BOP MODEL TABLE

MODEL(1) (5)	d-c OUTPUT RANGE E_o max.	I_o max.	CLOSED LOOP GAIN VOLTAGE CHANNEL G_V (V/V)	CURRENT CHANNEL G_I (A/V)	OUTPUT IMPEDANCE VOLTAGE MODE SERIES R	SERIES L(2)	CURRENT MODE SHUNT R	SHUNT C (3)
100 WATT								
BOP 20-5M	± 20V	± 5A	2.0	0.5	80µΩ	20µH	40kΩ	0.05µF
BOP 50-2M	± 50V	± 2A	5.0	0.2	0.5mΩ	100µH	50kΩ	0.05µF
BOP 100-1M	± 100V	± 1A	10.0	0.1	2.0mΩ	200µH	100kΩ	0.05µF
200 WATT								
BOP 20-10M	± 20V	± 10A	2.0	1.0	40µΩ	50µH	20kΩ	0.1µF
BOP 36-6M	± 36V	± 6A	3.6	0.6	120µΩ	50µH	36kΩ	0.1µF
BOP 50-4M	± 50V	± 4A	5.0	0.4	0.25mΩ	100µH	50kΩ	0.05µF
BOP 72-3M	± 72V	± 3A	7.2	0.3	0.48mΩ	200µH	72kΩ	0.05µF
BOP 100-2M	± 100V	± 2A	10.0	0.2	1.0mΩ	200µH	100kΩ	0.05µF
BOP 200-1M(4)	± 200V	± 1A	20.0	0.1	4.0mΩ	1.2mH	200kΩ	0.03µF
400 WATT								
BOP 20-20M	± 20V	± 20A	2.0	2.0	20µΩ	50µH	20kΩ	0.2µF
BOP 36-12M	± 36V	± 12A	3.6	1.2	60µΩ	50µH	36kΩ	0.2µF
BOP 50-8M	± 50V	± 8A	5.0	0.8	125µΩ	100µH	50kΩ	0.15µF
BOP 72-6M	± 72V	± 6A	7.2	0.6	240µΩ	200µH	72kΩ	0.1µF
BOP 100-4M	± 100V	± 4A	10.0	0.4	500µΩ	200µH	100kΩ	0.1µF

(1) For factory installed digital interfaces add appropriate suffix. See page 55.
(2) For determining dynamic impedance in voltage mode.
(3) For determining dynamic impedance in current mode.
(4) Same size as 400W models.
(5) To specify digital display, substitute the suffix letter "D" for the suffix letter "M."

FEATURES

- Source and sink 100% of their current rating. See Figure 1.
- Separate control circuits for voltage and current with automatic crossover to current and voltage limits.
- All controls and flag signals accessible through a 50-terminal user-port at the rear.
- Zeroable preamplifier available for scaling and summing external signals.
- Optional digital displays. Specify by substituting the suffix "D" in place of the "M."

This KEPCO product is backed by a firm **5-YEAR WARRANTY**

For high power bipolar power supplies, see Series BOP High Power, page 44.

For high voltage bipolar power supplies, see Series BOP-HV, page 56.

The tabulation of the effective series resistance and inductance in voltage mode, and the effective shunt resistance and shunt capacitance in current mode, is done to allow a calculation of the output impedance versus frequency.

BOP accept plug-in cards for remote digital control

- BIT 4882 provides 12-bit IEEE 488.2 talk-listen control with SCPI support.
- BIT 4886 provides 16-bit IEEE 488.2 talk-listen control with SCPI support.
- BIT TMA-27 connect BOP to Kepco's single-address multiple instrument serial bus for long range (>300m) control from IEEE 488.2, RS 232 or VXI-based hosts.
- BIT 488B or BIT 488D offer listen-only GPIB support in binary or Hex format.

Cards may be factory installed. See page 55 for appropriate suffix designations.

VXI plug&play member

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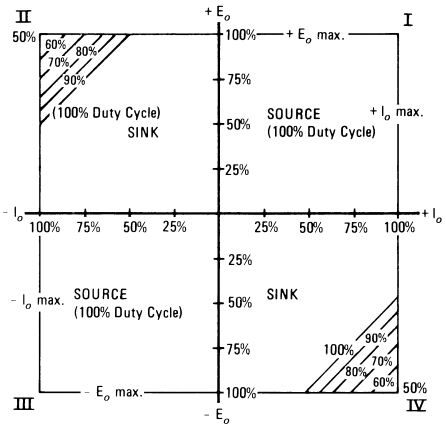


FIGURE 1
Output Source-Sink plot

TABLE 1
Source current measured worst case, 125V a-c.

MODEL	CURRENT (Amps)
BOP 20-5M	2.6
BOP 20-10M	5.5
BOP 20-20M	11.0
BOP 36-6M	5.1
BOP 36-12M	10.6
BOP 50-2M	2.6
BOP 50-4M	4.8
BOP 50-8M	9.5
BOP 72-3M	5.0
BOP 72-6M	10.8
BOP 100-1M	2.6
BOP 100-2M	4.8
BOP 100-4M	9.2
BOP 200-1M	5.5

CE BOP are CE marked per the Low Voltage Directive (LVD), EN61010-1.

BOP GENERAL SPECIFICATIONS

SPECIFICATION	RATING/DESCRIPTION	CONDITION
INPUT		
a-c Voltage	95-113, 105-125, 190-226, 210-250V a-c	User selectable
Current	See Table 1	Max load, 115V a-c
Frequency	47-65Hz	Range
OUTPUT		
d-c Output	Bi-direction, series pass	Transistor (1)
Type of stabilizer	Automatic crossover	Voltage/current
Voltage	0 to 100% of rating (bipolar)	Adjustment range for temp 0-55°C
Current	0 to 100% of rating (bipolar)	
Sink	See source/sink plot	Duty cycle
Error Sense	0.5V per load wire	Voltage allowance
Isolation Voltage	500V d-c or peak	Output to ground
Leakage Current	<5 microamperes	rms at 115V a-c 60Hz
Output to Ground	<50 microamperes	p-p at 115V a-c 60Hz
Series Connection	500V	Max voltage off ground
Parallel Connection	Current sharing	Use master-slave connection
OVP	Not available	
CONTROL		
Type — Voltage / Current	Variable input, fixed gain	
Voltage/ Current — Local	10-turn zero-center pot	
Remote Analog	-10V to +10V	
Local Digital	Serial bus or GPIB or VXI	Optional internal BIT card
Remote Digital	Use SN or SNR interface	
Bounding	±Volt/current local	Four screwdriver trimmers
	±Volt/current remote	0 to 10 volts
Dynamics	See dynamic spec table	Fast only
User Amplifiers	Uncommitted gain 20K	Two provided
References	±10 volts, 1mA	Two provided
Options (built-in) For user added card refer to "BIT" models page 55	GPIB hex card	Suffix -488B
	GPIB BCD card	Suffix -488D
	Long range serial card/VXI	Suffix -TMA
	Talk-listen 4882 card (SCPI)	Suffix -4882
	Talk-listen 4886 card (SCPI)	Suffix -4886
	Serial RS 232	Suffix -232
MECHANICAL		
Input Connection	Detachable IEC type 3-wire	All models
Output Connections	Front signal/output	Binding posts
	Rear user port	50-terminal connector
	Rear output	Barrier strip
Meters	Two 2½″ horiz., 2% zero center analog	Front panel
Indicators	Four LEDs	Voltage/Current/Bounding
Mounting (in std 19" racks)	Use RA 37 rack adapter	¾ rack size
	Mounting "ears" supplied	Full rack size
Cooling	Forced air	Exhaust to rear
Dimensions (HxWxD) add 2½″ to rear for connector — inches	5 7/32 x 12 17/32 x 17 9/64	¾ rack size
mm	132.6 x 318.3 x 435.4	
inches	5 7/32 x 19 x 20 5/64	Full rack size
mm	132.6 x 482.6 x 510	
Finish; Fed Std 595	Light gray, color 26440	Front panel
Weight (packed for shipment)	47lb (21.4Kg)	¾ rack size (100W)
	53lb (24.1Kg)	¾ rack size (200W)
	76lb (34.5Kg)	Full rack size

(1) 200V model uses FET.

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