# TEMPERATURE SENSOR

## User Manual

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For additional copies of this publication contact:

**TASC Systems Inc.**
9415 – 202 Street
Langley, BC V1M 4B5
Canada

Tel: 604-455-2000
Toll Free: 1-855-337-8235
Fax: 1-866-588-8840
info@tascsystems.com
www.tascsystems.com

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# PREFACE

This document describes the installation, configuration, and operation of TASC Systems' Temperature Sensor.

The user should ascertain that this product is suitable for the intended application. TASC Systems Inc. accepts no responsibility, liability, for misuse, or damage resulting from the inappropriate use of the product described herein.

**Before connecting any equipment to the Temperature Sensor, the user is advised to read this document in its entirety.**

## CONTENTS

## REVISION HISTORY

| Revision | Date | Change |
|---|---|---|
| 00 | December 2009 | Initial document |
| 01 | May 2013 | Updated to show current hardware. |

## RELATED DOCUMENTS

SCCU siteCOMMANDER/RSM Configuration Utility User Manual (050-015-0055)

siteRSM User Manual (050-015-0052)

siteCOMMANDER User Manual (050-015-0002)

siteVIEW 2.0 User Manual (050-015-0050)

# 1. PRODUCT OVERVIEW

The TASC Temperature Sensor is an ambient “air sensor” style of temperature sensor. Temperature readings are taken at one second intervals.

The RJ-45 cable is connected between the Temperature Sensor cable and the TEMP port on the back of the TASC siteCOMMANDER and siteRSM products. The TEMP port is connected to an I2C bus and can be used to connect up to 8 optional temperature sensors.

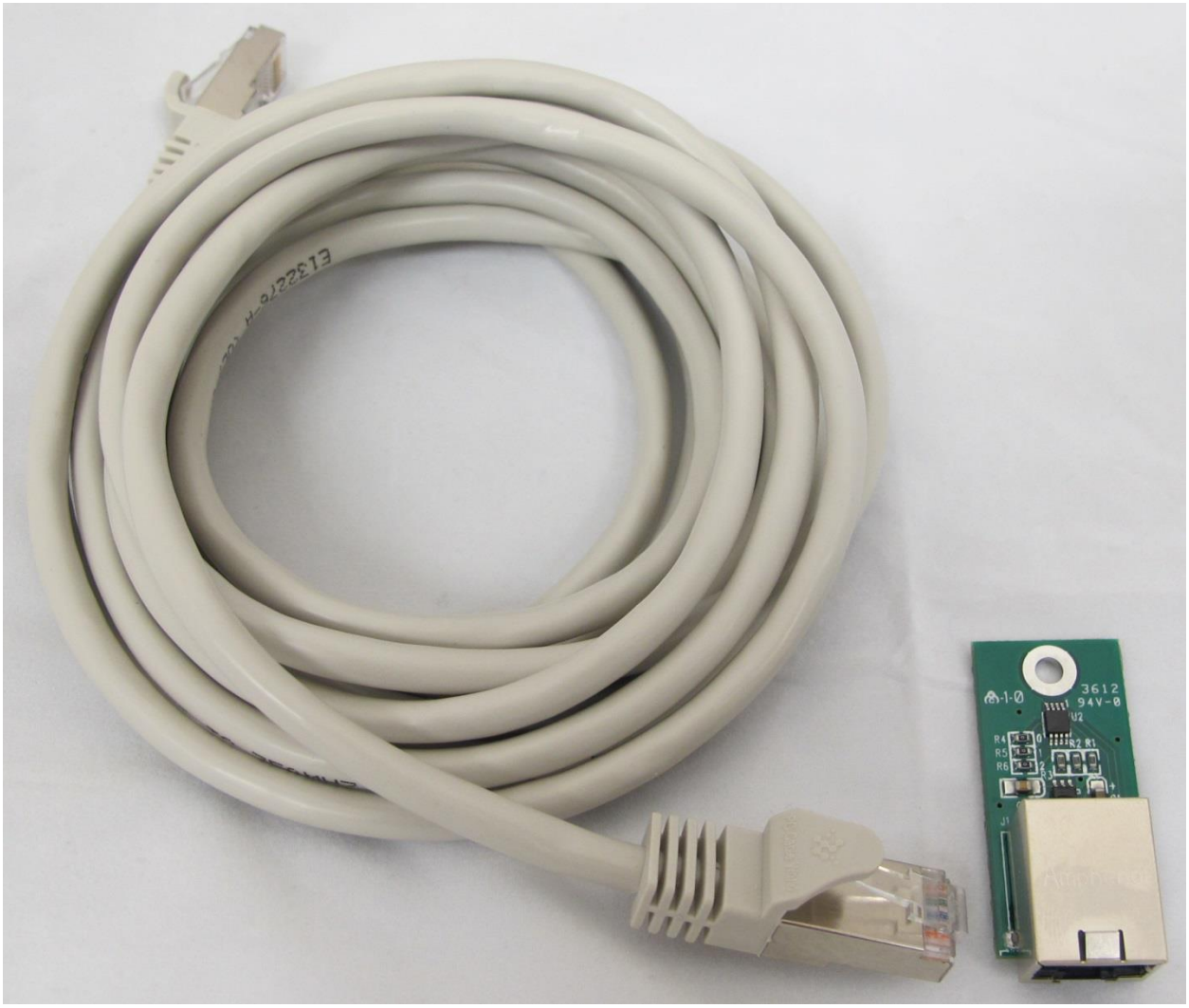

**Figure 1 - Temperature Sensor Kit**

The sensor can measure temperatures between –55°C and +125°C. Temperature accuracy ($T_A$) is shown in Table 1.

| Parameter | Temperature Range | Accuracy Range |
|---|---|---|
| Accuracy (6-Sigma) | -25C ≤ $T_A$ ≤ +100C | Min= -2.0C, Max= +2.0C |
| | -55C ≤ $T_A$ ≤ 125C | Min= -3.0C, Max= +3.0C |
| Accuracy (3-Sigma) | -25C ≤ $T_A$ ≤ +100C | Min= -1.5C, Max= +1.5C |
| | -55C ≤ $T_A$ ≤ 125C | Min= -2.0C, Max= +2.0C |

**Table 1 - Temperature Accuracy**

## 2. INSTALLATION AND SETUP

The Temperature Sensor module is powered from the siteCOMMANDER or siteRSM module TEMP (P1) connector, and requires no external power supply.

Prior to plugging in the sensor, ensure that power is removed to the siteCOMMANDER/siteRSM module. Each temperature sensor requires a unique address when there is more than one Temperature Sensor. Set the Temperature Sensor's address by removing the appropriate resistors (0, 1, 2) on the temperature sensor board (see Table 2). Take care not to remove the conformal coating on the circuit board.

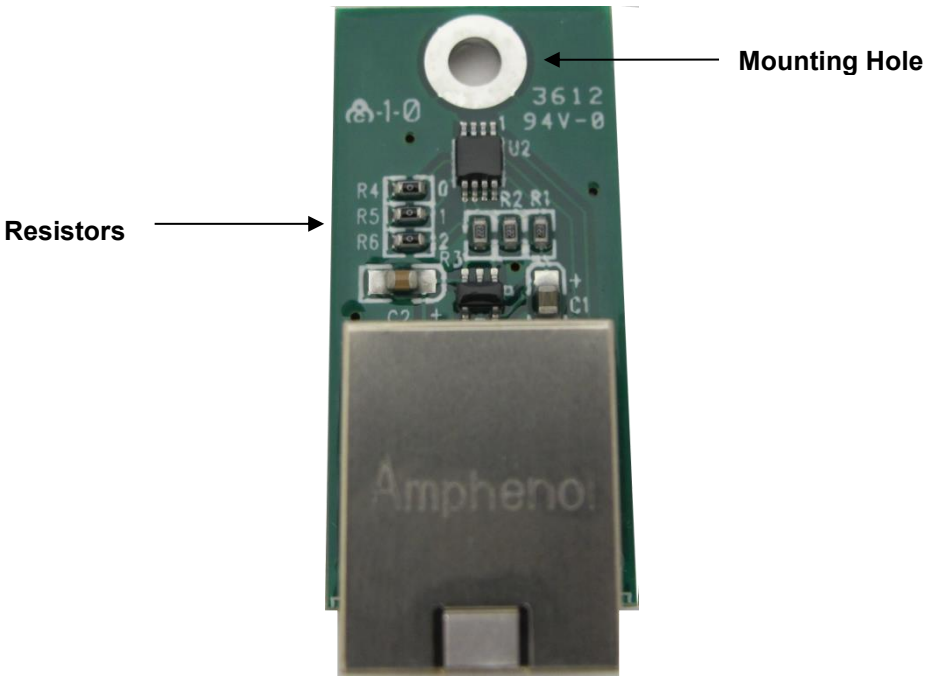


**Figure 2 - Temperature Sensor**

Because the Temperature Sensor bus on the siteRSM main board is a single RJ-45 connector, multiple sensors may be interfaced by placing the sensors in a parallel or daisy chain configuration.

Table 1 shows the resistor configuration to provide each Temperature Sensor with a unique address.

Table 2 shows the pins and functions of the RJ-45 off the Temperature Sensor as well as the TEMP port on the siteCOMMANDER and siteRSM.

| Temp Sensor Address | 2 (R6) | 1 (R5) | 0 (R4) |
|---|---|---|---|
| 1 | Present | Present | Present |
| 2 | Present | Present | Absent |
| 3 | Present | Absent | Present |
| 4 | Present | Absent | Absent |
| 5 | Absent | Present | Present |
| 6 | Absent | Present | Absent |
| 7 | Absent | Absent | Present |
| 8 | Absent | Absent | Absent |

**Table 2 - Temperature Sensor Addressing**

| RJ-45 Connector | |
|---|---|
| **Pin** | **Function** |
| 1 | +12 VDC |
| 2 | N/C |
| 3 | N/C |
| 4 | GROUND |
| 5 | SDATA |
| 6 | GROUND |
| 7 | SCLOCK |
| 8 | N/C |

**Table 3 - Temperature Sensor RJ-45 Pin Out**

The Temperature Sensor can be mounted using an M6 screw, and must be protected from moisture.

A shielded RJ-45 cable is used to connect the Temperature Sensor to the siteCOMMANDER or siteRSM. This cable should be routed away from RF noise. A maximum length of 25 foot shielded cable can be used with the Temperature Sensor.

Refer to the SCCU or siteVIEW 2.0 software manual for information about the configuration of the Temperature Sensor.