



PowerFlex® 700L Frame 3A and 3B Input Filter Precharge Resistor Kit (20L-RESPRE-A1)



ATTENTION: To avoid an electric shock hazard, ensure that all power to the complete drive cabinet has been removed before performing any steps of these instructions.



ATTENTION: To avoid an electric shock hazard, verify that the voltage on the bus capacitors has completely discharged before performing any work on the complete drive cabinet. After removing power, wait 5 minutes for the power module bus capacitors to discharge. Remove the lower front cover of the power module. Measure the DC bus voltage at the DC+ TESTPOINT and DC- TESTPOINT sockets on the front of the power module. The voltage must be zero.



ATTENTION: HOT surfaces can cause severe burns. **Do not** touch the heatsink surface during operation of the power module. After disconnecting power allow time for cooling.



ATTENTION: The complete drive cabinet contains **ESD** (Electrostatic Discharge) sensitive parts and assemblies. Static control precautions are required when installing, testing, servicing or repairing the complete drive. Component damage may result if ESD control procedures are not followed. If you are not familiar with static control procedures, refer to Allen-Bradley publication 8000-4.5.2, “Guarding Against Electrostatic Damage” or any other applicable ESD protection handbook.

Where This Kit Is Used

This kit can only be used with PowerFlex 700L Frame 3A and 3B complete drives. It is used to increase the precharge power capacity of the drive. This kit may be required when powering another drive from the DC bus of a Frame 3A or 3B complete drive. Only one kit per drive is permitted. See the tables below for comparisons of maximum DC bus capacitance.

Table A Maximum DC Bus Capacitance with Existing Precharge

Input Voltage	400V AC		480V AC		600V AC		690V AC	
Frame Size	3A	3B	3A	3B	3A	3B	3A	3B
Drive's Internal DC Bus Capacitance (µF)	16,200	32,400	16,200	32,400	10,800	21,600	10,800	21,600
Maximum External DC Bus Capacitance (µF)	19,150	38,301	8,349	16,698	4,911	9,823	1,080	2,160
Maximum Total DC Bus Capacitance (µF)	35,350	70,701	24,549	49,098	15,711	31,423	11,880	23,760

Table B Maximum DC Bus Capacitance with Precharge Kit Plus Existing Precharge

Input Voltage	400V AC		480V AC		600V AC		690V AC	
Frame Size	3A	3B	3A	3B	3A	3B	3A	3B
Drive's Internal DC Bus Capacitance (µF)	16,200	32,400	16,200	32,400	10,800	21,600	10,800	21,600
Maximum External DC Bus Capacitance (µF)	89,851	109,002	57,447	65,796	36,334	41,245	24,840	25,920
Maximum Total DC Bus Capacitance (µF)	106,051	141,402	73,647	98,196	47,134	62,845	35,640	47,520

Parameter 162 - [Capacitance] of the PowerFlex 700L Active Converter must be set to the total DC bus capacitance of the PowerFlex 700L complete drive plus the other drives connected to the DC bus.

What This Kit Includes

- Precharge Resistor Plate Assembly
- Four (4) M6 x 16 mm (0.63 in.) long hex head Taptite® screws

Taptite is a registered trademark of REMINC (Research Engineering & Manufacturing Inc.)

Note: The customer must provide wire, lugs, and hardware.

Tools That You Need

- 10 mm socket
- Phillips® #1 screwdriver
- Phillips® #2 screwdriver
- Torque wrench
- Wire stripper

Phillips is a registered trademark of Phillips Screw Company.

What You Need to Do

To install the PowerFlex® 700L Frame 3A and 3B Precharge Resistor Kit:

- Step 1: Remove power from the complete drive.
- Step 2: Drill installation holes (only required for input filter panel without holes).
- Step 3: Mount the kit.
- Step 4: Wire the kit.

Step 1: Removing Power from the Complete Drive



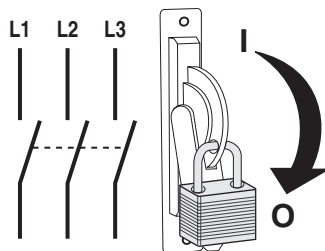
ATTENTION: To avoid an electric shock hazard, verify that the voltage on the bus capacitors has completely discharged before performing any work on the complete drive cabinet. After removing power, wait 5 minutes for the power module bus capacitors to discharge. Remove the lower front cover of the power module. Measure the DC bus voltage at the DC+ TESTPOINT and DC- TESTPOINT sockets on the front of the power module. The voltage must be zero.

Remove power before making or breaking cable connections. When you remove or insert a cable connector with power applied, an electrical arc may occur, which can cause personal injury or property damage by:

- sending an erroneous signal to your system's field devices, causing unintended machine motion
- causing an explosion in a hazardous environment

Electrical arcing causes excessive wear to contacts on both the module and its mating connector. Worn contacts may create electrical resistance.

1. Turn off and lock out complete drive input power. Wait 5 minutes.



2. Verify that there is no voltage at the complete drive's input power terminals.
3. Remove the lower front cover of the power module. Loosen the two (2) captive screws and pull the cover off the power module. Set the cover aside to be reinstalled later.
4. Measure the DC bus voltage at the DC+ TESTPOINT and DC- TESTPOINT sockets on the front of the power module chassis. The voltage must be zero.

Step 2: Drilling Installation Holes (only required for input filter panel without pre-drilled holes)

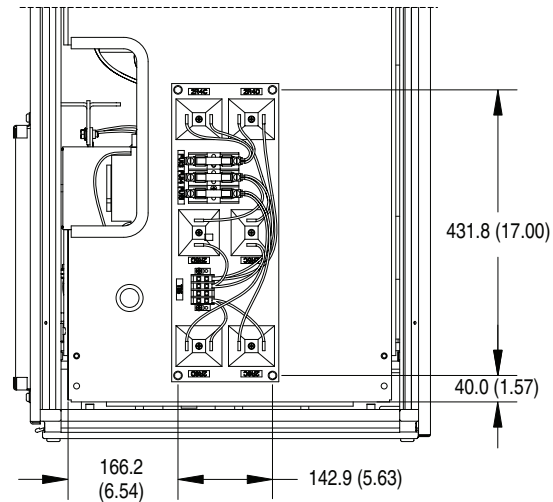


ATTENTION: To avoid damaging critical electrical components behind the input filter divider panel when drilling holes, set the drill bit length to a maximum of 25.4 mm (1.0 in.).

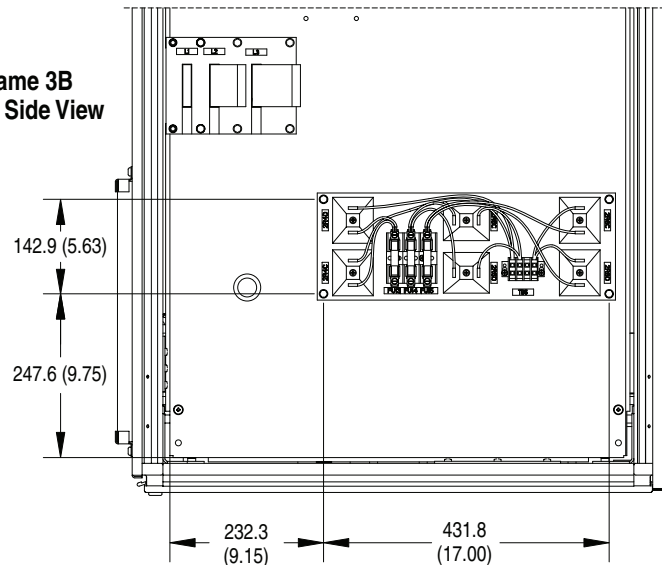
If the input filter panel has no pre-drilled holes, drill four (4) mounting holes at the dimensions shown in the drawings below in the right side panel of the input filter. Use a #16 (4.5 mm/0.177 inch diameter) twist drill bit to make the required diameter holes for the M6 x 16 mm (0.63 in.) long Taptite hex head screws provided in the kit. Take care to prevent metal chips from entering the enclosure.

Dimensions are in millimeters (inches).

**Frame 3A
Right Side View**

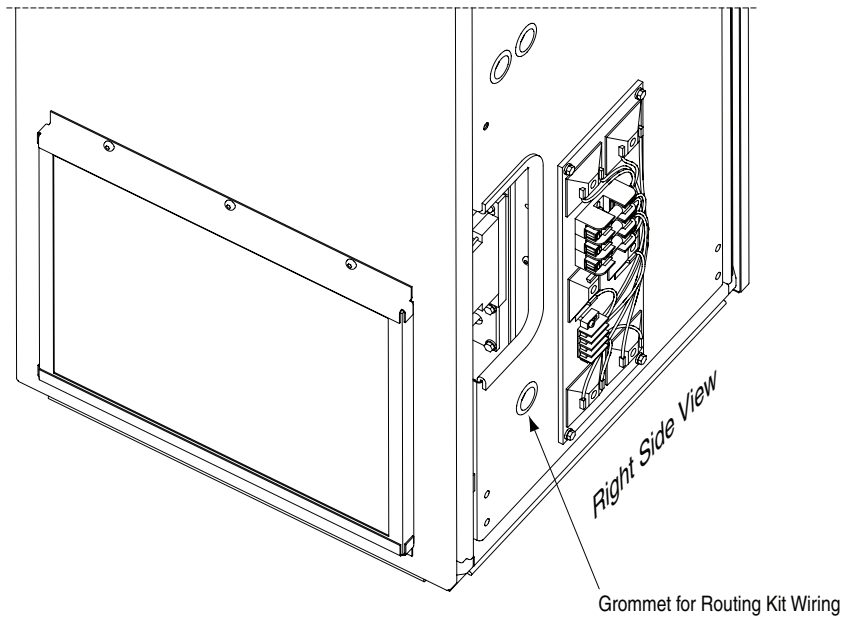
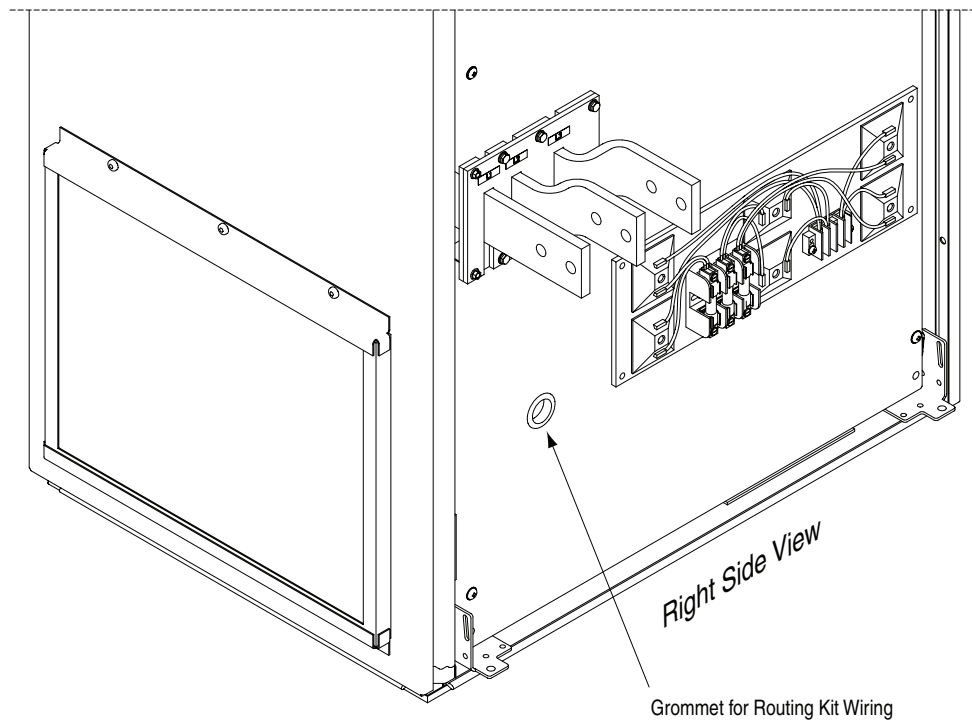


**Frame 3B
Right Side View**

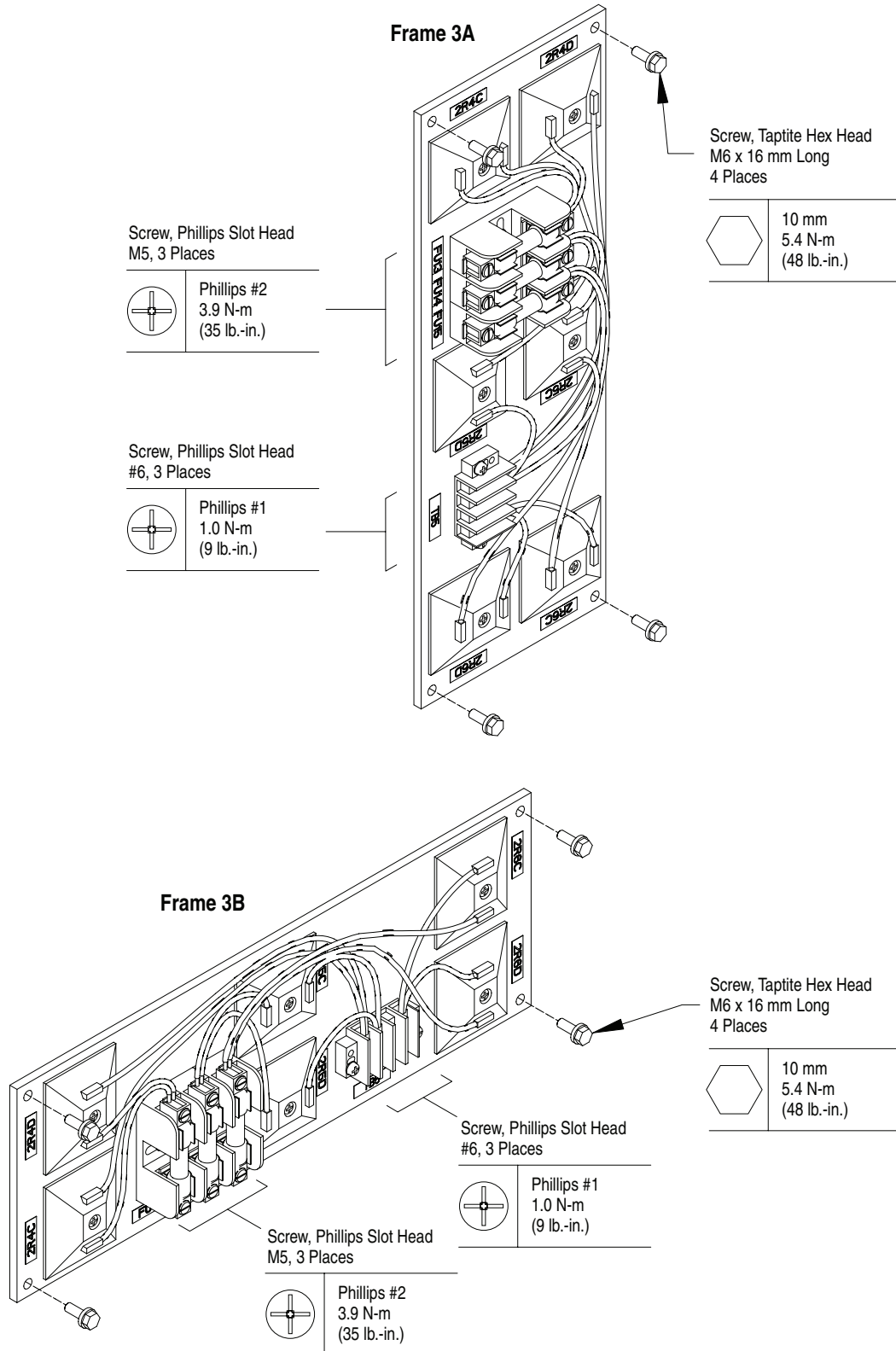


Step 3: Mounting the Kit

1. Orient the kit vertically (Frame 3A) or horizontally (Frame 3B) on the right side panel of the input filter as shown in the drawings below.

**Frame 3A Precharge Resistor Kit (shown installed)****Frame 3B Precharge Resistor Kit (shown installed)**

- Mount the kit using the four (4) new M6 x 16 mm (0.63 in.) long Taptite® hex head screws from the kit. Tighten the screws to the torque shown in the drawing below.

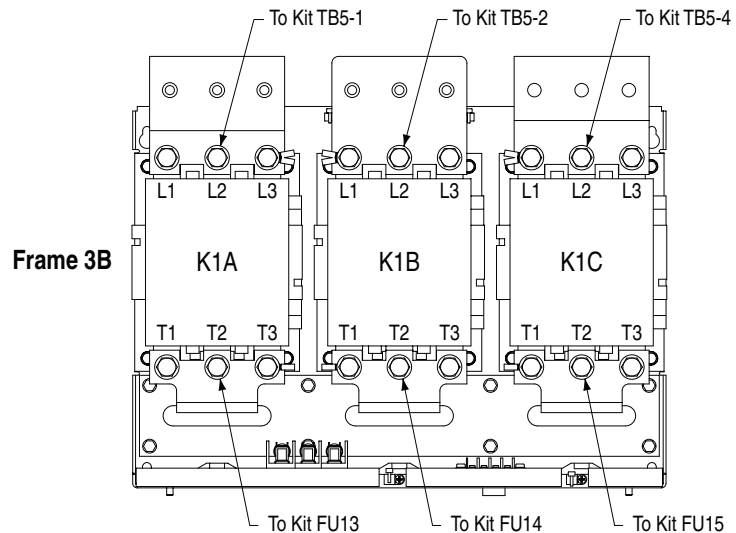
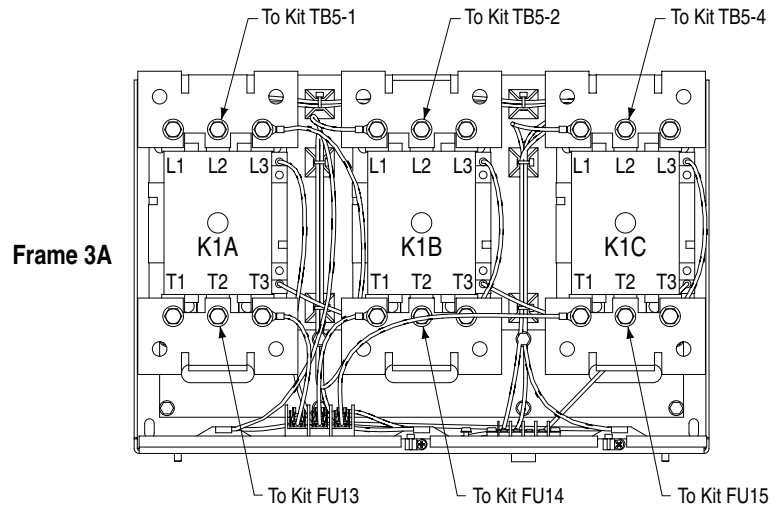


Step 4: Wiring the Kit

Connect the kit's resistors in parallel with the existing precharge resistors in the input filter. Wire the kit as follows:

From Kit	To Input Filter
TB5-1	K1A-L2
TB5-2	K1B-L2
TB5-4	K1C-L2
FU13	K1A-T2
FU14	K1B-T2
FU15	K1C-T2

On the kit side, tighten the screws to the torque shown in the drawings of Step 3. Use tie-wraps to bundle the wiring. Route the wiring through the grommet hole shown in the drawing on page 5. On the input filter side, use the existing M8 hex head screws on the contactors as shown in the drawings below and ring lugs (not provided) for wiring connections. Tighten the screws on the contactors to 14.9 N-m (132 lb.-in.).



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