DP-CALC™
Micromanometers

Models 8702 and 8705

TSI's DP-CALC™ Micromanometers allow you to easily make HVAC pressure measurements. The DP-CALC measures static, total, and velocity pressures as well as pressure drops across filters,coils, fans, and diffusers. The microprocessor-based DP-CALC uses the latest electronic pressure transducer technology, eliminating sensitivity due to the orientation of the meter. Each model of the DP-CALC combines a lightweight and durable design with an easy to read display.



Model 8705

Model 8702/8705 Features and Benefits

- Measures and displays differential pressure readings from -1245 to 3735 Pa
- Zeroing function quickly and easily resets instrument zero to ensure accurate measurements
- Calculates and displays a velocity reading when using a Pitot tube
- Variable time constant modes available for a steady display when measuring fluctuating flows
- Sampling function takes a sample and stores the current reading
- Optional portable printer provides hard copy documentation of your measurements
- NIST* traceable calibration certificate

Additional Features of Model 8705

- Data logging ability allows user to log 1000 data points with a time and date stamp
- Single point and continuous data logging modes to fit your applications
- Data can be reviewed on-screen, printed, and downloaded to your computer spreadsheet program
- TSI downloading software permits easy transfer of data to a computer
- Statistics function displays average, maximum and minimum values, and the number of recorded samples
- Automatic conversion between actual and standard velocity readings
- Flowrate feature allows for simple and quick calculations of volumetric flowrate by simply inputting the duct shape and size
- K factor function provides flexibility for measuring flowrates in various applications

TSI®

Models 8702 and 8705 DP-Calc Micromanometers

Specifications

Pressure:

Range: -1245 to 3735 Pa (-9.3 to 28.0 mm Hg, -5 to +15 in. H_2O)

Accuracy: ±1% of reading ±1 Pa
(±1% of reading ±0.01 mm Hg)
(±1% of reading ±0.005 in. H_2O)

Resolution
(Model 8702 only): 1 Pa (0.01 mm Hg, 0.001 in. H_2O)
(Model 8705 only): 0.1 Pa (0.001 mm Hg, 0.0005 in. H_2O)

Velocity:

Range: 1.27 m/s to 78.7 m/s (250 ft/min - 15,500 ft/min)

Accuracy[1]: ±1.5 % at 10.16 m/s (2,000 ft/min)

Instrument Temperature Range:

Operating range: 0 to 70°C (32 to 158°F)

Storage range: -40 to 85°C (-40 to 185°F)

Averaging Capability: (Model 8702 only)

Range: Up to 255 values each of pressure and velocity

Flow Rate: (Model 8705 only)

Displayed range[2]: Up to 9,999,000 CFM, m^3/h, l/s

K Factor range: 0.01 to 2

Logging Capability: (Model 8705 only)

Range: Up to 1,000 samples and 500 test id's

Intervals: 2 sec, 5 sec, 10 sec, 15 sec, 20 sec, 30 sec, 60 sec, 2 min, 5 min, 10 min, 15 min, 20 min, 30 min, 60 min

Time Constant:

Values: 1, 5, 10, 15, or 20 seconds

Power Requirements:

Batteries: Four AA-size Alkaline or NiCd rechargeable

Approx. battery life: 24 hours (Alkaline), 7 hours (NiCd)

AC adapter (optional): 7 VDC nominal, 300 mA

[1] Accuracy is a function of converting pressure to velocity. Conversion accuracy improves when actual pressure values increase.

[2] Actual range is a function of maximum velocity, pressure, duct size, K factor and density correction.

Specifications subject to change without notice. Specifications in parentheses () indicates US equivalents.



Physical:

External dimensions: 100 mm × 168 mm × 38 mm (3.9 in. × 6.6 in. × 1.5 in.)

Weight (with batteries): 0.35 kg (0.76 lb.)

Display: 4-digit LCD, 15 mm (0.6 in.) digit height

Printer Interface:

Type: Serial

Baud rate: 1200

Features	8702	8705
Differential Pressure	●	●
Static Pressure	●	●
Velocity	●	●
Volumetric Flowrate		●
Calculate Average	●	●
Determines Min/Max		●
Variable Time Constant	●	●
Density Correction		●
K Factor		●
Data Logging		●
Data Downloading Software*		●
Printer Output	●	●
NIST** Calibration Certificate	●	●

*Requires use of a spreadsheet software package.
** U.S. National Institute of Standards and Technology.

TSI Incorporated
Environmental Measurements and Controls Division
500 Cardigan Road
Shoreview, MN 55126 USA
Telephone: 800 777 8356
651 490 2711
Fax: 651 490 2874
E-mail: emco@tsi.com
Website: www.tsi.com

Europe:
TSI AB:
Telephone:46 18 527000
TSI GmbH
Telephone:49 241 523030

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