PVM400 (2025) Operating Instructions

Use with caution with 12” globes or smaller as glass may puncture if unit is operated at maximum output. It is suggested to use our PVM12 unit for these smaller displays

OUTPUT.....Variable 1 to 15 KV.
FREQUENCY...Variable 20 to 50 KHZ
CURRENT..Reactance limited
INPUT..115 at 60 Hz /220@50 HZ
SAFETY...Over-voltage Shutdown With Manual Reset.

Precautions

Keep at least 10 feet from sensitive electronic equipment. Energized display may radiate RF energy into nearby objects and people causing annoying burns.
This product can be a fire hazard and must be installed by experienced personal.

Operation

1. Connect HV lead to display-CAUTION lead must not be near any flammable or conductive objects.

2. Plug into power outlet and click POWER CONTROL to "on". Slowly adjust CW for desired effect.

If unit shuts down you must reset by turning unit “off” and waiting several minutes for unit to reset before turning “on”. Shut down should not occur on globes 14” or over.
Apply power and slowly advance POWER CONTROL just to point where unit turns “off” and note position. Turn slightly CCW and repeat reset procedure. *See special note on shutdown level adjust*

3. Allow to run for 1 hour and note unit and display are slightly warm.

4. Turn lights "off" to see and eliminate any corona. This manifests itself as bluish glows, hissing sounds or an ozone smell

5. IMPORTANT: Allow to operate for 1 hour. Turn “off” and check OUTPUT TRANSFORMER for excessive heat. It should never be uncomfortably hot to touch. Turn power down as it is possible to overpower if display is improperly made or has out gassed. These problems will require excessive voltage to now obtain a decent display and cause both the PVM400 and display to run hot. Unit has a 1.5 amp fuse and will blow if severely overloaded.

Shut down level adjust for undersize displays. This setting is factory set, usually sufficing for most applications

Undersized displays of smaller electrical capacity may cause shut down due to excessive output voltage. It is suggested to use our MODEL #PVM12 or NEON21 for these smaller displays.

Unit contains an internal factory set shutdown level control. You may adjust it for more voltage but if the transformer is damaged it will be a fee for factory replacement. Consult the factory if in doubt.

6. Use a plastic screwdriver and rotate the orange TRIMPOT nearest to the front panel full CCW-Note this setting disables the safety shutdown function.

7. Set POWER CONTROL for desired effect in particular display as described above. Make sure there is no excessive corona on the transformer or leads.

8. Slowly rotate TRIMPOT CW just to point where display shuts down.

9. Turn POWER CONTROL "off" and wait as in above step 2 to reset. Turn "on" and readjust for desired effect. Increasing output further should now trigger shutdown turning unit "off".

It may be necessary to repeat above steps to guarantee reliable operation. Rotate TRIMPOT slightly more CCW if unit prematurely shuts down. It may take several attempts to properly perform for a particular display. The objective is to shut down in case of over voltage, display breakage, out gassing or other failure.

You may also damage the display from over powering noting glass should only be warm to the touch. You can get an idea of power by connecting an AC ammeter in the line and observe the current noting larger displays will automatically take more power than smaller ones ***for a given voltage.*** This is due to the electrical capacity of the display

*A 12" globe should draw a maximum line current of .25 amps at 120 vac
A 14" globe should draw a maximum line current of .40 amps at 120 vac
A 18" globe should draw a maximum line current of .50 amps at 120 vac
A 24" globe should draw a maximum line current of .6 amps at 120 vac
A 30" globe should draw a maximum line current of 1 amps at 120 vac
Assumed globes are argon/neon and properly prepped and pumped
***It is suggested to use our PVM12 unit along with our 12DC/3 Adapter for 12" globes and smaller to prevent over powering**