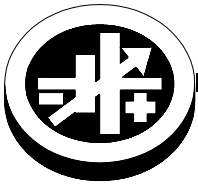


# INSTRUCTION SHEET



**KEPCO** An ISO 9001 Company.

**CABLE  
KIT  
219-0480**

## CABLE KIT NO. 219-0480 BOP 1000W MODELS 2 X 2 COMBINATION

### I. DESCRIPTION.

This kit contains the cables and terminations required to operate a multiple unit combination consisting of two parallel branches each comprised of two identical 1000 Watt BOP High Power models in series, effectively doubling the output voltage and doubling the output current capacity. Only identical models may be configured to operate in parallel and series.

This kit can be used with all 1000W BOP models that have revision levels as shown in Table 1. Earlier models that have been upgraded to permit multiple unit configurations must include the letter "A" following the revision number.

Refer to the associated technical manual supplied with the 1000W BOP power supply for all instructions regarding installation and operation of multiple units in parallel.

**TABLE 1. REVISION LEVELS APPLICABLE TO THIS KIT**

Model	Revision	Revisions for Upgraded Units (Must include "A")
BOP 10-75MG	5 or higher	4A or lower
BOP 20-50MG	8 or higher	7A or lower
BOP 36-28MG	11 or higher	10A or lower
BOP 50-20MG	7 or higher	6A or lower
BOP 72-14MG	7 or higher	6A or lower
BOP 100-10MG	6 or higher	5A or lower

### II. SPECIFICATIONS

Table 3 lists the model parameters unique to a 2 X 2 multiple unit combination of identical 1000W BOP Power Supplies (two series-connected units X two parallel branches). Table 4 lists the general specifications applicable to all 2 X 2 multiple unit combinations listed in Table 3. For specifications not listed in Table 3, refer to the General Specifications provided in the associated technical manual supplied with each 1000W BOP power supply.

**TABLE 2. EQUIPMENT SUPPLIED**

Item	Quantity	Purpose	Kepeco Part Number
Output/Series Power cable, (1.5 ft.)	3	Connects the OUTPUT terminal of Master to the COMMON terminal of Slave #1, OUTPUT terminal of Slave #1 to the OUTPUT terminal of Slave #2, and COMMON terminal of Slave #2 to the OUTPUT terminal of Slave #3	118-1112
Common power cable, (4.5 ft.)	1	Connects the COMMON terminal of Master to the COMMON terminal of Slave #3.	118-1155
Configuration Control cable, (2.5 ft)	1	Connects the PAR/SER CONTROL - IN ports of the Master and Slave #3 together to provide control signals needed to establish a series-parallel configuration	118-1158
Series Control cable, (1.5 ft.)	2	Provides control signals required for series operation.	118-1120

**TABLE 2. EQUIPMENT SUPPLIED (CONTINUED)**

Item	Quantity	Purpose	Kepeco Part Number
Digital Control (Bitbus) Cable, (4.5 ft.)	1	Provides communication between master and three slaves comprised of two series-connected units arranged in 2 parallel branches.	118-1149
Protection Cable (1 ft.)	3	Provides interlock protection signals required for multiple unit operation.	118-1126
Protection - OUT Termination (Slave)	1	Provides proper termination for the slave connection to the Protection Cable.	195-0108
Protection - IN Termination (Master)	1	Provides proper termination for the master connection to the Protection Cable.	195-0107
Instruction Manual	1	Lists material supplied and specifications for multiple unit combination.	228-1524
Nut	2	Overcomes tight space for output cable connections. After securing bottom cable to output terminal stud using one nut, additional cables can be oriented for best layout and secured with separate nut.	102-0046

**TABLE 3. MODEL PARAMETERS FOR 2 X 2 CONFIGURATION OF FOUR (4) IDENTICAL BOP 1000W UNITS (2 SERIES-CONNECTED UNITS X 2 PARALLEL BRANCHES)**

Model	d-c Output Range		Closed Loop Gain	
	$E_O$ Max	$I_O$ Max	Voltage Channel	Current Channel
BOP 10-75MG	±20V d-c	±150A d-c	2.0	15.0
BOP 20-50MG	±40V d-c	±100A d-c	4.0	10.0
BOP 36-28MG	±72V d-c	±56A d-c	7.2	5.6
BOP 50-20MG	±100V d-c	±40A d-c	10.0	4.0
BOP 72-14MG	±144V d-c	±28A d-c	14.4	2.8
BOP 100-10MG	±200V d-c	±20A d-c	20.0	2.0

**TABLE 4. GENERAL SPECIFICATIONS FOR BOP 1000W 2 X 2 CONFIGURATION (2 IN SERIES, 2 PARALLEL BRANCHES)**

SPECIFICATION	RATING/DESCRIPTION		CONDITION
<b>INPUT CHARACTERISTICS</b>			
Current	176 Va-c	38A a-c	maximum
	264 Va-c	25.6A a-c	maximum
Leakage current	14.0mA a-c		230V a-c, 47-63 Hz
<b>OUTPUT CHARACTERISTICS</b>			
Programming resolution/accuracy	Voltage	14 bits / 0.2%	2% accuracy for Ext Ref Level. Unit gain adjustable between 0 and $E_{ONOM}/10$ (voltage) or $I_{ONOM}/10$ (current).
	Current	14 bits / 0.5%	
	Voltage Limit	12 bits / 0.5%	
	Current Limit	12 bits / 0.5%	
Readback resolution/accuracy	Voltage	16 bits / 0.2%	main or limit channel
	Current	16 bits / 0.5%	main or limit channel