TPI 575

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Vane/Hotwire Air Velocity Meter

Contents

Sensors

Temperature Measurement	-20˚C to +80˚C (-5˚F to 175˚F)
Temperature Accuracy	±1% of reading ±0.5°C
	±1% of reading ±1.0°F
Velocity Measurement	Vane: 0.4 to 25 m/s ±2% of reading ±3 digits
	Hot wire: 0.2 to 20 m/s ±0.5% of reading ±3 digits
Units of Measure	m/s, km/h, ft/min, knots, mile/h

CALIBRATION & SERVICE

It is recommended that the instrument be calibrated every 12 months. Please consult Test Products International for further details.

GUARANTEE

Your TPI 575 Hot wire/Vane Air Velocity Meter is guaranteed free from defects in materials and workmanship for 3 Years from the date of purchase.

Covered by TPI: - Repair parts and labour; or replacement of the product at the option of TPI. Normal transportation charges to the purchaser are also covered.

Not covered by TPI: - Damage to the product which are the result of abuse, improper use or maintenance are not covered. Any other expenses, consequential damages, incidental expenses including damages to property are not covered. Transportation expenses to the customer are not covered.

To obtain warranty performance: - Include with the product your name, address, phone number, written description of the problem and proof of purchase date. Carefully package and return to TPI.

This guarantee does not affect your statuary rights.

Trouble Shooting Guide

Problem	Solution
Unit will not turn on	Battery voltage is low, change batteries.

1. The REC annunciator will be displayed. The meter will record minimum, maximum and average temperatures.
2. To recall the data after recording, press "RCL" button.
3. The "MAX", "MIN", "AVG" values will be recalled sequentially.
4. If you press "RCL" button, both temperature and wind velocity will be displayed at the same time on the LCD. The screen will display "MAX", "MIN", "AVG" sequentially.
5. Press "REC" button to return to normal operation.

The meter has auto power off feature on normal operation.(10 minutes) Auto power off is disabled on record mode.

RS232 Output

Holding down "RCL" button will display "MAX, "MIN", "AVG". And then "RS-232" at the top right of the screen. This function prints the reading currently being measured in ASCII code. RS232 cable is needed in order to view the readings on your computer.

SPECIFICATIONS

Instrument General

Operating Temperature Range	-10˚C to +50˚C
Operating Humidity	Less than 80% Rh
Battery	1.5V Alkaline battery X6
Battery Life	> 30 Hours Continuous Use
Display	Backlit Dual LCD with function annunciators
Dimensions	74mm x 144mm x 29mm
Weight	150g
Casing	Rubber Boot as Standard
Switch Off	Auto Power Off after 10 minutes

1. Introduction

Thank you for purchasing TPI brand products. The TPI 575 Vane/Hotwire Air Velocity Meter is a state of the art, easy to use instrument designed to provide temperature and air velocity readings. The instrument is ruggedly constructed and comes with a 3 Year Guarantee.

This manual will guide you through the functions of the TPI 575 which will give you many years of reliable service.

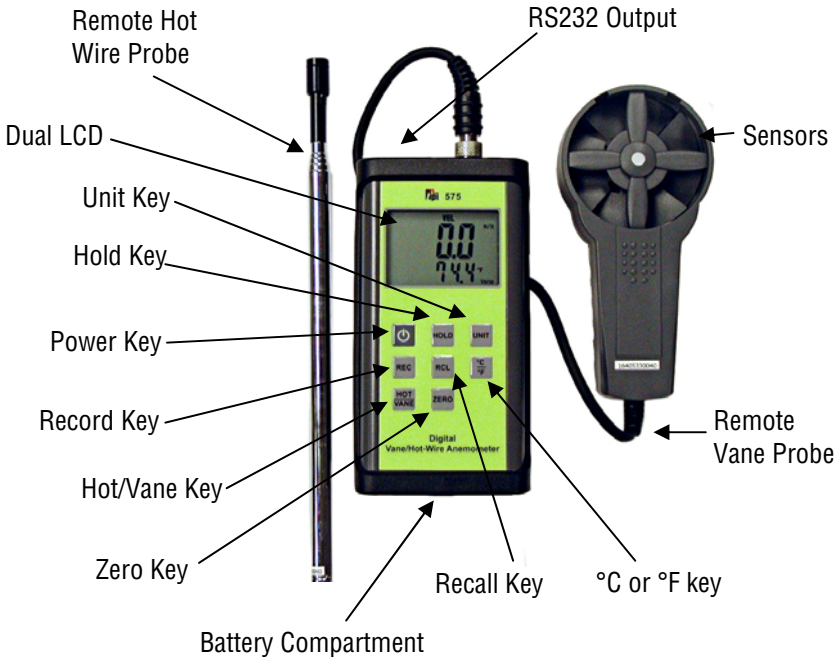
Your TPI 575 Vane/Hotwire Air Velocity Meter comes complete with the following items as standard:

TPI 575 Instrument
Hotwire Probe Head
Vane Probe Head
Rubber Boot
Soft Carrying Case
Batteries
Instruction Manual

Your TPI 575 Digital Vane/Hotwire Thermometer has the following options available:

Serial Computer Interface RS232

Instrument Overview



Operating Instructions

1. Select the Hot probe or Vane probe for location of measurement.
2. Connect the selected probe to the meter.
3. Push ON button to turn meter on.
4. Push HOT WIRE button or VANE button as per a selected probe.
5. Pressing the 'C/'F button will toggle between 'C and 'F.
6. Push UNIT button to select the desired display units of the air velocity.
7. The user can scroll through 5 units: - m/s, km/s, ft/min, knots, mile/h.
8. If you selected a hot probe, pull down the sensor cover of the probe (so that air velocity sensor can be seen) and position the probe at desired location of measurement. The Probe should be positioned so that a white spot will face the winds. In case the place is too far and the antenna should be pulled long, do not hold the probe sensor, but hold the antenna.
9. Read the velocity and temperature on the LCD.
10. It will take several minutes until the readings get stable after the probe is positioned.
11. Press "HOLD" button to freeze the display after taking a measurement is finished.
12. "DH" will be displayed on the LCD.
13. Press "HOLD" button again to return to normal operation.

Battery should be replaced when "LBT" is displayed at the top left of the screen.

Volume Measurements

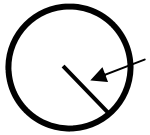
To determine CFM (cubic feet per minute) in a duct, the area of the duct must first be measured (use the equations below). Then multiply an air velocity measurement by the area measurement to obtain CFM.

$$\text{CFM (ft}^3\text{/min)} = \frac{\text{Air Velocity (ft/min) X Area (in square Inches)}}{144}$$

Area Equation for Square Ducts:

Area (A) = Height (H) X Width (W)

Area Equation for Round Ducts:



Area (A) = π X R^2

Where π = 3.14

R^2 = (Radius x Radius)

Recording Data

If you want to record the reading changes, press "REC" button when the reading gets stable. Once activated the meter will begin recording.