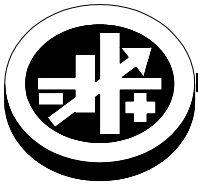# APPLICATION NOTE

KEPCO An ISO 9001 Company.

BOP
002

BOP Recommended Grounding Techniques

I — INTRODUCTION

This application note describes the use of the BOP Ground Network as well as recommended grounding techniques.

II — GROUNDING NETWORK.

The grounding network is a series R-C network (10ohms, +0.1uF) connected between the chassis-ground and the rear panel GND NET (Grounding Network) terminal.

When the BOP output and load are both floating, connecting the GND NET terminal to COM (Common) lowers the value of output ripple/noise because part of the common mode current noise will be diverted to the chassis-ground.

III — RECOMMENDED GROUNDING TECHNIQUES.

- Use either the front panel or rear panel output terminals, however the rear panel output terminals are recommended.

- For remote sensing, do not mix up the front and rear panel connections. Do NOT connect power leads to the front panel with sense leads at the rear panel. Do NOT connect power leads to the rear panel with sense leads at the front panel.

- For local sensing install the links (OUT to OUTS and COM to COMS), at the output terminals where the load is connected, either at the front or rear panel.

- Connect the COM terminal to GND terminal ONLY if the Programming device/source and the load are floating.

- If the Programming device/source is grounded (most configurations), leave the BOP output and the load floating.

- If the BOP output and the Load are floating, it is recommended that the GND NET terminal be connected to the COM terminal at the rear panel in order to reduce output ripple/noise.

- If the Load has an active BIAS voltage between the COM terminal and chassis-ground, both the Programming device and the BOP must be floating. For this case the connection between GND NET and COM terminals must be removed.

NOTE: Maximum allowable voltage between each BOP output terminal and chassis is 500V (d-c or peak).