INSTRUCTION MANUAL

KEPCO An ISO 9001 Company.

BOP 1KW-GL, EL TO MGL, MEL
FRONT PANEL RETROFIT KIT

1. DESCRIPTION

Kepco KIT 219-0628 contains a front panel assembly that includes a color display and keypad which is used to upgrade BOP 1KW-GL and -EL models to -MGL and -MEL models, respectively.

2. APPLICABILITY

This KIT applies only to models listed in Table 1.

TABLE 1. APPLICABILITY

MODEL	KIT PART NUMBER
BOP 10-100GL	KIT 219-628-1G
BOP 10-100EL	KIT 219-628-1E
BOP 20-50GL	KIT 219-628-2G.
BOP 20-50EL	KIT 219-628-2E
BOP 36-28GL	KIT 219-628-3G.
BOP36-28EL	KIT 219-628-3E
BOP 50-20GL	KIT 219-628-5G.
BOP 50-20-EL	KIT 219-628-5E

3. INSTALLATION INSTRUCTIONS

3.1 MATERIAL REQUIRED (See Table 2.)

TABLE 2. MATERIAL REQUIRED

MATERIAL	LOCATION	QUANTITY
Front Panel Assembly	Provided in this Kit	1
Instruction Manual Kepco P/N 228-1917	Provided in this Kit	1
Phillips Screw Driver	Not Supplied	N/A

3.2 DISASSEMBLY PROCEDURE

1. Turn power off, disconnect the unit from source power and remove line cord.

2. Remove four front panel screws: two from the top cover and two from the bottom of the unit (see Figure 1). **CAUTION: Failure to remove these four screws can result in damage to the front panel as it is removed and a repair charge when the front panel is returned.**

3. Remove the two mounting ears from the chassis by removing three screws from each.

4. Remove the top cover of the unit by removing 12 screws as follows: four at each side (one towards the rear, three at the bottom) and four at the top of the rear panel.

5. Disconnect ribbon cable attached to Distribution board A6A1 (see Figure 1) going to Front End Control board A4A3 connector J1.

6. Disconnect ribbon cable attached to Distribution board A6A1 going to Digital board A1J2.

7. Disconnect one 4-pin and one 6-pin connector) (J12, J15, Figure 1), and one 5-pin connector (J14, Figure 1) wired with twisted pairs from Distribution board A6A1. Pull on the twisted pair where it enters the connector; if necessary, a screwdriver can be used to apply enough pressure to front panel to slightly increase separation between front panel and Distribution board A6A1, enough for the connectors to be removed.

8. Remove fan connector (J10, Figure 1) from Distribution board A6A1 by pulling connector straight back. **CAUTION: Failure to pull the fan connector straight back can damage the connector.**

9. Carefully pull the front panel straight back from the chassis to disengage the circuit breaker pins and separate the front panel from the chassis.

10. Remove the circuit breaker from the front panel by pressing the circuit breaker tabs.

3.3 FRONT PANEL REPLACEMENT (SEE FIGURE 1)

1. Unwrap new front panel supplied in this kit.

2. Use the wrapping material to wrap the front panel removed in PAR. 3.2 and ship back to Kepco for credit.

3. Insert circuit breaker removed in PAR. 3.2 into new front panel.

4. Carefully line up pins of circuit breaker removed in PAR. 3.2 with corresponding connectors on new front panel and carefully mate front panel and chassis. Press the PCB onto the circuit breaker.

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3.4 REASSEMBLY

CAUTION: Installing the inner screws first can result in damage to the front panel.

1. Attach front panel with Distribution board A6A1 to the chassis first using two outer screws at the bottom of the chassis, then two inner screws.

2. Connect one 4-pin, one 6-pin connector, and one 5-pin connector attached to twisted pairs to connectors J12, J15 and J14, respectively on Distribution board A6A1 (see Figure 1). Holding the wires, line up the pins on an angle, then push until straight and press into place; if necessary a screwdriver can be used to apply enough pressure to front panel to slightly increase separation between front panel and Distribution board A6A1, enough for the connectors to be inserted.

3. Attach the fan connector (J10, Figure 1) by inserting the connector straight into the mating socket.

4. Connect ribbon cable from Distribution board A6A1 to Digital board connector A1J2.

5. Connect ribbon cable from A4A3 module to Distribution board A6A1 connector J11.

6. Attach the cover to the chassis using 14 screws. Figure 2 shows the unit after reassembly.

7. Attach the two mounting ears to the chassis using three screws for each.

8. Install the power cord, connect the unit to source power, turn on power supply

3.5 SETUP BEFORE USE

Once the unit has been reassembled, the following procedure must be completed for the unit to function properly. Refer to BOP-1KW (MG, ME, MGL, MEL) Operator's Manual, P/N 243-1027 as needed.

1. With POWER switch set to off position, connect the power supply to source power.

2. With no load connected, set POWER switch to the ON position. Each time the unit is turned on an internal self-test is performed. If all tests pass, the unit goes into the default mode. If a failure occurs, the failure is displayed.

3.5.1 SET LOAD TYPE TO INTERNAL. Refer to CHANGING THE DEFAULT POWER UP SETTINGS paragraph of the Operator Manual for further details.

1. Press [F5] from the power-up screen to enter the General Setup menu.

2. Highlight Power-up Settings and press [F1].

3. Highlight the Main Channel Reference and press [F1] to modify. Use [↑], [↓] or the **ADJUST** control to highlight INTERNAL, then press [F4] to apply.

4. Press [F4] to save for power up.

3.5.2 CONFIGURE THE TRIGGER PORT. Operation of the Trigger Port must be set from the front panel. Refer to the USING THE TRIGGER PORT TO CUSTOMIZE OUTPUT ON/OFF OPERATION paragraph of the Operator Manual for further details.

1. Press [F5] from the power-up screen to enter the General Setup menu.

2. Highlight Load Type and press [F1] to modify. Use [↑], [↓] or the **ADJUST** control to highlight the Remote On-Off option, then press [F1] to open the Output Configuration screen and show choices.

3. Highlight either Disabled, High Is Off, Low Is Off, High Is On, Low Is On, or LowPulseOff, and press [F4] to save. Then press [F4] to save for power-up,

3.5.3 RESET PASSWORDS. Three passwords, Main Unit, Admin 1 and Admin 2, are used to protect operations from the front panel when desired. These passwords must first be reset to their defaults. Refer to the PASSWORD SETUP paragraph of the Operator Manual for further details.

1. Press [F5] from the power-up screen to enter the General Setup menu.

2. Highlight Password and press [F1].

3. Press [F2] to reset passwords to the defaults: Admin 2 password is set to "`KEPCO`," the Main Unit password is set to "`DEFAULT`," and the Admin 1 password is not assigned.
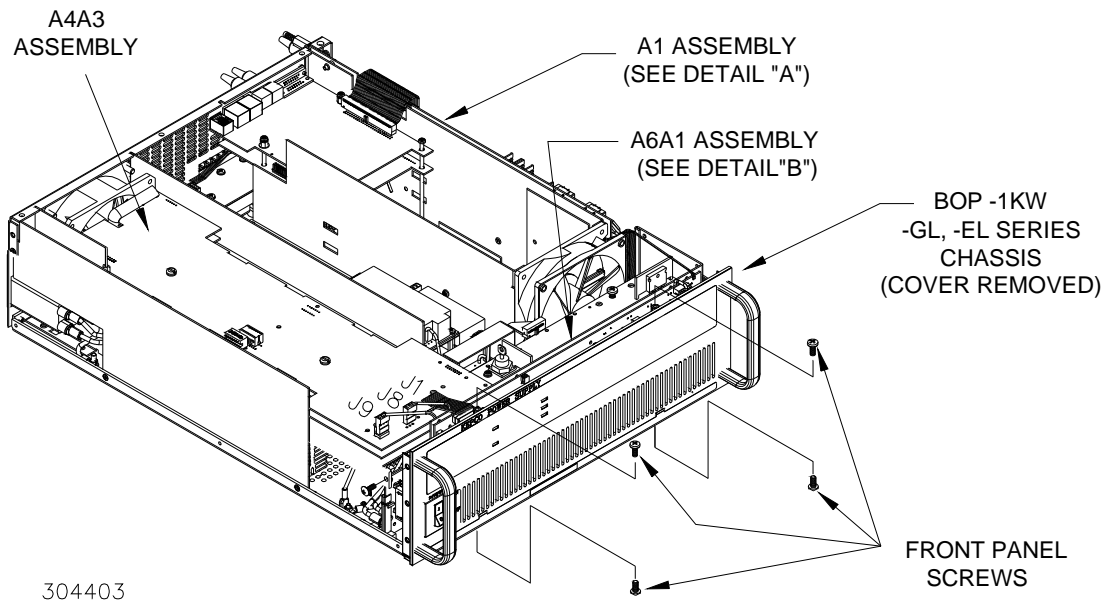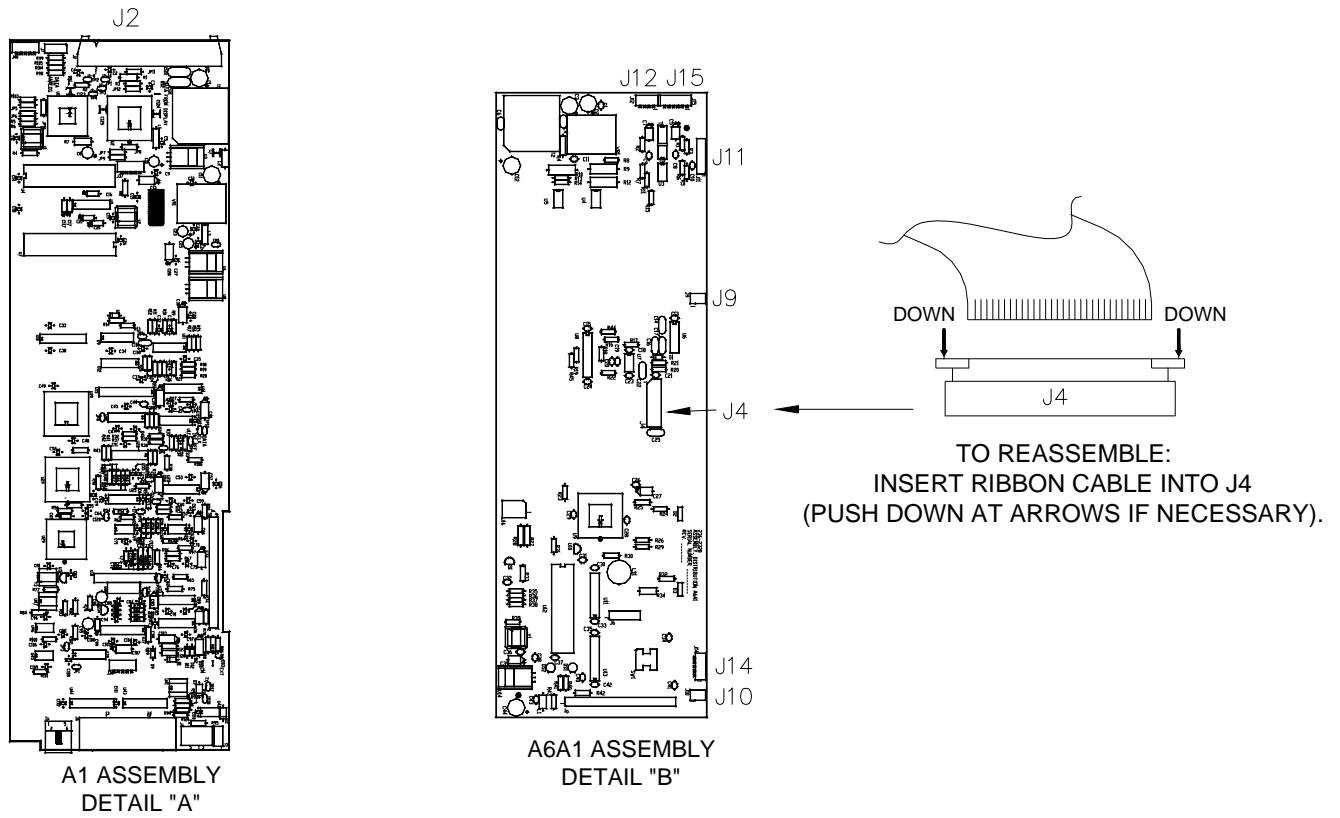
4. Press [F4] to save for power up.

4. INSTRUCTION MANUAL CHANGES

BOP-1KW (EL, GL) Quick Start Guide, P/N 228-1699 is replaced by:
BOP-1KW (MG, ME, MGL, MEL) Quick Start Guide, P/N 228-1692

BOP-1KW (EL, GL) Operator Manual, P/N 243-1293 is replaced by:
BOP-1KW (MG, ME, MGL, MEL) Operator's Manual, P/N 243-1027

Refer to the replacements listed above for complete instructions for the updated unit. These manuals can be downloaded from the Kepco web site at
www.kepcopower.com/support/opmanls.htm#bop-1k-mg

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J2

A1 ASSEMBLY
DETAIL "A"

J12 J15

J11

J9

J4

J14
J10

A6A1 ASSEMBLY
DETAIL "B"

DOWN   DOWN

J4

TO REASSEMBLE:
INSERT RIBBON CABLE INTO J4
(PUSH DOWN AT ARROWS IF NECESSARY).

A4A3
ASSEMBLY

A1 ASSEMBLY
(SEE DETAIL "A")

A6A1 ASSEMBLY
(SEE DETAIL"B")

BOP -1KW
-GL, -EL SERIES
CHASSIS
(COVER REMOVED)

FRONT PANEL
SCREWS

304403

FIGURE 1. ASSEMBLIES A1, A4A3 AND A6A1 COMPONENT LOCATIONS
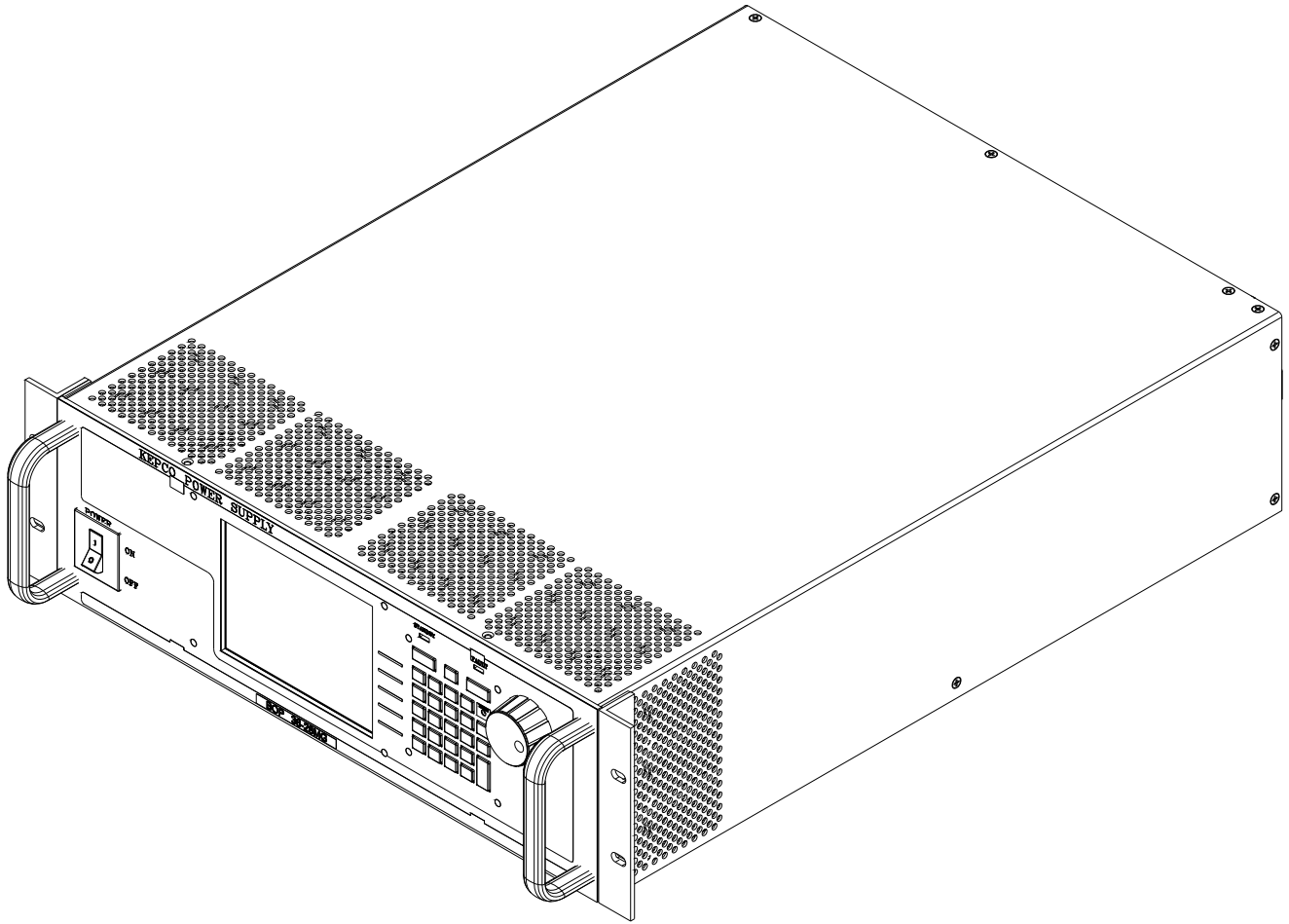
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FIGURE 2. BOP 1KW -MGL, -MEL AFTER RETROFIT COMPLETE

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