iWorx by Taco Electronic Solutions

Installation and Troubleshooting

506-008

ASM Auxiliary Sensor Module

SUPERSEDES: New

EFFECTIVE: August 21, 2012

Plant ID: 001-4111

PURPOSE: This guide is a consolidation of important ASM information that can be used when installing, commissioning and setting up the controller. It is not meant to replace any other ASM documents or drawings.

APPLICATION: The application is for monitoring of global readings such as Outside Air temperature that can be propagated to multiple controllers on the network. By distributing the values from various sensors, it eliminates the need for the same type of sensor at each controller.

IMPORTANT FACTS

- If an OAT sensor is used on the ASM2, it can be sent to all controllers requiring it on the network, including the BLMC.
- There is an Indoor Air Humidity input and it can be used by multiple DXU3 and DXU4 controllers on the network.
- The ASM2 can monitor the building KW and signal the LCI to shed loads according to the consumption.
- If the air handlers or roof top controllers are controlling an economizer, the ASM must be used.
- The outdoor air enthalpy is calculated by the OAT and OAH readings on the ASM.

INSTALLER/ELECTRICIAN CHECKLIST

Task	Verified Yes/No
Ensure that the 24VAC power source is properly connected to terminals 38 & 39 and that the polarity is correct.	
Ensure that terminal 40 GND is connected to a known good earth ground.	
Ensure that the 3 sets of DIP switches are properly set in accordance with the drawing below, installation or application documents. The DIP switches can be accessed by removing the controllers cover. Note the black square for each position indicates the direction the switch needs to be placed.	
Ensure that the proper wire is used for inputs and the communication trunk. Analog input wiring must be 18 AWG TSP (can also use multi-conductor). Taco part # Wir-018 (1 Pair + shield). Communication wiring must be Echelon approved cable 22 AWG TP. Taco part # WIR-022.	
Ensure that the shielded input wiring is properly grounded. Remember the shield must only be connected at the controller end, at the sensor end it should be cut even with the wire jacket and taped.	
Ensure that the sensors required for this application are properly installed and wired to the controller. Refer to sensor and controller installation sheets for reference.	
If the LCI is connected and powered up, depress the service pin button so that the controller is recognized and added to the LCI's database. This can be verified by logging into the LCI and depressing the Controllers button. The controller appears as Unit*x*_ASM2, where *x* is the order in which all controllers service pin buttons have been depressed.	

COMISSIONING THE CONTROLLER

After the ASM has had all inputs properly wired, a point-to-point check should be performed to ensure all terminations have been properly made. Use this checklist to verify all inputs are working correctly and reading properly in the LCI; if a point is not used, simply indicate “not used.”

Steps required for verifying inputs on the ASM

To verify the inputs, login to the LCI and perform the following steps:

1. Select the controllers button from the Home screen.
2. Select the ASM from the list of controllers.
3. Select **`Inputs`** and and verify that there are realistic temperatures and humidity readings. It is recommended that the temperature sensors be warmed up or cooled down so a response is seen. To verify digital inputs, change the state of the sensor to see a response.

Inputs	Verified/Initials
Outside Temperature	
Outside Humidity	
Water Temperature	
Inside Humidity	
Unit Enable	
Current Reading	
Daily Reading	

CONFIGURING THE ASM SETTINGS

A description of ASM settings can be found in the Application Guide on page 14. If a copy of the Application Guide is needed, it can be found at www.taco-hvac.com. Once in the web site, select the *Products* tab, and from the drop down list select *iWorx® by Taco Electronic Solutions*. A complete list of links to all documentation is shown on the left side of the web page.

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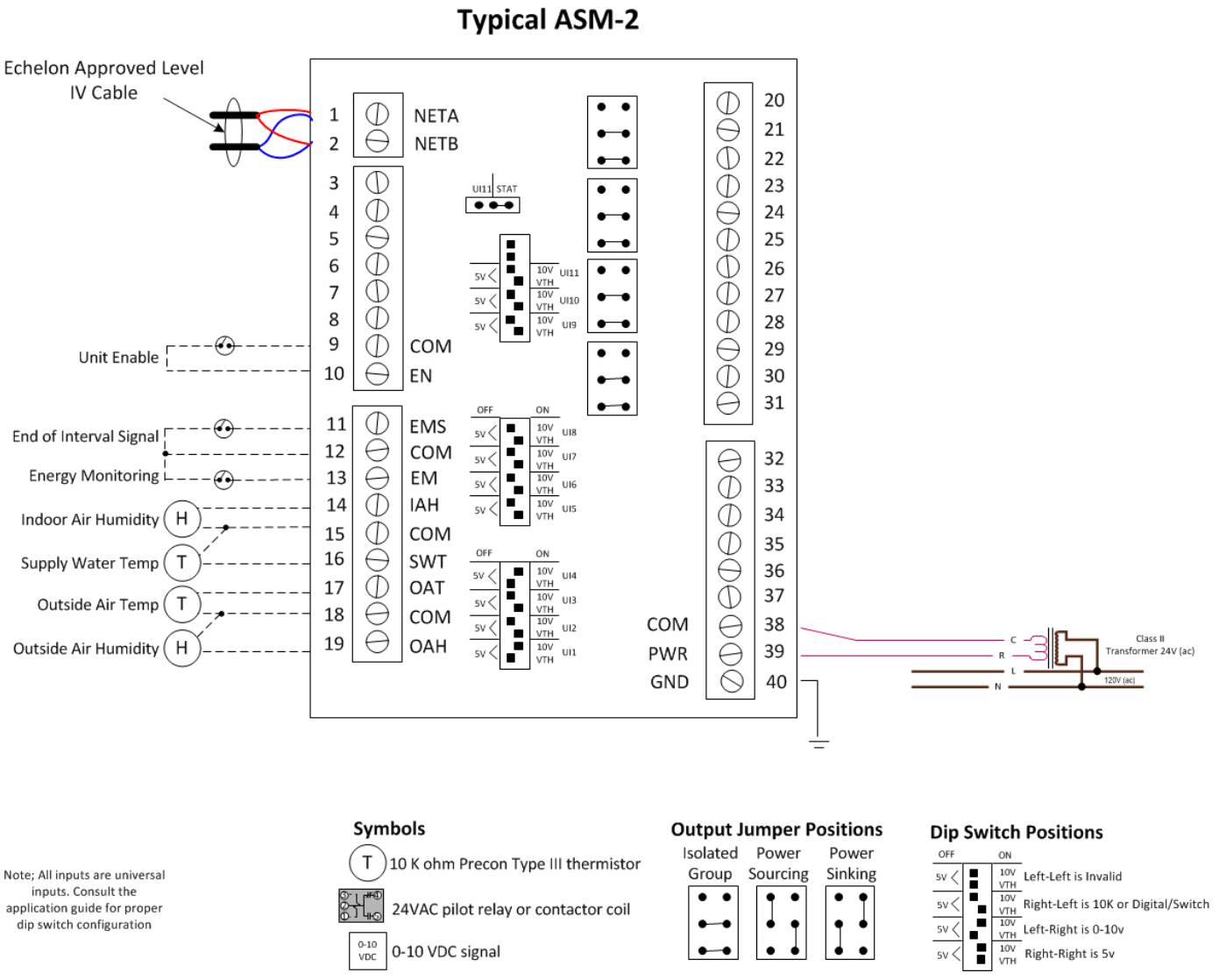
TROUBLESHOOTING & TECHNICAL TIPS

Problem	Solution
Controller is not running and Status LED is not illuminated.	No power to controller. Verify the voltage on the controller's power connector (24 VAC).
How do I reset the controller?	The controller can be reset by the LCI, or you can cycle power to the controller. Refer to the LCI documentation for more information on resetting the controller using the LCI.
The 10K thermistor reading is at its maximum or minimum.	The input is either shorted or open.
Thermistor readings fluctuate rapidly, sometimes by several degrees.	The controller may not be properly grounded. The controller's ground (GND) pin (T40) must be connected to earth ground. Also ensure that the controller's digital inputs are dry contacts and that no voltage is being applied or switched to the inputs.

TYPICAL ASM WIRING



Note; All inputs are universal inputs. Consult the application guide for proper dip switch configuration

Symbols

T 10 K ohm Precon Type III thermistor

24VAC pilot relay or contactor coil

0-10 VDC 0-10 VDC signal

Output Jumper Positions

Dip Switch Positions

CONTROLS MADE EASY®

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