



## Advantage II

# Features/Benefits

-P Duct/Plenum Probes and -F Fan Inlet Sensors

Feature Benefit

	Sensor Probe Construction	
	Independently Wired/Processed, Multi-point Sensing	True average airflow measurement is not affected by velocity profiles.
	Precision Bead-in-Glass Thermistors	Rugged sensor design. Drift free performance. Long life.
	"Plug and Play" Sensor Probes	Easy to install. Sensors do not need to be matched to transmitters.
	Waterproof Epoxy Sensor Potting Compounds	Sensors will not be damaged by rain or snow.
Duct/Plenum Probes	Sensor Density Options	Cost flexibility. A higher number of sensors improves installed accuracy on larger ducts.
	High Sensor Density Option	Exceptional installed accuracy without field calibration when installed in accordance with published guidelines.
	Gold Finish 6063 Aluminum Tube (-T Probe mill Alum.)	Lightweight. Easy to ship, handle and install. Corrosion resistant alloy.
	304 Stainless Steel Mounting Brackets	Strong, corrosion resistant hardware.
	FEP Plenum Rated Cable	Plenum rated. No additional cables or connectors to provide. Chemical and UV protection. Remains flexible at low temperatures.
Fan Inlet Sensors	Single or Dual Inlet Design	Requires only a single transmitter on dual inlet fans. Cost effective. Simplifies wiring.
	Available in Throat, Face and Forward Mount Styles	Installation flexibility. Face mount design will not affect performance on sensitive high efficiency plenum fans.
	Adjustable Mounting Rods	Simplifies installation and wiring. Standard sizes. In stock for fast delivery.
	304 Stainless Steel Mounting Block and Feet	Lightweight. Easy to ship, handle and install. Corrosion resistant alloy.
	PVC Plenum Rated Cable	Plenum rated. No additional cables or connectors to provide. Chemical and UV protection. Less costly than FEP.
	Gold Plated Cable Plug Pins	Will not deteriorate or corrode over time. Best corrosion resistant electrical connection available.

Feature Benefit

	Calibration and Listings	
	NIST Traceable Calibration Standards	Calibrated to National standards. Accurate. Traceable.
	16 Point Individual Sensor Airflow Calibration	Required to achieve $\pm 2$ percent of reading accuracy over the entire calibrated range.
	3 Point Individual Sensor Temperature Calibration	Assures accurate airflow and temperature measurement at all operating temperatures.
	UL Listed Probe and Transmitter Assembly	Required in most jurisdictions. Strict UL <sup>®</sup> quality control requires quarterly, unannounced inspections from UL <sup>®</sup> .
	Transmitter Circuitry and Construction	
	High Speed Microprocessor	Near instantaneous airflow readings result in negligible sampling error.
	EBTRON <sup>®</sup> Thermal Dispersion Technology	Time-tested technology results in accurate measurement over the widest range of airflow rates and temperatures.
	High Performance A/D Converter	Conversion of thermistor raw signals to 1/2 least significant bit accuracy (0.012%)
	Industrial Rated Integrated Circuits	Components are rated to -38° F rather than +32° F on commercial components.
	"Smart Sensor" Fault Detection	Provides notification if a sensor node, probe or cable is damaged while averaging remaining sensors without service interruption
	Gold Plated PC Board Interconnects	Will not deteriorate or corrode over time.
	Switching Power Supply	Minimizes power consumption and heat. Extends transmitter life.
	Fused and Surge Protected Power Supply	Protects the AMD from permanent damage that could result from improper wiring and line surges. Extends AMD life.
	Watchdog Brownout Protection	Continues to operate after severe brown-outs. transient power loss or generator switchover during emergencies.
	Lightweight Aluminum Enclosure	Lightweight. Easy to ship, handle and install. Corrosion resistant alloy.
	Gold Plated Cable Receptacle Pins	Will not deteriorate or corrode over time.



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User Interface	
16 Character Alpha-numeric LCD Display	Provides a visual display for airflow, temperature, configuration and system diagnostics.
Display Individual Sensor Airflow & Temperature	Ideal for diagnosing system problems that result from excessive velocity and/or temperature profiles.
Pushbutton User Interface	Easy to use, intuitive interface.
EB-Link Infra-red Interface to PDA	Download individual sensor airflow and temperature to your PDA. Upload/download transmitter configuration information.
BAS Interface Options (select one)	
Analog	
Linear 0-5, 0-10 VDC/4-20mA (isolated from main circuit)	Connect to any DDC controller's analog input without additional isolation. Ideal for electrically "noisy" environments.
Linear 0-10 VDC/4-20mA (isolated from 24 VAC)	Connect to any DDC controller's analog input without additional isolation.
RS-485	
RS-485 (BACnet® MS/TP, Modbus RTU, JCI®-N2-Bus®)	Open protocol over RS-485. Reduced wiring. Fast and reliable data transmission. BACnet® master.
RS-485 View Individual Sensor Values	Ideal for troubleshooting HVAC system effects from a remote location.
Combination Analog (Dual Output) AND RS-485 Output	Ideal when the application requires local analog output with monitoring across a network. Ideal for GreenBox.
Combination Analog (Dual Output) AND Ethernet Output (BACnet®-Ethernet/IP, Modbus TCP, TCP/IP)	Both Analog AND open protocol over Ethernet. Flexibility of analog outputs and reduced wiring for existing Ethernet infrastructures.
LonWorks® Free Topology Interface	Use on any LonWorks® network. Reduced wiring. Fast and reliable transmission.
USB Thumb Drive Data Logger	Log airflow rates over time to identify airflow rate or temperature issues before a control system is in place. Ideal for outside air intakes. Replace with other interface card to interface with newly installed host control system.

Feature	Benefit
Special Functions	
Arithmetic Average Temperature Output	Provides an arithmetic average of individual temperature sensors.
Velocity Weighted Temperature Output	Provides the true temperature of a moving airstream by weighting temperatures by airflow at each sensor node.
Airflow Field Cal Wizard	Field adjustment can result in a fewer sensor nodes, hence lower first-cost of AMD. Ideal for LEED® applications.
"Live" or "Coefficient" Airflow Digital Offset/Gain Adjustment	Provides two comprehensive methods of adjustment when field calibration is required by a commissioning agent.
Airflow Digital Gain Adjustment Control	Provides a simple gain adjustment when field calibration is required by a commissioning agent.
Airflow "Rate of Change" Dampening Filter	Reduces airflow rate fluctuations that result from transient wind gusts on outside air intakes.
Variable Airflow Output Integration	Reduces airflow rate fluctuations that result from turbulence when low sensor density AMDs are used.
Low Limit Airflow Cutoff	Provides a method to force the output to zero when transient wind gusts result in false readings on closed outside air intakes.
Low Airflow Alarm (Visual and Analog Output)	Provides a visual and analog output signal when the airflow rate is outside of a specified tolerance. Ideal for LEED® EQ.C1.