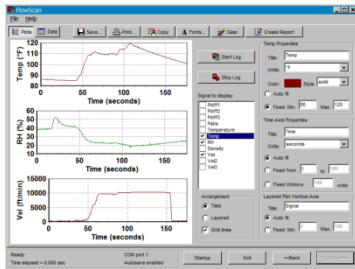


The Choice for Air Flow, Speed & Pressure Measurement

A remarkably easy to use and accurate instrument for HVAC, IAQ, testing and balancing, air speed and volume flow rate measurements. One FKT 1DP1A-SV measures several parameters including differential and static pressure, speed (using a Pitot probe), absolute pressure, temperature, humidity, humidity ratio and even air density. The instrument calculates volumetric flow rate and has sophisticated statistics to let you estimate the reliability of your measurements! This hand held meter is ideally suited for fast high accuracy Pitot probe traverses for measuring duct volumetric (and even mass) flow rate.

Data logging with optional FlowScan software



Pressure display

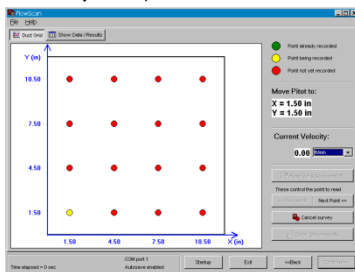
```
P=2.46inH2O  P1
P=0.07361b/ft³W0.014
T=79.0F      RH10%
Pw407.16inH2O M29
```



Speed display

```
U=105.7ft/s  P1
P=0.07361b/ft³W0.014
T=79.0F      RH10%
Pw29.92inHg  M29
```

Duct surveys with optional FlowScan software



Survey result displays

```
Q/A=6923sft/m
Q/A=7262ft/m
m/A=528.21b/ft²m
ZERO to resume

Q/A std deviation
s=124sft/m
s=130ft/m
ZERO to resume
```



Features

- ◆ The industry leader – unmatched for value, ease of use, flexibility and measurement ability
- ◆ No menus – exceptionally intuitive prompt driven operation
- ◆ Extraordinary accuracy and reliability – automatically eliminates pressure and velocity drift with built-in electronic valve system. The valves eliminate the need to disconnect the meter from the applied pressures during zeroing, saving you considerable time and effort
- ◆ Prompt driven Pitot probe survey mode for ductwork – rapidly calculates both actual (air density corrected) and standard velocity and volumetric flow rates
- ◆ Large variable contrast 4 line LCD display
- ◆ Averaging function for unsteady or turbulent flows
- ◆ English and Metric units
- ◆ Full data logging capability with software. Allows extended monitoring and real time data export to Microsoft® Excel®. Stand-alone FlowScan application performs logging; plotting, prompt driven duct Pitot probe surveys and even creates instant reports.
- ◆ Measures differential, gauge, static, and absolute pressure, velocity, flow, temperature, humidity and calculates air density and humidity ratio.
- ◆ Advanced statistics to estimate measurement accuracy and give you confidence in your measurements
- ◆ Portable with neck strap for hands free operation; great for mobility in the work place
- ◆ Rugged water resistant case
- ◆ Ideal for HVAC, IAQ, windtunnel measurements, process control, research, calibration, etc

Specifications

Model

FKT 1DP1A-SV

Conformity

CSA C22.2 No. 1010-1 and UL 3111-1

Measures and calculates

- Differential pressure
- Absolute pressure
- Relative Humidity
- Humidity ratio
- Temperature
- Speed
- Density
- Volumetric flow
- Mass flow

Working Temperatures

- Operating: 32°F to 158°F (0°C to 60°C)
- Storage: 14°F to 140°F (-10°C to 60°C)

Enclosure

- UV protected, water resistant and virtually unbreakable.
- Length: 8.7 in (220.9 mm)
- Width: 7.5 in (190.5 mm)
- Height: 3.9 in (99.1 mm)
- Weight: 2.93 lb (1.33 kg)

Power

- Eight 1.5V AA Alkaline batteries, field replaceable
- Auto-switching power supply (100V-240V AC 50-60Hz)
- Battery life: 30 hrs approx.

Pressure Connectors

- 1/8 in barb, 0.41 in (10.45 mm) long by 0.19 in (4.9 mm) diameter.
- Accepts 1/8 in ID rubber tubing

Differential Pressure Transducer

- Several Ranges available: ± 0.25 to ± 400 inH₂O (± 60 to ± 99500 Pa).
- Temperature compensated
- Automatic zero using internal electronic valve
- Overload protection using internal electronic valve
- Accuracy at 25°C: Typically within $\pm 0.1\%$ of full scale ($\pm 0.22\%$ max)

Absolute Pressure Transducer

- Range: 2.2 -16.7 psi (15 – 115 kPa)
- Temperature compensated
- Accuracy: 0 to 85°C: $\pm 0.5\%$ of Full Scale typical, includes effects of linearity, temperature and pressure hysteresis, zero temperature shift and span temperature shift.
- Media: Clean, dry, non-corrosive gases

Temperature Sensor

- Flexible K-type wire thermocouple
- Thermocouple has a range from -73°C to 482°C (-100°F to 900°F).
- The FKT instrument can work with other K-type thermocouples and can display temperatures from -200°C to 777°C (-328°F to 1430°F)
- Accuracy: $\pm 1.8^\circ\text{F}$ ($\pm 1^\circ\text{C}$)
- Quick disconnect miniature size connector
- Cable length: 60 in (150 cm)

Relative Humidity Sensor

- Detachable probe
- Range: 0% to 99% RH, non-condensing
- Accuracy: $\pm 2\%$ typical at 25°C, non-condensing
- Resp. time (1/e): 15 sec in slow moving air at 25°C
- Working temperature: 0°F to 185°F (-17.8°C to 85°C)
- Cable length: 60 in (150 cm)
- Probe size: Cylinder 4 in (100mm) long with a diameter of 0.5 in (13mm).

Speed

- Using Pitot-static probe with user selectable flow coefficient
- Corrected for gas density, humidity and molec. weight.
- Measure velocities up to 25000 ft/min (127 m/sec).

Specifications
can be
customized.
Contact us for
details.

Damping

User selectable from 1 to 64 data averages.

Display

- 4 line large character variable contrast alphanumeric LCD with LED backlight.
- Viewing area: 4.02 in (102 mm) by 1.63 in (41.5 mm)
- Pressure units: kPa, inH₂O, mmHg and psi.
- Speed units: m/s, ft/s and ft/min
- Temperature units: degrees C and degrees F
- Density units: kg/m³ and lb/ft³
- Humidity units: percent & mass ratio (lb water vapor / lb dry air)
- Volume flow units: m³/s, ft³/s, ft³/min, sft³/min (SCFM)
- Mass flow units: kg/s, lb/s, lb/min

Output

RS232 serial port interface, 9 pin connector. USB adapter available.

Included accessories

- Neck/shoulder strap
- Auto-switching power supply
- Carrying case
- Printed manual
- Tubing
- NIST traceable calibration with data

Optional accessories

- FlowScan™ software suite and cable to easily access the instrument readings from a computer
- Speed probes. Several sizes and shapes available.



Typical Applications:

- HVAC
- Process Monitoring / Data logging
- Research
- Environmental Engineering
- IAQ
- Calibration
- Laboratory & Field Measurement
- Any application requiring high accuracy pressure, temperature, RH, density, speed and flow measurement



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