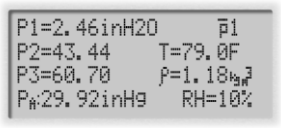
FKT 3DP1A Portable Measurement System

The Choice for Flow Testing and Process Monitoring

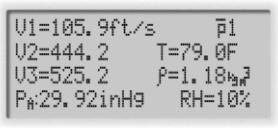
The FKT 3DP1A allows for the simultaneous measurement and display of up to three independent differential pressures as well as concurrent measurement and display of atmospheric pressure, target gas temperature, relative humidity (RH) and density. Density is determined from the temperature and humidity readings. Accurate measurements can also be made on gases other than air by inputting the molecular weight of the target gas.

In conjunction with a Pitot Static Tube, the FKT3DP1A can also display up to three velocity readings accounting for true gas density. The instrument can interface with a computer using the FlowScan software suite allowing data logging and flow survey functions and can be configured as a component of a data acquisition system.

Pressure Display



Velocity Display



Features

- The industry leader – unmatched for value, ease of use, flexibility and measurement ability
- No menus – exceptionally intuitive prompt driven operation
- Multiple pressure transducers allow for exceptional accuracy. Simply use a transducer that fits your measurement range. You do not need to measure near the low end of the transducer range any longer
- 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
- Over-range protection -- instrument automatically vents pressure lines when exceeding the differential transducer's rated maximum range
- English and Metric units
- Large variable contrast 4 line LCD display
- Averaging function for unsteady or turbulent flows
- Full data logging capability with optional 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, temperature, humidity and calculates air density.
- 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

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Specifications

Model
FKT 3DP1A

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

Measures and calculates
- Differential pressure
- Absolute pressure
- Relative Humidity
- Temperature
- Velocity
- Density

Specifications can be customized.

Contact us for details.

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 Transducers
- Can have up to three independent transducers.
- 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 ±0.1% of full scale (±0.22% max)

Absolute Pressure Transducer
- Range: 2.2 -16.7 psi (15 – 115 kPa). Can be upgraded to a 30 psi (206 kPa) range.
- Temperature compensated
- Accuracy: 0 to 85°C: ±0.5% of Full Scale typical, includes effects of linearity, temperature and pressure hysteresis, zero temperature shift and span temperature shift.

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: ±1.8°F (±1°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: ±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).

Velocity
- 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).

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.
- Velocity units: m/s, ft/s and ft/min
- Temperature units: degrees C and degrees F
- Density units: kg/m^3 and lb/ft^3
- Humidity units: percent

Compatible Mediums
Clean, dry, non-corrosive, non-flammable gases

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
- Velocity 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, velocity and flow measurement

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