

INSTRUCTION SHEET D2-3254

RPM Blower Motor Protection Kit Model 1BM4000

For Use With GP2000 and VTAC V 1-100 HP A-C V★S® Drives

DANGER

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 IN ITS ENTIRETY BEFORE PROCEEDING. FAILURE TO OBSERVE THIS PRECAUTION COULD RESULT IN SEVERE BODILY INJURY OR LOSS OF LIFE.

DESCRIPTION

The products described in this instruction sheet are manufactured and/or distributed by Reliance® Electric Industrial Company.

The RPM Blower Motor Protection Kit is a set of fuses designed to provide overload protection for the ventilating fan motor used on Reliance RPM™ A-C motors. This kit can be used with GP2000 controllers rated 1-100 HP (1-20 HP in Expanded Cabinet) and VTAC V controllers rated 1-100 HP.

RECEIVE AND ACCEPT THE SHIPMENT

Reliance Electric's terms of sale in all instances are F.O.B. point of origin. The user is responsible for thoroughly inspecting the equipment before accepting shipment from the transportation company.

If all the items called for on the bill of lading or on the express receipt are not included or if any items are obviously damaged, do not accept the shipment until the freight or express agent makes an appropriate notation on your freight bill or express receipt. If any concealed loss or damage is discovered later, notify your freight or express agent within 15 days of receipt and request that he make an inspection of the shipment. Keep the entire shipment intact in its original shipping container.

The user is responsible for making claim against the carrier for any shortage or damage occurring in transit. Claims for loss or damage in shipment must not be deducted from the Reliance Electric invoice, nor should payment of the invoice be withheld while awaiting adjustment of such claims since the carrier guarantees safe delivery.

Upon receiving, check that the contents of the kit are as listed in Table 1. Store this equipment in a clean and dry

area until ready to use. The ambient temperature of the storage area must not exceed 65°C (149°F) or go below -40°C (-40°F) within a relative humidity range of 5 to 95% without condensation.

FILE A RETURN REQUEST

1. To return equipment, send a written request to Reliance Electric within ten days of receipt.
2. Do not return equipment without a numbered Equipment Return Authorization (ERA) from Reliance Electric.
3. Reliance Electric reserves the right to inspect the equipment on site.

Table 1. Complete Parts List.

Description	Quantity	Part Number
Fuse Block (3 position)	1	49454-19C
M4 x 10 TTS	2	419062-100PGG
Fuse (7.50 A)	3	64676-72U
Fuse (3.50 A)	3	64676-72L
Fuse (2.50 A)	3	64676-72J
Fuse (1.50 A)	3	64676-72F
Fuse (0.50 A)	3	64676-72B
Fuse (0.25 A)	3	64676-72A
Fuse (0.80 A)	3	64676-72C
Nameplate (FU. REPL. 7.50 A)	1	417114-77AE
Nameplate (FU. REPL. 3.50 A)	1	417114-77AC
Nameplate (FU. REPL. 2.50 A)	1	417114-77AA
Nameplate (FU. REPL. 1.50 A)	1	417114-77F
Nameplate (FU. REPL. 0.50 A)	1	417114-77B
Nameplate (FU. REPL. 0.25 A)	1	417114-77S
Nameplate (FU. REPL. 0.80 A)	1	417114-77D
Wire Harness	1	803432-76R
Wire Harness	1	612182-40R
Ty-Rap	4	69306-3D

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Table 2. RPM Blower Motor Fuse Selection.

Enclosure	Frame	Blower 3-Phase 460V 60 Hz; 380V 50 Hz		Full Load Amps	Reliance RPM A-C Motor		Fuse Amp Rating
		Blower Motor Part Number	Locked Rotor Amps		Typical HP @1750 RPM	Typical HP @850 RPM	
TEAO-BC	L210	613450-1A	0.35	0.11	15-25	7.5-10	0.25
TEAO-BC	L250	613450-2A	0.68	0.28	30-40	15-20	0.50
TEAO-BC	L280	613450-2A	0.68	0.28	50-60	25-30	0.50
TEAO-BC	L320	613450-2A	0.68	0.28	75-100	40-50	0.50
TEAO-BC	L360	610490-1A	5.50	0.75	125-150	60-75	1.50
TEAO-BC	L400	610490-1AF	18.0	1.75	200-300	100-150	3.50
DPFV	L210	610490-1A	5.50	0.75	30-40	N/A	1.50
DPFV	L250	610490-1A	5.50	0.75	50-75	30	1.50
DPFV	L280	610490-1AH	9.30	1.30	100-150	50-75	2.50
DPFV	L320	610490-1AH	9.30	1.30	200-250	100-125	2.50
DPFV	L360	610490-1AF	18.0	1.75	300-400	150-200	3.50
DPFV	L400	610490-1BW	28.5	3.80	500	250	7.50
TEAO-BC-XT	L210	610490-1A	5.50	0.75	15-25	7.5-10	1.50
TEAO-BC-XT	L250	610490-1A	5.50	0.75	30-40	15-20	1.50
TEAO-BC-XT	L280	610490-1A	5.50	0.75	50-60	25-30	1.50
TEAO-BC-XT	L320	610490-1A	5.50	0.75	75-100	40-50	1.50
TEAO-BC-XT	L360	610490-1A	5.50	0.75	125-150	60-75	1.50
TEAO-BC-XT	L400	610490-1AF	18.0	1.75	200-300	100-150	3.50

Note: The following is recommended as a replacement fuse: Littell Fuse type KLMR, 1/2" x 13/32" cartridge. This is a time-delay, 600-volt, rejection type fuse, Class CC, designed specifically for blower motor protection.

INSTALLATION

1-20 HP GP2000 in Expanded Cabinet

25-40 HP GP2000

1-50 HP VTAC V

Refer to the next section of this instruction sheet if installing this kit in 50-100 HP GP2000 or 60-100 HP VTAC V.

DANGER

DO NOT INSTALL MODIFICATION KITS WITH POWER APPLIED TO THE UNIT. DISCONNECT AND LOCK OUT INCOMING POWER BEFORE ATTEMPTING SUCH INSTALLATION. FAILURE TO OBSERVE THIS PRECAUTION COULD RESULT IN SEVERE BODILY INJURY OR LOSS OF LIFE.

1. Disconnect all power to the controller before installing this kit.
2. Remove the controller cover and set aside for reassembly.
3. Mount the fuse block in the controller cabinet. Refer to Figure 1 for mounting location. Use M4 x 10 TTS screws to mount the fuse block.

Note: Mounting the RPM A-C Blower Motor Protection Kit may be mutually exclusive with other kits within the Inverter cabinet. Contact your Reliance Electric Sales Office for assistance.

DANGER

THE USER IS RESPONSIBLE FOR CONFORMING TO THE NATIONAL ELECTRICAL CODE AND ALL OTHER APPLICABLE LOCAL CODES. WIRING PRACTICES, ENCLOSURES, GROUNDING, DISCONNECTS, AND OVERCURRENT PROTECTION ARE OF PARTICULAR IMPORTANCE. FAILURE TO OBSERVE THESE PRECAUTIONS COULD RESULT IN SEVERE BODILY INJURY OR LOSS OF LIFE.

4. Follow the wiring diagrams and instructions in the Controller Instruction Manual and/or any other appropriate kit instruction manuals (if other kits are installed) for all wires except those wires detailed in this instruction sheet.
5. Using wire harness 803432-76R (181B, 182B, and 183B), connect the terminals on the top of the fuse block to input terminals R', S', and T' on the terminal board. Refer to Figure 1 for wiring detail.
6. Using wire selected in accordance with all applicable codes, connect the leads on the RPM blower motor to the terminals on the bottom end of the fuse block. Route the motor lead wiring through an appropriate conduit hole on the top or bottom of the controller cabinet. Refer to Figure 1 for wiring detail.

7. Select the appropriate set of three fuses based on the RPM A-C motor specifications as detailed in Table 2.
8. Select the appropriate nameplate based on fuse amperage selected in the previous step. Mount the nameplate beside the fuse block. Refer to Figure 1 for location.
9. Replace the controller cover.

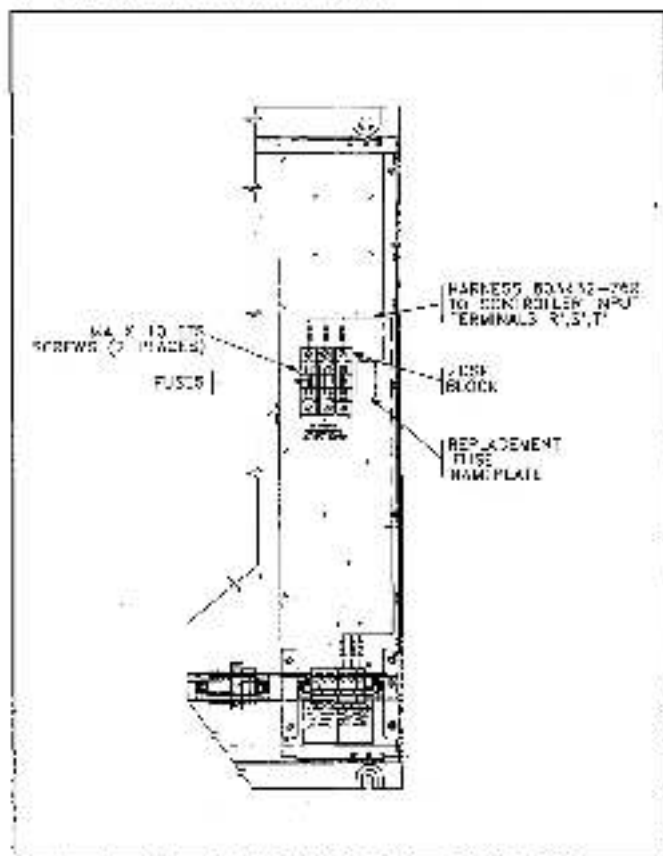


Figure 1. Fuse Block Mounting Location and Connection Diagram (1-20 HP GP2000 Expanded Cabinet, 25-40 HP GP2000, 1-50 HP VTAC V Controllers).

INSTALLATION

50-100 HP GP2000

60-100 HP VTAC V

DANGER

DO NOT INSTALL MODIFICATION KITS WITH POWER APPLIED TO THE UNIT. DISCONNECT AND LOCK OUT INCOMING POWER BEFORE ATTEMPTING SUCH INSTALLATION. FAILURE TO OBSERVE THIS PRECAUTION COULD RESULT IN SEVERE BODILY INJURY OR LOSS OF LIFE.

1. Disconnect all power to the controller before installing this kit.
2. Loosen the two (2) captive screws and open the hinged cabinet door.
3. Mount the fuse block in the inverter cabinet on the D-C Bus Capacitor Bank plate 708207-11A, located above the capacitor bank. Refer to Figure 2 for mounting location. Use M4 x 10 TTS screws to mount the fuse block.

DANGER

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4. Follow the wiring diagrams and instructions in the Controller Instruction Manual and/or any other appropriate kit instruction manuals (if other kits are installed) for all wires except those wires detailed in this instruction sheet.
5. Using wire harness 812182-40R (BRN/ORG/BLU), connect the terminals on the top of the fuse block to their respective inverter fuse block terminals. Refer to Figure 2 for wiring detail.
6. Using wire selected in accordance with all applicable codes, connect the leads on the RPM blower motor to the terminals on the bottom end of the fuse block. Route the motor lead wiring through an appropriate conduit hole on the top or bottom of the inverter cabinet. Refer to Figure 2 for wiring detail.
7. Select the appropriate set of three fuses based on the RPM A-C motor specifications as detailed in Table 2.
8. Select the appropriate nameplate based on the fuse amperage selected in the previous step. Mount the nameplate beside the fuse block. Refer to Figure 2 for location.
9. Close the cabinet door and tighten the two captive screws.

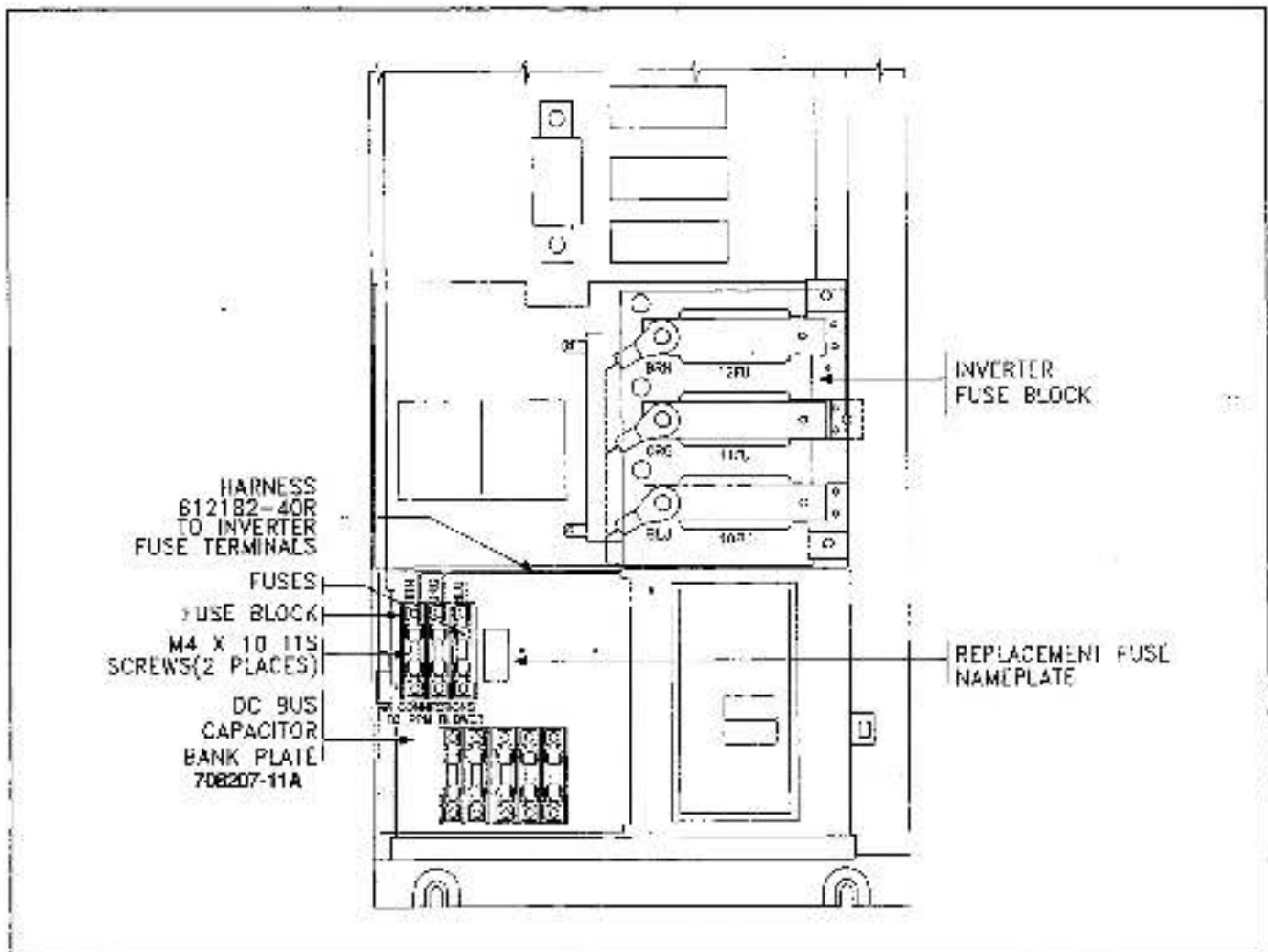


Figure 2. Fuse Block Mounting Location and Connection Diagram (50-100 HP GP2000 and 60-100 HP YTAC V Controllers).

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