BAFCON INSTALLATION

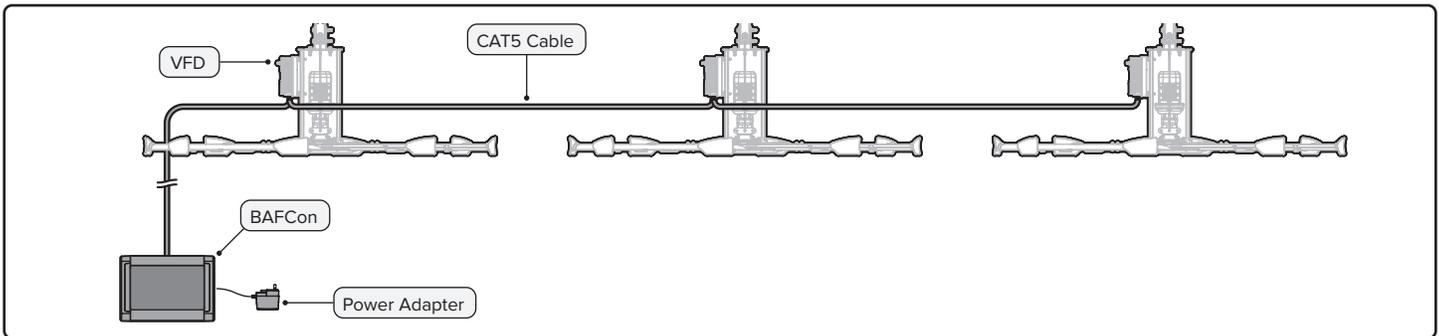## Powerfoil® 8 and Basic 6®

TO REDUCE THE RISK OF FIRE, ELECTRIC SHOCK, OR INJURY TO PERSONS, OBSERVE THE FOLLOWING:

⚡ **WARNING: Disconnect power to the installation locations before installing the fan and controller.**

⚡ **WARNING: Installation work and electrical wiring must be done by qualified person(s) in accordance with all applicable codes and standards, including fire-rated construction. Incorrect assembly can cause electric shock or damage the motor and the controller.**

⚡ **WARNING: The fan VFD contains high voltage capacitors which take time to discharge after removal of mains supply. Before working on the VFD, ensure isolation of main supply from line inputs at the VFD or fan controller's disconnect. Wait three minutes for capacitors to discharge to safe voltage levels. Failure to do so may result in personal injury or death. Darkened display LEDs are not an indication of safe voltage levels.**

⚠ **CAUTION: The Big Ass Fans product warranty will not cover equipment damage or failure that is caused by improper installation or use.**
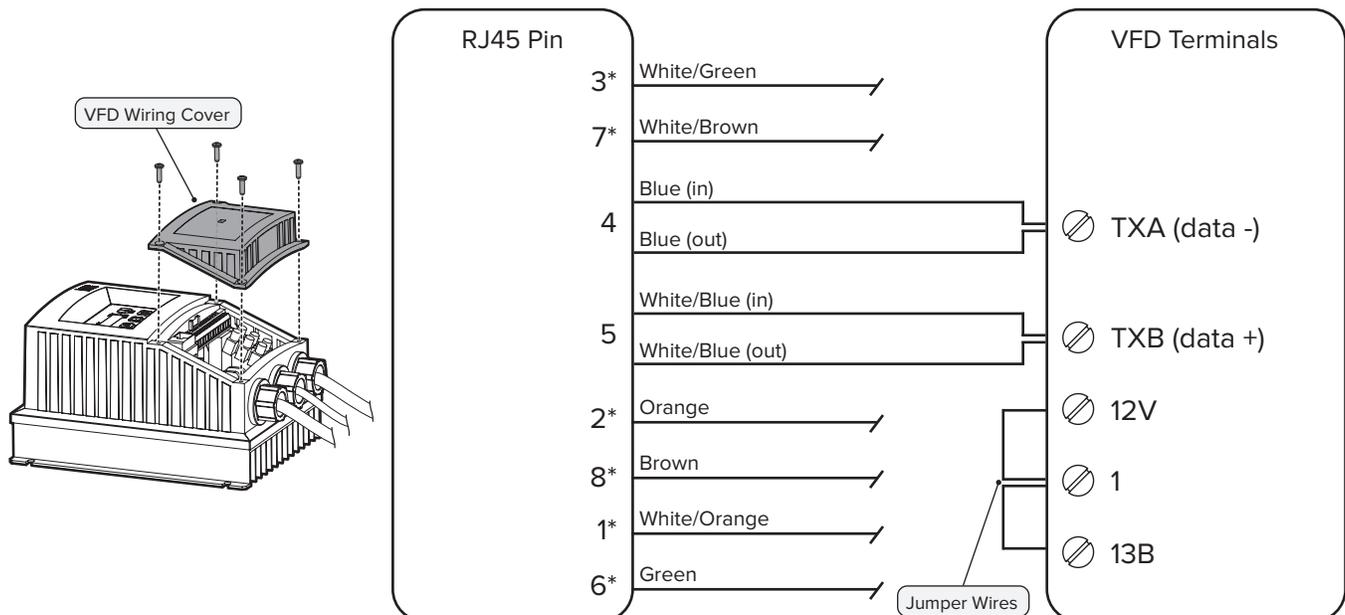
OVERVIEW

VFD WIRING

⚡ **WARNING: Before making parameter changes, ensure fan is stopped and jumper wires are removed.**

Power down fan. Change parameter 4.10 (Modbus Address) to a value between 1–247 (must be unique to fan). The default setting is 1.

Remove VFD wiring cover. Wire CAT5 controller cable to VFD. Insert a jumper wire between terminals 1 and 12V and between terminals 1 and 13B on VFD terminal strip for a drive RUN enable. Reinstall wiring cover. Route other end of cable from VFD to controller installation location.
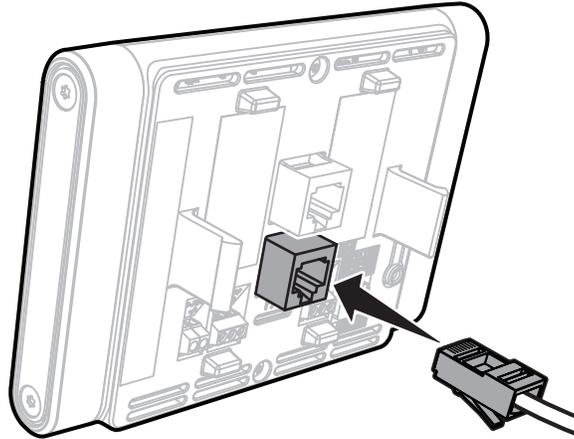

RJ45 Pin		VFD Terminals
3*	White/Green	
7*	White/Brown	
4	Blue (in) / Blue (out)	TXA (data -)
5	White/Blue (in) / White/Blue (out)	TXB (data +)
2*	Orange	12V
8*	Brown	1
1*	White/Orange	13B
6*	Green	

Jumper Wires

* Trim off wires. The trimmed wires can be used as jumpers.
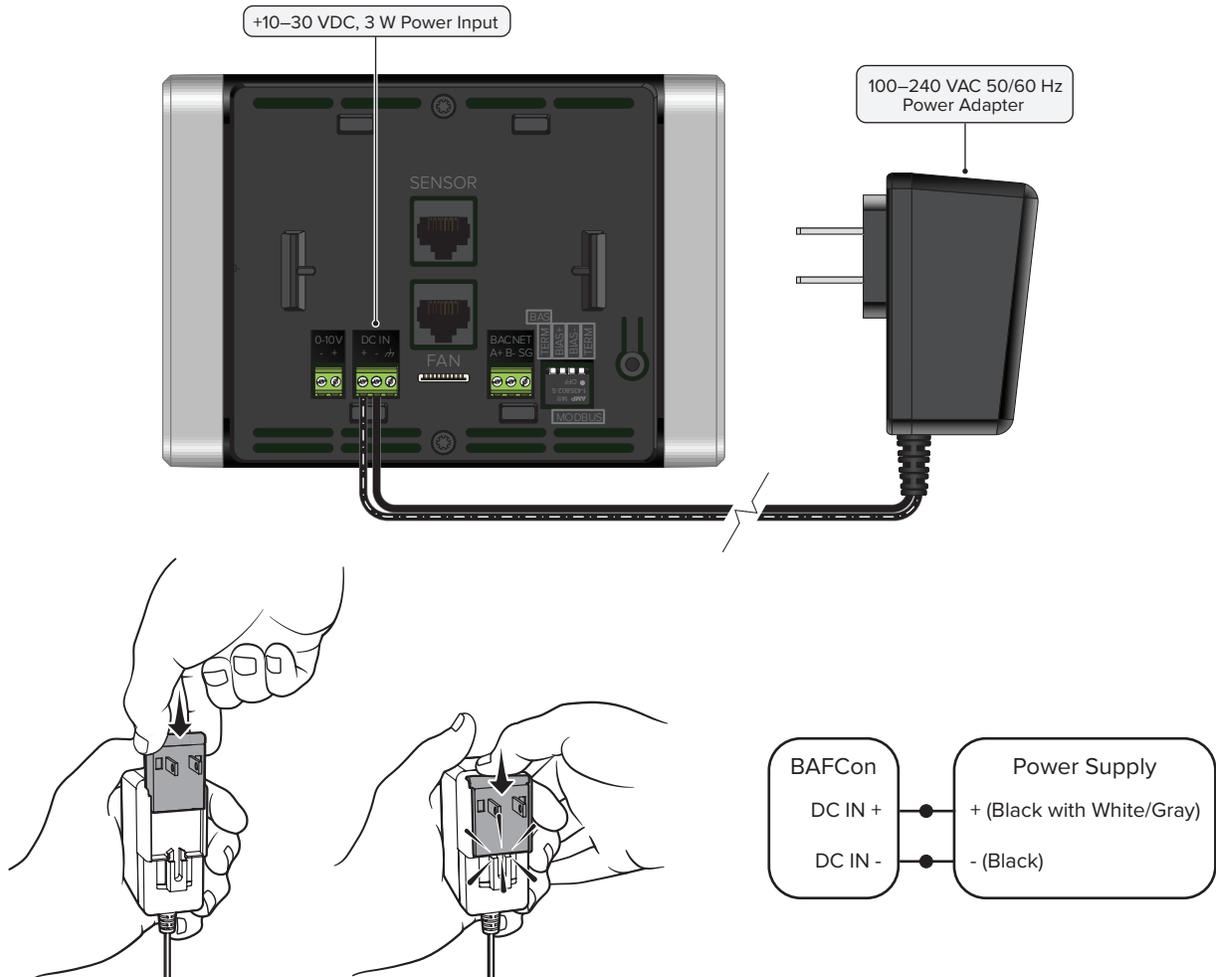
BAFCON WIRING

Controller Wiring

Insert the CAT5 cable from the fan into the FAN jack on the back of the controller.

Power Adapter Wiring

Attach the appropriate plug type for your region to the power adapter. Wire the adapter to the controller.
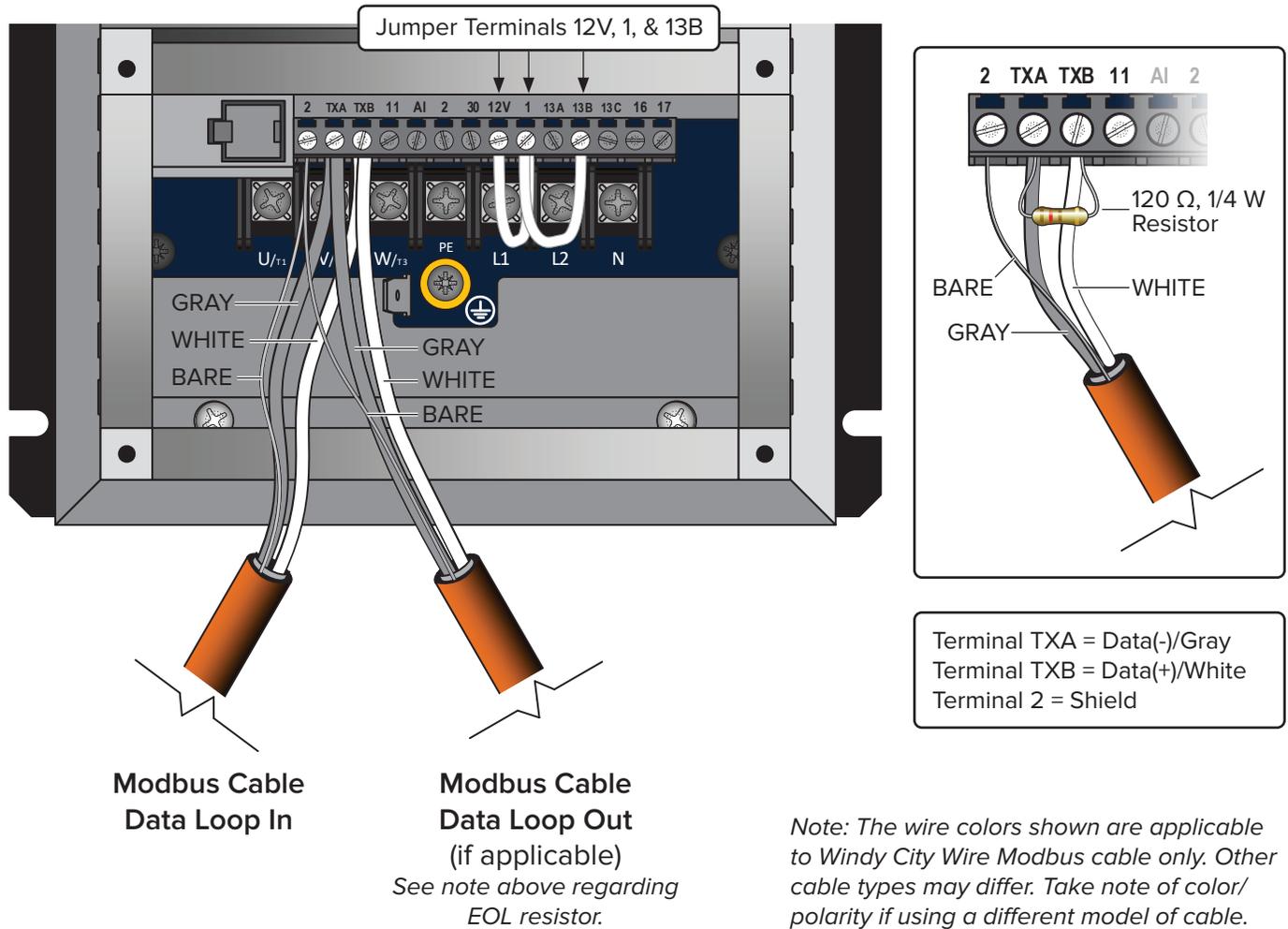

+10–30 VDC, 3 W Power Input

100–240 VAC 50/60 Hz Power Adapter

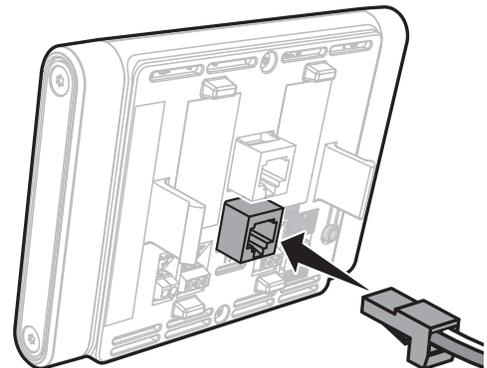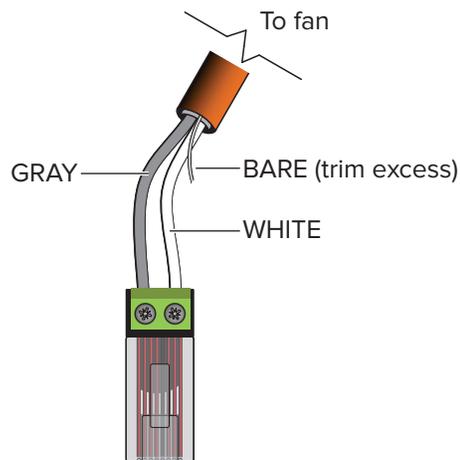| BAFCon	Power Supply
DC IN +	+ (Black with White/Gray)
DC IN -	- (Black)

OPTIONAL MODBUS WIRING

⚡ **WARNING: Before making parameter changes, ensure fan is stopped and jumper wires are removed.**

Power down fan. Change parameter 4.10 (Modbus Address) to a value between 1–247 (must be unique to fan). The default setting is 1.

Remove VFD wiring cover. Wire Modbus cable to VFD. Insert a jumper wire between terminals 1 and 12V and between terminals 1 and 13B on VFD terminal strip for a drive RUN enable. The last fan connected on a run of Modbus cable (regardless of fan quantity) must include an EOL resistor to maintain proper cable impedance as shown. Reinstall wiring cover. Route other end of cable from VFD to controller installation location.

Jumper Terminals 12V, 1, & 13B

2 TXA TXB 11 AI 2 30 12V 1 13A 13B 13C 16 17

U/T1 V/ W/T3 PE L1 L2 N

GRAY
WHITE
BARE

GRAY
WHITE
BARE

**Modbus Cable
Data Loop In**

**Modbus Cable
Data Loop Out**
(if applicable)
*See note above regarding
EOL resistor.*

2 TXA TXB 11 AI 2

120 Ω, 1/4 W
Resistor

BARE

WHITE

GRAY

Terminal TXA = Data(-)/Gray
Terminal TXB = Data(+)/White
Terminal 2 = Shield

Note: The wire colors shown are applicable to Windy City Wire Modbus cable only. Other cable types may differ. Take note of color/ polarity if using a different model of cable.

Connect the gray and white Modbus wires from the fan to the provided RJ45 terminal block. Trim the excess bare wire. Insert the terminal block into the FAN jack on the back of the controller.

To fan

GRAY

BARE (trim excess)

WHITE

NOTES