

6 Getting Started



Warning

Stored charge

The Drive contains capacitors that remain charged to a potentially lethal voltage after the AC supply has been disconnected. If the Drive has been energized, the AC supply must be isolated at least ten minutes before work may continue.



Warning

Isolation

The control circuits and terminals are isolated from the power circuits only by basic insulation to IEC664-1. The installer must ensure that all external control circuits are separated from human contact by at least one layer of insulation rated for use at the AC supply voltage.



Warning

The Drive must be operated only by personnel having the necessary training or experience.



Warning

If this is the first time the Drive has been operated, ensure that no damage or safety hazard could arise from the motor starting unexpectedly.



Warning

The motor must be fixed down and the shaft guarded against inadvertent contact.



Warning

Do not change parameter values without careful consideration; wrong values may cause damage or a safety hazard.

The Drive can be configured for Terminal mode or Keypad mode of operation. The following diagrams show the basic connections that need to be made to allow the Drive to be operated in either mode.

6.1 Operation in terminal mode

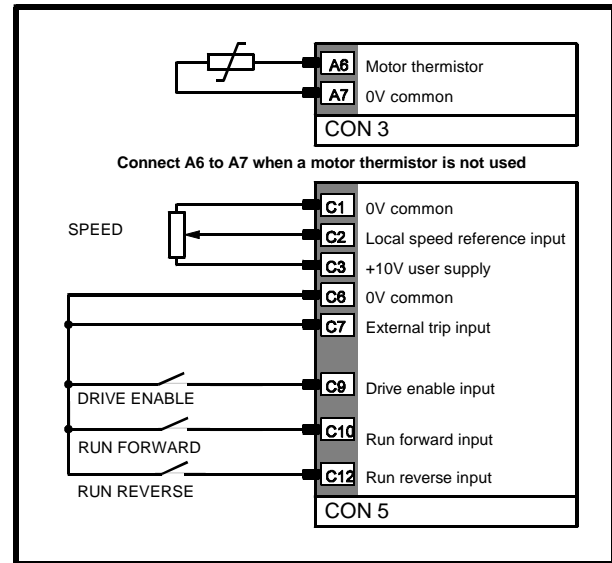


Figure 6-1 Basic connections for Terminal mode



Warning

Do not apply AC power until the checks in instruction 3 (below) have been performed successfully.

1. Connect the Drive to the AC supply circuit and motor as described in Chapter 4 *Installing the Drive*. **Do not apply AC power to the Drive.**
2. Make the signal connections shown in Figure 6-1.
3. Perform the following checks:
 - AC supply and motor connections are correct.
 - Motor installation is correct.
 - Motor shaft is not exposed.
 - Signal connector terminals C9, C10, C12 are not connected to 0V. (This ensures the motor will not start when AC power is applied.)
 - SPEED potentiometer set at minimum.
4. Apply AC power to the Drive.
5. Check that the value of parameter **p1** *Maximum frequency* does not exceed the permissible frequency of the motor.
6. Check that values of the following parameters:
 - pc** *Maximum voltage frequency* is the same as the rated frequency of the motor
 - b9** *Terminal or Keypad mode selector* is set at 1
7. Check the display indicates **rdY**.

8. Close the **DRIVE ENABLE** switch.
9. Close either the **RUN FORWARD** or **RUN REVERSE** switch.
10. Check the display indicates zero frequency.
11. Advance the **SPEED** potentiometer.
12. Check that the motor speed and displayed frequency change accordingly.
13. To display the percentage of full load current (**FLC**), press the following two keys at the same time:



14. If parameter **b55** is already set at 1 and the Drive trips, press...



(red key)

...to reset the Drive.

6.2 Operation in keypad mode

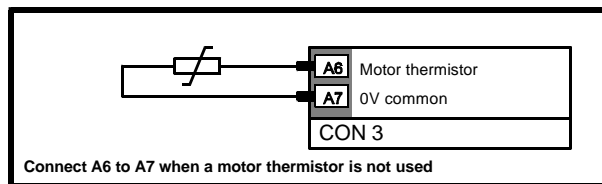


Figure 6–2 Basic connections for Keypad mode



Warning


Do not apply AC power until the checks in instruction 3 (below) have been performed successfully.


1. Connect the Drive to the AC supply circuit and motor as described in Chapter 4 *Electrical Installation*. **Do not apply AC power to the Drive.**
2. Make the signal connections shown in Figure 6–2.
3. Perform the following checks:
 - AC supply and motor connections are correct
 - Motor installation is correct
 - Motor shaft is not exposed
4. Apply AC power to the Drive.
5. Check that the value of parameter **p1** *Maximum frequency* does not exceed the maximum permissible frequency of the motor.

6. Check that values of the following parameters:
 - pc** *Maximum voltage frequency* is the same as the rated frequency of the motor


7. Set parameter **b9** *Terminal or Keypad mode selector* at 0 for Keypad mode.


When the display returns to Status mode, it displays trip **Et**.


8. Press  (red key) to reset the Drive.
9. Check that the Drive indicates **rdY** alternating with the minimum frequency.


10. Press  (green key) to run the Drive.

11. Check the display indicates zero frequency.

12. Press  to raise the frequency. Check that the motor speed increases.

13. Press  to reduce the frequency. Check that the motor speed decreases.

14. To stop the Drive, press  (red key).

15. If the Drive trips, press  (red key) to reset the Drive.

Note

The FORWARD/REVERSE  (blue key) may be enabled by setting parameter b51 at 1.