SECTION 2 - SPECIFICATIONS

2.1 ELECTRICAL SPECIFICATIONS

The following specifications apply to the Models BOP 125-1KVA-T and BOP 125-1KVA-3T. Each specification is assumed to apply to both models unless otherwise noted.

2.1.1 INPUT PERFORMANCE SPECIFICATIONS

Input voltage

NOMINAL	100	120	220	240
TOLERANCE Vac	± 10	± 12	± 22	± 24

All of the above operate at 47 - 63 Hz, Single Phase.

CAUTION

DO NOT APPLY EXCESSIVE INPUT VOLTAGE, AS POWER SOURCE DAMAGE WILL RESULT.

2.1.2 OUTPUT PERFORMANCE SPECIFICATIONS

OUTPUT VOLTAGE RANGE: (Adjustable in 0.1V steps)

Model BOP 125-1KVA-T: 0-136.5 Vac

Model BOP 125-1KVA-3T: 3Ø line to neutral 0-136.5 Vac; 3Ø line to line 0-236 Vac
Split phase 0-273 Vac (phase B set to 180°)

For other output voltages use Stepup/Stepdown Transformers. Consult factory for details.

OUTPUT CURRENT:

Model BOP 125-1KVA-T: 8.3 Amps RMS
18 Amps peak available at crest of sine wave to drive peak type loads such as DC power supplies

Model BOP 125-1KVA-3T: 3 Amps RMS per phase
9 Amps peak per phase available at crest of sine wave to drive peak type loads such as DC power supplies

OUTPUT POWER:

Model BOP 125-1KVA-T:
Model BOP 125-1KVA-3T: Full rated KVA at all power factors

OUTPUT FREQUENCY:

VARIABLE, AUTORANGING

20.00 to 49.99 Hz in 0.01 Hz steps
50.0 to 499.9 Hz in 0.1 Hz steps
500 to 2000 Hz in 1.0 Hz steps

CURRENT LIMIT:

Model BOP 125-1KVA-T: 12.0 Amps maximum
Adjustable in 0.2 Amp steps

Model BOP 125-1KVA-3T: 6.0 Amps per phase maximum
Adjustable in 0.2 Amp steps

PHASE SEPARATION:

Model BOP 125-1KVA-3T only:

Phase A: 0 degrees (Reference Phase)

Phase B: Adjustable 0-360 degrees in 1 degree steps

Phase C: Adjustable 0-360 degrees in 1 degree steps

SOURCE EFFECT:

± 0.1%, Maximum for ± 10% source voltage change

LOAD EFFECT: (0–100%)

Less than 0.5% (0.1% typical)

TEMPERATURE EFFECT: 0–50° C

Frequency 0.25%; Voltage 1.0%

OUTPUT DISTORTION:

Less than 1.0% Total Harmonic Distortion (0.50% Total Harmonic Distortion typical)

RIPPLE (Output Modulation):

Less than 0.8 V p-p @ 120 Vac RMS Output

SMALL SIGNAL BANDWIDTH:

20 to 20,000 Hz

TRANSIENT RESPONSE TIME:

Less than 50 microseconds for a no load to full load step transient.

OUTPUT DC OFFSET:

Less than 10 mVdc

OUTPUT ISOLATION:

Output is completely isolated from chassis ground and the input. Any one leg may be grounded to provide local reference. Maximum float off ground 150 Vac.

METERING:

80 character 2-line LCD display.

OUTPUT VOLTAGES:

Model BOP 125-1KVA-T: Output voltage is displayed on front panel LCD display

Resolution/Accuracy: 0.1 Vac/1% ± 1 digit

Model BOP 125-1KVA-3T: Output line to neutral voltages displayed simultaneously on front panel LCD

Resolution/Accuracy: 0.1 Vac/1% ± 1 digit

OUTPUT FREQUENCY:

Output Frequency is displayed on front panel display

Resolution/Accuracy: 0.1 Hz/1% ± 1 digit

OUTPUT CURRENT:

Model BOP 125-1KVA-T: Output current is displayed on front panel LCD

Resolution/Accuracy: 0.1 A rms/1% ± 1 digit

Model BOP 125-1KVA-3T: Each Phase output displayed on front panel LCD

Resolution/Accuracy: 0.1 A rms/1% ± 1 digit

FAULT INDICATORS:

a) Overtemperature

b) Output device failure – Fail-safe circuit allows Power Source to continue operation at reduced output capability).

c) Overload - If unit is in current limit state for more than 30 seconds, an overload message is displayed.

Programmable Interface:

The BOP 125-1KVA equipment is supplied with an IEEE-488 instrumentation interface. Amplitude, frequency, phase displacement, current limit, and the output contactor maybe controlled over the bus .

The BOP 125-1KVA Power Source can be addressed as a Listener and a Talker. Output frequency, voltages and currents are transmitted back to the IEEE controller upon command.

Programming Accuracy:
Frequency: ± 0.01%
Voltage: ± 0.1% ± 1 count @ 120 Vac output
Phase Displacement: ± 0.1 degree
Current Limit: ± 0.1% ± 1 count @ full scale

2.2 MECHANICAL SPECIFICATIONS

Height: 5.25 inches (133 mm)
Width (Front Panel): 19.00 Inches (482 mm)
(Chassis): 16.75 (425 mm)
Depth: 23.00 inches (584.2 mm)
Weight: 65 pounds (29.5 Kg)

INPUT CONNECTIONS:

The BOP 125-1KVA Series is supplied with an input power cord. A NEMA Type 5-20P plug is attached to the end of the power cord when ordered for the 115 Vac input operation.

OUTPUT CONNECTION:

Output is taken from the BOP 125-1KVA Series equipment via a single row terminal strip supplied with No. 6-32 Binding Head Screws.

CHASSIS SLIDES:

The chassis of the BOP 125-1KVA Series equipment has been designed to accept the following chassis slides: Kepco model number CS 04

2.3 ENVIRONMENTAL SPECIFICATIONS

POWER DISSIPATION:

Power dissipation is directly proportional to the output power produced. Worst case dissipation is at full rated output load and high line input, approximately 500 Watts.

AMBIENT TEMPERATURE:

The BOP 125-1KVA Series equipment is designed to operate in ambient temperatures of 0-55°C.

VENTILATION REQUIREMENTS:

Air intake is along the sides, exhaust is through the rear panel.The BOP 125-1KVA Series equipment contains two 70 CFM fans.

AUDIBLE NOISE:

Audible noise generated by the BOP 125-1KVA series is less than 50 dbA when measured 1 meter from the front panel.