



REVERSING CONTACTOR KIT MODEL NUMBERS 14C400, 14C401, 14C402 ASSEMBLY DRAWINGS 705385-75

The equipment described below should be installed only by qualified electrical maintenance personnel familiar with the construction and operation of the equipment and the hazards involved.

DESCRIPTION

The standard three-phase FlexPak Plus/MinPak Plus controller offers unidirectional control. See figure 1. With an optional reversing contactor kit mounted on the auxiliary panel, bidirectional operation (both forward and reverse) is possible. See figure 2. Motor direction is manually selected.



Figure 1 – Three-Phase MinPak Plus/FlexPak Plus Reversing Kit

CAUTION

The FlexPak Plus/MinPak Plus controllers were designed for motoring operation only. In reversing applications the drive must be assured to come to a rest before the reversing contactor is pulled in. If not, the possibility of transient regenerative currents can occur with the result being significant damage to the controller.



Figure 2 – Reversing Kit Installed On Auxiliary Panel

The thick black bar shown on the right-hand margin of this page will be used throughout this instruction manual to signify new or revised text or figures.

INSTALLATION

WARNING

BEFORE ATTEMPTING TO INSTALL THE MIN-PAK PLUS/FLEXPAK PLUS MODIFICATION KIT, DISCONNECT AND LOCK OUT ALL SOURCES OF INCOMING POWER TO THE CONTROLLER.

- Open the faceplate and let it hang down.
- Remove fuse/circuit breaker mounting plate from auxiliary panel by removing three screws.
- Mount contactor to auxiliary chassis on 8-10 HP 230VAC units. Use the two taptites provided. On 15-20 HP @ 230VAC and 3-40 HP @ 460VAC units, use four taptites and four flat washers. Refer to iligures 3 and 4.



Figure 3 – 3-10 HP @ 230VAC Reversing Kit Mounting Locations







Figure 5 – Internal Jumper Connection for 3-10 HP @ 230VAC Reversing Application

- 3-10 HP 230VAC only. Connect (umpers S1, 47, A1, and A2 from lorward contactor to reversing contactor as shown. Refer to figure 5. (Skip to slep 7).
- All other ratings. Connect bus bar S1, 47, A1 and A2 from forward contactor to reversing contactor as shown. Refer to figure 4.
- Mount pilot relay printed circuit card to auxiEary chassis using two binding HMS and star washers Sea figure 4. Connect leads 188-189 from pilot relay card to terminal board on forward pilot relay card mounted on left side of auxiliary panel.
- Mount label in corresponding position. See figures 3 and 4.
- Connect harness from contactor, 3-10 hp @ 230VAC units, or pilot relay, to Regulator Printed Circuit module terminal 139.
- If an optional Tachometer Feedback Kit (M/N 14C221) is used, locate jumpers J1 and J2 on the Tachometer Module. Refer to figures 6 and 7. Clip out and discard these jumpers.

DANGER

WHEN A REVERSING CONTACTOR IS INSTALLED OR FOR ANY REASON THE TACHOMETER OUTPUT VOLTAGE IS REVERSED, JUMPERS J1 AND J2 ON THE TACHOMETER FEEDBACK KIT MUST BE REMOVED REGARDLESS OF THE TYPE TACHOMETER USED. PERSONAL INJURY MAY RESULT IF THIS PROCEDURE IS NOT FOLLOWED.



Figure 6 - Tachometer Feedback Kit Mounted on Regulator Module



Figure 7 - Jumpers J1, J2

- 10. Disconnect lead 45 at contactor.
- FlexPak Plus only Install terminal block S1 between existing terminals 53 and 45. Add marking tag S2 to top of existing terminal 45. Disconnect lead 45 at terminal block and remove this lead totally from controller.

MinPak Plus only – Install terminal blocks S1 and 45-S2 between existing terminal blocks A2 and F1. Heconnect lead 45 to terminal block 45.

 Connect lead S1 to contactor. Lead must be routed under terminal board mounting bracket. See figure 8.



Figure 8 - Series Field Terminal Connection

- 13. Cut jumper J9 on Regulator Printed Circuit Module.
- Remount fuse/circuit breaker mounting plate to auxiliary chassis using existing three screws.
- Tighten all connectors that may have loosened during kit installation
- 16. Close faceplate and tighten screws.

See figures 9 and 10 for an installed reversing kit schematic and a typical bidirectional control scheme.



Figure 9 – 15-20 HP @ 230VAC/3-40 HP @ 450VAC Installed Reversing Kit Schematic



Figure 10 - Typical Bidirectional Control Scheme

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