iWorx by Taco Electronic Solutions

Submittal Data Information

501-045

CSM1 Chilled Beam Sensor Module

Self-Contained Interoperable Controller Model UCP-1 for Software Version 2

SUPERSEDES: New

EFFECTIVE: July 25, 2013

Plant ID: 001-4129

Job: _____ Engineer: _____

Contractor: _____ Rep: _____

Date: _____ Tag/Item #: _____

CSM1

The Chilled Beam Sensor Module is a stand-alone microprocessor based controller for monitoring auxiliary sensors. The application would include unitary heating, ventilating, and air conditioning (HVAC) equipment.

Overview

Analog inputs are provided for outside air temperature, outside air humidity, inside air humidity, and hot and chilled water supply water temperatures. A “unit enable” digital input is provided for confirmation to water dependant systems. For energy monitoring, digital inputs for meter pulses and end-of-interval signals are also provided.

The controller is based on the LONWORKS® networking technology. The controller can be networked to a higher-level control system for monitoring and control applications.

Features

- Outside air temperature measurement
- Outside air humidity measurement
- Supply water temperature measurement
- Inside humidity measurement
- Energy meter digital input for pulse counting
- Energy monitoring “end of period” digital input
- Network outputs to LCI for load shedding functions
- Current energy measurement
- Current daily energy consumption measurement
- Log of daily energy consumption (previous 30 days)
- Log of interval energy usage (previous 96 intervals)
- “Unit Enable” digital input
- LONWORKS interface to building automation systems.
- Automatic configuration with the LCI

Specifications

Electrical Inputs

Resolution: 10 bit

Outside Air Humidity, Inside Air Humidity, Supply Air Humidity: 0-10 Volts DC

Outside Air Temp, Hot Supply Water Temperature, Chilled Supply Water Temperature, Supply Air Temp: Precon Type III 10K thermistor

Energy Monitor, End of Interval: Normally open, Dry contact, 5 Volts DC Max

Unit Enable: Normally open (closed when active), Dry contact, 5 Volts DC Max

Recommended Sensor Wire

Maximum Length: 500 feet (152 meters)

Cable Type	Pairs	Details	Taco Catalog No.
18AWG	1	Stranded Twisted Shielded Pair, Plenum	WIR-018

Recommended LON Bus FTT-10A Network Wire

Speed: 78KBPS

Max Volts: 42.4 Volts DC

Cabling: Maximum node-to-node distance: 1312 feet (400 meters); Maximum total distance: 1640 feet (500 meters)

Cable Type	Pairs	Details	Taco Catalog No.
Level 4 22AWG (0.65mm)	1	Unshielded, Plenum, U.L. Type CMP	WIR-022

Power

Requires: 24VAC (20VAC to 28VAC), requires an external Class 2 supply

Consumes: 7.2W with no external loads, maximum limited by the Class 2 supply rating

Mechanical

Dimensions: 5.55” (141mm) high, 6.54” (166 mm) wide, 1.75” deep (44 mm), ABS

Controller Weight: 0.70 pounds (0.32 kilograms)

Shipping Weight: 1.0 pounds (0.46 kilograms)

Processor: 3150 Neuron 10 MHz

Flash: 48 Kilobytes

SRAM: 8 Kilobytes

Termination: 0.197” (5.0 mm) Pluggable Terminal Blocks, 14-22 AWG

Temperature: 32 °F to 140 °F (0 °C to 60 °C)

Humidity: 0 to 90%, non-condensing

UL Listed for US and Canada, Energy Management Equipment PAZX and PAZX7

FCC Part 15 Class A compliant

CONTROLS MADE EASY®

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