

## Fast-Response Aeroprobe Specifications

GEOMETRY AND CONSTRUCTION		MEASUREMENT ACCURACY (w/Aeroprobe Calibration)	
<b>Probe Geometry</b>	Straight, L-Shaped, Cobra	<i>Flow Angles</i>	< 0.4°
<b>Number of Holes</b>	5, 7	<i>Total Flow Velocity *</i>	< 0.8%
<b>Tip Geometry</b>	Standard: 30° Conical, Hemispherical Optional	<i>Required Thermo Data</i>	Reference Pressure, Total Temperature
<b>Tip Diameter</b>	Standard: 3.2 mm Option: 1.6 mm, 2.4 mm, 6.35 mm	<b>OPERATION</b>	
<b>Spatial Resolution</b>	½ Tip Diameter	<b>Flow Angle of Receptivity</b>	< 60° Total Angle (5HP) < 70° Total Angle (7HP)
<b>Available Pressure Ranges</b>	±1, ±2, ±5, ±15, ±50psi (4 <sup>th</sup> Order Sensor Calibration Included)	<b>Probe Calibration Speeds</b>	5 m/s to 320 m/s (Mach = 0.93) Available, Calibration at One Speed Included with Cost of Probe
<b>Material</b>	Brass Tip, Ferrules and Hex Mount. Shafts and Internal Tubing Stainless. All-Stainless Option Available.	<b>Pressure-Velocity Data Reduction</b>	Multiprobe Software (Includes Windows GUI, Excel Macro, or Windows DLL For Integration)
<b>Pneumatic Connection</b>	Tygon R3603 Formulation, 1/32" ID, 3/32" OD Standard for Single Reference Exit Tube of 0.89 mm – 1.6 mm (0.035" – 0.063") OD.	<b>Frequency Response</b>	1.6 mm Probe Tip: 2.5 kHz, Typical 3.2+ mm Probe Tip: 4.5 kHz, Typical
		<b>Media</b>	Clean, Dry, Non-Reactive Gases
<b>Electrical Connection</b>	Press-n-Lock 4-pin Connectors (one per probe sensor)	<b>Compensated Temp Range</b>	
<b>Mounting</b>	Standard: Hex Prism Option: Rectangular Prism, Cylindrical	<i>Without Sensor Temp Option</i>	0 to 200°F (-18 to +93° C)
<b>Probe Reference</b>		<i>With Sensor Temp Option</i>	-22 to 225°F (-30 to +107° C)
<i>Straight Probe</i>	Flat on Hex or Rectangular Mount		
<i>Bent Probe</i>	Plane of Bent Probe Tip		
<b>ELECTRICAL (each sensor)</b>		<b>Fluid Temperature Measurement</b>	Tip Thermocouple Option, Compatible with AeroAcquire Data Acquisition Software (3.2+ mm ProbeTips Only)
<b>Full-Scale Output</b>	300 ±100mV at 10V Excitation		
<b>Supply Voltage</b>	10V Nominal, 18V Maximum	<b>Sensor Temperature Measurement</b>	Sensor Thermocouple Option for Extended Temperature Sensor Compensation, Compatible with AeroAcquire Data Acquisition Software
<b>Electrical Configuration</b>	Each Sensor – Active Four Arm Piezoresistive Bridge		
<b>Polarity</b>	Positive Output for Positive Pressure	*Utilizing 0.1% Accurate Pressure Sensors Properly Rated for Flow Speed	
<b>Sensitivity (mV/psi)</b>	1psi: 200 ±50mV 2psi: 100 +50 –20mV 5psi: 60 ±20mV 15psi: 20 ±7mV 50psi: 6 ±2mV	** Auxiliary Data Provided By AP3KAX Probe Amplifier Module (not included)	