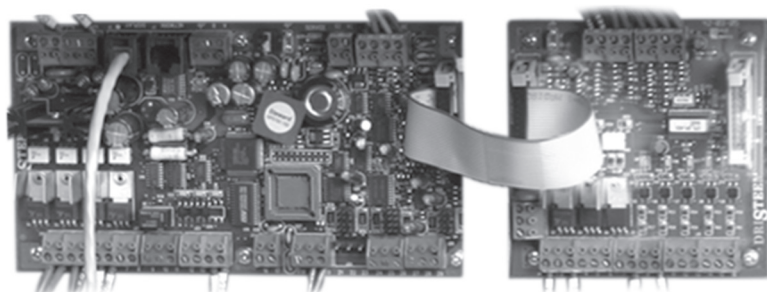# DriSteem

Vapor-logic® version 3 to Vapor-logic version 6 Field Conversion Instructions: GTS® Humidifiers

1. Note the board orientations shown in Figure 3-1. The photos depict the orientation of the Vapor-logic version 3 board before removal, and the recommended Vapor-logic version 6 board orientation.

2. Leave the wires connected to the Vapor-logic version 3 board and expansion board terminals (see photo below). Use needlenose pliers to pull the terminals off of the pins.

    Three- and four-burner GTS humidifiers have two expansion boards.

Vapor-logic version 3 board   **Expansion board**

3. Remove the six screws holding the Vapor-logic version 3 board and expansion board(s) to the sub-panel, and remove the boards. When removing the screws, take care to prevent the standoffs behind the board from falling down the subpanel and into other electrical components.

Note: The Vapor-logic version 6 board has adhesive-backed standoffs that adhere to the subpanel. For the best adhesion, make sure the subpanel surface is clean and dry.

4. Remove the adhesive backing paper from the standoffs, and press the Vapor-logic version 6 board onto the subpanel as close as possible to the original footprint of the Vapor-logic version 3 board.

5. See Figure 3-1. The Vapor-logic version 3 disconnections and Vapor-logic version 6 connections needed for this conversion are labeled.

Note: If any wires are too short to reach their new locations on the Vapor-logic version 6 board, add pigtail extensions to them.

⚠ WARNING

Carbon monoxide, fire, explosion, and electrical shock hazards

This page provides important safety instructions; it is intended to supplement — not replace — the humidifier's Installation, Operation, and Maintenance Manual (IOM). Read the IOM that was provided with the humidifier before performing service or maintenance procedures on any part of the system. Failure to follow all warnings and instructions could produce the hazardous situations described here and in the IOM, resulting in property damage, personal injury, or death.

If the IOM is missing, go to www.dristeem.com to download a replacement.

Improper installation, adjustment, alteration, service, maintenance, or use can cause carbon monoxide poisoning, fire, explosion, electrical shock, and other hazardous conditions. These hazardous conditions could cause personal injury, property damage, or death.

To prevent hazardous conditions, read all warnings; lock all power disconnect switches in the OFF position before removing any access panels; and consult a qualified installer, service agency, local gas supplier, or your distributor or branch for information or assistance. The qualified installer or agency must use only factory authorized and listed kits or accessories when modifying this product.

If you smell gas:

• Do not try to light any appliance.
• Do not touch any electrical switch; do not use any phone in your building.
• Immediately call your gas supplier from an off-site phone. Follow the gas supplier's instructions.
• If you cannot reach your gas supplier, call the fire department.

Note: If literature shipped with the humidifier is not available, historical literature is available at www.dristeem.com.
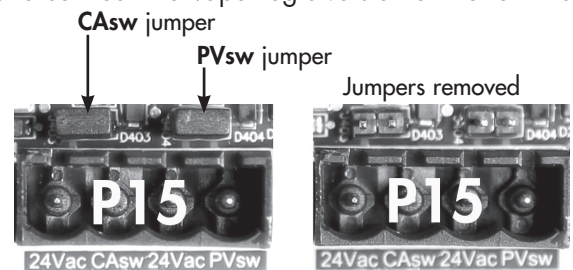
Moving wires from Vapor-logic version 3 expansion board(s) to Vapor-logic version 6 board

6. *Second expansion board* (Skip to step 7 if the humidifier does not have two expansion boards):

   a) Disconnect the wires from the second expansion board (furthest from the Vapor-logic version 3 board location) terminals **1** and **3**. Connect these wires to the following Vapor-logic version 6 P18 terminals: wire #601 to **CT3**, wire #603 to **CT4**.

   b) Disconnect the wires from the second expansion board terminals **8** and **10**. Connect these wires to the following Vapor-logic version 6 terminals: wire #608 to P5 terminal **GV3**, wire #610 to P6 terminal **GV4**.

   c) *Blower #3:* Disconnect the wires from the second expansion board terminals **17**, **18**, **19**, and **20**. Connect wire #618 to Vapor-logic version 6 P5 terminal **BT3**. Connect the remaining wires to the following Vapor-logic version 6 P19 terminals: wire #617 to **+SSR**, wire #619 to **-BL**, wire #620 to ⏚.

   d) *Blower #4:* Disconnect the wires from the second expansion board terminals **21**, **22**, **23**, and **24**. Connect wire #622 to Vapor-logic version 6 P6 terminal **BT4**. Connect the remaining wires to the following Vapor-logic version 6 P19 terminals: wire #621 to **+SSR**, wire #623 to **–BL**, wire #624 to ⏚.

7. *First expansion board:* All disconnections in this step are from the first (or only) expansion board, or the expansion board closest to the Vapor-logic version 3 board location.

   a) Disconnect the wires from expansion board terminals **1** and **3**. Connect these wires to the following Vapor-logic version 6 terminals: wire #501 to P17 terminal **CT1**, wire #503 to P18 terminal **CT2**.

   b) Disconnect the wires from expansion board terminals **8** and **10**. Connect these wires to the following Vapor-logic version 6 terminals: wire #508 to P3 terminal **GV1**, wire #510 to P5 terminal **GV2**.

   c) *Blower #1:* Disconnect the wires from expansion board terminals **17**, **18**, **19**, and **20**. Connect wire #518 to Vapor-logic version 6 P3 terminal **BT1**. Connect the remaining wires to the following Vapor-logic version 6 P19 terminals: wire #517 to **+SSR**, wire #519 to **–BL**, wire #520 to ⏚.

   d) *Blower #2:* Disconnect the wires from expansion board terminals **21**, **22**, **23**, and **24**. Connect wire #522 to Vapor-logic version 6 P5 terminal **BT2**. Connect the remaining wires to the following Vapor-logic version 6 P19 terminals: wire #521 to **+SSR**, wire #523 to **–BL**, wire #524 to ⏚.

   e) If there is a wire on expansion board terminal **12**, disconnect it, and connect it to Vapor-logic version 6 P15 terminal **CAsw**.

   If there is a wire on expansion board terminal **14**, disconnect it, and connect it to Vapor-logic version 6 P15 terminal **PVsw**.

   If terminal **12** or **14** had a wire to move, then connect one end of a new wire to Vapor-logic version 6 P15 terminal **24Vac**, and connect the other end to DIN rail terminal **h**.

   If **CAsw** (combustion air switch) or **PVsw** (power vent switch) are used on Vapor-logic version 6, make sure the jumper or jumpers are removed from those terminals. See the photo at right.

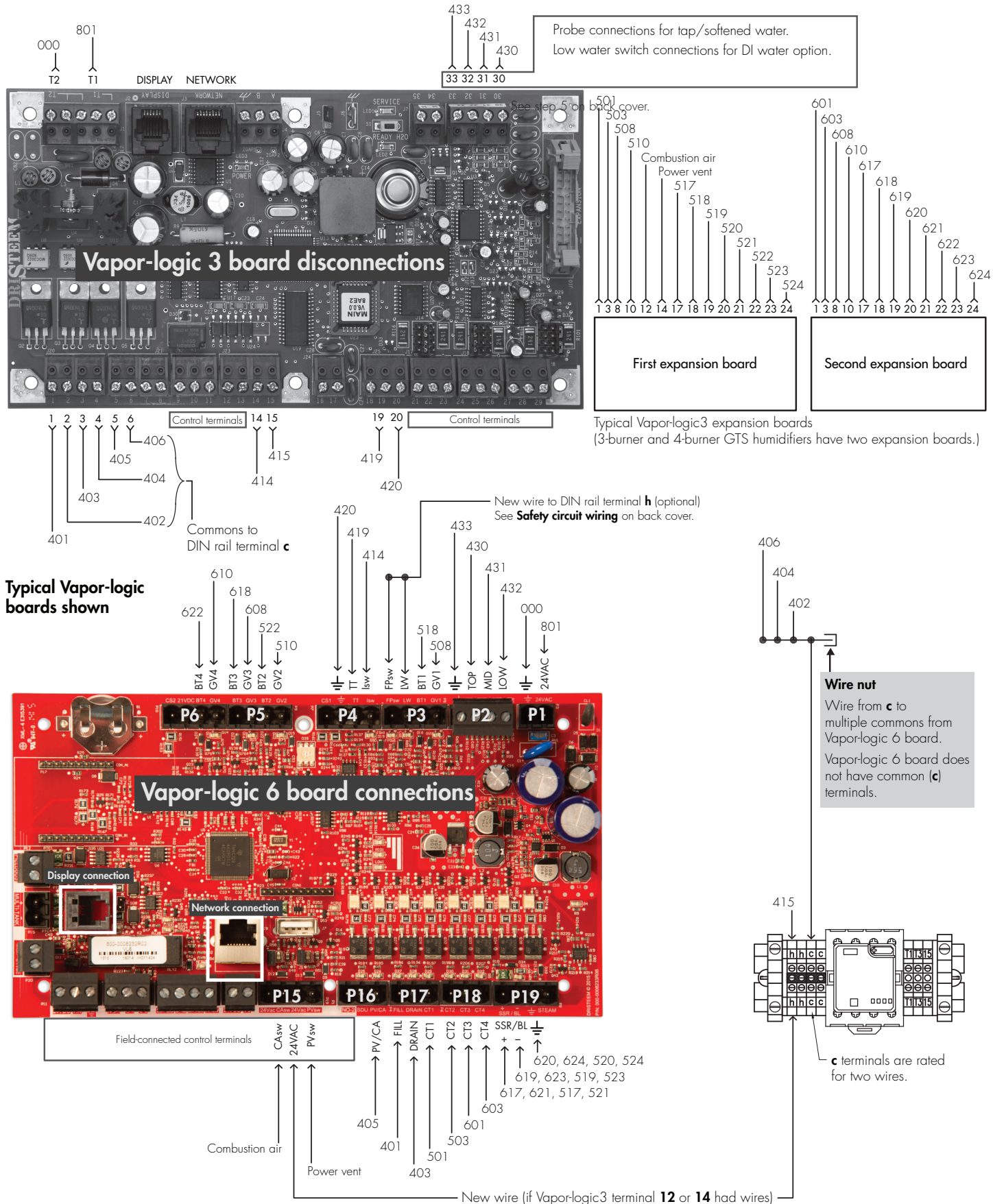## Moving wires from Vapor-logic version 3 main board to Vapor-logic version 6 board

1. Disconnect the wires from Vapor-logic version 3 board terminals **1**, **3**, and **5**. Connect wire #405 to Vapor-logic version 6 P16 terminal **PV/CA**. Connect the remaining wires to the following Vapor-logic version 6 P17 terminals: wire #401 to **FILL**, wire #403 to **DRAIN**.

2. Disconnect wires #402, #404, and #406 from Vapor-logic version 3 terminals **2**, **4**, and **6**. Tie them together, and pigtail them to a single common that goes to a DIN rail terminal **c**.

   There are no dedicated common terminals on the Vapor-logic version 6 board. That is why, in this step, the Vapor-logic version 3 commons get tied together and pigtailed to a single wire connected to DIN rail terminal **c**. These terminals are rated for only two wires, so not all commons can be run back to them. See the gray text box in Figure 3-1.

3. Disconnect the wires from Vapor-logic version 3 terminals **19** and **20**, and connect them to the following Vapor-logic version 6 P4 terminals: wire #419 to TT, wire #420 to ⏚.

FIGURE 3-1: VAPOR-LOGIC VERSION 3 BOARD DISCONNECTIONS AND VAPOR-LOGIC VERSION 6 BOARD CONNECTIONS

Probe connections for tap/softened water.
Low water switch connections for DI water option.

See step 5 on back cover.

Combustion air
Power vent

Vapor-logic 3 board disconnections

First expansion board

Second expansion board

Typical Vapor-logic3 expansion boards
(3-burner and 4-burner GTS humidifiers have two expansion boards.)

Commons to
DIN rail terminal **c**

Typical Vapor-logic
boards shown

New wire to DIN rail terminal **h** (optional)
See **Safety circuit wiring** on back cover.

Wire from **c** to multiple commons from Vapor-logic 6 board.

Vapor-logic 6 board does not have common (**c**) terminals.

Wire nut

Vapor-logic 6 board connections

Display connection

Network connection

Field-connected control terminals

Combustion air

Power vent

c terminals are rated for two wires.

620, 624, 520, 524
619, 623, 519, 523
617, 621, 517, 521

New wire (if Vapor-logic3 terminal **12** or **14** had wires)

Moving wires from Vapor-logic version 3 main board to Vapor-logic version 6 board *(cont.)*

4. Disconnect wires #801 and #000 from Vapor-logic version 3 terminals **T1** and **T2**. If the terminals are not marked, see terminals T1 and T2 in the upper-left corner of the Vapor-logic version 3 board shown in Figure 3-1. Connect the wires to the following Vapor-logic version 6 P1 terminals: wire #801 to **24VAC** and wire #000 to ⏚.

5. *If humidifier has tap/softened water*:
   Disconnect the wires from Vapor-logic version 3 terminals **30**, **31**, **32**, **33**, and connect them to the following Vapor-logic version 6 P2 terminals: wire #430 to **TOP**, wire #431 to **MID**, wire #432 to **LOW**, and wire #433 to ⏚.

   If humidifier has the DI water option:
   Disconnect the wires from Vapor-logic version 3 terminals **32** and **33**, and connect them to the following Vapor-logic version 6 P2 terminals: wire #432 to **LOW** and wire #433 to ⏚.

6. External connections: Refer to the Vapor-logic version 3 wiring diagram and the Vapor-logic version 6 external connection requirements in the *VL-1* wiring diagram shipped with the conversion kit.

Vapor-logic version 6 keypad/display

The kit was shipped with a Vapor-logic version 6 keypad/display.

1. Remove the left end panel of the GTS humidifier to access the keypad/display mounting screws.

2. Remove the four keypad/display mounting screws, and disconnect and remove the Vapor-logic version 3 keypad/display. Save the cable for re-use.

3. Plug the cable into Vapor-logic version 6 keypad/display, and install the Vapor-logic version 6 keypad/display using the screws from step 2.

4. Plug the other end of the keypad/display cable into the Vapor-logic version 6 board display connection (shown in Figure 3-1).

Safety circuit wiring

1. Door interlock: Disconnect wire #414 from Vapor-logic version 3 terminal **14**, and connect it to Vapor-logic version 6 P4 terminal **Isw**.

2. Blocked flue: Connect a new wire to Vapor-logic version 6 P3 terminal **FPsw** and to DIN rail terminal **h**.

3. Low water: Connect a new wire to Vapor-logic version 6 P3 terminal **LW** and to DIN rail terminal **h**.

4. Disconnect wire #415 from Vapor-logic version 3 terminal **15**, and connect it to DIN rail terminal **h**.

The alarms above are wired in series, with one alarm registering as *Interlock Disable* if any alarm in the series is tripped. GTS humidifiers with Vapor-logic version 6 can be wired to register as separate alarms. Please call DriSteem Technical Support at 800-328-4447.