

## Air Velocity Transmitter

Sensor for Air Velocity Measurement



measuring  
•  
monitoring  
•  
analyzing

KAH



- Selectable Working Range: 0...2000/3000/4000 ft/min
- Output Signal: 4...20 mA or 0...10 V<sub>DC</sub>
- Supply Voltage: 24 V<sub>AC/DC</sub>
- Low Angular Dependence



Order from: **C A Briggs Company**  
622 Mary Street; Suite 101; Warminster, PA 18974  
Phone: 267-673-8117 - Fax: 267-673-8118  
[Sales@cabriggs.com](mailto:Sales@cabriggs.com) - [www.cabriggs.com](http://www.cabriggs.com)

**Description**

KAH air velocity sensors are ideal for applications requiring accurate ventilation control. They operate on an innovative hot film anemometer principle. This thin film sensor guarantees accuracy at low air velocity, which is not possible for conventional anemometers with commercial temperature sensors or NTC bead thermistors. The sensor is also much more insensitive to dust and dirt than all other anemometer principles. The KAH delivers high reliability and low maintenance costs. The configuration equipment allows air velocity adjustment of the sensor. The measuring range and the response time can be selected via jumpers by the user. This facilitates easy adjustment to the correct working range upon start-up. By use of the supplied mounting bracket, the insertion depth is infinitely adjustable.

**Note:** The sensor is to be mounted so that the direction of air-flow is parallel to the sensor duct.



**Applications**

- HVAC Applications
- Process and Environmental Control

**Advantages**

- Adjustable Damping Time
- Short Reaction Time
- Adjustable Probe Insertion Length
- Low Angular Dependence
- Easy Installation
- Adjustable to Application Requirements

**Technical Details**

**Measuring Values**

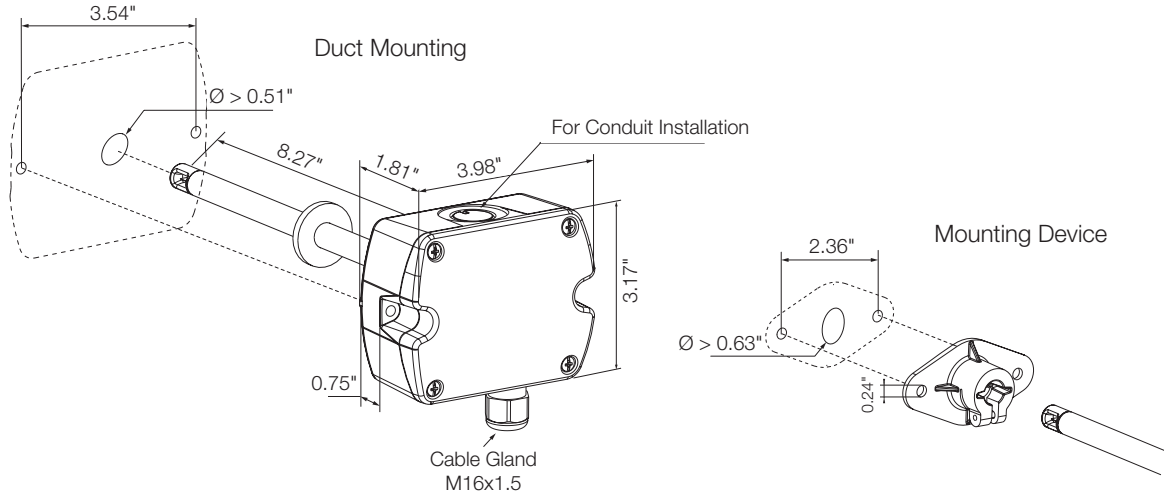
<b>Working Range<sup>1)</sup>:</b>	0 ... 2000 ft/min 0 ... 3000 ft/min 0 ... 4000 ft/min
<b>Output Signal<sup>1)</sup>:</b>	4 - 20 mA $R_L < 450 \Omega$ 0 ... 10 V $(-1mA < I_L < 1mA)$
<b>Accuracy at 68 °F, 45 % rH, 0 psig:</b>	40 ... 2000 ft/min $\pm (40 \text{ ft/min} + 3\% \text{ of reading})$ 40 ... 3000 ft/min $\pm (40 \text{ ft/min} + 3\% \text{ of reading})$ 40 ... 4000 ft/min $\pm (40 \text{ ft/min} + 3\% \text{ of reading})$
<b>Response Time <math>\tau_{90}</math><sup>1)2)</sup>:</b>	4 seconds (1 second at constant temperature)

<b>Probe Length:</b>	7.87"
<b>Process Connection:</b>	Clamp for duct mounting
<b>Power Supply:</b>	24 V <sub>AC/DC</sub> $\pm 20\%$
<b>Current Consumption for AC Supply:</b>	Max. 170 mA
<b>for DC Supply:</b>	Max. 70 mA
<b>Angular Dependence:</b>	< 3 % of reading at $ \Delta\alpha  < 10^\circ$
<b>Wire Termination:</b>	Screw terminals up to AWG 16 (1.5 mm <sup>2</sup> )
<b>Cable Gland:</b>	M16x1.5
<b>Electromagnetic Compatibility:</b>	EN 61326-1 EN 61326-2-3
<b>Housing Material:</b>	Polycarbonate, UL94V-0 approved
<b>Protection:</b>	IP 65
<b>Operating Pressure:</b>	Max. 200 mbar
<b>Temperature Range</b>	
<b>Working Temp. Probe:</b>	-13 ... 122 °F
<b>Working Temp. Electronic:</b>	-14 ... 122 °F
<b>Storage Temp:</b>	-22 ... 140 °F
<b>Working Range Humidity:</b>	5 ... 95 % rH (non-condensing)

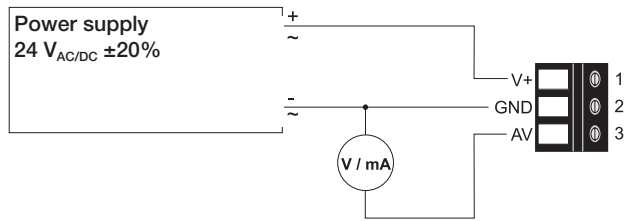
<sup>1)</sup> Selectable by jumper

<sup>2)</sup> Response time  $\tau_{90}$  is measured from the beginning of a step change of air velocity to the moment of reaching 90% of the step.

**Dimensions**

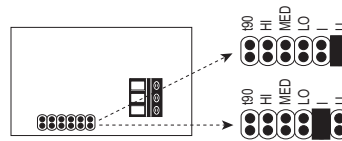


**Wiring Settings**



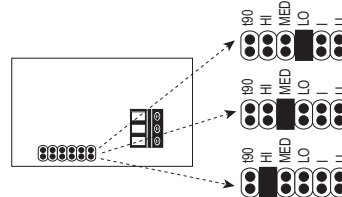
V+ = Supply voltage  
 GND = Ground  
 AV = Airflow output

**Selection of Output Signal**



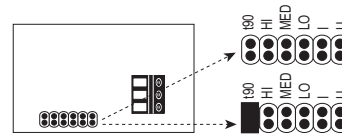
Jumper Voltage (U) = factory setting  
 Jumper Current (I)

**Selection of Working Range**



Jumper 0...2000 ft/min  
 Jumper 0...3000 ft/min  
 Jumper 0...4000 ft/min = factory setting

**Selection of Response Time**



No jumper FAST approx. 1 s  
 Jumper SLOW approx. 4 s = factory setting

The output signal, working range and response time are selected via the jumpers according to the picture.

**Order Details** (Example: KAH-22004)

Model	Connection	Sensor Length A	Cable Length	Output/Display
KAH-..	..2.. = Clamp for Duct Mounting	..2.. = 7.87"	..00.. = without Cable	..4 = 4-20 mA, 0-10 V without Display

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