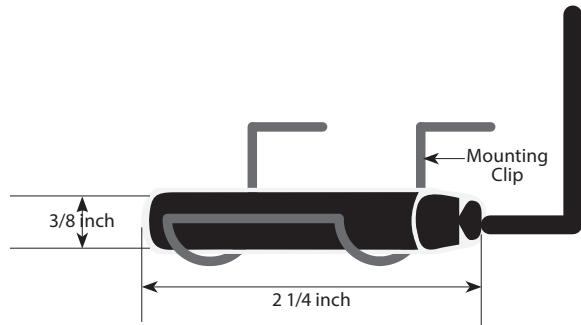# Outdoor Temperature Extended Reach Sensor

Operation

The Outdoor Temperatures Extended Reach Sensor (Part No. 960-001-0008) converts outdoor ambient temperature to a resistance. When the resistance is excited with a constant volatage from the Summit or siteCOMMANDER, it provides a 4 to 20 mA current, which can be used over much longer leads than other temperature sensors (up to 100 feet).

The sensor has a negative temperature coefficient, which means that resistance decreases as the temperature increases.

3/8 inch

Mounting Clip

2 1/4 inch

Key Features

• Compatible 0 - 5 V signal.

• Mounting clip allows easy positioning on siding or soffit.

• Factory calibrated; no field calibration required.

• Maximum wire run of 100 feet.

Specifications

Operating	-40 to 120°F (-40 to 49°)
Display range	-40 to 127°F (-40 to 53°C)
Sensory accuracy	+/-1.5 at 70°F (+/-8.4 to 21°C)
Operating relative humidity	5% to 95% non-condensing
Cable length	10 feet (3m) 960-001-0008 50 feet (15m) 960-001-0010 100 feet (30m) 960-001-0013
Mounting	Clip included
Operating voltage	12 - 14 VDC

Installation

⚠ Caution

• Can cause electrical shock or equipment damage. Disconnect the power supply before connecting the wiring.
• RF interference can cause erratic system operation, keep the wiring away from any RF equipment and cabling.

Mount the sensor on a flat surface with good air circulation.

Do not mount the sensor in direct sunlight, where hot or cold air blows on the sensor or where snow, ice or debris can cover the sensor.

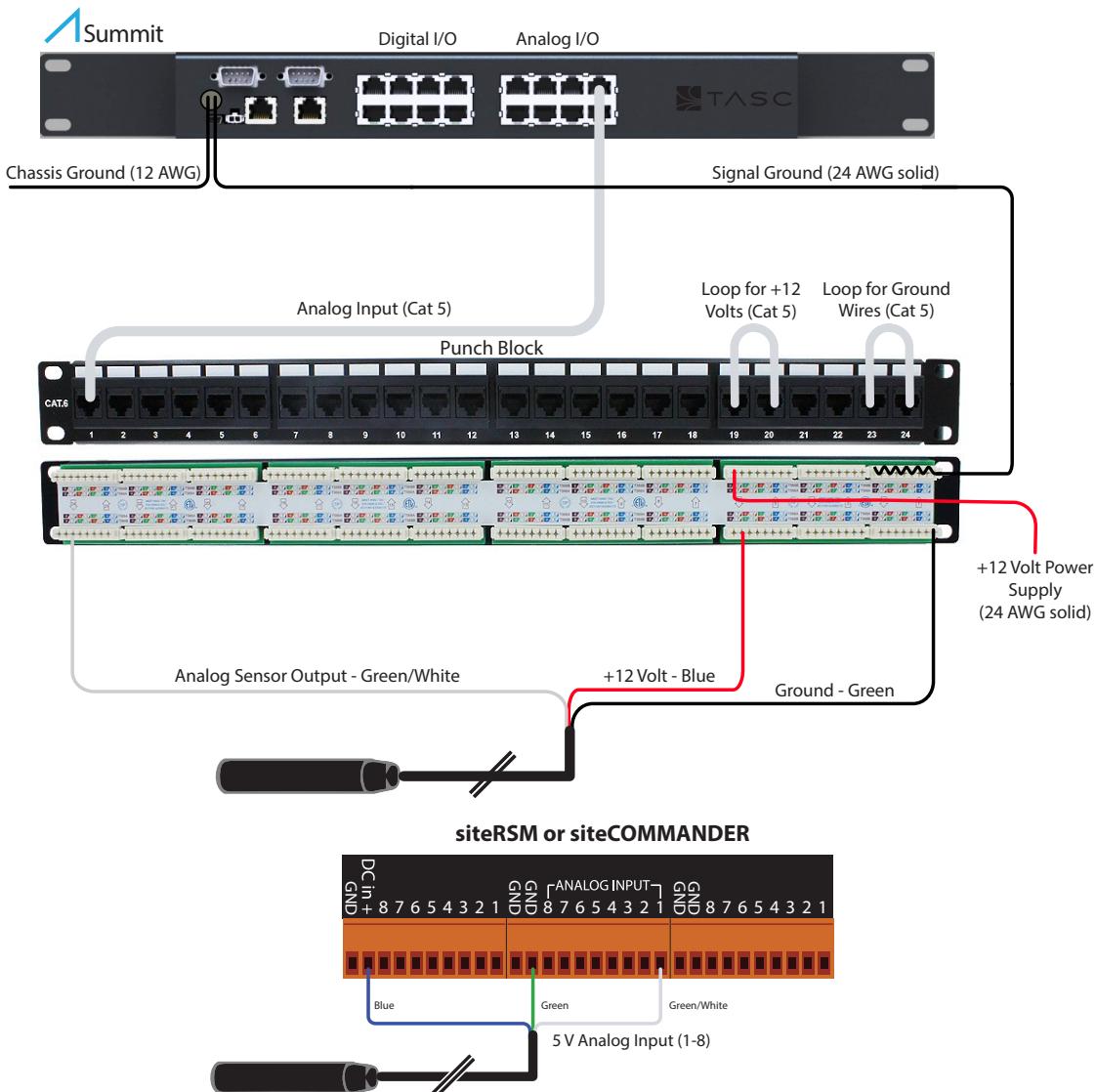# Outdoor Temperature Extended Reach Sensor

Temperature Formula

Summit - Use Crest to enter one of the formulas, as below, at the Analog I/O Configuration - Formula tab.

Celsius	Crest	$0.0718*pow(x,6) - 1.3414*pow(x,5) + 10.119*pow(x,4) - 39.778*pow(x,3) + 88.527*pow(x,2) - 121.76*x + 70.902$
Fahrenheit	Crest	$0.1292*pow(x,6) - 2.4146*pow(x,5) + 18.215*pow(x,4) - 71.601*pow(x,3) + 159.35*pow(x,2) - 219.16*x + 159.79$

siteCOMMANDER - Use Apex Client to enter one fo the formulas, as below. Select Edit, Properties, Analog Inputs tab to access the formulas.

Celsius	siteVIEW Apex	$(0.0718*x^6 - 1.3414*x^5) + (10.119*x^4 - 39.778*x^3) + (88.527*x^2 - 121.76*x) + 70.92$
Fahrenheit	siteVIEW Apex	$(0.1292*x^6 - 2.4146*x^5) + (18.215*x^4 - 71.601*x^3) + (159.35*x^2 - 219.16*x) + 159.79$

Summit

Digital I/O   Analog I/O

Chassis Ground (12 AWG)   Signal Ground (24 AWG solid)

Loop for +12 Volts (Cat 5)   Loop for Ground Wires (Cat 5)

Analog Input (Cat 5)

Punch Block

CAT.6   1 2 3 4 5 6   7 8 9 10 11 12   13 14 15 16 17 18   19 20 21 22 23 24

+12 Volt Power Supply (24 AWG solid)

Analog Sensor Output - Green/White   +12 Volt - Blue   Ground - Green

siteRSM or siteCOMMANDER

DC in +
GND   8 7 6 5 4 3 2 1   GND GND   ┌ANALOG INPUT┐ 8 7 6 5 4 3 2 1   GND GND   8 7 6 5 4 3 2 1

Blue   Green   Green/White

5 V Analog Input (1-8)