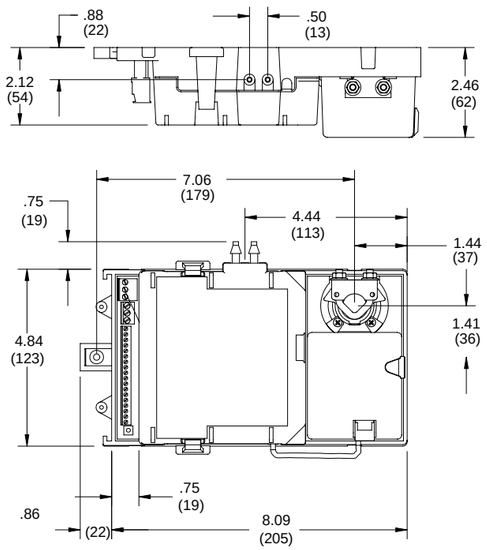
Mechanical



Schneider Electric

865/866 Installation

30-3001-810 Rev G

Wiring Rules

These modules are intended for installation within the enclosure of another product.

Do not remotely ground any part of the input sensor wiring.

Remote grounds connected to the return terminal could make the system operate incorrectly or damage the equipment.

The signal return is not true earth ground. It is an electronic reference point necessary to interpret the sensor properly.

For reliable input operation, follow these input wiring guidelines:

- Never lay wires across the surface of a printed circuit board.
- Wires should never be within 1 in. or 25 mm of any component on a printed circuit board.
- Use shielded input wire.
- Terminate the shield of the input wires at one end of the run only—preferably at the end where your I/O module is located.
- Be careful when stripping wire not to drop small pieces of wire inside the cabinet.
- Don't run your input wiring in the same conduit with AC power.
- Don't run your input wiring in the same conduit with your output wiring.

Grounding the Controller

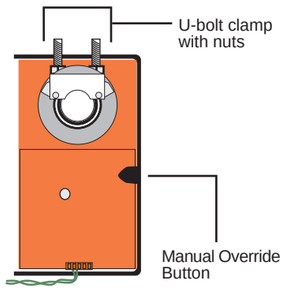
To insure proper operation of the controller, it is imperative that it be connected to a good earth ground. It is important that this connection be made as close to the module as possible.

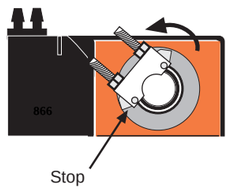
Caution: Earth ground (⏚) must be connected to avoid module damage.

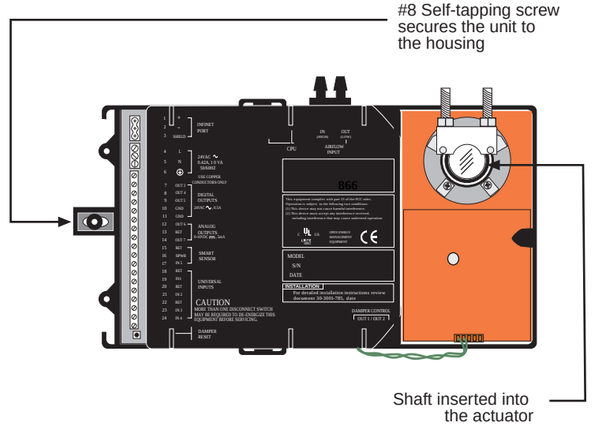
Mechanical Installation

Attach the controller to the VAV box using the following procedure:

1. Loosen the nuts that attach the mounting U-bolt to the actuator motor.
2. Manually, position the damper blade at its fully closed position.
3. With the manual override button depressed, rotate the actuator clamp of the controller motor to approximately 1/16 - 1/8" between the actuator stop and clamp, depending on seal design. The rotation direction to turn depends on the setting of the rotation direction switch on the controller. The default direction to position the clamp would be counter-clockwise (full '-' position). See the other side of this sheet for details on the rotation direction switch.
4. Position the unit at the proper perspective on the VAV box. Carefully insert the shaft of the VAV unit into the opening of the actuator motor through the U-bolt. Make sure the controller is flush with the VAV housing. Finger-tighten the nuts to secure the shaft to the actuator.
5. Insert a #8 self-tapping screw through the mounting slot to secure the controller to the housing. Position the screw in the center of the slot. Do not over-tighten. The controller should move freely on this screw.

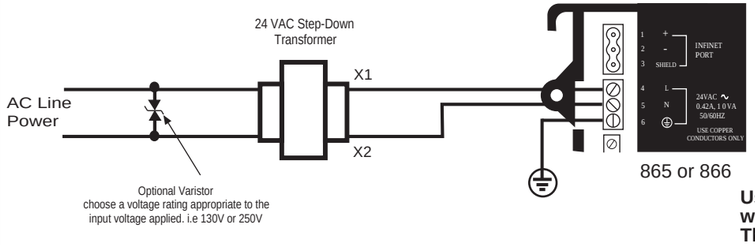






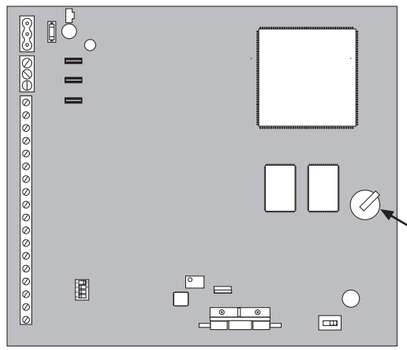
6. Tighten the U-Bolt to the shaft using an 8 mm wrench.

AC Power & Battery Backup Connection



Use care when attaching power wiring to these connectors. They are not to be used as a strain relief. The connectors cannot withstand excessive bending or flexing.

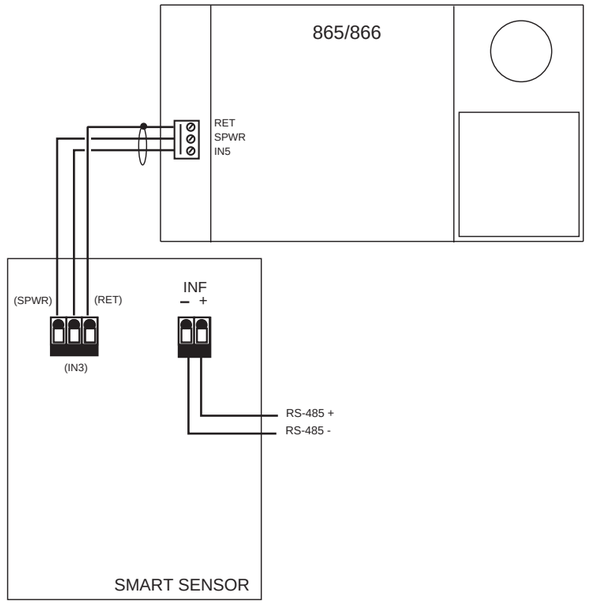
Use a separate transformer for each 865/6 installed unless the units are installed next to each other.



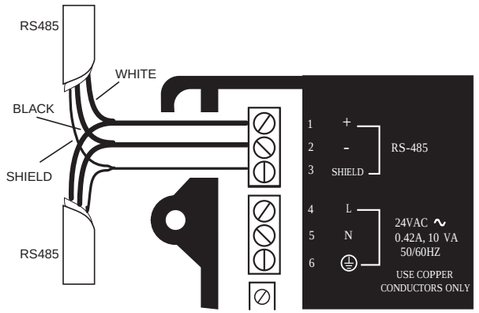
BATTERY ENABLE INFORMATION

During shipment, an insulating plastic tab is inserted under the clip on the battery to prevent it from draining prior to installation. To activate the battery, this tab must be removed. Remove the cover to access the board.

Smart Sensor Bus Interface (IN5 & SPWR)



RS-485 Connection



DETAILED PROGRAMMING & TECHNICAL INFORMATION

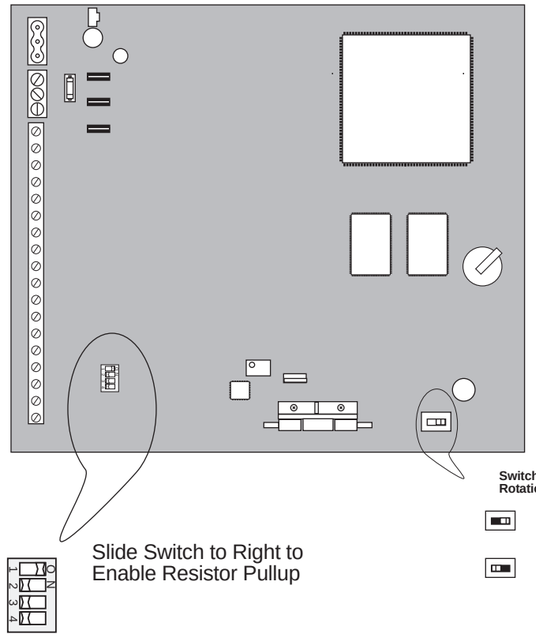
Refer to the following documents:

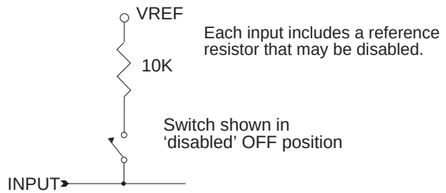
i2 Controller Technical Reference 30-3001-861

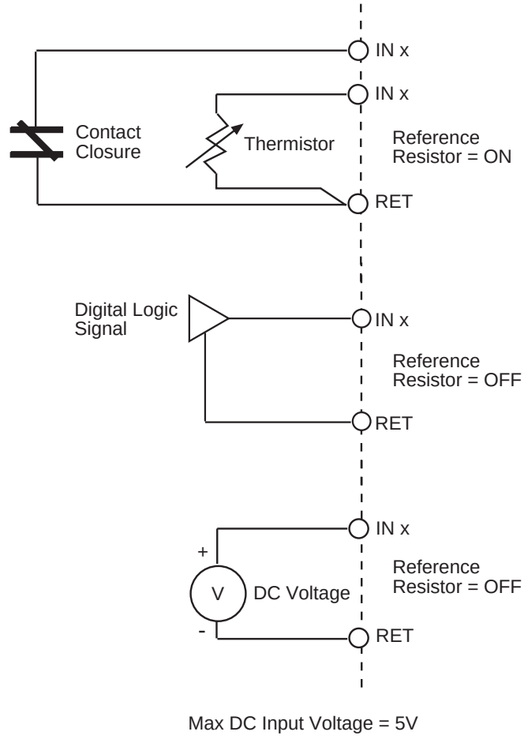
b3 and b4920 Controller Technical Reference 30-3001-862

Inputs

Accessing the Reference Resistor and Rotation Direction Switches

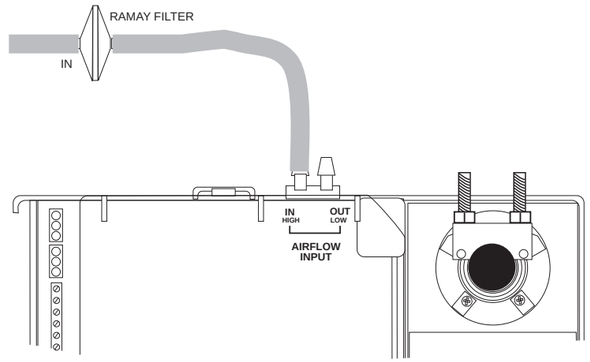






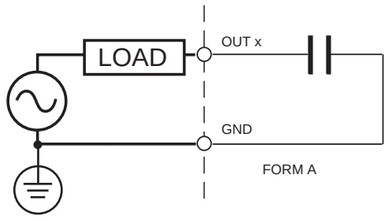
Max DC Input Voltage = 5V

Airflow Sensor Input



Outputs

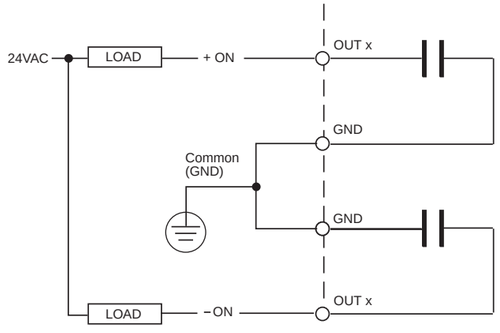
Digital Triac Output



Output Rating: 24 VAC, 0.5 A (Cannot switch DC Loads)

Minimum Load Current: 30 mA

Tristate from 2 Triac Outputs



Adjacent output pairs:

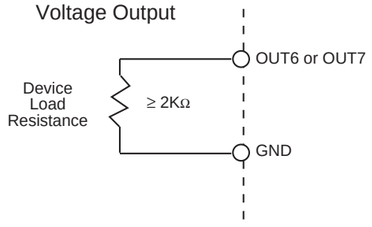
OUT3 and OUT4
OUT4 and OUT5

can be combined to form a standard Tri-state output. The outputs are electrically connected as shown in the schematic for the built-in Tri-state output.

Configure the output point of the first point of a pair (i.e., OUT3 of the pair OUT3 and OUT4) with an Electrical Type of Tri-state.

Analog Output (866 only)

Voltage Output



Voltage Output = 0 - 10V

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