



INSTRUCTIONS

Installation/Operation/Maintenance

POWERSTAT®

Variable Transformers
with POWERKOTE® Coils
Enclosed L Series



  UL and cUL listed for US and Canada under file E15506



The right to make engineering refinements on all products is reserved. Dimensions and other details are subject to change.

INSPECTION

A POWERSTAT Variable Transformer is a precision product packed with care. Examine it carefully for any shipping damage when unpacking. The "Damage and Shortage" instructions packed with the unit outline the procedures to follow if any parts are damaged or missing.

Enclosed L 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. They are specially designed to minimize the possibility of shock hazard.

Enclosed L Series POWERSTAT 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 70 years of variable transformer manufacturing experience with rigid inspection at every production stage in an ISO9001:2000 certified environment assures a quality built product.

All Enclosed L Series models 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.

MOUNTING

Enclosed L Series models are designed as portable instruments and are ideal for benchtop or shelf use. A slot is provided at the top rear of the unit for wall mounting. With the use of wall hanger brackets, L Series units may be hung off the working surface yet can be easily removed for use in another location.

INSTALLATION

For maximum protection and safety, all Enclosed L Series models are equipped with a grounded NEMA 5-15 cord-plug assembly, On-Off switch, pilot light, output receptacles and fuse. Type L116C has an integrally designed non-projecting handle. Controls on the panel are recessed and provide against accidental bumping. All Enclosed L Series models are designed for 120 VAC single phase service.

OPERATION

Connections and controls on all Enclosed L Series units have been designed for easy operation. Proceed as follows to operate the unit.

1. Be sure that the AC power to the Enclosed L Series unit complies with the voltage and frequency specifications listed on the nameplate.
2. Be sure the main power switch is in the "OFF" position.
3. Insert the input cord and plug assembly into a receptacle of the proper voltage and frequency.
4. Plug the load(s) into the receptacle(s) on the front of the unit. Be certain the load or total of the loads does not exceed the current rating of the unit.
5. Place the main power switch in the "ON" position. The pilot lamp will light.
6. Turn the control knob to adjust the output voltage. The voltage will increase when the knob is turned clockwise.
7. Circuit protection is provided by a fuse on the unit output.

In many test applications, it is advisable to turn power on with the output knob set at the zero position. With the use of an ammeter, this permits monitoring of the load current as voltage is increased to safeguard against potential shorts or miswiring in the load.

INSTRUCTIONS

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 (158°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).

MAINTENANCE

An Enclosed L Series POWERSTAT Variable Transformer requires no regular maintenance and should provide trouble-free service as long as the ratings of the unit are not exceeded. The only moving part of the unit is the brush, which slides across the commutator surface as the control knob is turned. Normally, the brush will last for the life of the unit. If it should become necessary to replace the brush, use only the correct Superior Electric replacement brush assembly listed because they contain special materials to attain proper operation. The brush can be reached by removing the cover.

REPLACEMENT BRUSH ASSEMBLIES

TYPE	PART NO.	DESCRIPTION
L10C	030098-001	RB10C
L21C	060098-001	RB21
L116C	065431-001	RB116C

RATINGS

TYPE	INPUT		OUTPUT			RECEPTACLE
	VOLTS	HERTZ	VOLTS	CONSTANT CURRENT LOAD		
				MAX AMP	MAX KVA	
L10C	120	60	0-132	1.8	0.23	(1) NEMA 5-15R
L21C		50/60	0-140	4.5	0.63	
L116C				10.0	1.40	



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