FLEXPAK PLUS / MINPAK PLUS ACCESSORY

INSTRUCTION MANUAL D-3957

DYNAMIC BRAKING KIT

MODEL NUMBERS 14C630-14C644, 14C420-14C434

ASSEMBLY DRAWINGS 801455-4

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 and MinPak Plus controllers allow a drive motor to coast to rest after the stop switch is pressed. Optionally, a user may install a Dynamic Braking kit. (Refer to Figure 1 and Figure 2) Dynamic Braking is not a mechanical holding brake. It will not hold the shaft in place nor will it prevent the motor from turning once motion has stopped.

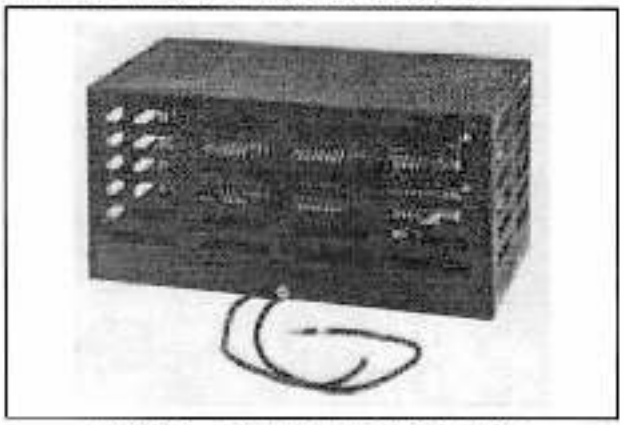

Figure 1 – Three Phase MinPak Plus Dynamic Braking Kit

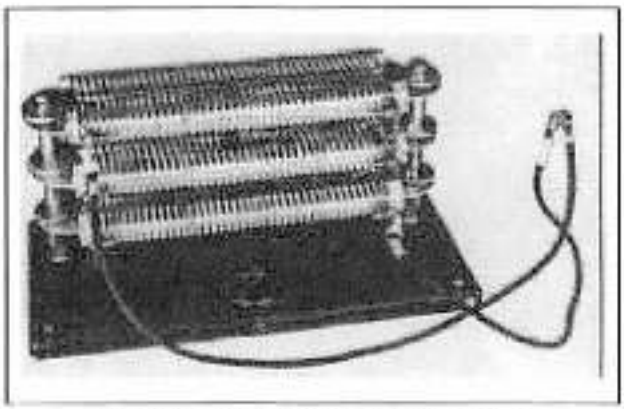

Figure 2 – Three Phase FlexPak Plus Dynamic Braking Kit

The Dynamic Braking option is actually a resistor connected across the motor armature. It allows a motor to act as a generator; the rotating mechanical (kinetic) energy is converted into electrical energy that is dissipated in the form of heat by the Dynamic Braking resistor.

Note that the resistor is sized for infrequent stops. Thus, users must allow time between stops for heat dissipation.

When ordering the Kit, it is necessary to specify Model Numbers according to horsepower and voltage ratings.

SPECIFICATIONS

Table 1 – 230VAC. 3 Phase, 50/60 Hz 240VDC Armature

MinPak Plus Model No.	FlexPak Plus Model No.	HP	RES Value (OHMS)	Reliance Part No.	QUA	Watt-Seconds @ 375°C
14C433	14C643	3	9.420	48267-L	1	2,466
14C423	14C630	5	5.930	48267-J	1	3,937
14C421	14C631	7.5	3.891	48267-G	1	6,212
14C422	14C632	10	3.044	48267-F	1	7,981
14C425	14C633	15	1.912	48267-D	1	12,981
14C424	14C634	20	1.523	48267-C	1	16,365

Table 2 – 460VAC, 3 Phase, 50/60 Hz 500VDC Armature

MinPak Plus Model No.	FlexPak Plus Model No.	HP	RES Value (OHMS)	Reliance Part No.	QUA	Connection	Total OHMS	Watt-Seconds @ 375°C
14C434	14C644	3	20.87	48267-P	2	Series	41.74	4,090
14C425	14C635	5	12.06	48267-M	2	Series	24.10	3,894
14C426	14C636	7.5	5.930	48267-J	3	Series	17.79	11,811
14C427	14C637	10	4.698	48267-H	3	Series	14.09	14,986
14C428	14C638	15	3.044	48267-F	3	Series	9.132	23,763
14C429	14C639	20	2.370	48267-E	3	Series	7.110	30,426
14C430	14C640	25	1.912	48267-D	3	Series	5.736	38,943
14C431	14C641	30	1.523	48267-C	3	Series	4.569	49,065
14C432	14C642	40	1.212	48267-B	3	Series	3.636	62,676

(Note: Initial Current of 150% Derated I_A)

INSTALLATION

WARNING

BEFORE ATTEMPTING TO INSTALL THIS MINPAK PLUS/FLEXPAK PLUS MODIFICATION KIT DISCONNECT AND LOCK OUT ALL SOURCES OF INCOMING POWER TO THE CONTROLLER.

MINPAK PLUS:

Remove 5 knockouts in top of cabinet (Figure 3).

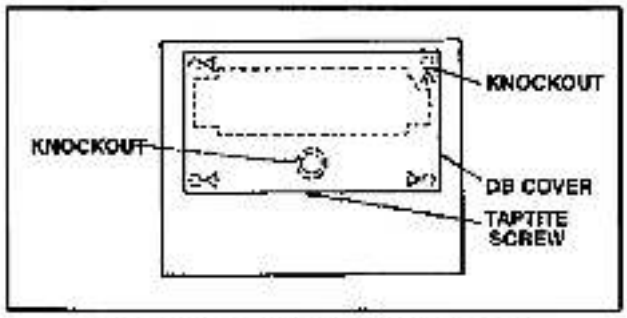

Figure 3 – Top View of Three Phase MinPak Plus Cabinet

1. Insert grommet into 1.75 diameter hole.
2. Place assembled mtg. panel on top of cabinet and feed leads DB1 and DB2/A2 through the grommet.
3. Secure assembled mounting panel to cabinet using four hex head cap screws, washers, flatwashers, split washers and hex nut mounting hardware (Figure 8). ***(NOTE: Hardware must be used as shown in Figure 4 to insure NEMA 12 rating.)***
4. Mount DB cover to mounting panel by inserting tabs into slots on mounting panel and using taptite screw provided.

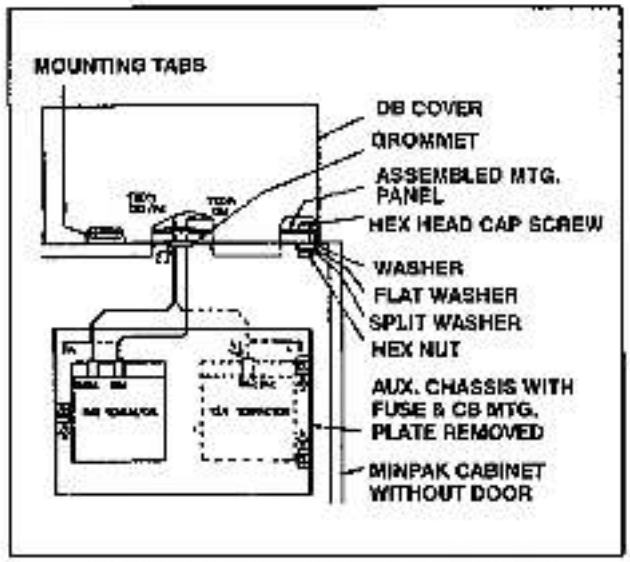

Figure 4 – Front View of Three Phase MinPak Plus Cabinet

5. Open cabinet door and open controller face plate and let hang open.
6. /Remove fuse/circuit breaker mounting plate from auxiliary chassis by removing three screws.
7. Connect lead DB1 to forward contactor and lead DB2/A2 to other side of forward contactor. For reversing applications connect DB2/A2 to reversing contactor. (Refer to Figures 4 and 5).
8. Remount fuse/circuit breaker plate to auxiliary chassis using three existing screws.
9. Tighten all connectors that may have loosened during kit installation.
10. Close controller face plate and tighten screws.

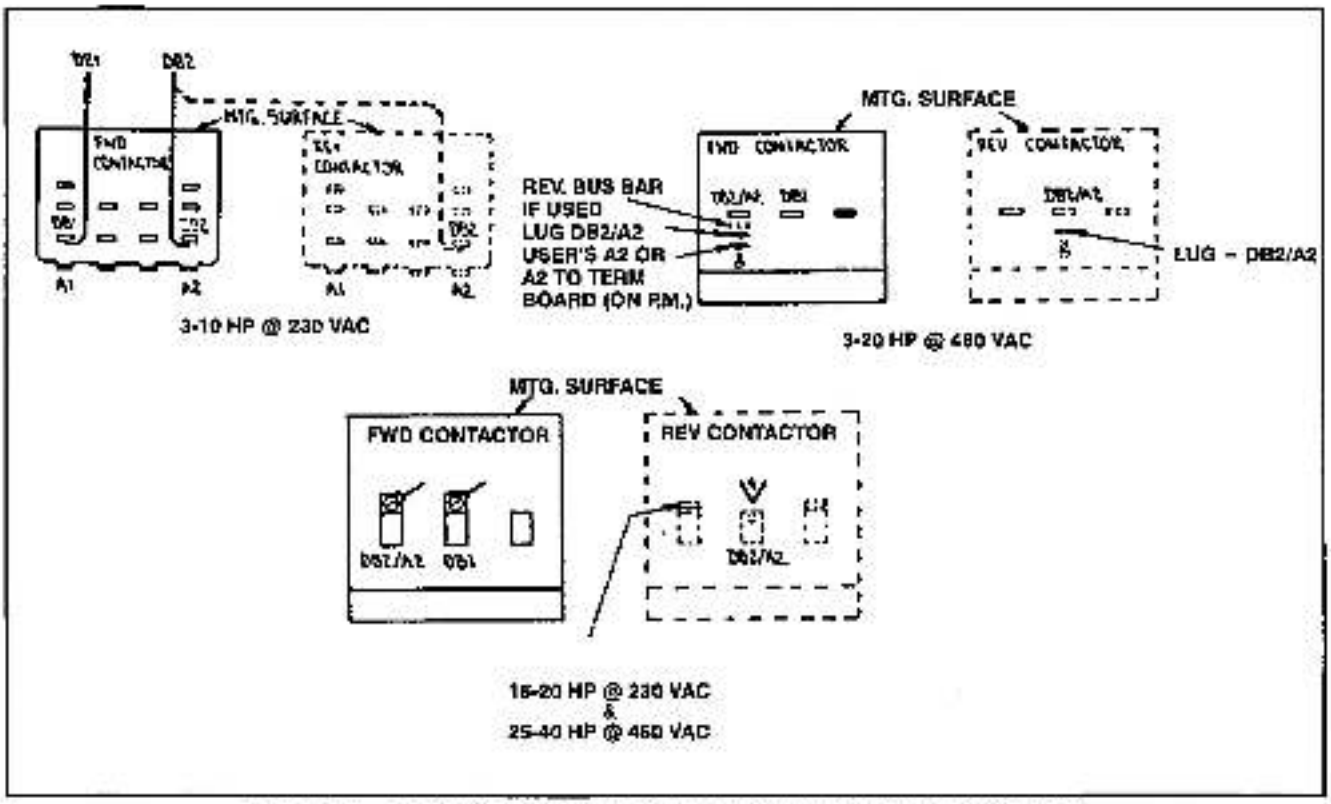

Figure 5 – Contactor Configurations For Dynamic Braking Kit Wiring

FLEXPAK PLUS:

Mount assembled panel into user supplied enclosure.

1. Connect leads DB1 and DB2/A2 to resistors (Refer to Figures 2, 6 & 7).
2. Open controller face plate and let hang open.
3. Remove fuse/circuit breaker mounting plate from auxiliary chassis by removing three screws.
4. Connect lead DB1 to forward contactor and lead DB2/A2 to other side of forward contactor. For reversing applications connect DB2/A2 to reversing contactor. (Refer to Figure 5).
5. Remount fuse/circuit breaker plate to auxiliary chassis using three existing screws.
6. Tighten all connectors that may have loosened during kit installation.
7. Close controller face plate and tighten screws.

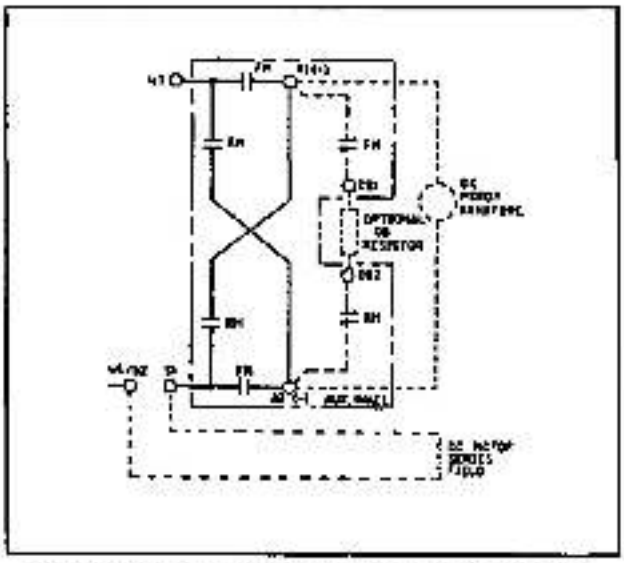

Figure 6 – Dynamic Braking Kit With Optional Reversing Kit Schematic

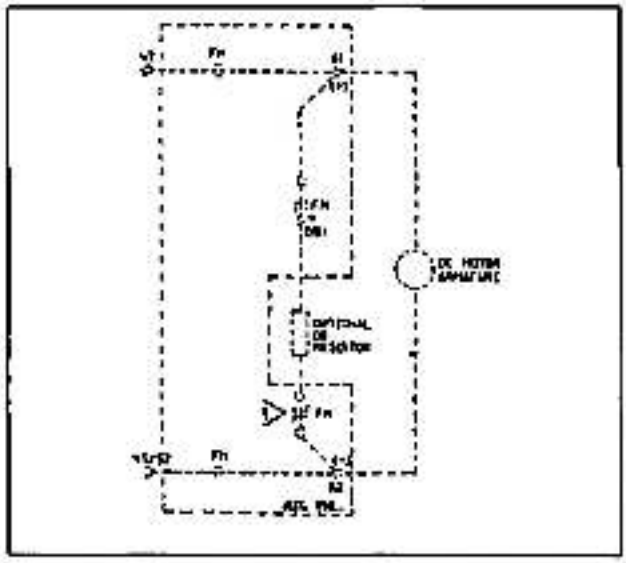

Figure 7 – Dynamic Braking Kit For Unidirectional Application Schematic

Reliance Electric Company / 24703 Euclid Avenue / Cleveland, Ohio 44117

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