

# THERMAL ANEMOMETERS MODELS TA410, TA430 AND TA440

## Model TA410

The Model TA410 is a solid choice for a digital Air Velocity Meter, without compromising accuracy or precision. Excellent for troubleshooting HVAC systems and conducting commissioning work.

## Models TA430 and TA440

The Models TA430 and TA440 are like having multiple meters for the price of one, yet they are simple to operate. Purchase instruments with a straight or articulated probe—all in one compact package.



Model TA440

## Features and Benefits

- + Accurate air velocity measurement
- + Large, easy to read display
- + Calibration certificate included

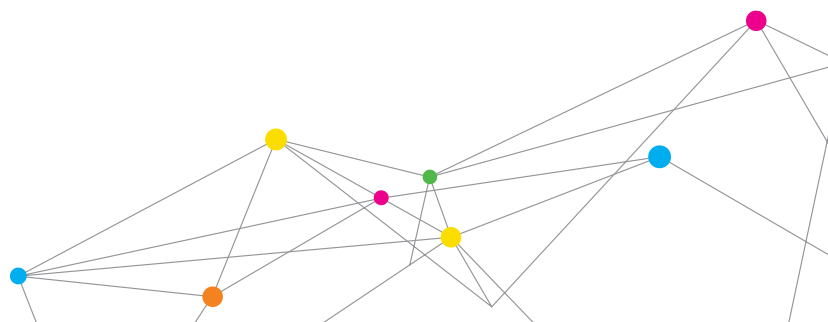
## Additional Features and Benefits

### (Models TA430 and TA440)

- + Simultaneously measures temperature and velocity
- + Displays up to three measurements simultaneously
- + Calculates volumetric flow, and actual/standard velocity
- + Articulated probe versions available
- + Data logging and LogDat2™ downloading software included
- + Measures humidity (TA440), wet bulb, and dewpoint temperature

## Applications

- + HVAC system performance
- + Commissioning
- + Plant maintenance
- + Critical environment certification
- + Duct traverses



# SPECIFICATIONS

## THERMAL ANEMOMETERS MODELS TA410, TA430 AND TA440

### Velocity

|  |  |
|--|--|
| Range (TA410)                              | 0 to 20 m/s (0 to 4,000 ft/min)                                |
| Range (TA430, TA440)                       | 0 to 30 m/s (0 to 6,000 ft/min)                                |
| Accuracy (TA410) <sup>1&amp;2</sup>        | ±5% of reading or ±0.025 m/s (±5 ft/min), whichever is greater |
| Accuracy (TA430, TA440) <sup>1&amp;2</sup> | ±3% of reading or ±0.015 m/s (±3 ft/min), whichever is greater |
| Resolution                                 | 0.01 m/s (1 ft/min)  |

### Duct Size (TA430, TA440)

|            |  |
|------------|--|
| Dimensions | 1 to 635 cm in increments of 0.1 cm (1 to 250 inches in increments of 0.1 in.) |
|------------|--|

### Volumetric Flow Rate (TA430, TA440)

|       |   |
|-------|---|
| Range | Actual range is a function of velocity, and duct size |
|-------|---|

### Temperature

|                       |                           |
|-----------------------|---------------------------|
| Range (TA410, TA430)  | -18 to 93°C (0 to 200°F)  |
| Range (TA440)         | -10 to 60°C (14 to 140°F) |
| Accuracy <sup>3</sup> | ±0.3°C (±0.5°F)           |
| Resolution            | 0.1°C (0.1°F)             |

### Relative Humidity (TA440 only)

|                       |             |
|-----------------------|-------------|
| Range                 | 5 to 95% RH |
| Accuracy <sup>4</sup> | ±3% RH      |
| Resolution            | 0.1% RH     |

### Wet Bulb Temperature (TA440 only)

|            |                         |
|------------|-------------------------|
| Range      | 5 to 60°C (40 to 140°F) |
| Resolution | 0.1°C (0.1°F)           |

### Dew Point (TA440 only)

|            |                          |
|------------|--------------------------|
| Range      | -15 to 49°C (5 to 120°F) |
| Resolution | 0.1°C (0.1°F)            |

### Instrument Temperature Range

|   |                           |
|---|---------------------------|
| Operating (Electronics)                 | 5 to 45°C (40 to 113°F)   |
| Model TA410, TA430<br>Operating (Probe) | -18 to 93°C (0 to 200°F)  |
| Model TA440<br>Operating (Probe)        | -10 to 60°C (14 to 140°F) |
| Storage                                 | -20 to 60°C (-4 to 140°F) |

### Data Storage Capabilities (TA430, TA440)

|       |                                  |
|-------|----------------------------------|
| Range | 12,700+ samples and 100 test IDs |
|-------|----------------------------------|

### Logging Interval (TA430, TA440)

1 second to 1 hour

Specifications subject to change without notice.

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### Time Constant (TA430, TA440)

User selectable

### External Meter Dimensions

8.4 cm x 17.8 cm x 4.4 cm (3.3 in. x 7.0 in. x 1.8 in.)

### Meter Weight with Batteries

0.27 kg (0.6 lbs.)

### Meter Probe Dimensions

|                        |                    |
|------------------------|--------------------|
| Probe Length           | 101.6 cm (40 in.)  |
| Probe Diameter of Tip  | 7.0 mm (0.28 in.)  |
| Probe Diameter of Base | 13.0 mm (0.51 in.) |

### Articulating Probe Dimensions

|                                  |                   |
|----------------------------------|-------------------|
| Articulating Section Length      | 19.7 cm (7.8 in.) |
| Diameter of Articulating Knuckle | 9.5 mm (0.38 in.) |

### Power Requirements

Four AA-size batteries or AC adapter

|  | TA410    | TA430, TA430-A             | TA440, TA440-A             |
|--|----------|----------------------------|----------------------------|
| Velocity range<br>0 to 20.00 m/s<br>(0 to 4000 ft/min) | +        |                            |                            |
| Velocity range<br>0 to 30.00 m/s<br>(0 to 6000 ft/min) |          | +                          | +                          |
| Temperature  | +        | +                          | +                          |
| Flow   |          | +                          | +                          |
| Humidity, wet bulb,<br>dew point                       |          |                            | +                          |
| Probe  | Straight | Straight or -A articulated | Straight or -A articulated |
| Variable time constant                                 |          | +                          | +                          |
| Manual data logging                                    |          | +                          | +                          |
| Auto save data logging                                 |          |                            | +                          |
| Statistics   |          | +                          | +                          |
| Review data  |          | +                          | +                          |
| LogDat2 downloading software                           |          | +                          | +                          |
| Free Certificate of Calibration                        | +        | +                          | +                          |

<sup>1</sup> Temperature compensated over an air temperature range of 5 to 65°C (40 to 150°F).

<sup>2</sup> The accuracy statement begins at 30 ft/min through 4000 ft/min (0.15 m/s through 20 m/s) for the Model TA410, and 30 ft/min through 6,000 ft/min (0.15 m/s through 30 m/s) for Models TA430 and TA440.

<sup>3</sup> Accuracy with instrument case at 25°C (77°F), add uncertainty of 0.03°C/°C (0.05°F/°F) for change in instrument temperature.

<sup>4</sup> Accuracy with probe at 25°C (77°F). Add uncertainty of 0.2% RH/°C (0.1% RH/°F) for change in probe temperature. Includes 1% hysteresis.