

# User's Handbook for the Plug-In-Type Units

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### INSPECTION

Prior to installation we recommend the following:

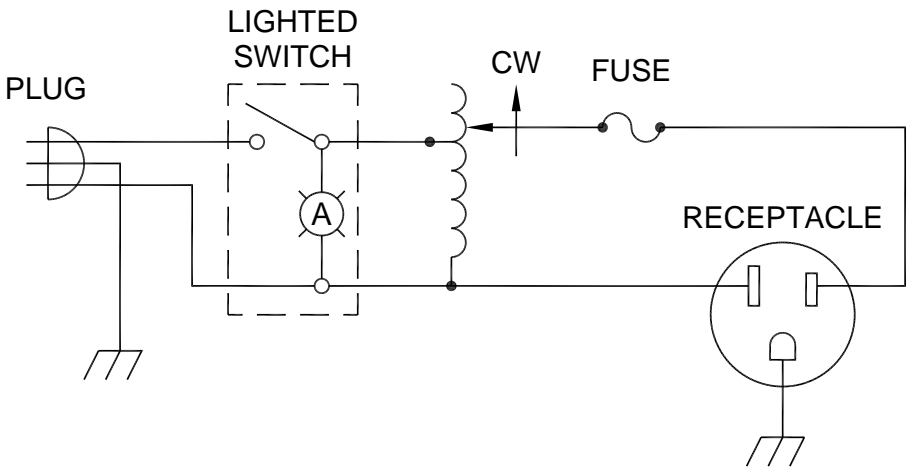
1. Check the nameplate to verify that the unit received matches the rating specified in your order.
2. Verify that the line frequency, current and voltage rating are suitable for your application.
3. Inspect the unit for visible signs of shipping damage.
4. Make sure that the knob rotates freely and that a functional fuse is properly installed in the fuse holder.
5. Report missing or damaged parts to the factory.

### PRECAUTION

1. Be absolutely sure that the voltage and frequency to be used match the ratings of the unit before applying power.
2. The unit is provided with a 3-conductor grounded cord and plug, it is recommended that it be connected to a corresponding grounded receptacle. If an adapter must be used, be sure to ground the green neutral wire. **DO NOT CUT OFF THE GROUNDING PIN OF THE PLUG!**
3. The current drawn by the load must be within the current rating of the Staco Variable Transformer.

## INSTALLATION

Installation consists of inserting the plug on the line cord of the variable transformer into a suitable power line receptacle and similarly connecting the load to the receptacle provided on the unit. Most models provide for permanent mounting to a bench or wall surface by means of screws. This is optional, so screws are not provided; but standard wood or machine screws of the proper diameter to fit the holes are recommended. L series models have a slot at the top rear of the case to allow for wall mounting. All units are connected for clockwise voltage increase.



## TROUBLESHOOTING

If your Staco Energy Products Co. Variable Transformer fails to function properly check the following:

### A. ROCKER SWITCH NOT LIGHTED

Power is not getting to the unit.

1. Is the switch turned on?
2. Is the plug properly seated into a socket?

3. Is the socket turned on (has a fuse or circuit breaker opened)?

### B. ROCKER SWITCH LIGHTED

Power is getting to the unit.

1. Is the load properly connected to the unit?
2. Is the fuse in the Variable Transformer functional?
3. Is the load functional?
4. If there is no output under this condition, check the brush and replace if necessary.

- C. If the above procedures fail to isolate the source of trouble, refer the problem to a qualified repair technician.

## MAINTENANCE

No regular maintenance is required on Staco Energy Products Co. Variable Transformers as long as the ratings of the unit are not exceeded. Normally, the brush may be expected to last the life of the unit. Occasionally, brushes may need replacement. Should this become necessary, it is essential that a new or reinstalled brush be properly seated. With power off, insert a piece of fine garnet paper or crocus cloth between the brush and the commutator surface with the abrasive side toward the brush. A few swings of the brush across the abrasive will mate the surfaces. Remove the paper or cloth and blow away loose particles of brush or abrasive before applying power.

Consult table for replacement brush assemblies.

## AUTOTRANSFORMER MODELS

TYPE	INPUT		VOLTS	OUTPUT				Replacement Brush Part No.	FUSE TYPE	AC METER
	NOMINAL VOLTS	LINE HZ		Constant Current Load		Constant Impedance Load				
				MAX AMPS	MAX KVA	MAX AMPS*	MAX KVA			
L221B	120	60	0-132	1.75	0.23	---	---	146-0121	ABC-3	---
3PN221B	120	60	0-132	2.50	0.33	---	---	146-0121	ABC-3	---
L501B	120	50/60	0-140	4.5	0.63	---	---	146-0121	MTH-5	---
3PN501B	120	50/60	0-140	5.0	0.70	---	---	146-0121	MTH-5	---
L1010B	120	50/60	0-140	10	1.4	---	---	808-0127	ABC-12	---
L1010BVA										++
3PN1010B										---
3PN1010BV										0-150V
3PN1010BA										0-10A
3PN1020B	240	50/60	0-280	3.5	0.98	---	---	808-0129	MTH-4	---
3PN1020BV										0-300V
3PN1020BA										0-5A
3PN1210B	120	60	0-120	12	1.44	15*	1.80	808-0130	ABC-12	---
3PN1220B	240	60	0-240	5.0	12	7.0*	1.68	808-0131	3AG-6-1/4	---
3PN1510B	120	50/60	0-140	15	2.1	---	---	808-0123	ABC-15	---
3PN1510BV										0-150V
3PN1510BA										0-15A
3PN1520B	240	50/60	0-280	9.5	2.66	---	---	808-0124	ABC-10	---
3PN1520BV										0-300V
3PN1520BA										0-10A
3PN2210B	120	50/60	0-140	22	3.08	---	---	B-10402	FLM-25	---
3PN2520B	240	50/60	0-280	10	2.8	---	---	B-10690	ABC-10	---

## ISOLATION TRANSFORMER MODELS

3PNJ201B	120	50/60	0-140	2.0	0.28	---	---	808-0131	AGC-2	---
3PNJ201BV										0-150V
3PNJ201BA										0-5A
3PNJ401B	120	50/60	0-140	4.0	0.56	---	---	808-0124	MTH-4	---
3PNJ401BV										0-150V
3PNJ401BA										0-5A

\* All units come from the factory fused for the maximum constant current load.

++0-150V voltmeter and 0-10A ammeter

