

Connection diagrams

The following diagrams show:

- The terminal layout for frame size R3, which, in general, applies to frame sizes R1...R6, except for the R5/R6 power and ground terminals.
- The R5/R6 power and ground terminals.
- The terminal layout for R7/R8.

R1...R4 (Diagram shows the R3 frame.)

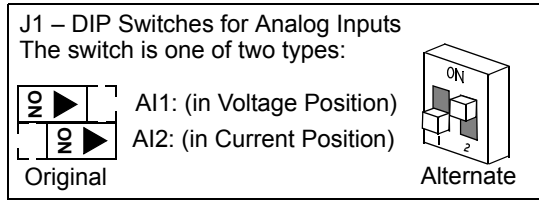
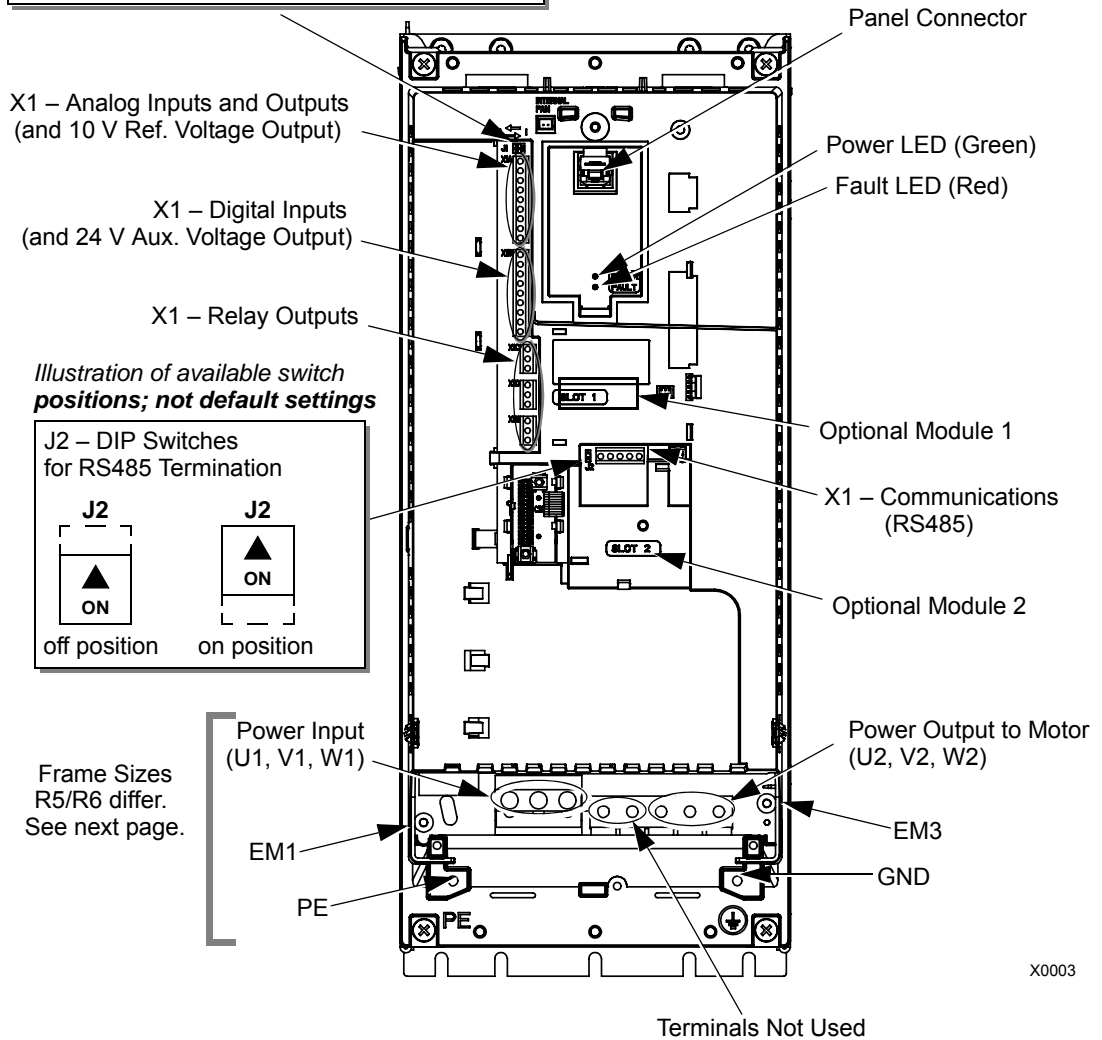


Illustration of available switch positions; not default settings

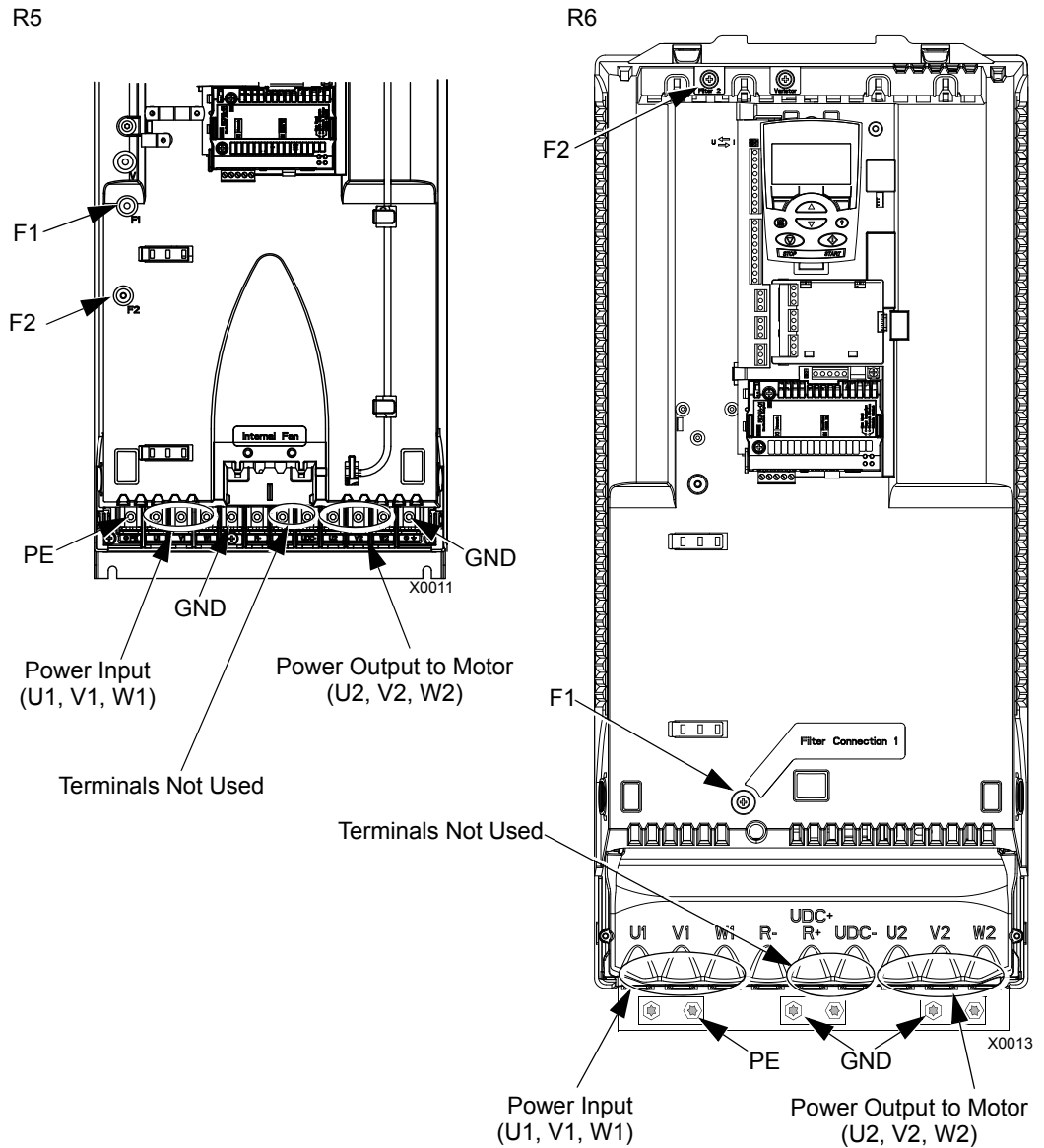


X0003



WARNING! To avoid danger, or damage to the drive, on IT systems and corner grounded TN systems, see section [Disconnecting the internal EMC filter](#) on page [1-22](#).

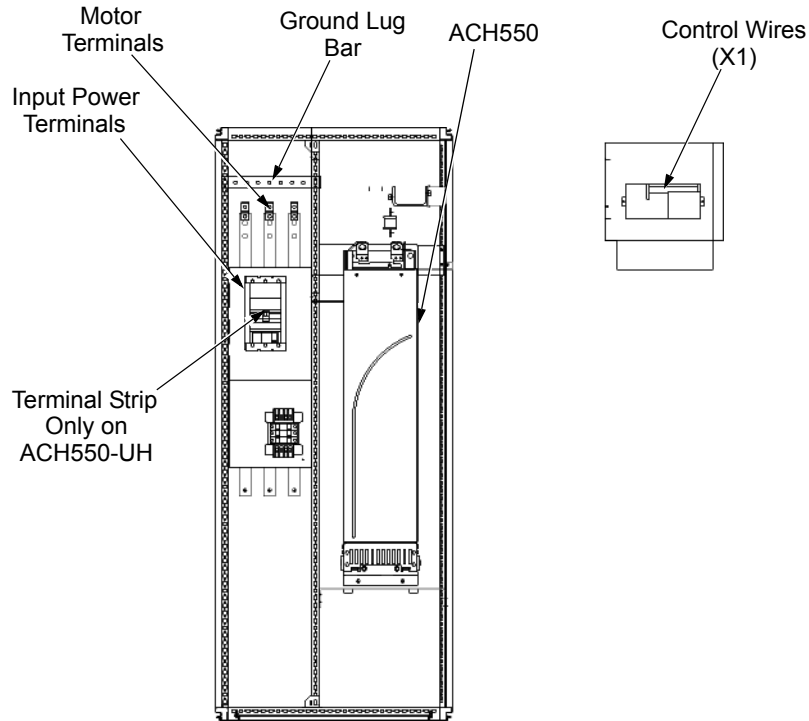
The following diagram shows the power and ground terminal layout for frame sizes R5 and R6.



WARNING! To avoid danger, or damage to the drive, on IT systems and corner grounded TN systems, see section [Disconnecting the internal EMC filter](#) on page 1-22.

The following diagram shows the power and ground terminal layout for frame size R7 (R8 is similar).

R7



Disconnecting the internal EMC filter

On certain types of systems, you must disconnect the internal EMC filter, otherwise the system will be connected to ground potential through the EMC filter capacitors, which might cause danger, or damage the drive.

Note: When the internal EMC filter is disconnected, the drive is not EMC compatible.

The following table shows the installation rules for the EMC filter screws in order to connect or disconnect the filter, depending on the system type and the frame size. For more information on the different system types, see [Floating networks](#) on page 1-306 and [Unsymmetrically grounded networks](#) on page 1-305.

The locations of screws EM1 and EM3 are shown in the diagram on page 1-20. The locations of screws F1 and F2 are shown in the diagram on page 1-21.

Frame sizes	Screw	Symmetrically grounded TN systems (TN-S systems)	Corner grounded TN systems	IT systems (ungrounded or high-resistance-grounded [$> 30 \text{ ohm}$])
R1...R3	EM1	x	x	•
	EM3	x	•	•
R4	EM1	x	x	–
	EM3	x	–	–
R5...R6	F1	x	x	–
	F2	x	x	–

x = Install the screw. (EMC filter will be connected.)

• = Replace the screw with the provided polyamide screw. (EMC filter will be disconnected.)

– = Remove the screw. (EMC filter will be disconnected.)

Install the wiring

Checking motor and motor cable insulation



WARNING! Check the motor and motor cable insulation before connecting the drive to input power. For this test, make sure that motor cables are NOT connected to the drive.

1. Complete motor cable connections to the motor, but NOT to the drive output terminals (U2, V2, W2).
2. At the drive end of the motor cable, measure the insulation resistance between each motor cable phase and Protective Earth (PE): Apply a voltage of 1 kV DC and verify that resistance is greater than 1 Mohm.

