

We offer all types of sensors, signal conditioners, data loggers and instrumentation products:

Sensors, Transducers, & Transmitters

- ▲ Temperature
- ▲ Pressure
- ▲ Position
- ▲ Force
- ▲ Level
- ▲ Power Monitoring
- ▲ Current, Voltage & Watts
- ▲ Torque
- ▲ Flow
- ▲ Analytical
- ▲ Vibration
- ▲ Acceleration
- ▲ Tilt



Signal Conditioning, Controllers, & Recorders

- ▲ Stand Alone PID Temperature Controllers
- ▲ Stand Alone General Purpose Controllers
- ▲ Chart Recorders
- ▲ Digital Paperless Recorders
- ▲ Signal Isolators
- ▲ Signal Converters/Retransmitters
- ▲ Signal Conditioners

Component Level Sensors

- ▲ Pressure Sensors
- ▲ Position Sensors
- ▲ Humidity Sensors
- ▲ Temperature Sensors
- ▲ Universal Transducer Interface

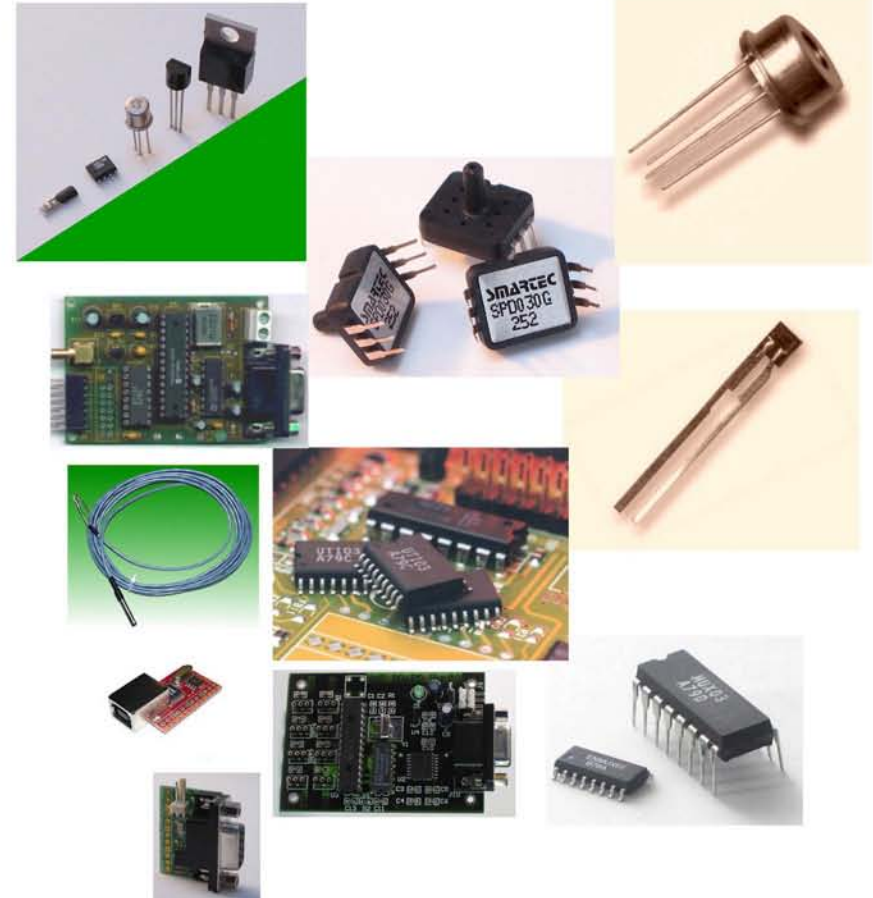
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DD & ENGINEERING

Smart Temperature Sensor with Digital Output

- Most important features:**
- Absolute accuracy 0.7 °C
 - Linear within 0.2 °C
 - Duty cycle output
 - Temperature range 175 °C
 - CMOS compatible output
 - Quick design in
 - Replace hardware by software



Packaging
The device is available in TO18, TO92, TO220, and as small HE element of 2.5 x 8 mm. For pick and place an 8-pin SOIC is available. Die size 1.55 X 2.5 mm.

- Typical applications:**
- Heater/cooling systems
 - Professional ovens
 - Medical instruments.
 - Appliances

Product Highlights
The Smartec temperature sensor is calibrated during test and burn-in of the chip. The built in oscillator generates a duty cycle that is digital as well as analogue. Therefore the device can communicate effectively with low-cost micros that do not need even a crystal oscillator. Due to a special measuring system the resolution is better than 0.005 °C. This fact makes the sensor especially suitable for applications where a sophisticated measurement is needed.

Temperature Probe Assembly SMTRVS1801

- Sensor: SMT1603018
- Probe: stainless steel tube ϕ 7 mm. x 40 mm.
- Cable: 5 m. PVC shielded, ϕ 3.5 mm.



Pressure Sensor

- Features**
- Commercial grade
 - DIP version for high volume production
 - Gage or absolute pressure
 - Can be driven by voltage or current
 - 0-5 to 0-100 psig or psia ranges

- Applications**
- Medical applications
 - Blood pressure
 - Portable Gages
 - Process control
 - HVAC controls



Humidity Sensor 0 - 100% RH

- Most important features**
- Linear 0 - 100 % RH
 - High Performance
 - Long Term Stability
 - Very low cost

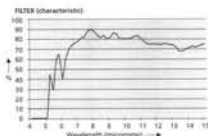


- Typical applications**
- Air conditioning systems
 - Climate control for green houses
 - Storage and warehouses
 - Medical applications

Infrared Sensor

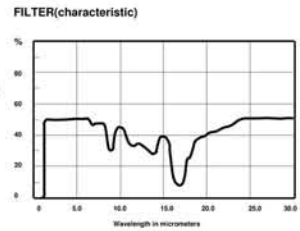
- Most important features:**
- High Sensitivity (110V/W)
 - High Accuracy
 - Low resistance 50k Ω
 - Very good signal-to noise ratio
 - Response time 40ms
 - Low cost thin film technology

- Typical applications:**
- Contactless measurement of surface temperature
 - Contactless measurement of infrared radiation
 - Continuous temperature control of manufacturing
 - Thermal alarm systems
 - Climate control
 - Medical instruments
 - Home appliances

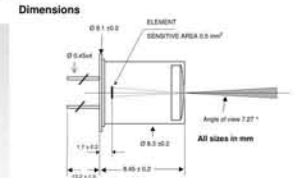


Infrared Sensor with Silicon Lens

Introduction
The Smartec infrared sensor type SMTIR9902SIL is a standard Smartec SMTIR9902 sensor equipped with a silicon lens for measuring radiation temperatures within a small angle of view (7.27°). The SMTIR9902SIL contains a NI1000 temperature sensor for measuring the temperature itself. The temperature range of this internal sensor is -20 to 100° C. The sensor is mounted in a modified TO-05 encapsulation.

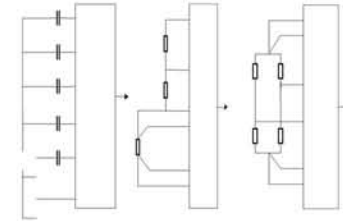


- Typical applications:**
- Contactless measurement of surface temperature
 - Temperature measurement of moving objects
 - Remote measurement due to small angle view
 - Climate control
 - Medical instruments



Universal Transducer Interface

- Most important features**
- interface for many types of sensors capacitors, PT100/1000, bridges
 - 2,3 and 4-wire measurement setup
 - AC excitation
 - Single 7-15V power supply
 - Linearity up to 13 bits.
 - Resolution 14 bits
 - Self-calibrating
 - 50/60 Hz interference filter.
 - One line digital output.



UTI Development Kit

- Typical applications**
- Capacitive level gauging.
 - Digitising of pressure sensors
 - Low cost PT 100/1000 interface
 - Thermistor measurement.



UTI Chip Version

Temperature SMTAS04 & SMTAS08 Boards

PRODUCT DESCRIPTION
The Smart Temperature Acquisition System (SMTAS04 & SMTAS08) is available as a 4 or 8 channel temperature measurement system. It was designed to get the best possible temperature measurement results with the SMT160 Smartec temperature sensors. The SMT160 is a three-terminal integrated temperature sensor with a duty-cycle-modulated square-wave output signal. Now available – 4 channel USB system.



4-Channel Smart Temperature Acquisition System USB Interface



4-Channel Smart Temperature Acquisition System



8-Channel Smart Temperature Acquisition System

Multiplexer

PRODUCT DESCRIPTION
The multiplexer MUCC01 is especially designed for use in combination with the Smartec Universal Transducer Interface (UTI). The combination of the UTI and the MUXC01 makes it possible to measure multiple capacitances with a very low capacitance value and a very high accuracy (15 bits).

