VELOCITY AND TEMPERATURE MEASUREMENT SYSTEM

TVS-1000 Series

1 YEAR WARRANTY

- ✔ **Flexible Sensors**
- ✔ **Thin Low Profile for Minimal Flow Disturbance**
- ✔ **High Accuracy**
- ✔ **Air Velocity and Temperature Measurements in One Sensor**
- ✔ **Research Quality Results**

TVS-1004 shown smaller than actual size.

TVS-1004

POWER

OMEGA
TVS-1004

COMM F   POR   POR   PORT   PORT 4

POWER

CE

The TVS-1004 series is supplied with one miniature candlestick sensor for each channel. Shown slightly larger than actual size.

TVS-1004 Kit includes 4 calibrated sensors, scanner, analysis software, power cord and complete operator's manual.

The TVS-1004 and TVS-1008 automatic temperature and velocity scanners are portable, 4- and 8-channel hot wire anemometer systems. The TVS-1100 series are factory expandable for up to 32 total sensors. Fully automated, these research-quality instruments take accurate single- or multi-point measurements of air temperature, velocity and surface temperature in complex environments, such as PCBs and electronics enclosures. When used as temperature loggers, they can measure both fluid and solid temperatures.

The TVS-1000 series employ patented, fast response, omni-directional sensors, which measure both temperature and velocity. This patented single-sensor technology eliminates errors introduced as a result of air flow being non-isothermal. Each precisely calibrated sensor is flexible and robust with a low-profile configuration that allows minimally intrusive mounting throughout the peaks and valleys created by the PCB components. These systems require a PC to operate and utilize the provided software for data acquisition and reporting.

TVS-1000-RP sensor shown actual size.

The candlestick style sensor, is a flexible, robust, base-and-stem design sensor that measures both temperature and air velocity for characterizing thermal conditions in electronic systems. The candlestick sensor is narrow and low profile to minimize the disturbance of the heat flow in the test domain. It features a flexible, plastic-sleeved stem, which facilitates installation and repositioning during the testing process. Sensors are calibrated for low (natural convection) and high velocity flows. They are capable of temperature measurements ranging from -30 to 150°C ±1°C. Velocity measurements range from 0 to 20 m/s (4000 ft/min). Other

TVS-1132 shown smaller than actual size.

ranges available contact OMEGA for details. The use of a single sensor to measure both temperature and velocity eliminates errors that can occur when airflow is non-isothermal. Multiple candlestick sensors can be easily installed to thoroughly map a system's thermal and airflow conditions. Their robust nature allows for continuous repositioning and reading.

SPECIFICATIONS

Scanners
Power: 115 Vac, 60 to 50 Hz
Max No of Channels: 4 for TVS-1004; 8 for TVS-1008
Temperature Range: -30 to 150°C ±1°C (-22 to 302°F) ±1.8°F
Velocity Range: 0 to 20 m/s (4000 ft/min) ±2% at velocity, other ranges available contact OMEGA for details.
Sensors: Up to 8 with the TVS-1008; Up to 4 with the TVS-1004; TVS-1100 series are factory expandable for up to 32 channels
Measurement Duration: Depends upon the PC storage limitation in the save file mode, unlimited without saving data PC Software with thermal analysis module
Computer Interface: RS232 Port with USB adaptor

Sensor
Cable: 2 m (6')
Height: 12 mm (0.5")
Base Diameter: 9.5 mm (0.4")
Sensor Stem Diameter: 0.5 mm (0.02")
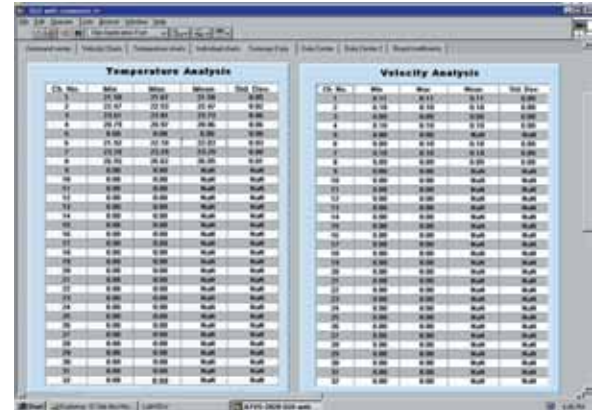**Sensor Bead Diameter:** 1.1 mm (0.04")
Velocity Measurements: 0 to 20 m/s or custom
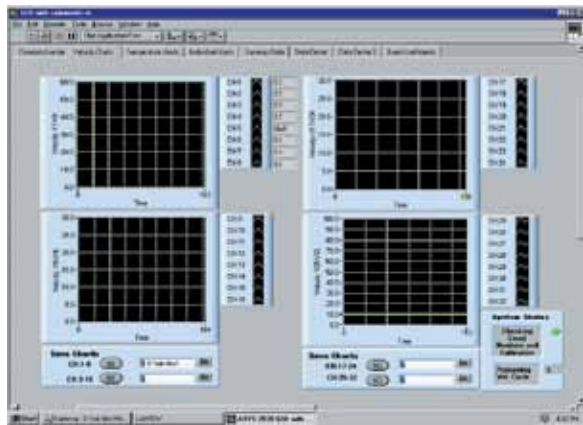**Temperature Measurements:** -30 to 150°C ±1°C

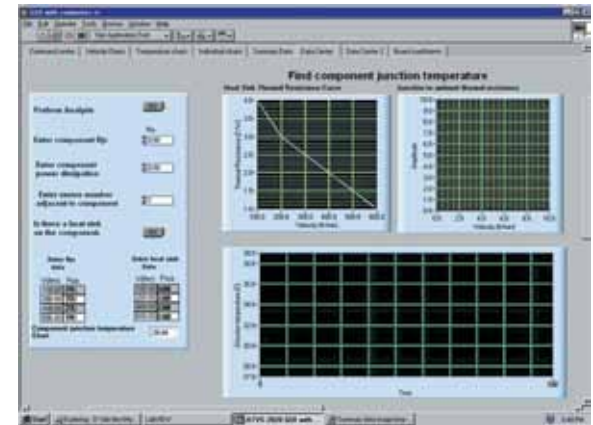| Series	TVS-1000	TVS-1100
Depth	23.5 cm (9 1⁄4")	27.9 cm (11")
Width	13.4 cm (5 1⁄4")	34.3 cm (13.5")
Height	6.4 cm (2.5")	3.5 cm (5.3")
Weight	2 kg (4 lbs)	5 kg (10 lbs)

TVS-1000 Series PC software with thermal analysis module.

TVS-1000 Series PC software with thermal analysis module.

TVS-1000 Series PC software with thermal analysis module.

TVS-1000 Series PC software with thermal analysis module.

To Order *Visit omega.com/tvs-1000 for Pricing and Details*

Model No.	Description
TVS-1004	Scanner, 4 velocity/temperature sensors and software
TVS-1008	Scanner, 8 velocity/temperature sensors and software
TVS-1108	Scanner, 8 velocity/temperature sensors and software (factory expandable)
TVS-1112	Scanner, 12 velocity/temperature sensors and software (factory expandable)
TVS-1120	Scanner, 20 velocity/temperature sensors and software (factory expandable)
TVS-1132	Scanner, 32 velocity/temperature sensors and software

Accessories

Model No.	Description
TVS-1000-RP	Replacement velocity/temperature sensor with calibration reference book
TVS-1000-PS	Replacement power cord and power supply

Comes complete with calibrated sensors, scanner, analysis software, power cord and operator's manual.
***Ordering Examples: TVS-1004,** 4-channel with velocity/temperature sensors and software.*
TVS-1108, *expandable 8 channel scanner with sensors and software.*