Quick Start Guide

560/583 DDC

BOSCH

Please refer to the included Hardware User's Guide and BACview Installation and Operation Manual for more detailed information on setting up and using the controllers.

8733914716(2014/02)

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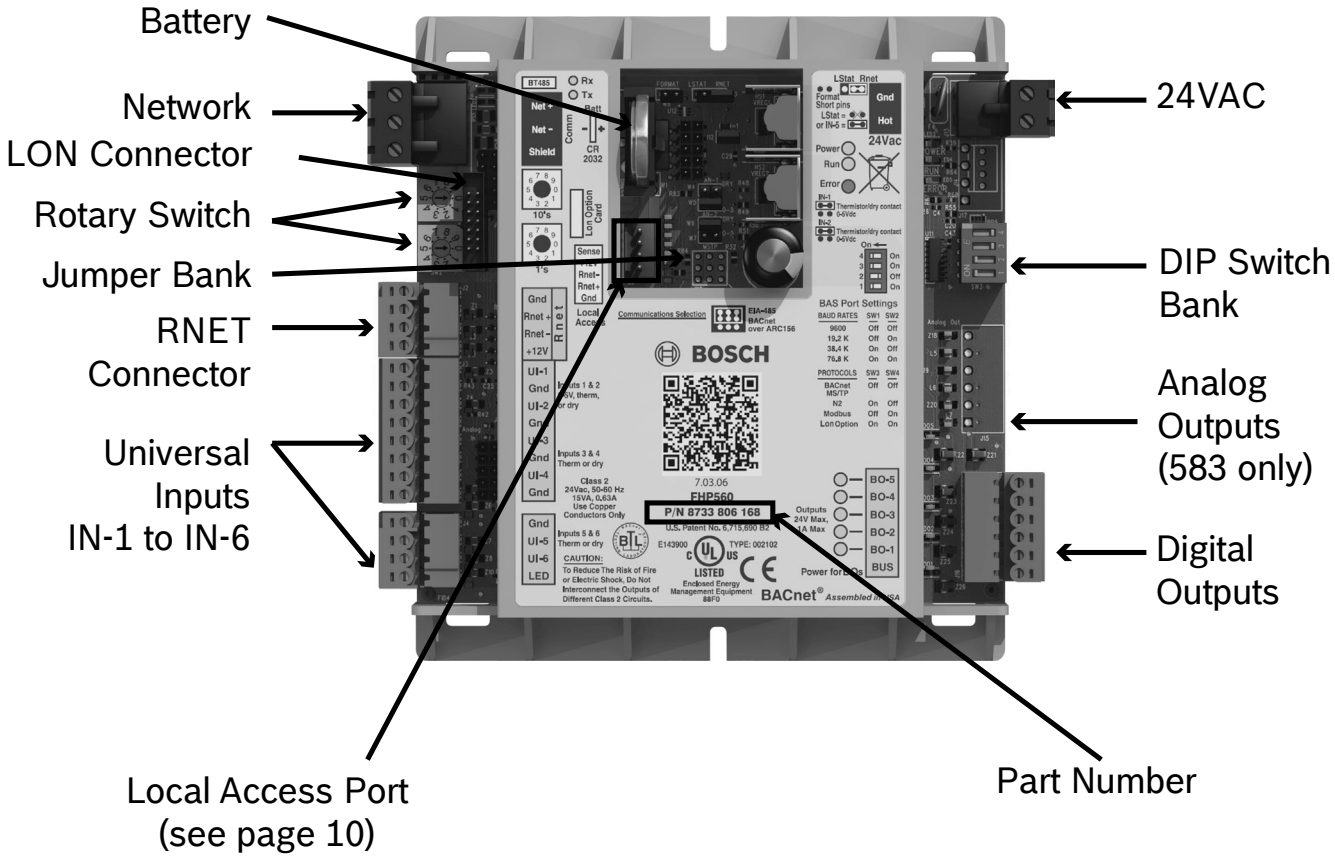
Controller Features



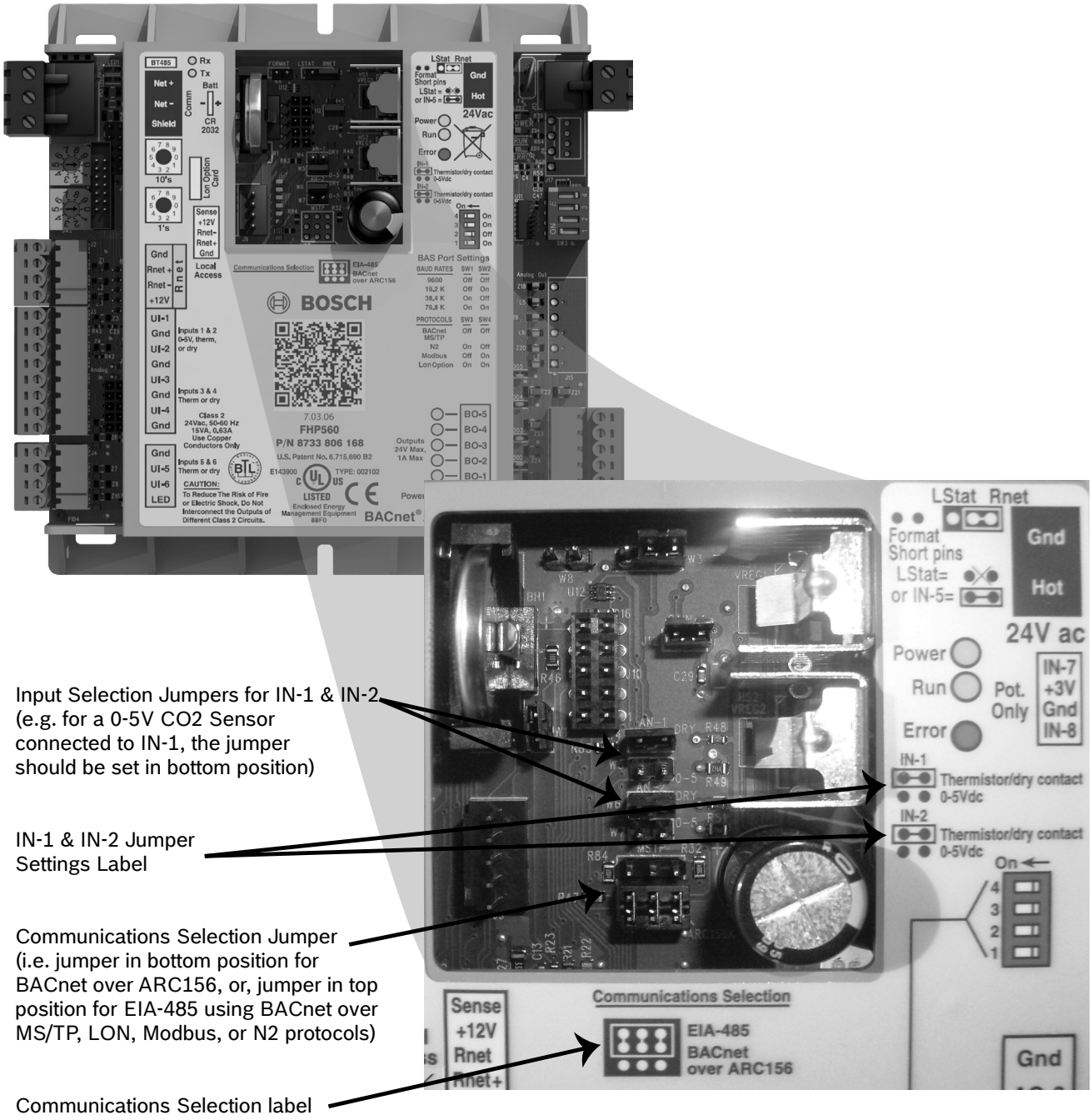
FHP 560 Controller

GETTING STARTED

Perform a quick visual inspection to ensure the controller has no external damage and all connectors are intact. Ensure wiring is per desired application (see sample FHP 560 wiring diagram on page 14). Refer to I/O port configuration (page 13) for further details on wiring inputs and outputs.

JUMPER SETTINGS

Verify that hardware configuration for jumpers match corresponding Heat Pump system application. If the controller is networked, ensure communications jumper is set to EIA-485, unless the network protocol is BACnet over ARC156.

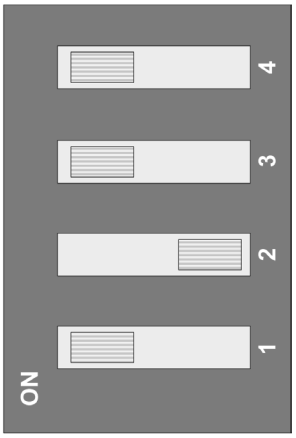


In the above diagram, IN-1 and IN-2 are set to Thermistor/Dry Contact, and Communications is set to BACnet over ARC156.

DIP SWITCH SETTINGS

Verify that hardware configuration for DIP switches match corresponding network application per the BAS Port Settings.

BAUD RATES	SW1	SW2
9600	Off	Off
19.2K	Off	On
38.4K	On	Off
76.8K	On	On
PROTOCOLS	**SW3**	**SW4**
BACnet® MS/TP	Off	Off
N2	On	Off
Modbus	Off	On
LON Option	On	On

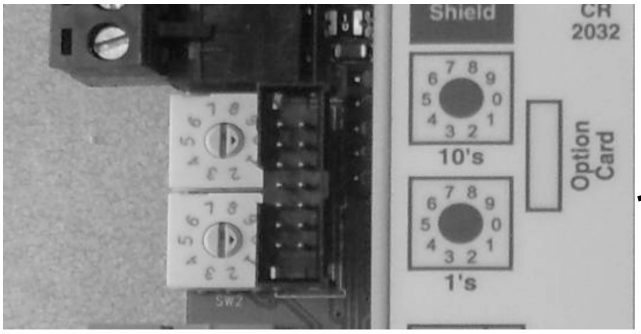


Sample DIP switch settings for a LON Talk Application.

The LonTalk® card must be installed

ROTARY DIAL SETTINGS

Verify hardware configuration for rotary dials matches corresponding application.



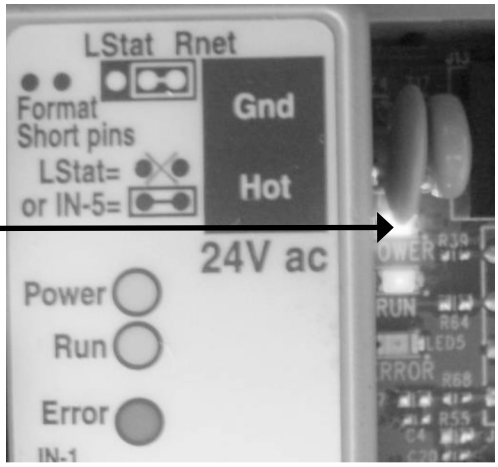
The rotary dials provide the controller address for identification over a network.

The top dial represents the tens digit of the address, and the bottom dial represents the ones digit for the address. See example below:

In the example to the left, the rotary dial is set to 69.

POWER UP

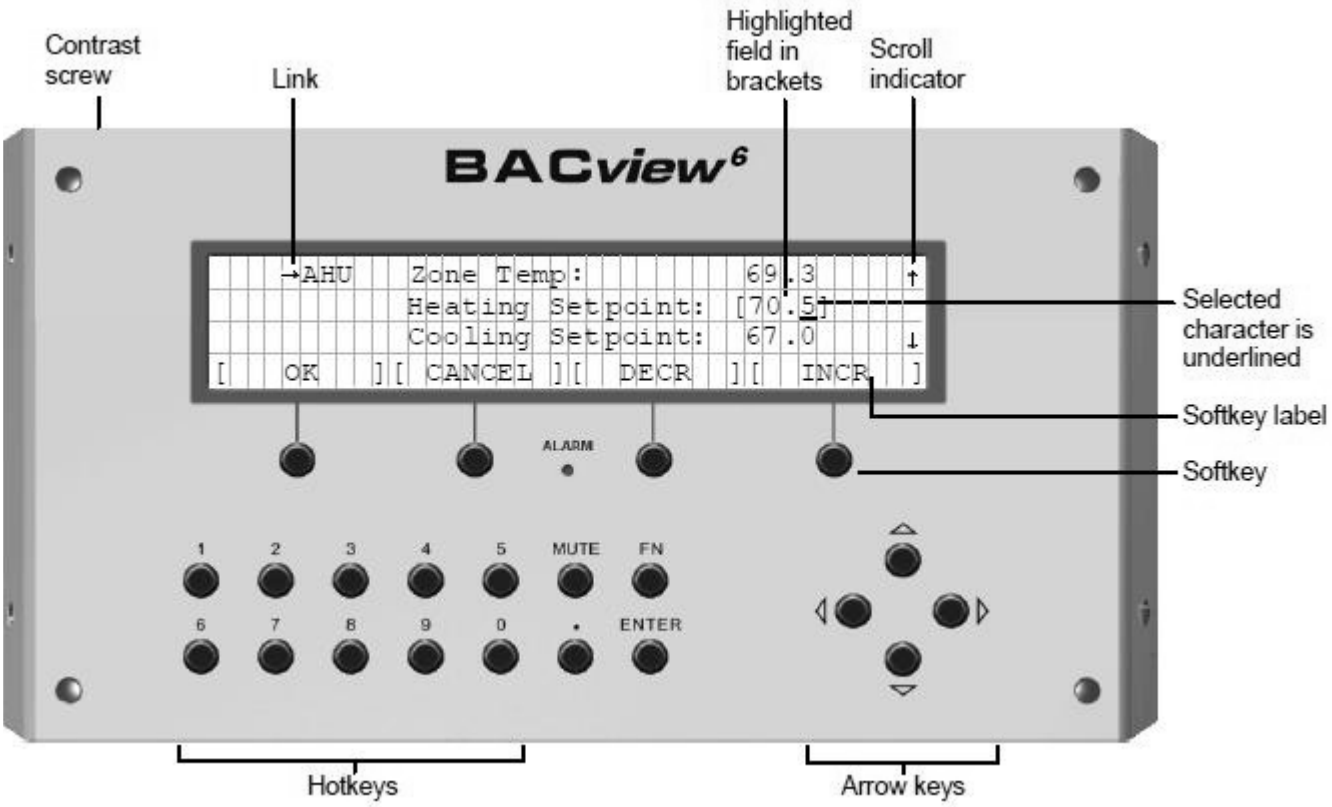
Apply power to the unit and verify via the power LED that the controller is receiving 24VAC.



Quick Start Guide – Software Setup

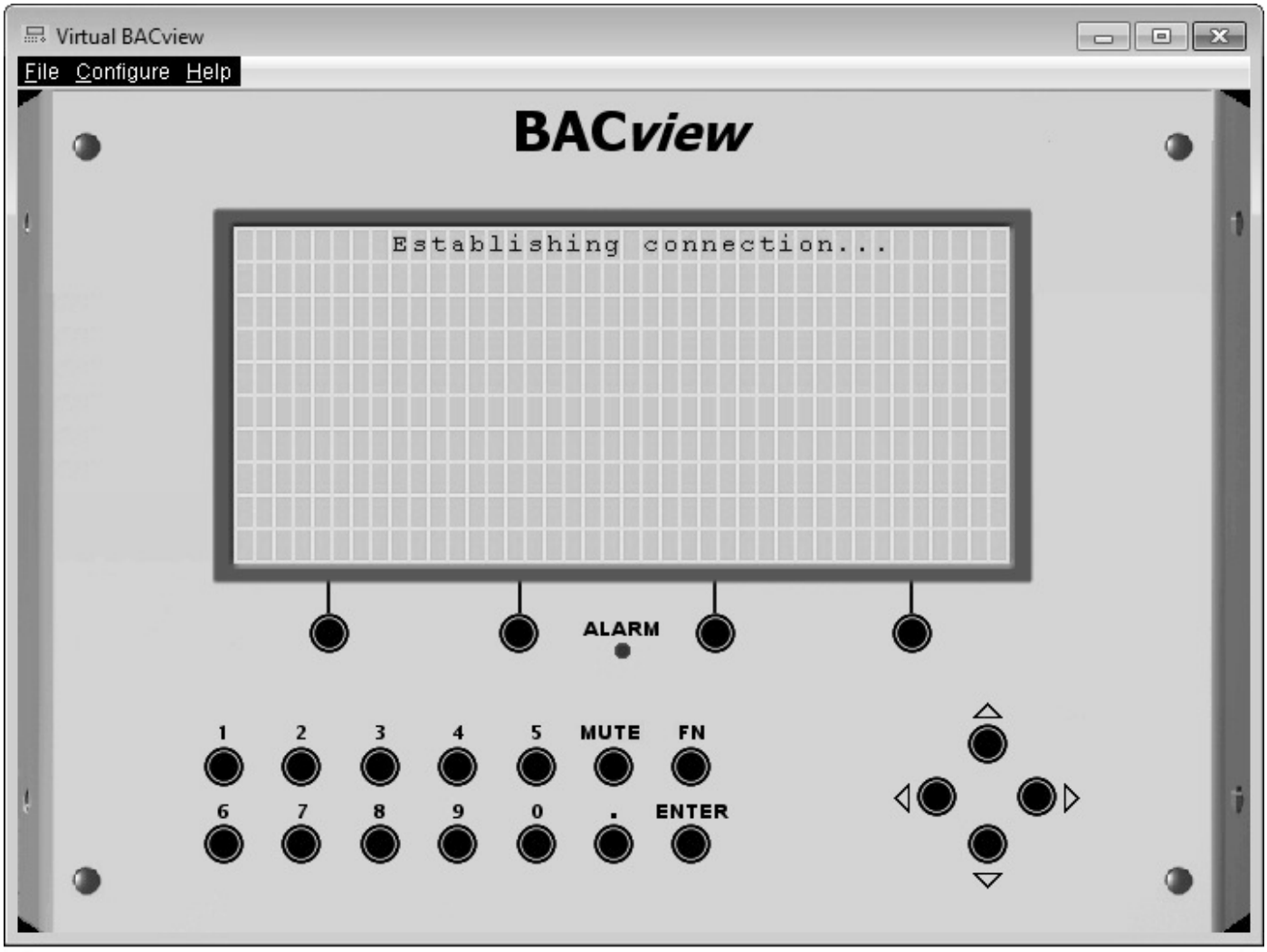
Software Configuration Tools

Handheld BACview Module Features



- **Hot-keys**: used for entering number values.
- **Arrow keys**: used for navigating the various BACview screens.
- **Soft- keys**: four (4) buttons used to access corresponding Soft-key Labels directly above them.
- **Link**: an arrow next to a menu item implies additional screen(s) can be accessed through that menu. To access a screen navigate to the menu item and hit the ENTER button. (Note: selected fields have a bracket [...] around them).
- **Contrast screw**: used to adjust screen contrast.

Virtual BACview Features



Installation

- Download and install driver for USB cable (cable p/n 641-261 purchase required) from FHP website (http://fhp-mfg.com/?p=controls_support).
- Verify device is installed in Device Manager and take note of COM port.
- Download and install Virtual BACview from FHP website (http://fhp-mfg.com/?p=controls_support).

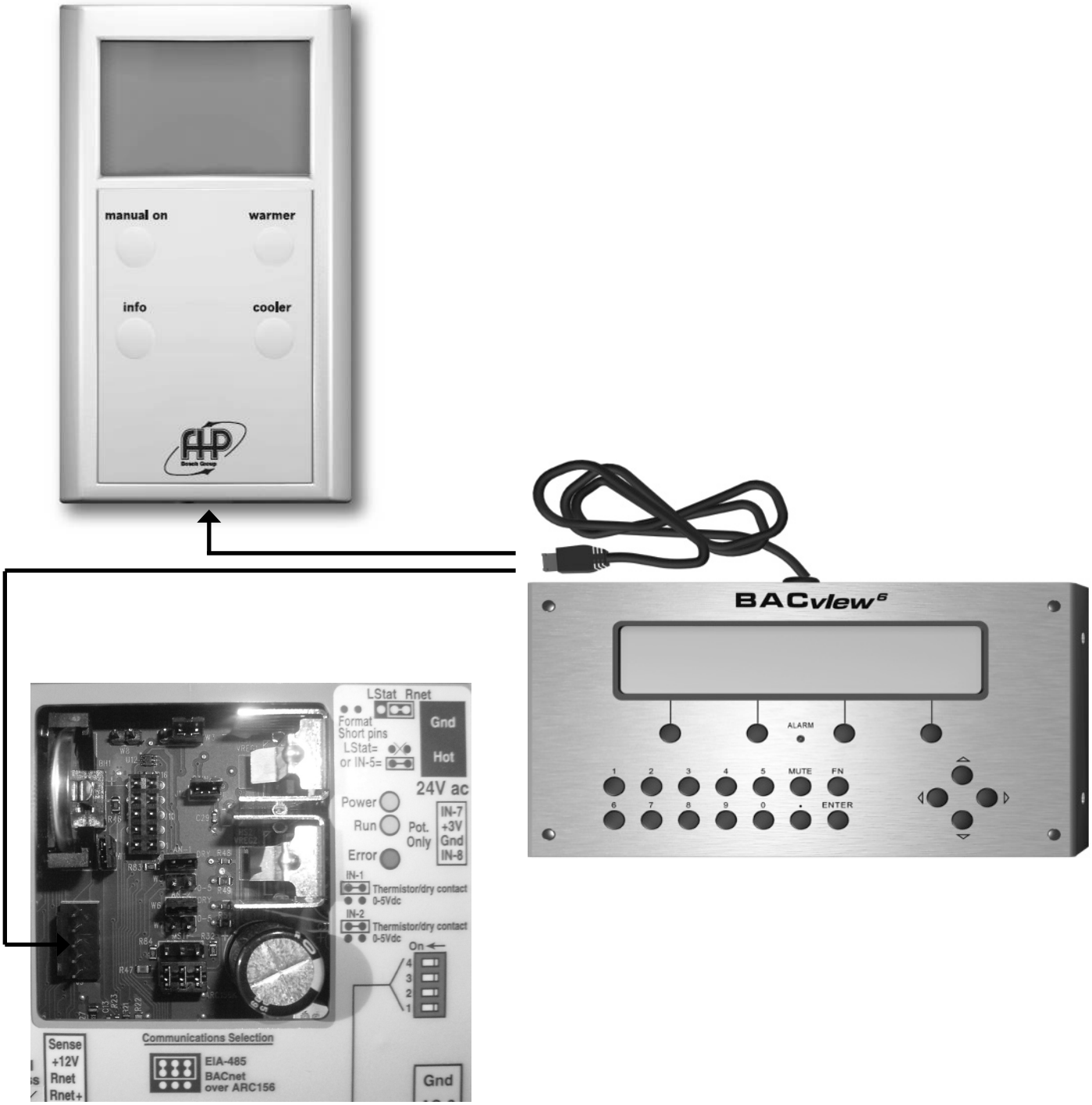
Interface

- Use mouse to select keypad buttons (for shortcut key combinations, FN = Ctrl on keyboard e.g. FN+9 is Ctrl+9).
- Screen size (number of rows) can be adjusted in Virtual BACview at startup.

All screen shots of BACview used in this manual are from Virtual BACview and may not represent the screen viewed on an actual BACview module, which is limited to four (4) rows of text.

Getting Connected

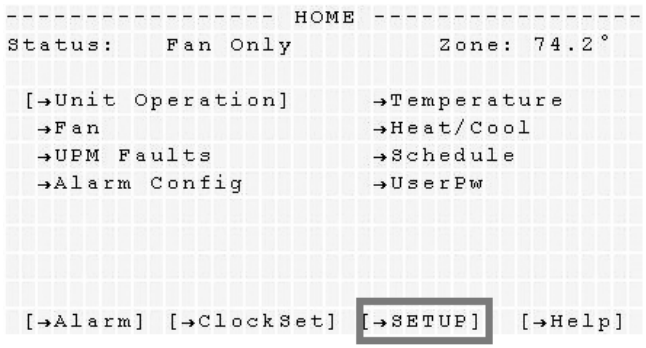
Connect the BACview module (or laptop if using Virtual BACview) to the FHP controller, or to an RS Sensor connected to the controller.



CONFIGURING APPLICATION PARAMETERS USING BACVIEW

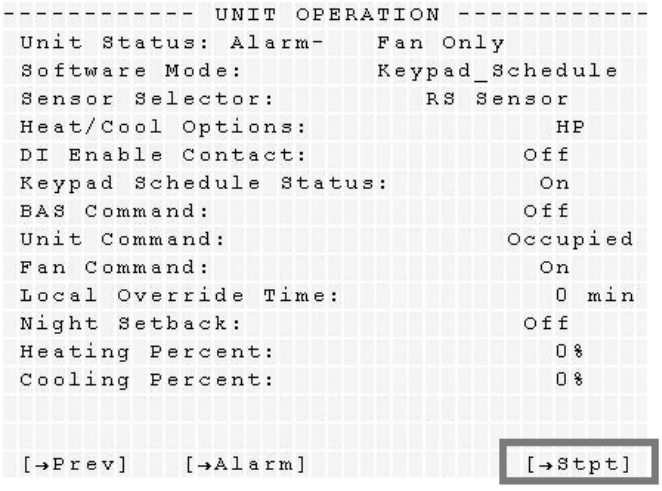
Verify that the different parameters of the controller program match the application of the Heat Pump system.

1. Maneuver from the Standby Screen to the HOME screen by pressing any key on the BACview.
2. Depending on the software version, either select the [→SETUP] soft-key label (if available) using the corresponding soft-key:



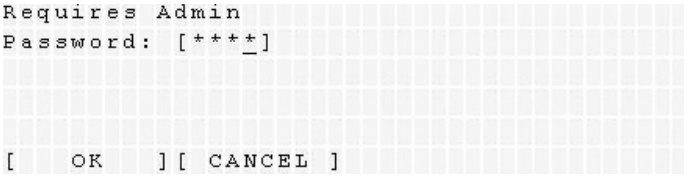
Sample screen shot from Virtual BACview. Actual screen may vary.

or use the arrow-keys to highlight the [→UNIT OPERATION] menu and hit the ENTER button to access the Unit Operation screen, then select the [→Stpt] soft-key label:



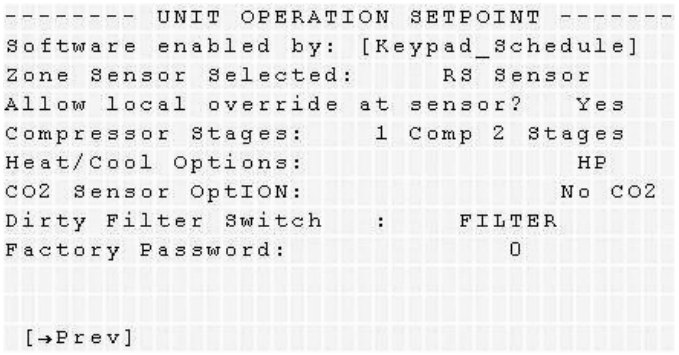
Sample screen shot from Virtual BACview. Actual screen may vary.

3. A 4-character password is required to modify the Unit Operation Set-point parameters. The default administrative password for all FHP controllers is 1111.



Sample screen shot from Virtual BACview. Actual screen may vary.

4. Maneuver through the different sub-menus and change parameters to match your application using the Arrow Keys and the Soft Keys.



Sample screen shot from Virtual BACview. Actual screen may vary.

MODIFYING PARAMETER VALUES USING BACVIEW:

1. Scroll to the desired parameter to highlight it.
2. Hit the Enter button. The selected parameter should begin to flash and the modification soft-key labels should appear at the bottom of the page.

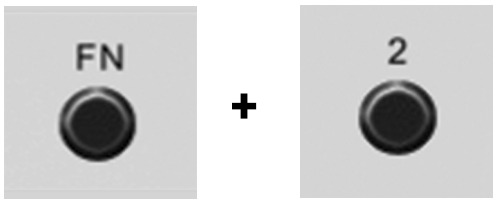
3. Use the [DECR] and [INCR] soft-keys to toggle through and select the preferred parameter value.
4. Use the [OK] or [CANCEL] soft-keys to save or discard all changes respectively.

Based on the heat pump application chosen, additional screens may need to be configured. Consult the Bacview instruction manual for detailed information.

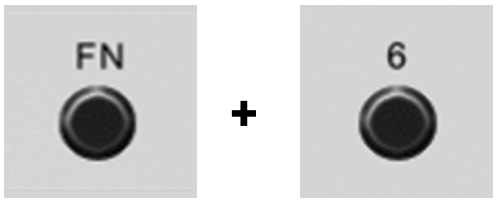
CUSTOMIZING PROGRAM FEATURES USING BACVIEW

Verify that the various features of the controller program match the application of the Heat Pump system.

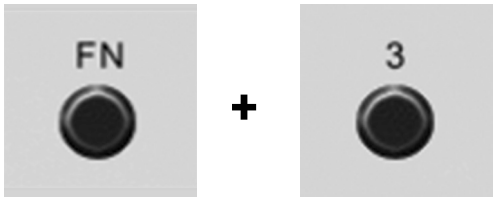
Useful Shortcuts for Tweaking Program Features Using BACview:



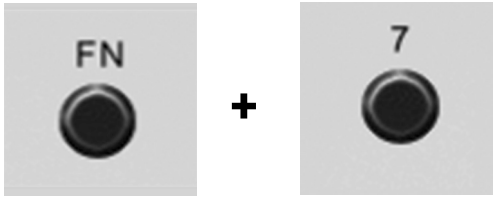
Change the User Password



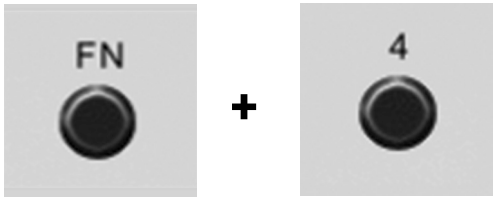
Change Inactivity Timeout



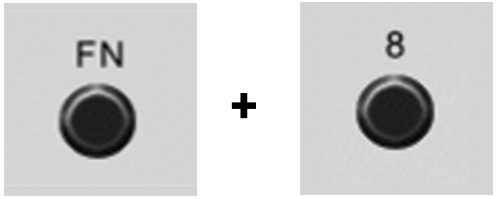
Set the Time



Modify Tuning Parameters



Access Alarms



Change Temperature Offsets

Change BACnet ID

Access I/O Status & Overrides

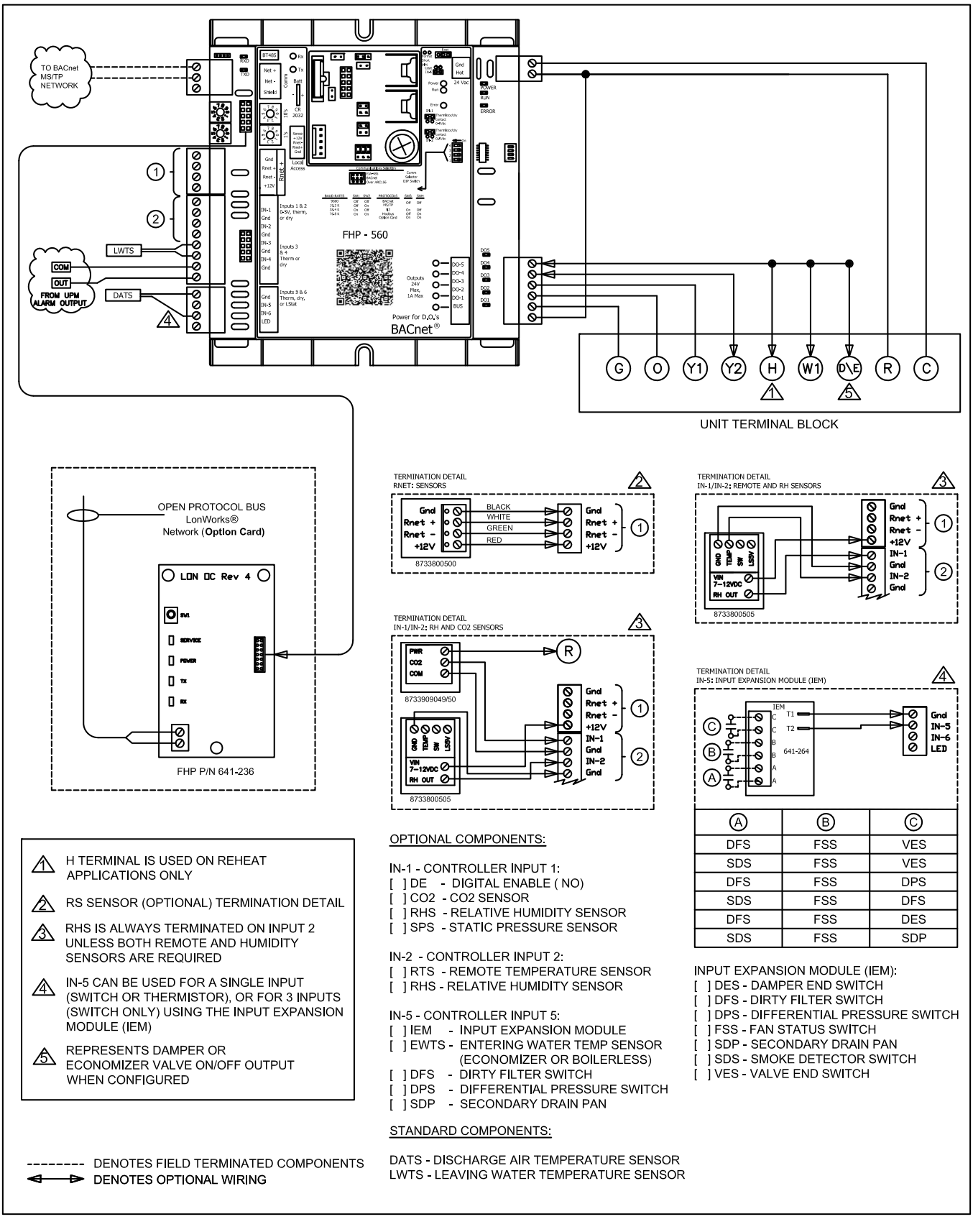
CONFIGURABLE I/O PORT ASSIGNMENTS (SW 7.03.06)

<table>
<tr><th>PORT</th><th colspan="3">INPUT PORTS</th></tr>
<tr><td>IN-1</td><td colspan="3">Digital Input Enable
Humidity Sensor (0-5V output)
CO2 Sensor (0-5V output)
Static Pressure Sensor (0-5V output)</td></tr>
<tr><td>IN-2</td><td colspan="3">Humidity Sensor (0-5V output)
Remote Temperature Sensor (OA or Zone)</td></tr>
<tr><td>IN-3*</td><td colspan="3">Leaving Water Temperature Sensor</td></tr>
<tr><td>IN-4*</td><td colspan="3">UPM Input</td></tr>
<tr><td rowspan="9">IN-5</td><td colspan="3">Filter Switch
Economizer Cooling (Entering Water Temperature Sensor)
Differential Pressure Switch
Secondary Condensate Pan
Boilerless (Entering Water Temperature Sensor)</td></tr>
<tr><td colspan="3">INPUT EXPANSION MODULE (IEM) COMBINATIONS**</td></tr>
<tr><td>EXPANSION PORT 1 (A)</td><td>EXPANSION PORT 2 (B)</td><td>EXPANSION PORT 3 (C)</td></tr>
<tr><td>Dirty Filter Switch</td><td>Fan Status Switch</td><td>Valve End Switch</td></tr>
<tr><td>Smoke Detector Switch</td><td>Fan Status Switch</td><td>Valve End Switch</td></tr>
<tr><td>Dirty Filter Switch</td><td>Fan Status Switch</td><td>Differential Pressure Switch</td></tr>
<tr><td>Smoke Detector Switch</td><td>Fan Status Switch</td><td>Dirty Filter Switch</td></tr>
<tr><td>Dirty Filter Switch</td><td>Fan Status Switch</td><td>Damper End Switch</td></tr>
<tr><td>Smoke Detector Switch</td><td>Fan Status Switch</td><td>Secondary Drain Pan</td></tr>
<tr><td>IN-6*</td><td colspan="3">Discharge Air Temperature</td></tr>
<tr><th colspan="4">DIGITAL OUTPUTS</th></tr>
<tr><td>DO-1*</td><td colspan="3">Fan</td></tr>
<tr><td>DO-2*</td><td colspan="3">Reversing Valve</td></tr>
<tr><td>DO-3*</td><td colspan="3">Compressor Stage 1</td></tr>
<tr><td>DO-4*</td><td colspan="3">Compressor Stage 2</td></tr>
<tr><td>DO-5**</td><td colspan="3">Hot Gas Re-Heat (On/Off)
Fresh Air Damper (On/Off)
Heating Stage 1 (Aux Heat)
Boilerless Control (Aux Heat)
Economizer Cooling
Condenser Water Valve</td></tr>
<tr><th colspan="4">ANALOG OUTPUTS (FHP 583 only)</th></tr>
<tr><td>AO-1</td><td colspan="3">Variable Frequency Drive (Blower) ABB Drive or Equivalent
Mix Air Temperature SCR</td></tr>
<tr><td>AO-2</td><td colspan="3">Modulating Hot Gas Re-Heat Valve</td></tr>
<tr><td>AO-3</td><td colspan="3">Modulating Outside Air Damper</td></tr>
</table>

* Non-configurable, factory assigned I/O parameters
** Only ***one*** of six possible combinations per application

WIRING DIAGRAM

Typical FHP560 Wiring Diagram



Ⓐ	Ⓑ	Ⓒ
DFS	FSS	VES
SDS	FSS	VES
DFS	FSS	DPS
SDS	FSS	DFS
DFS	FSS	DES
SDS	FSS	SDP

1. H TERMINAL IS USED ON REHEAT APPLICATIONS ONLY
2. RS SENSOR (OPTIONAL) TERMINATION DETAIL
3. RHS IS ALWAYS TERMINATED ON INPUT 2 UNLESS BOTH REMOTE AND HUMIDITY SENSORS ARE REQUIRED
4. IN-5 CAN BE USED FOR A SINGLE INPUT (SWITCH OR THERMISTOR), OR FOR 3 INPUTS (SWITCH ONLY) USING THE INPUT EXPANSION MODULE (IEM)
5. REPRESENTS DAMPER OR ECONOMIZER VALVE ON/OFF OUTPUT WHEN CONFIGURED

-------- DENOTES FIELD TERMINATED COMPONENTS
◄——► DENOTES OPTIONAL WIRING

OPTIONAL COMPONENTS:

IN-1 - CONTROLLER INPUT 1:
[ ] DE - DIGITAL ENABLE (NO)
[ ] CO2 - CO2 SENSOR
[ ] RHS - RELATIVE HUMIDITY SENSOR
[ ] SPS - STATIC PRESSURE SENSOR

IN-2 - CONTROLLER INPUT 2:
[ ] RTS - REMOTE TEMPERATURE SENSOR
[ ] RHS - RELATIVE HUMIDITY SENSOR

IN-5 - CONTROLLER INPUT 5:
[ ] IEM - INPUT EXPANSION MODULE
[ ] EWTS - ENTERING WATER TEMP SENSOR (ECONOMIZER OR BOILERLESS)
[ ] DFS - DIRTY FILTER SWITCH
[ ] DPS - DIFFERENTIAL PRESSURE SWITCH
[ ] SDP - SECONDARY DRAIN PAN

STANDARD COMPONENTS:

DATS - DISCHARGE AIR TEMPERATURE SENSOR
LWTS - LEAVING WATER TEMPERATURE SENSOR

INPUT EXPANSION MODULE (IEM):
[ ] DES - DAMPER END SWITCH
[ ] DFS - DIRTY FILTER SWITCH
[ ] DPS - DIFFERENTIAL PRESSURE SWITCH
[ ] FSS - FAN STATUS SWITCH
[ ] SDP - SECONDARY DRAIN PAN
[ ] SDS - SMOKE DETECTOR SWITCH
[ ] VES - VALVE END SWITCH

Notes

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