OUTDOOR TEMPERATURE SENSOR

Manual

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PREFACE

This document describes the installation, configuration, and operation of TASC Systems' Outdoor 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 siteRSM, the user is advised to read this document in its entirety.

CONTENTS

REVISION HISTORY

Revision	Date	Change
00	February 2014	Initial document

RELATED DOCUMENTS

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

siteRSM User Manual (050-015-0052)

siteVIEW 2.0 User Manual (050-015-0050)

1. OVERVIEW

The Outdoor Temperature Sensor can be connected to a siteRSM or siteCOMMANDER. With its built-in surge protection, this temperature sensor is ideally suited to be used in a wide range of applications in our automation systems. In addition, this sensor will deliver very accurate readings for precise control.

The temperature is measured with a precise and long-term stable platinum thermistor that conforms to relevant industry standards. The non- linear reading of this platinum sensor is linearized using a second order polynomial according to DIN47115 guidelines. Following this signal processing the reading is represented as a 0 - 10 V signal, which conforms to common industry standards.

The sensor is mounted in a protective tube made of 316Ti grade stainless steel and is also suitable for measuring liquids or the installation in ventilation ducts, where condensation is likely. The electronics required for the signal processing are thermally isolated from the sensor platinum sensor to avoid any self-heating.

Operating range	-22 to 158°F (-30 to 70°C)
Sensor probe	Platinum thermistor (PT 1000)
Accuracy	+/- 0.3°C (from 0 - 50°C)
CE Conformity	89/336/EEC
EMC Emissions	EN 61000-6-3:2001
EMC Emissions	EN 61000-6-2:2001
Sensor tube	Grade 316Ti stainless steel
Electronic enclosure	Plastic (IP65 rated)
Connection	Screw terminals 0.75 mm2
Operating voltage	12 – 24 V DC
Surge protection	Varistor and RC-Filter
Cable Length	20’ (6m)
ROHS	Conforms

Table 1 – Specifications

2. INSTALLATION AND SETUP

2.1 Caution

- Can cause electrical shock or equipment damage, disconnect the power supply before connecting wiring.
- Do not connect the temperature sensor to a 0-5 V analog input, as this may damage the siteRSM or siteCOMMANDER. This includes ANALOG INPUTs 9 through 24, and ANALOG INPUTs 1 through 8 with jumpers set to 0-5 V.
- RF interference can cause erratic system operation, keep wiring at away from RF equipment and cabling.

2.2 Wiring

The clear wire can output up to 10 Volts, therefore it must be connected to a 0 – 25 Volt analog input. The 0 – 25 Volt analog inputs are 1 – 8. Note that these inputs can be configured as 0 – 5 Volts through jumper settings. Check the jumper setting using the *siteRSM User Manual* before making the connection.

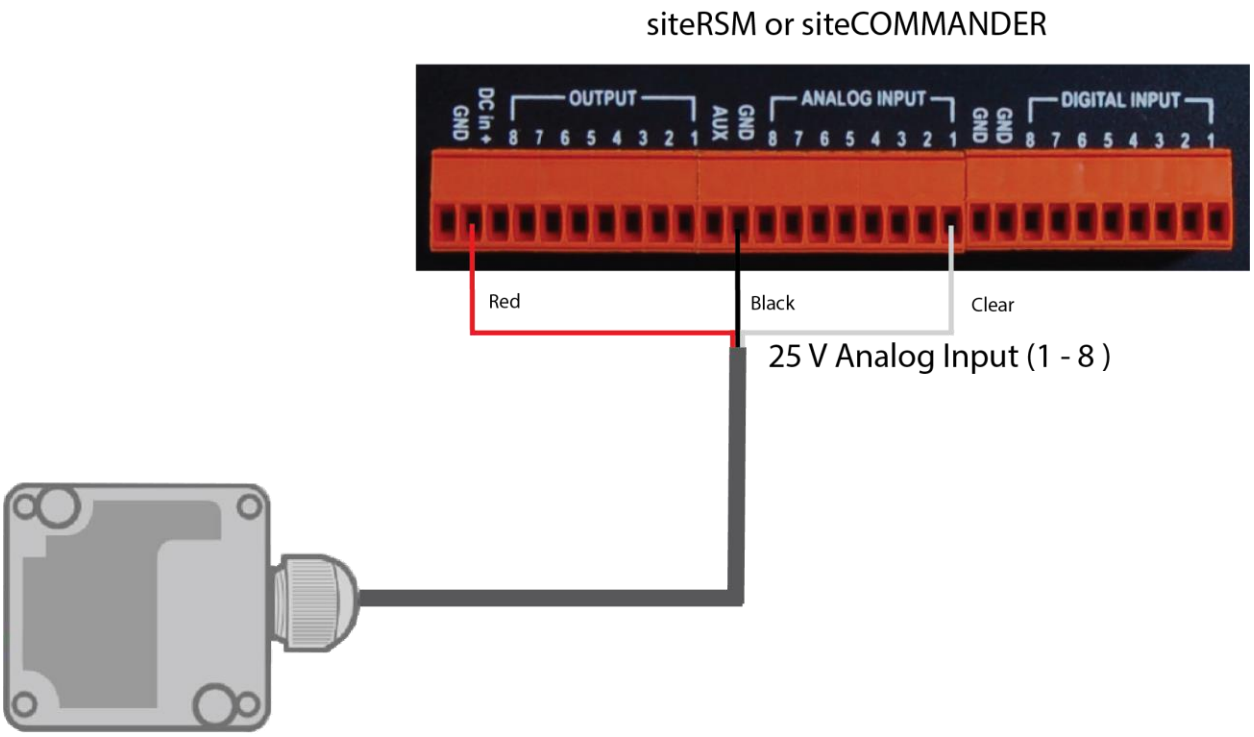

Figure 1 – Wiring Drawing

2.3 siteVIEW Formula

Enter one of the formulas below into the siteVIEW Client software, to convert the analog input voltage to a temperature value to be displayed on the siteVIEW panel. Select Edit, Properties, Analog Inputs tab, to access the siteVIEW formulas. Further details about entering formulas can be found in the *siteVIEW 2.0 User Manual*.

Celsius	10*X-30
Fahrenheit	18*X-22

Table 2 – Formulas

Voltage (V)	Temperature (C)	Temperature (F)
0	-30	-22
5	20	68
10	70	158

Table 3 – Voltage Table