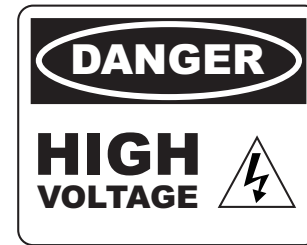


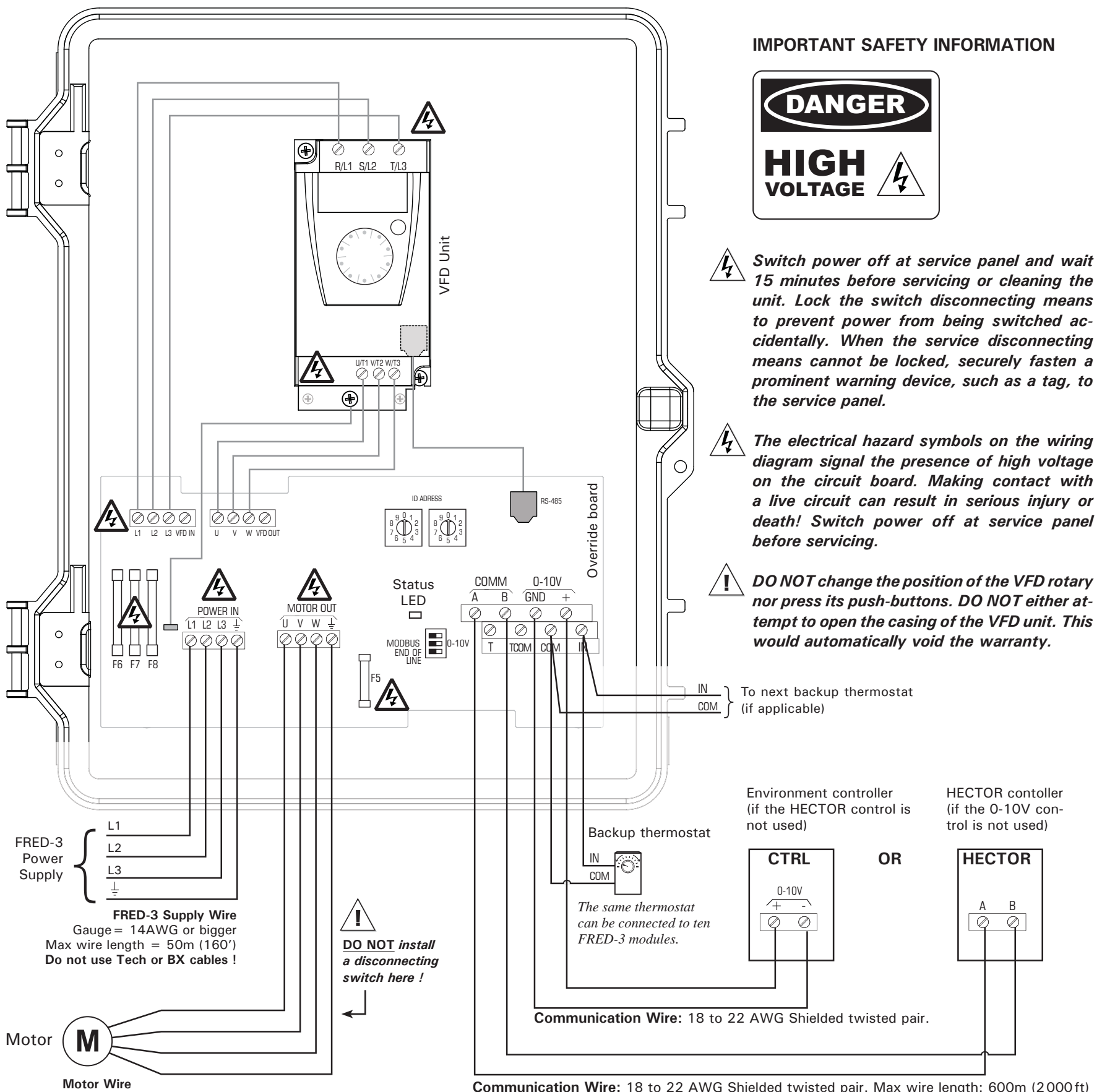
IMPORTANT SAFETY INFORMATION



⚡ **Switch power off at service panel and wait 15 minutes before servicing or cleaning the unit. Lock the switch disconnecting means to prevent power from being switched accidentally. When the service disconnecting means cannot be locked, securely fasten a prominent warning device, such as a tag, to the service panel.**

⚡ **The electrical hazard symbols on the wiring diagram signal the presence of high voltage on the circuit board. Making contact with a live circuit can result in serious injury or death! Switch power off at service panel before servicing.**

! **DO NOT change the position of the VFD rotary nor press its push-buttons. DO NOT either attempt to open the casing of the VFD unit. This would automatically void the warranty.**



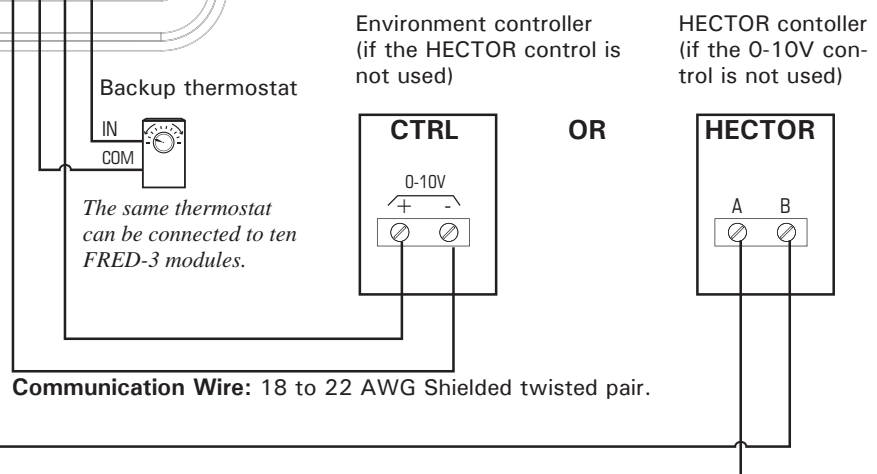
FRED-3 Power Supply
L1
L2
L3
F6 F7 F8

FRED-3 Supply Wire
Gauge = 14AWG or bigger
Max wire length = 50m (160')
Do not use Tech or BX cables!

Motor Wire
Gauge = 14AWG or bigger
Max wire length = 50m (160')
Do not use Tech or BX cables!

! **Ensure the fan rotates in proper direction. If it rotates in the wrong direction, invert any 2 of the 3 motor wires ("MOTOR OUT U", "V" or "W" wires).**

! **DO NOT install a disconnecting switch here!**



Communication Wire: 18 to 22 AWG Shielded twisted pair. Max wire length: 600m (2000ft)

! IMPORTANT

- The **Communication Wire** must **NEVER** run in parallel with the **Motor Wire!**
- The **Communication Wire** must run at least 12" away from the **FRED-3 Supply Wire.**

INSTALLATION NOTES

Mounting Instructions — Leave a clearance of at least 400mm (16") to the left of the box to allow the cover to be removed for maintenance.

Cable Entry — Install a PVC conduit into each electrical knockout made at the bottom of the enclosure. Each PVC conduit entering the enclosure must be perfectly sealed with an appropriate watertight connector.

3 PVC Conduits — The electrical wires going out from the FRED-3 module must run through 3 different PVC conduits: 1 for power line, 1 for motor wires and 1 for control signals.

Ground Wire — The ground wire connected to the FRED-3 module(s) must not be used for any other piece of equipment.

Surge Protection — Provide a surge protection (including lightning protection) from the power supply to the controller and from the control to the sensors. Consult a certified electrician if required.

Motor & Power Supply — Use single conductor wires in plastic conduit. Do not use Tech or BX cables. Never connect more than one motor to a FRED-3 module.

Circuit Breaker — A separate circuit breaker shall be used for the FRED-3 module(s) and the mains supply of this breaker shall be 15 A.

Disconnecting Switch —The controller has no power-on switch. Each disconnecting switch shall be included in the building installation to interrupt power to one (1) FRED-3 module and its respective fan motor. The disconnecting switch shall be in close proximity to the equipment and within easy reach of the operator and shall be marked as the disconnecting device for the equipment.

WIRING DIAGRAM	
FRED-3	
891-00470	Rev.01

QUICK START

Step1. Make the Holes

Three holes must be made for passing the PVC conduits at the bottom of your FRED-3 module (hole 1: power supply conduit, hole 2: motor conduit, hole 3: controller communication conduit).

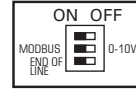
1. Open the enclosure and then unscrew the two winged screws that are holding the plate.
2. Make three holes through the plate. The diameter of these holes depends on the size of your particular conduits and knock outs.
3. Put the plate back in place with the winged screws. Open the enclosure and then unscrew the two winged screws that are holding the plate.

Step2. Make the Connections

Connect your FRED Module as shown overleaf and be sure to respect all safety rules mentioned in the user's manual.

Step3. Set the Dipswitches

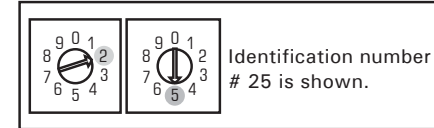
#	ON	OFF
1	RESERVED	
2	MODBUS comm.	0-10V comm.
3	EOL = Yes	EOL = No



MODBUS / 0-10V Communication Switch: Select the desired communication mode with the second dipswitch: if your FRED-3 module is connected to a HECTOR controller, select the "MODBUS" position; if it is connected to the 0-10V output of any environment control, select the "0-10V" mode. By default, this switch is at the "0-10V" position.

End of Line Switch: Flip this switch to the "END OF LINE" position if the FRED-3 module is the very last module on the network.

Step4. Set the Network Addresses



If the FRED-3 module is connected to a HECTOR control (MODBUS network), a unique identification number (ID) must be given to the module with the address selector. An ID number is made of 2 digits: use the rotary to the left to set the first digit and use the rotary to the right to set the other digit. Refer to the wiring diagram of your HECTOR controller to select the proper ID number.

Step5. Set the Motor Parameters

If the FRED-3 module is connected to a HECTOR control (MODBUS network), enter the parameters that are written down on your motor's nameplate in the HECTOR control. Refer to section 5.4 of the FRED-3 User's manual.

WIRING DIAGRAM

FRED-3

891-00470

Rev.01