**Bulletin P797** 



Metered L2M Series **POWERSTAT®** Variable Transformers

in 120 Volt, Single Phase Models to 15 Amperes, 1.8 kVA

Listed by Underwriters Laboratories

File No. E15506, Standard UL508

- Easy to Read Output Voltage and Current Meters
- Choice of 0-140 V or 0-280 V Output Models
- NEMA Style Receptacle and 5-WAY® Binding Post Output Connections
- Rocker Style "On Indicating" Thermal Magnetic Circuit Breaker
- Portable, Compact, Versatile, Attractive, Functional Design
- Integral, Non-Projecting Handle and Provision for Wall Mounting

Metered L2M Series POWERSTAT® Variable Transformers are continuously adjustable autotransformers having a movable brush-tap riding on a precious metal plated commutator. Rotation of the knob delivers any output voltage in the range of zero to or above line voltage. Operating characteristics make them ideally suited for laboratory, testing and other applications requiring a portable source of variable AC voltage. POWERSTAT<sup>®</sup> Variable Transformers are ruggedly designed for heavy duty use. They provide excellent regulation with only negligible variation in output voltage from no-load to full-load current. Waveform distortion is also negligible. Over 50 years of variable transformer manufacturing experience with rigid inspection at every production stage in an ISO 9001 certified environment assures a quality built product.



#### **POWERKOTE® COILS**

All L2M Series POWERSTAT® Variable Transformers feature POWERKOTE® Coils for longer life, increased ratings, greater overload capacity and better resistance to fungus, salt spray and other contaminating atmospheres. The precious metal plated commutator of the coil is imbedded in a high temperature material which holds the windings in place even under severe overloads. As a result, these units provide higher output ratings per pound and per dollar than competitive variable transformers.

### INPUT/OUTPUT CONNECTIONS

Input connection is through a grounded NEMA 5-15 line cord approximately 6 feet long.

Output connection is by means of a NEMA-style receptacle, 5-WAY® Binding Posts of a combination of both. Regardless of the method of output connection, the total output current rating of the unit must not be exceeded. Polarity of the circuit is maintained from input to output, therefore the polarity of the receptacle is always correct. Polarity of the 5-WAY® Binding Posts is black for line, white for neutral and green for ground.

### **OUTPUT METERING**

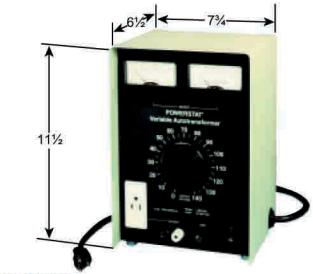
Output metering is provided by a separate analog voltmeter and an ammeter having accuracies of  $\pm 3\%$ .

### SWITCHING

On/Off switching and "On" indications is provided by a rocker style thermal magnetic circuit breaker. "On" is indicated by a green colored portion of the rocker which is visible facing up when the breaker is in the "On" position and by a combination of On/Off and I/O markings. A switch guard protects from accidental switching.

# **CIRCUIT PROTECTION**

Circuit protection is provided on the unit input and output by a thermal magnetic circuit breaker incorporating two poles. One pole is connected to the input line and the other to the output line. This patent pending configuration protects the unit from catastrophic overloading conditions which include substantial output overloads in the current derated portion of 0 to 280 Volt models (140-280 V).



## MOUNTING

Although L2M Series POWERSTAT® Variable Transformers are primarily used for general utility mounting, provision is made for wall mounting the unit too any flat surface having access from the rear. A square hole pattern of 6¼ inches vertical by 5¾ inches horizontal may be used to mount the unit to any surface ½ inch thick or less. Thread forming screws for this purpose are provided.

## ENVIRONMENTAL

To meet current ratings, average operating ambient temperature for any 24-hour period should not exceed 30°C (86°F) with maximum temperature not to exceed 40°C (104°F). When operated at higher temperatures, output current must be reduced as follows:

Maximum Ambient	Load Derating Factor			
50°C (122°F)	90%			
55°C (131°F)	83%			
60°C (140°F)	75%			
65°C (149°F)	65%			
70°C (149°F)	52%			

The units can be operated in ambient temperatures below -20°C (-4°F) but there is a danger of mechanical freezing. Storage ambient temperatures are -40°C to 70°C (-40°F to 158°F).

	INPUT		OUTPUT					10000
	VOLTS HZ.			MAXIMUM LOAD			NEMA	APPROX.
TYPE		VOLTS	AMPS 0-140 V	AMPS @ 280 V*	KVA	RECEP- TACLE	WEIGHT (LBS/KG}	
L2M116C	120	50/60	0-140	10	N/A	1.40	5-15	22 (11)
L2M126C	120	50/60	0-140	15	N/A	1.80	<b>C</b>	28 (13)
L2M216C	120	50/60	0-280	3.5	1.5	0.49	6-15	22 (11)
L2M226C	120	50/60	0-280	7.5	3.1	1.05	- C3 8	28 (13)

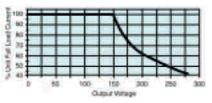


FIGURE A Current Rating vs. Output Voltage Types L2M216C and L2M226C

\* See Figure A for current derating over 140V.



