and calibration.

The DP7700 is a high-speed process/volt meter with many of the same features. It accepts most process inputs from 0-200 mV to 0-10 Vdc and 4 to 20 mA current loops. Transducer/loop power of ±15 Vdc @ 50 mA and 4 open-collector outputs are standard.

SPECIFICATIONS

DP7600 Load/Strain Gage Meter

Excitation: 10 Vdc @ 50 mA, 5 Vdc @ 25 mA

Coarse Gain Setting: Selectable by switches on rear of unit

Full Scale mV Ranges: 5.1, 10.2, 15.3, 20.0, 26.3, 30.6, 35.1, 39.2

Bridge Resistance: 100 to 5000 Ω; 4-wire or 6-wire configuration

Calibration: Shunt calibration capability with span programmable from front panel; no potentiometer adjustments; access code prevents unauthorized calibration switches

DP7700 Process/Volt Meter

Excitation: ±15 Vdc, ±5 Vdc @ ±50 mA

Range/Input Impedance:

0 to 200 mVdc	10×10^{12} Ω
0 to 5 Vdc	1 MΩ
0 to 10 Vdc	1 MΩ
4 to 20 mA	10 Ω

Range Selection: Selectable by DIP switch on rear of unit

Calibration: Digital calibration via front-panel button switches; no potentiometer adjustments; access code prevents unauthorized calibration switches

GENERAL SPECIFICATIONS

Accuracy: ±0.01% of reading ±1 count of A/D @ 25°C (77°F)

Temperature Coefficient: 50 ppm/°C

Operating Temperature: -20 to 60°C (-4 to 140°F)

Display: -32768 to 32767 with programmable decimal points; 14 mm (0.56") red LED

Resolution of A/D: 16-bit

Input Bias Current: ±50 nA maximum ±100 pA/°C (per input channel)

Front-Panel Controls: 5 pushbutton switches for programming digital filter, offset, span, limits and recall of peak reading or runout from storage

Normal-Mode Rejection: 70 dB

Rollover Error: ±2 counts of A/D @ 25°C (77°F)

Channels: One channel standard; second channel optional

Digital Filter: Programmable cutoff frequency, 1 to 500 Hz; display update, 3 times per second

Reading Rate: Limited to 1000/s divided by number of channels

Input Analog Filter: 4-pole active anti-alias; 500 Hz cutoff on single-channel unit and 250 Hz cutoff on dual-channel unit

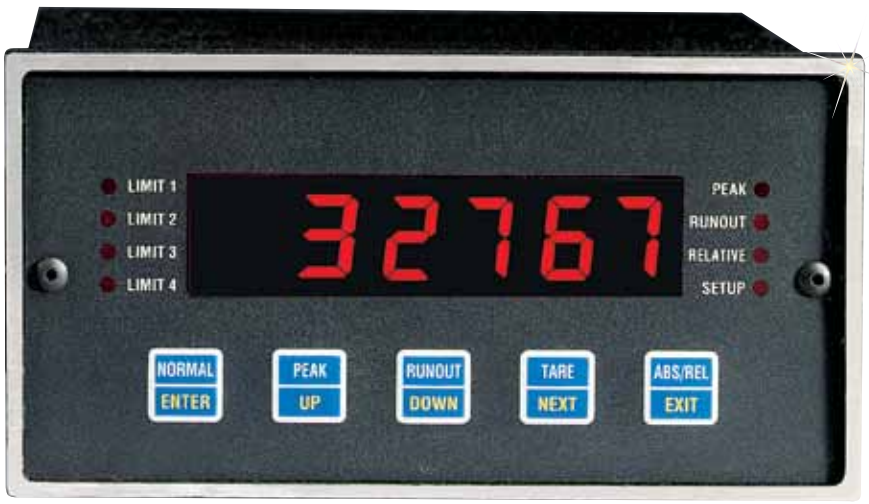
Peak Detect: Updated at rate selected by digital filter. Peak is normally stored in memory and recalled via front-panel switch, over the serial interface, or by selecting peak display mode on rear connector. If peak display mode is selected, an internal timer can be programmed to give limit #1 output up to 100 seconds after a programmed limit is reached. This output can be used to reset the peak reading by tying limit #1 output to remote input.

Runout Mode: Updated at rate selected by digital filter. Runout is normally stored in memory and recalled via front-panel switch, over the serial interface, or by selecting runout display mode on rear connector. If runout display mode is selected, an internal timer can be programmed to give limit #1 output up to 100 seconds after programmed limit is reached. This output can be used to reset the runout reading by tying limit #1 output to remote input.

Convert/Hold Input: Normally high; if pulled low, will hold display; requires 1 ms positive pulse for single conversion

Analog Output (Optional): 0 to 10 Vdc, 0 to 5 Vdc or 4 to 20 mA; tracks display reading; voltage outputs will sink or source 1 mA; 300V isolation between analog outputs and instrument ground

Serial Interface (Optional): ASCII RS232 compatible, 300V isolation to system ground



DP7600, shown smaller than actual size.

Limit Outputs: 4 isolated open-collector transistor outputs rated 30 Vdc maximum; will sink up to 50 mA; 300 V isolation between limit outputs and system ground; limit #1 can be programmed to be delayed from 1 to 100 seconds

Relays (Optional): Dual 115 Vac, 2.5 A, form "A" relay contacts (isolated transistor outputs not available when relays are installed); limit #1 and limit #2 activate the relay contacts

Remote Inputs: Tare, display peak, display runout, and reset peak reading or runout reading; active low TTL compatible, 50 ms negative pulse required

I/O Method: Quick-disconnect screw terminal block; RJ11 jack for serial interface

Power: 115/230 Vac selectable by switch on rear of unit

DC Power (Optional): 10 to 30 Vdc @ 600 mA

Power Consumption: 8 W

Construction: Aluminum case

Dimensions: 69 H x 132 W x 175 mm D (2.7 x 5.18 x 6.9") including I/O connector

Panel Cutout: 63 H x 129 mm W (2.45 x 5.06")

Weight: 370 g (13 oz)

To Order

MODEL NO.	DESCRIPTION
DP7600	High-speed load/strain meter
DP7700	High-speed process/voltmeter

Comes complete with operator's manual.

***Ordering Example: DP7600-DUAL-S2,** strain meter with dual-inputs and RS232.*

OPTIONS

ORDER SUFFIX	DESCRIPTION
-DUAL*	Second input channel
-S2	ASCII RS232 serial interface
-AMA	Analog output, 4 to 20 mA
-A10	Analog output, 0 to 10 Vdc
-A05	Analog output, 0 to 5 Vdc
-R	Dual 2.5 A @115 Vac form "A" relays
-DC9/18	9 to 18 Vdc power @ 600 mA
-DC18/36	18 to 36 Vdc power @ 500 mA

** Requires **"-S2"** option.*