

# Field Supply Kit for Non-Regenerative and Regenerative FlexPak Plus DC Drives

**Model Number 14C237**

**Instruction Manual D2-3382**



**ATTENTION:** Only qualified electrical personnel familiar with the construction and operation of this equipment and the hazards involved should install, adjust, operate, and/or service this equipment. Read and understand this manual and other applicable manuals in their entirety before proceeding. Failure to observe this precaution could result in severe bodily injury or loss of life.

## Product Description

The Field Supply kit provides field excitation for shunt-wound DC motors used with 1/4 to 1-1/2 HP non-regenerative and regenerative FlexPak™ Plus DC drives. The kit is an assembly consisting of a terminal block, a field power cube, two wiring harnesses, a support bracket, and mounting hardware.

The user must provide appropriate Field Supply wiring to the motor, based upon the motor's field rating.

The contents of the Field Supply kit are listed in table 1.

Table 1 – Contents of the Field Supply Kit

Description	Quantity	Part Number
Field Supply Power Cube	1	701819-12AD
Terminal Block 2TB (32/132)	1	417620-4R
Terminal Block 2TB Section (F1/F2)	2	417621-15A
Support Bracket	1	608878-113R
Wire Jumper 51	1	608808-90SK
Wire Jumper 52	1	608808-90SL
Wire Jumper F1	1	608808-90SM
Wire Jumper F2	1	608808-90SN
6-32 Nylon Washer	1	601748-11H
Mounting Screw, 6-32 x 3/4	1	601741-61F
Mounting Screw, 8-32 x 3/8	3	601741-62C
Cup Washer	1	601748-19A
Ground Screw	1	601741-78D
Field Kit Wiring Diagram	1	705385-72
Instruction Manual	1	D2-3382

## Installing the Field Supply in a Non-Regenerative FlexPak Plus Drive



**ATTENTION:** Do not install modification kits with power applied to the drive. Disconnect, lock out, and tag all sources of incoming AC power to the drive before attempting such installation. Verify that no voltage is present at the drive's AC input terminals, L1 and L2. Failure to observe this precaution could result in severe bodily injury or loss of life.

**ATTENTION:** The user is responsible for conforming with all applicable local, national, and international codes. Failure to observe this precaution could result in damage to, or destruction of, the equipment.

**ATTENTION:** This kit contains ESD (Electrostatic Discharge) sensitive parts and assemblies. Static control precautions are required when installing, testing, servicing, or repairing this assembly. Failure to observe these precautions could result in damage to, or destruction of, the equipment.

**Important:** This procedure is for non-regenerative FlexPak Plus drives. See page 4 for instructions for installation into regenerative FlexPak Plus drives.

Refer to the wiring diagram included with the kit and to your FlexPak Plus drive instruction manual for help locating and identifying drive components.

To install the Field Supply kit:

- Step 1. Disconnect, lock out, and tag input power to the drive.
- Step 2. Remove the drive cover.
- Step 3. Verify that no voltage is present at the drive's AC input terminals, L1 and L2.
- Step 4. Remove and set aside the drive's auxiliary mounting bracket.
- Step 5. Remove the power terminal block (1TB) and the terminal block labeled "32/132" from the terminal block support bracket inside the drive. Leave the wires connected to the terminals.
- Step 6. Remove the terminal block support bracket from the drive.
- Step 7. Mount the Field Supply support bracket (with the Field Supply power cube and terminal block 2TB) in place of the terminal block support bracket.
- Step 8. Remount terminal block 1TB (removed in step 5) on the left side of the Field Supply support bracket.
- Step 9. Disconnect the two wires from old terminal block 32/132. Connect them to terminals 32 and 132, respectively, on new terminal block 2TB, as shown in figure 1 (full-wave supplies) and figure 2 (half-wave supplies). Discard the old terminal block.
- Step 10. Connect wire harness 51/52 to terminal block 1TB. Connect wires F1 and F2 from the Field Supply to terminal block 2TB on the Field Supply mounting bracket. Refer to figure 1 or 2.
- Step 11. Route the user-supplied motor field wires (F1 and F2) into the drive chassis. You can use the same conduit as the armature and motor thermostat conductors. Refer to the section on DC wiring in your MinPak Plus DC drive instruction manual.
- Step 12. **For a full-wave supply**, connect the motor field wires to terminals F1 and F2 on Field Supply terminal block 2TB. See figure 1.

**For a half-wave supply**, connect motor lead F1 to terminal 51 on 1TB and motor lead F2 to terminal F2 on 2TB. See figure 2.

Refer to the motor's nameplate label and the technical specifications at the end of this instruction manual to determine the appropriate field type required.

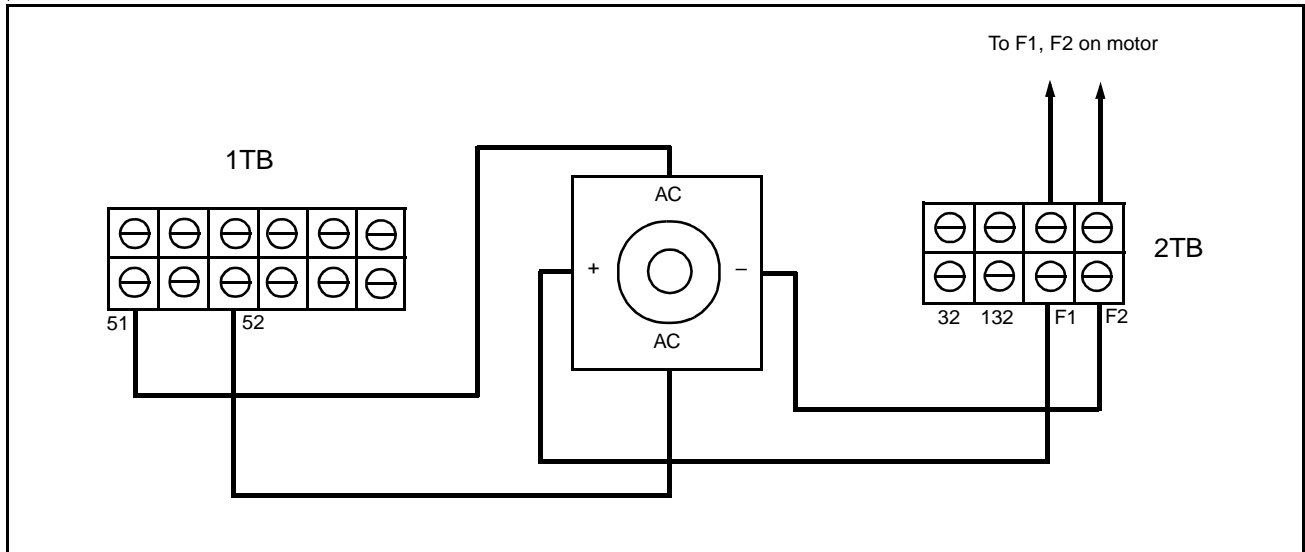


Figure 1 – Connecting the Field Supply (Full-Wave)

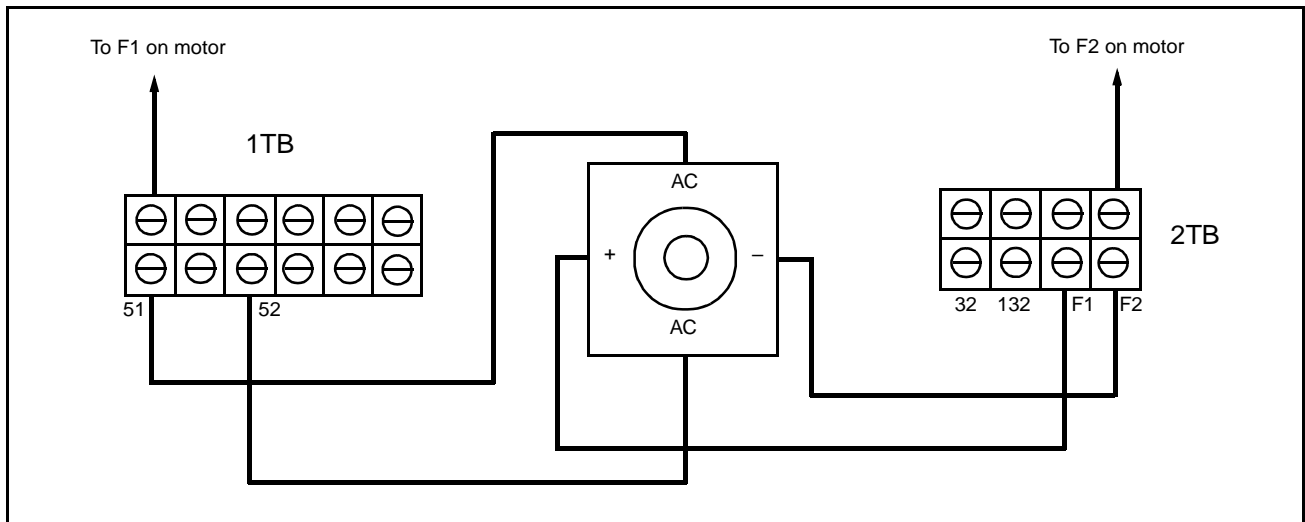


Figure 2 – Connecting the Field Supply (Half-Wave)

Step 13. Verify that the wiring of the Field Supply is correct and all connectors are securely fastened.

Step 14. Replace the auxiliary mounting bracket removed in step 4.

Step 15. Reattach the cover to the drive.

Step 16. Apply power and test the operation of the drive.

This completes installation of the Field Supply kit in a non-regenerative FlexPak drive.

## Installing the Field Supply in a Regenerative FlexPak Plus Drive



**ATTENTION:** Do not install modification kits with power applied to the drive. Disconnect, lock out, and tag all sources of incoming AC power to the drive before attempting such installation. Verify that no voltage is present at the drive's AC input terminals, L1 and L2. Failure to observe this precaution could result in severe bodily injury or loss of life.

**ATTENTION:** The user is responsible for conforming with all applicable local, national, and international codes. Failure to observe this precaution could result in damage to, or destruction of, the equipment.

**ATTENTION:** This kit contains ESD (Electrostatic Discharge) sensitive parts and assemblies. Static control precautions are required when installing, testing, servicing, or repairing this assembly. Failure to observe these precautions could result in damage to, or destruction of, the equipment.

**Important:** This procedure is for regenerative FlexPak Plus drives. See page 2 for instructions for installation into non-regenerative FlexPak Plus drives.

The Field Supply kit is shipped as an assembly mounted on a support bracket. For installation in a FlexPak Plus regenerative drive, kit components must be removed from the support bracket and mounted internally in the FlexPak drive.

Refer to the wiring diagram included with the kit and to your FlexPak Plus drive instruction manual for help locating and identifying drive components.

To install the Field Supply kit:

- Step 1. Disconnect, lock out, and tag input power to the drive.
- Step 2. Remove the drive cover.
- Step 3. Verify that no voltage is present at the drive's AC input terminals, L1 and L2.
- Step 4. Remove and set aside the drive's auxiliary mounting bracket.
- Step 5. Remove the power cube and terminal block 2TB from the Field Supply kit support bracket. Do not disconnect the jumpers.
- Step 6. Remove the drive terminal block labeled "32/132" from the drive. Save the fasteners. Note the connections to old terminals 32 and 132. Reconnect these to the new terminal block, 2TB, removed in step 5. Discard terminal block "32/132".
- Step 7. Mount the field supply power cube between terminal blocks 1TB and 2TB. Use the 6-32 x 3/4 screw and the nylon washer to mount it on the U-bar in the center of the drive chassis.
- Step 8. Connect wire harness 51/52 to terminal block 1TB. Connect wires F1 and F2 from the Field Supply to terminal block 2TB. Refer to figure 3 (full-wave supplies) or figure 4 (half-wave supplies). Use the fasteners removed in step 6 to mount terminal block 2TB to the drive where terminal block "32/132" was previously mounted.
- Step 9. Route the user-supplied motor field wires (F1 and F2) into the drive chassis. You can use the same conduit as the armature and motor thermostat conductors. Refer to the section on DC wiring in your MinPak Plus DC drive instruction manual.

Step 10. **For a full-wave supply**, connect the motor field wires to terminals F1 and F2 on Field Supply terminal block 2TB. See figure 3.

**For a half-wave supply**, connect motor lead F1 to terminal 51 on 1TB and motor lead F2 to terminal F2 on 2TB. See figure 4.

Refer to the motor's nameplate label and the technical specifications at the end of this instruction manual to determine the appropriate field type required.

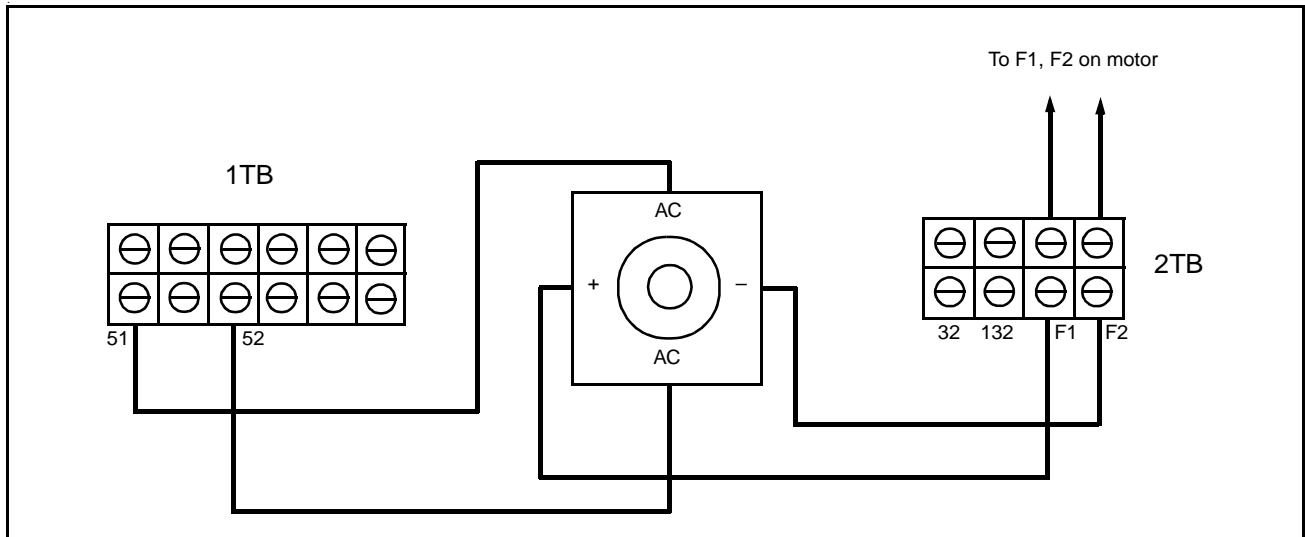


Figure 3 – Connecting the Field Supply (Full-wave)

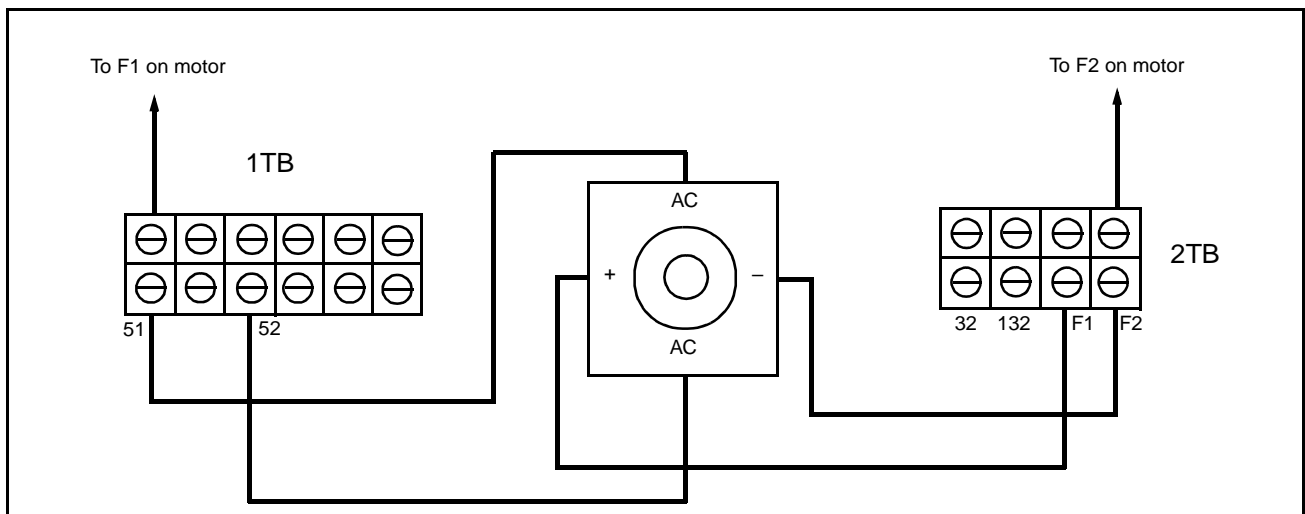


Figure 4 – Connecting the Field Supply (Half-wave)

Step 11. Verify the wiring of the Field Supply kit and that all connectors are securely fastened.

Step 12. Replace the auxiliary mounting bracket removed in step 4.

Step 13. Reattach the cover to the drive.

Step 14. Apply power and test the operation of the drive.

This completes the installation of the Field Supply kit in a regenerative FlexPak Plus drive.

## Technical Specifications

AC Line Voltage (VAC)	Field Supply Voltage Output (VDC)		Field Supply Current Output (Amps)
	Full-wave	Half-wave	
115	100	50	3.0
230	200	100	3.0

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