

POWERFOIL X3.0 KEYPAD CONTROLLER

Upon initial power-up of the fan, the controller appears as shown on the right. The controller is programmed to show the fan's current running speed in RPM on the LED display. The display also indicates if the fan is stopped (STOP), set to run forward (FWD), or is set to respond to a remote control source (REM) such as an Energy Management System or Building Automation System.

Other main LED display modes include Motor Current, Memory Status, Motor Command Frequency, and Motor Actual Frequency. Useful indicators of fan status on the controller are RUN/STOP, JOG, FWD/REV direction, and External or Local Control.

To operate the fan from the controller, press the LOCAL/REM button to make sure that the LOC indicator is illuminated. The RUN, STOP, and FWD/REV buttons are functional only when the LOC indicator is illuminated. *Note: To access the LOCAL/REM button on the controller, the controller's button cover must be removed (if used).*



Note: Controller cover and optional button cover are removed in the illustration.

Starting, stopping, and direction control

The LOC indicator must be illuminated on the controller in order to start, stop, or change the direction of the fan. *Note: The RUN, STOP/RESET, and FWD/REV buttons are disabled while External Automation Control is enabled (REM LED illuminated).*



To start the fan, press the RUN button on the controller. When the RUN button is pressed, the STOP LED extinguishes and the RUN LED illuminates while the fan accelerates to the commanded speed.



To stop the fan, press the STOP/RESET button. The RUN LED will flash, indicating that the fan has accepted the command, and the STOP LED will illuminate.



Proper fan rotation is initially set at the factory. **To reverse the rotation of the fan**, press the FWD/REV button. The fan does not have to be stopped in order to perform this action. When pressed while the fan is running, the FWD or REV LED will flash (current direction), indicating a pending change in fan direction.

Changing the fan speed

The LOC indicator must be illuminated to adjust fan speed, which can be performed when the fan is stopped or running.



To change the fan speed, press the UP and DOWN arrow buttons. The fan speed can be adjusted regardless of what is visible on the LED display, with the exception of the Memory Read/Write screen. When one of the direction keys is pressed, the current display mode is forced to change to the Fan Freq. Command screen as shown below.

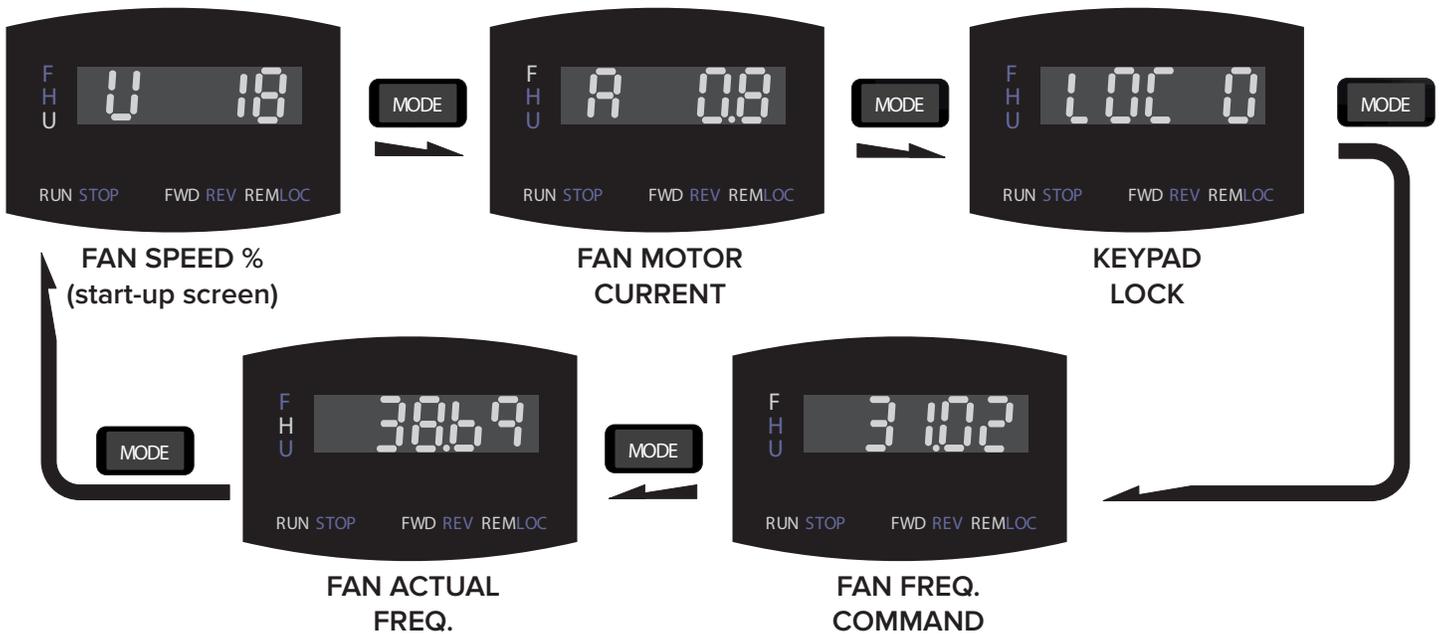


Note: To accelerate this process, press either the LEFT or RIGHT arrow button to select which digit is controlled by the UP and DOWN buttons. The button cover must be removed (if used) in order to access the LEFT and RIGHT arrow buttons.

Cycling through the LED display modes



To cycle through the possible display options on the controller, press the MODE button repeatedly. Below are the possible screens in the order in which they appear on the display. *Note: To access the MODE button, the controller's button cover must be removed (if used).*

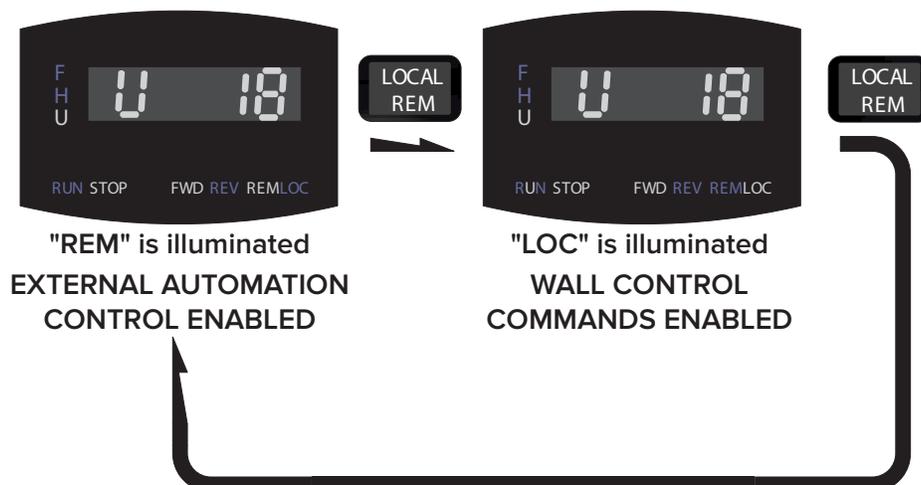


Toggle the fan's command source



To select the fan's command source, press the LOCAL/REM button. The controller is preprogrammed to accept digital and analog inputs from customer automation systems for start/stop and speed commands, or to be directly controlled from the controller. Upon startup, the fan puts priority on external commands provided by automation systems or other fans. *Note: To access all buttons on the controller, the controller's button cover must be removed (if used).*

To operate the fan from the controller, press the LOCAL/REM button to make sure that the LOC indicator is illuminated. The RUN, STOP, and FWD/REV buttons are functional only when the LOC indicator is illuminated. *Note: To access the LOCAL/REM button on the controller, the controller's button cover must be removed (if used).*



Locking and unlocking procedures

Note: To access the required buttons, the controller's button cover must be removed (if used).

Locking the controller

1. Press the **MODE** button until you see “LOC 0.”
2. Press the **Up** arrow to display the code screen.
3. Press the **Left** arrow until you see four digits. Use the arrow buttons to change each digit to your desired code.
4. Press the **PROG/DATA** button to save the code. You will see “LOC 1.”
5. Press the **MODE** button until you see your normal operational screen.

Unlocking the controller

1. Press the **MODE** button until you see “LOC 1” as illustrated below.



2. Press either the **Up** or **Down** arrow.
3. Enter your passcode using the **Up**, **Down**, **Left**, and **Right** arrows. *Note: The default passcode is **1271**.*
4. When the four-digit number is displayed, press the **PROG/DATA** button once. If the code has been entered correctly, you should see “LOC 0” as illustrated below.



5. Press the **MODE** button until you see “F” illuminated on the left side of the display.
6. Make sure “LOC” is illuminated at the bottom of the display. If it is not, press the **LOCAL/REM** button.
7. Press the **RUN** button.

If “LOC 0” does not appear, please contact Customer Service.

Understanding and clearing fan faults



External faults

EF or “External Fault” is displayed when the fan has stopped due to an alarm condition. EF also displays if the user has interfaced the fan system with other equipment requiring fan shutdown, such as an ESFR system.



Internal faults

All other error codes are considered “Internal faults.” These codes are specific to problems associated with the VFD or motor. For example, the error code for “input power phase loss” is shown on the left. For a full list of error codes and their meanings, see “Fan Error Codes.”



To reset the VFD, press the STOP/RESET button (after the condition that induced the fault has been cleared).