

TSYS01 Digital Temperature Sensor



Measurement Specialties, Inc. (NASDAQ: MEAS) [Model TSYS01 digital temperature sensor](#) encapsulates a temperature sensing chip and a 24-bit ADC in a QFN16 package. This new technology provides on-board factory calibration coefficients that provide highly accurate temperature information accompanied by high measurement resolution. For improved performance specific to the application, custom calibration is available upon request. Integration with microcontrollers is achieved through an I²C or SPI interface.

This digital temperature sensor is specifically designed for industrial control, HVACR and heating/cooling systems. Optimal performance is achieved through the use of a stabilized, noise-free power supply with the placement of a ceramic capacitor close to the supply pins, and keeping supply lines as short as possible.

The TSYS01 is easily embedded in most electronic applications as it draws < 12.5µA during normal operations and < 0.14µA on standby. Its broad operating range (-40°C to +125°C), small package and high accuracy (±0.1°C) makes it an ideal replacement for Thermistors and NTCs. Furthermore, it can be mated to an external element should that prove most cost-effective. For best results, customers should proceed according to IPC/JEDEC J-STD-020D (Pb-Free Process) when using solder reflow process.

Measurement Specialties, Inc. designs and manufactures sensors and sensor-based systems. The company produces a wide variety of sensors and transducers to measure precise ranges of physical characteristics such as pressure, force, vibration, torque, position, temperature, humidity, fluid properties, mass air flow and photo optics. Measurement Specialties uses multiple advanced technologies – including piezo-resistive, electro-optic, electro-magnetic, variable reluctance, magneto resistive, digital encoders, thermistors, thermocouples, RTDs, capacitive, resonant beam, application specific integrated circuits (ASICs), micro-electromechanical systems (MEMS), piezoelectric polymers and strain gauges to engineer sensors that operate accurately and cost-effectively in customers' applications.

For more information about Measurement Specialties and our products, e-mail temperature.cs.emea@meas-spec.com or visit us at www.meas-spec.com.