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Model AP100 ROTATING VANE ANEMOMETER PROBE



User Manual

INTRODUCTION

Congratulations on your purchase of an AP100 Rotating Vane Anemometer Probe! Sold as part number 10258-CAL.

These probes are characterized by durable metal construction and carefully balanced rotors which are sensitive to airflow rates while being rugged in order to handle a variety of flow rates.

Pacer's AP100 probe is widely used in industries and applications such as power generation, electronics manufacturing, fluids research, aerospace development, pharmaceutical, clean-room monitoring, HVAC, and industrial process control.

Pacer also offers a full line of handheld instruments and transmitters to complement our airflow, humidity, and temperature probes. These instruments feature rugged construction, digital readouts long with analog output, USB, and RS232 communications options. Please visit our website for more information.

CALIBRATION

To maintain your instrument in top working order, we recommend that you send it back to us for calibration each year, beginning one year after purchase.

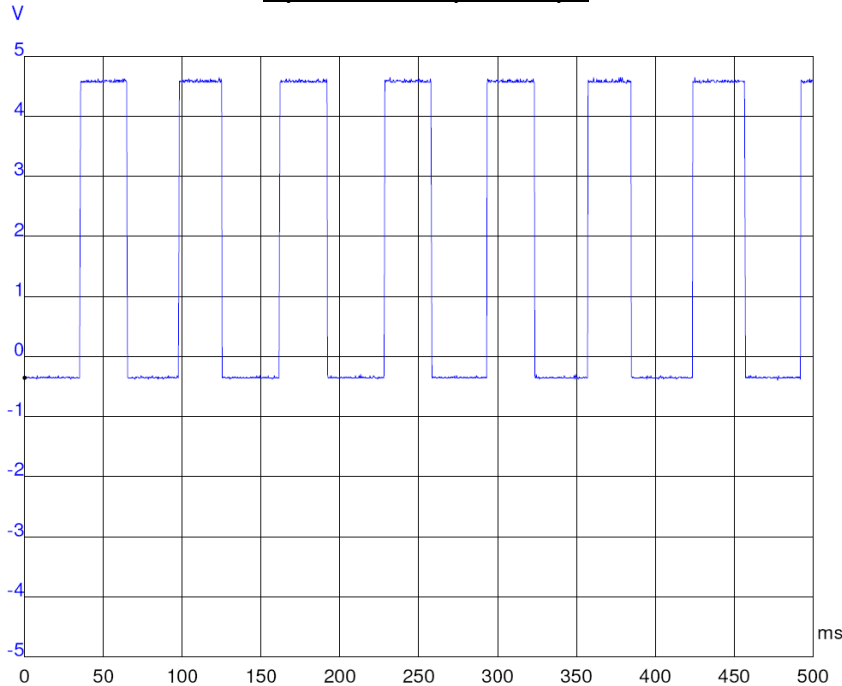
Our NIST-Traceable multi-point calibration services include ensuring the instrument performs within its accuracy tolerance, making any necessary adjustments, and inspecting all aspects of the instrument's functionality so that you'll have another year of dependable service. Calibration also includes a complimentary firmware upgrade so that you know you'll have the latest advances in accuracy and reliability in your instrument.

Additional points other than our standard calibration are also available from the factory. We can offer precise calibration tailored to your specific measurement needs using our state-of-the-art facilities and calibration equipment.

Please contact us or visit our website for the latest information on calibrating your instrument.

NOTE: Probes sold individually are calibrated using a control instrument. The data contained on the certificate of calibration is for reference only. Additional equipment and connections may change or alter the data. It is highly recommended that the entire unit be re-calibrated at the manufacturer's facility.

Square Wave Output Example



NOTE: The 1.00” probe is available with two connector options:

P/N 10258-CAL: works with all Premier Series instruments (DA400, DA410, DA430 and the AP400 transmitter). Connector is a metal M9 threaded locking style.

P/N 6090: works with Legacy Series instruments (DA40, DA40V, DA40H and the AT-1 transmitter). Connector is a plastic bayonet locking style.

Also available is a 10’ extension cable (P/N 10317) for use with Premier Series instruments and the AP100 probe. *(It is recommended that only one extension cable be used on the AP100 probe, as signal loss may occur with the use of additional extension cables).*

Warranty

This product is fully warranted against defective materials and/or workmanship for a period of one year after purchase, provided it was not improperly used. For your protection, please use this product as soon as possible. If returned, it must be securely wrapped, sent prepaid and insured to:

Miltronics Mfg. Svcs. Inc.
Attn: Pacer Instruments: Warranty Repair
95 Krif Road
Keene, New Hampshire 03431
USA

Please include a note with name, address, telephone number and description of the problem. Although we provide assistance on Pacer products both personally and through our literature, it is still the total responsibility of the customer to determine the suitability of the product for use in their application.

This manual is provided by Miltronics Mfg., Inc. without any kind of warranty. Precautions have been taken in accurately preparing this manual; however, we neither assume responsibility for any omissions or errors that may appear nor assume liability for any damages that result from the use of the products in accordance with the information contained in the manual.

SPECIFICATIONS

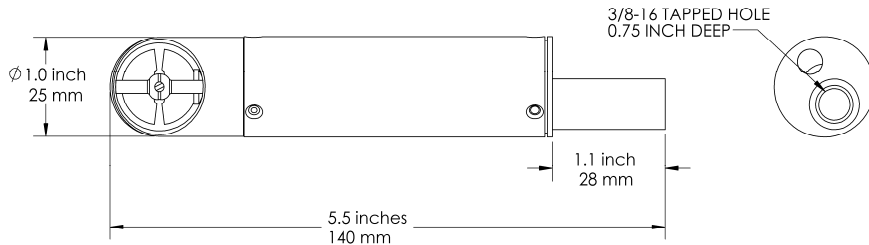
Range: 300 to 6890 ft/min (1.5 to 35.00 m/sec)

Accuracy: ±0.5% full scale ±0.75% of reading ±1 digit

Operating Temperature: -4 ° to 212 °F (-20 ° to 100 °C)

Cable Length: The pre-attached cable length is approximately 5' or 1.5m

Dimensions



ELECTRICAL AND SIGNAL INFORMATION

The AP100 probe outputs a calibrated, single-ended, 50% duty cycle 5-Volt square wave as shown on the next page. The frequency of this square wave corresponds to the airflow measured by the instrument according to the following formula:

$$Velocity = 3.1595 \times f + 36.4$$

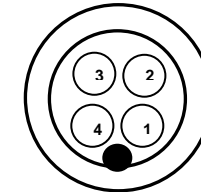
where *Velocity* is the air velocity in **feet per minute (FPM)** and *f* is the output frequency of the signal from the probe in Hertz (Hz).

ELECTRICAL CONNECTOR PIN-OUT DIAGRAM

(Enlarged to show detail)

(As viewed looking at connector face)

This connector is the one used for all Premier Series instruments.



Mating Cable Connector:
Binder Part No. 99-0410-00-04
www.binder-usa.com

Pin Assignments

PIN	Purpose	Value
PIN 1	Air Probe Type input	Connection is only required for use on Pacer instruments
PIN 2	Output Signal	5-Volt Square Wave (TTL), 50% duty cycle
PIN 3	Ground	Ground
PIN 4	Supply Voltage (V _{cc})	5 Volts DC @ 5 mA