

AVATAR INSTRUMENTS D2P OPERATING MANUAL

DESCRIPTION The D2P is a proportional, infinitely variable power controller capable of delivering 1-97% of the applied line voltage to the directly connected electric heaters. This is accomplished by phase angle firing a pair of inversely connected SCR's. The D2P will not control heaters with high inrush current (tungsten lamps), transformers or motors.

OPERATION The D2P comes standard with a potentiometer, knob and 0-100% scale which is used to vary the voltage to electric heaters, similar to a light dimmer and light bulb (see "WIRING DIAGRAM").
*WARNING: The potentiometer is NOT ISOLATED; it is at line voltage potential. The D2P CAN NOT create more voltage or current than what is supplied to it.

INSTALLATION



WARNING: FIRE HAZARD!! Even the best electronic components CAN FAIL SHORTED, KEEPING FULL POWER ON! Provide a completely SEPARATE (redundant) OVER TEMPERATURE SHUTDOWN MEANS to switch power off if safe temperature is exceeded.



WARNING: HIGH VOLTAGE!! This control must be installed in a GROUNDED enclosure by a qualified electrician. Provide a safety interlock on door to remove power before gaining access to device.

ELECTRICAL CONNECTIONS See "WIRING DIAGRAM" on back. Check the Avatar serial tag and verify the correct voltage/ ampere ratings and input control signal for your application. Wiring must be performed in accordance with any and all applicable local and national codes. Use a minimum wire size of 8AWG for a 40 amp D2P and a minimum of 6AWG for a 60 amp D2P.

OPTIONS

SOFT START: For use with Tungsten (T-3) lamps. This option provides a three second ramp up function (soft start) to permit control of high inrush lamps. **NOTE:** Never connect cold lamps after start up.

WARRANTY All Avatar Instruments products carry a full three year, from date of purchase, parts and labor warranty against component failure and defects in workmanship. In the event your controller fails to perform properly, **contact Avatar to obtain a return authorization number.** Controllers sent to Avatar for warranty service that have no apparent defect will be treated as a standard repair and a \$50.00 charge will be applied. Avatar will repair or replace any unit that failed due to defective parts or assembly. This warranty DOES NOT cover damage due to shipping, abuse, misapplication or operation beyond specified rating. Further more fuses and improperly fused SCR's/ TRIAC's are NOT COVERED by this warranty. Avatar is not responsible for any subsequent or other damage experienced in use of this device.



File # E207795

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D2P SPECIFICATIONS

INPUT SIGNAL:supplied 100K potentiometer

SUPPLY VOLTAGE: 120,208-240, 277, 380, and 480 VAC, 50/60Hz

POWER CONSUMPTION (max)

D2P-XX-40: 48 watts

D2P-XX-60: 72 watts

CURRENT RATING (vertically mounted)

D2P-XX-40: 40 amps

D2P-XX-60: 60 amps

OPERATING TEMPERATURE (ambient)

0-50°C/122°F

FUSE REQUIREMENTS (SCR Protection)

semi-conductor/ rectifier I²T

RESPONSE TIME

10 mS (without soft start)

CONTROL METHOD

phase angle, proportional

OUTPUT VOLTAGE

1-97% of supply voltage

ORDERING CODES

D2P - _____ - _____ - _____ - _____
 Voltage **Amperes** **Options** **Options**

MODEL DESIGNATION

SCR CONTROLLER (**D2P**)

VOLTAGE DESIGNATIONS

(12) 120 VAC 50/60Hz

(24) 208-240 VAC 50/60Hz

(27) 277 VAC 50/60Hz

(38) 380 VAC 50/60Hz*

(48) 480 VAC 50/60Hz*

LOAD IN AMPS:

40, 60

OPTIONS:

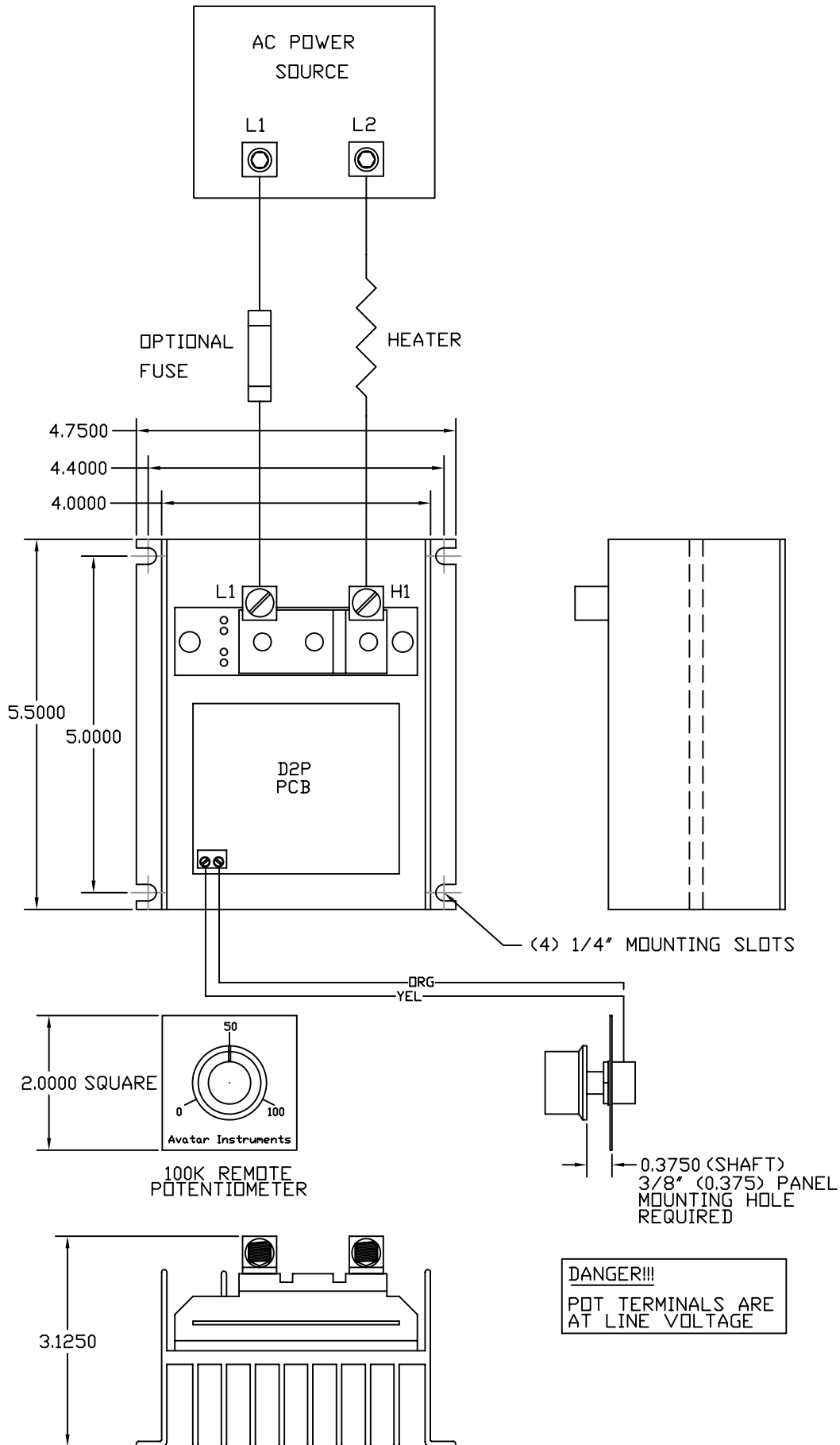
Soft Start

3 Seconds (S)

Example: D2P-24-60-S is a 240VAC, 60 Ampere SCR with 3 second soft start.

PHYSICAL DIMENSIONS and WIRING DIAGRAM

D2P - 40 & 60 AMP



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