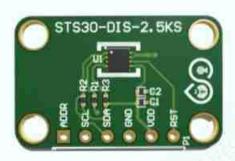# STS30-DIS

Overview

The STS30-DIS is a digital temperature sensor from Sensirion. It provides accurate temperature readings through an I²C digital interface, making it easy to integrate into embedded and IoT systems. The sensor offers high precision, low power consumption, and fast response time, ideal for both consumer and industrial temperature monitoring applications.

Key Features

- Fully calibrated and linearized digital output
- High accuracy and repeatability
- Fast response and low power consumption
- Simple I²C communication interface
- Compact DFN package for easy integration

Technical Specification

- Measurement Parameters: Temperature and Humidity
- Temperature Range: -40°C to +85°C (industrial grade)
- Humidity Range: 0% to 100% RH (non-condensing)
- Accuracy: ±0.2°C (temperature), ±2% RH (humidity)
- Resolution: 0.01°C (temperature), 0.01% RH (humidity)
- Response Time: <5 seconds (typical)
- Output Interface: Digital (I²C / SPI)
- Supply Voltage: 3.3V – 5.5V DC
- Operating Temperature: -40°C to +85°C
- Power Consumption: Ultra-low power, <1 mA typical

Applications

- Precision temperature and humidity monitoring in industrial environments
- HVAC systems for climate control and efficiency optimization
- Smart agriculture for greenhouse and soil monitoring
- Weather stations and environmental sensing platforms
- IoT-enabled home automation and smart devices
- Data logging and remote monitoring systems
- Laboratory and research-grade environmental measurements
- Process control and automation in manufacturing industries