

# INSTALLATION & OPERATING INSTRUCTIONS 501 SERIES 501-40 SERIES (SEE INSERT)

## INSPECTION

Your variable autotransformer has been carefully packed for shipment; however, damage may occur in transit. 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. Check the unit to satisfy yourself there is no damage.
3. Make sure that the dial, knob, lockwashers and mounting nuts are in the package. Report missing or damaged parts to the factory.

## PRECAUTIONS

1. If not provided in the unit, fuses of the same rating as that of the unit should be installed in the hot side of the output.
2. Provide additional support for back-of-panel mounting of stacked units.
3. Be sure all brushes of stacked units are aligned with each other.

## INSTALLATION

### SINGLE, MANUAL UNITS – PANEL MOUNTING

1. Locate and drill holes from template #1.
2. Mount dial plate with #6-32 screws and unit with 1/4-20 flat-head screws.
3. ADJUST shaft for panel thickness (two set-

screws on rotor hub) and mount knob with pointer set to zero when brush is at zero voltage position.

### STACKED, MANUAL UNITS – PANEL MOUNTING

1. Locate and drill holes from template #2.
2. Mount dial plate with #6-32 screws and unit with 1/4-28 mounting screws.
3. Provide some form of support for the end of the unit not supported by the panel.
4. Adjust shaft for panel thickness (two setscrews on each rotor hub) and mount knob with pointer set to zero when brushes are at zero voltage position.

### MOTORIZED UNITS – BENCH MOUNTING

1. Locate and drill mounting holes from template #2.
2. Plate unit in position and mount with 1/4-28 mounting screw.

### MOUNTING BRACKETS – STACKED AND MOTORIZED UNITS

As an alternate, use template #3 to mount unit parallel to surface, using wall mount brackets with four 1/4 diameter bolts. Dial plate may be mounted to knob or supported externally.

**NOTE:** When it becomes necessary to adjust or loosen the shaft on stacked units, be sure all brushes are aligned with each other when shaft is tightened.

# INTERNAL WIRING (as viewed from rotor end)

FIGURE 1-COIL

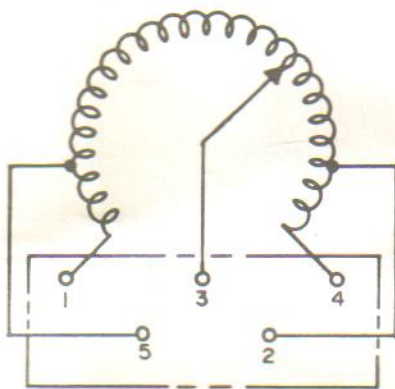
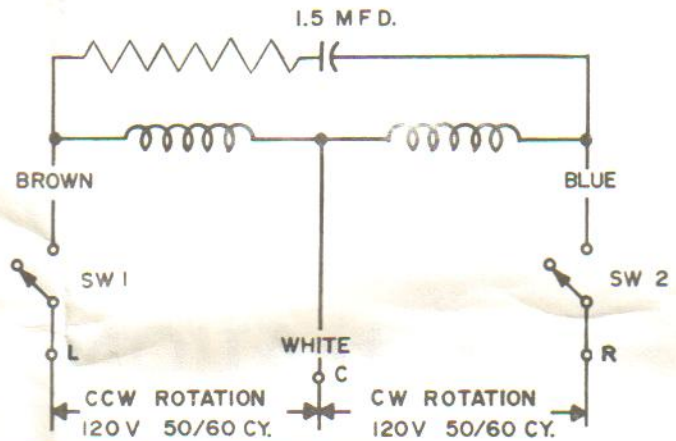
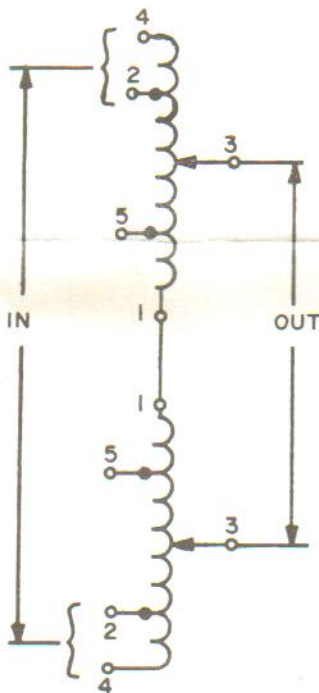


FIGURE 2-MOTOR CIRCUIT

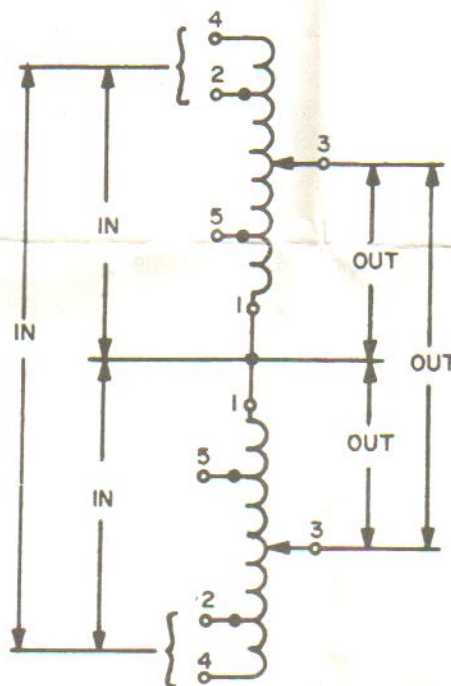


## DIAGRAMS (voltage increase CW as viewed from rotor end)

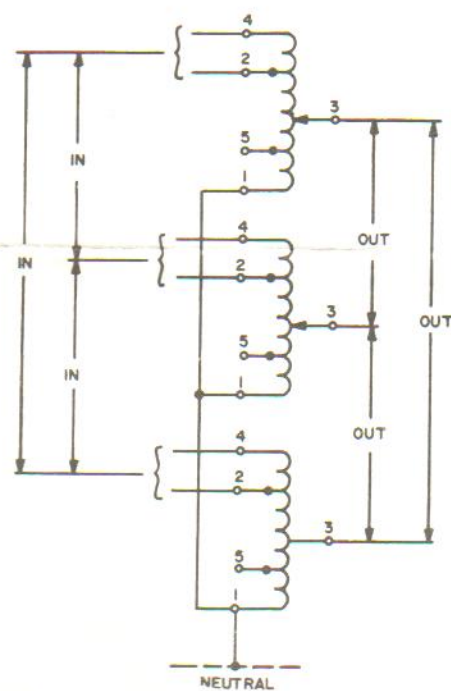
SERIES



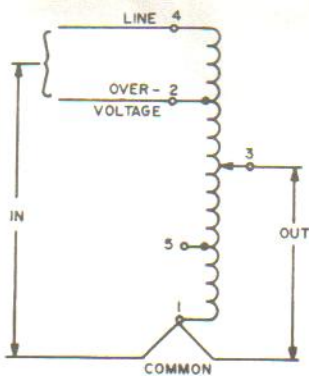
3-PHASE OPEN DELTA



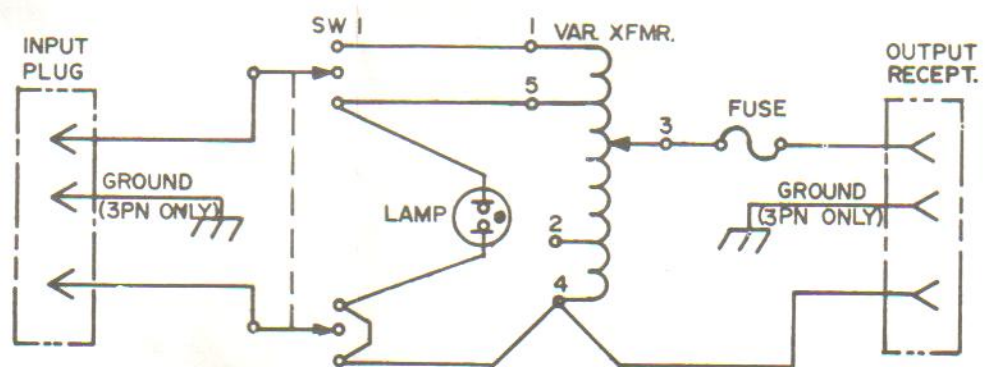
3-PHASE WYE



SINGLE-PHASE



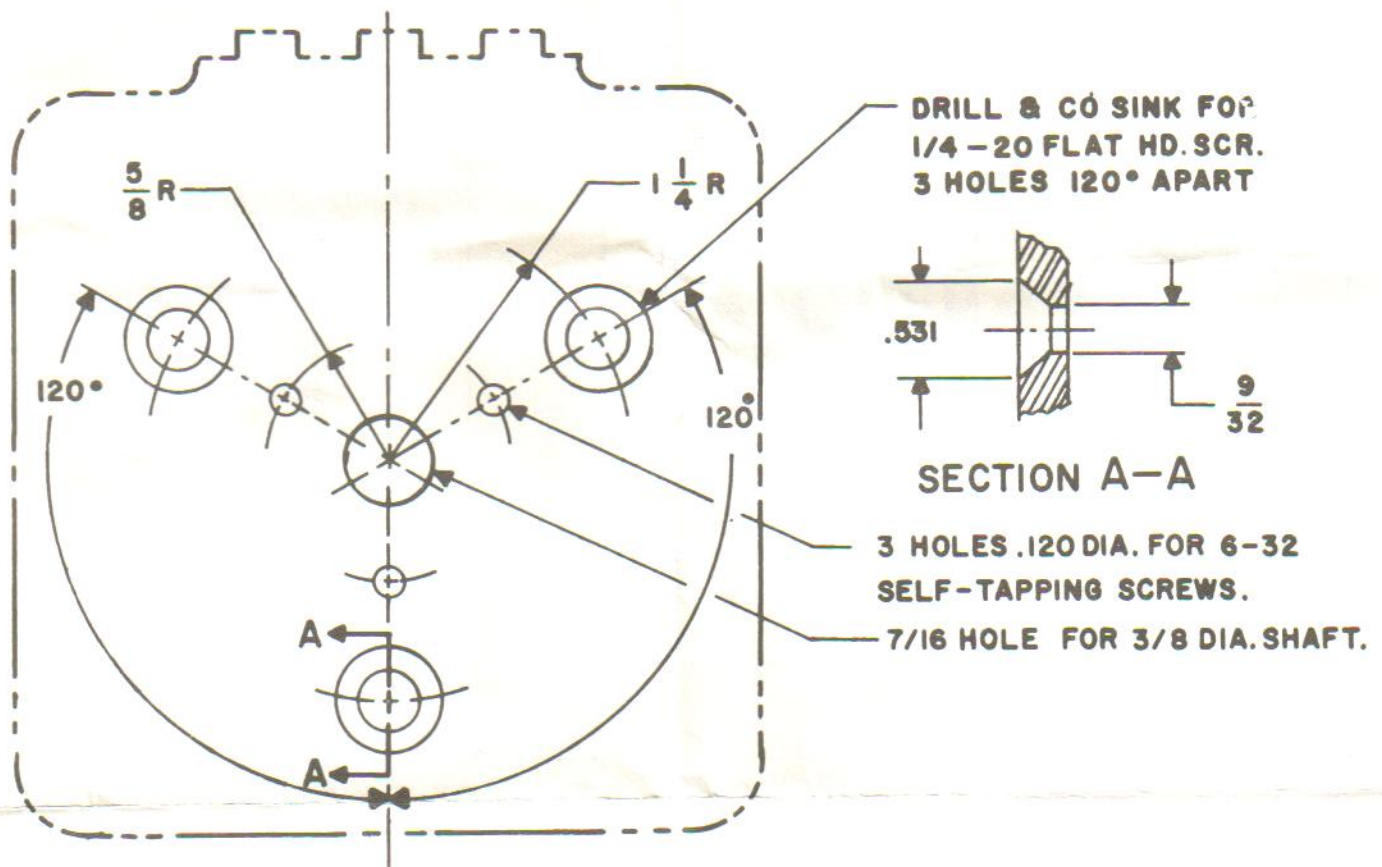
PORTABLE UNITS





# MOUNTING FOR MANUAL, SINGLE 501

TEMPLATE NO.1 FOR 3 HOLE MOUNTING



RATING AND HOOK-UP CHART

## SINGLE UNITS

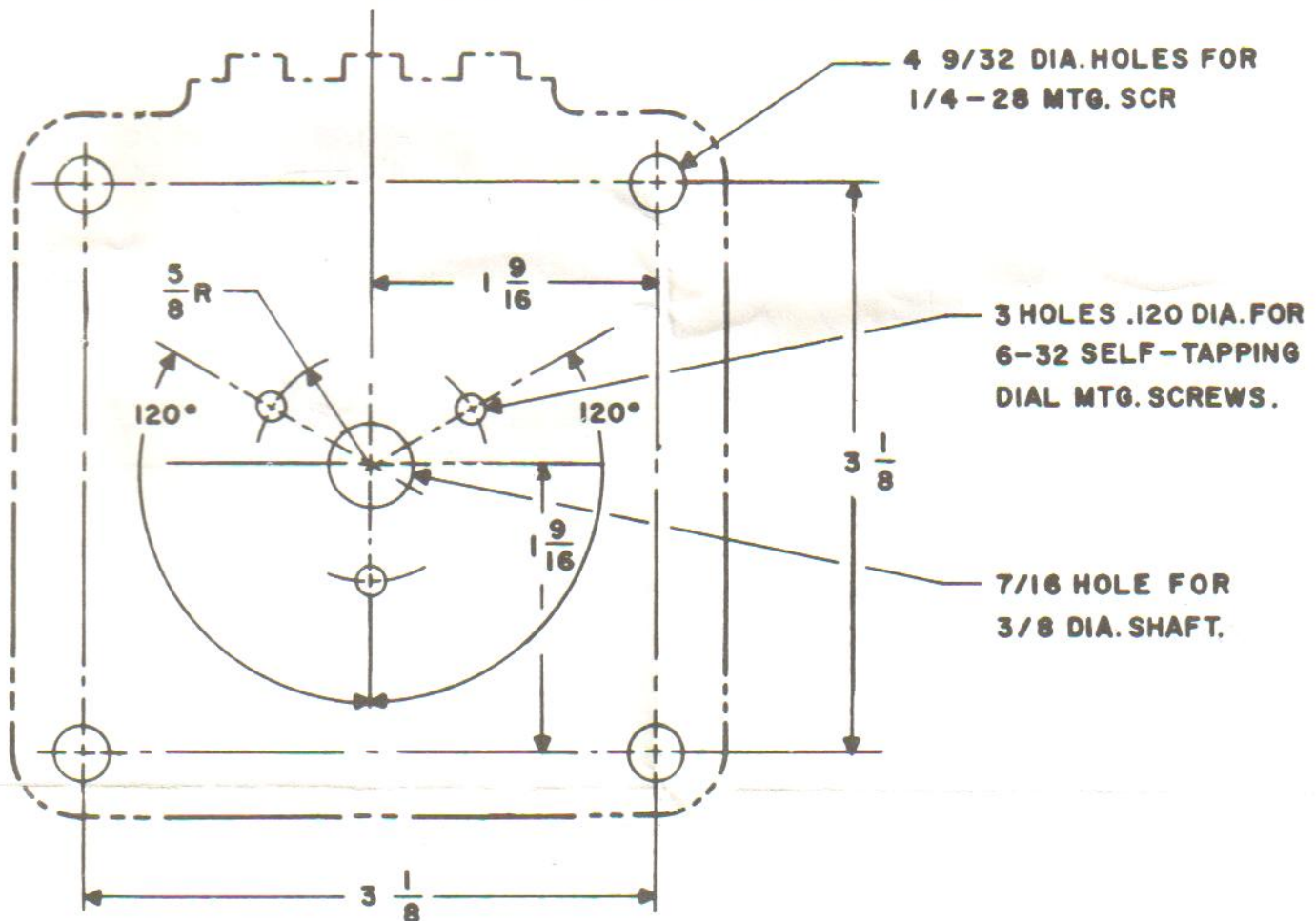
Type	Wiring	INPUT		OUTPUT				EXTERNAL CONNECTIONS					
		Volts	CPS	Volts	Max. Amps	Max. KVA	Voltage Increase	Knob On Base End			Knob On Rotor End		
								Input	Jumper	Output	Input	Jumper	Output
501 M501	Single Phase	120	50/60	0-120	5.0	0.6	CW	1-4	--	3-4	1-4	--	1-3
							CCW	1-4	--	1-3	1-4	--	3-4
							CW	4-5	--	3-4	1-2	--	1-3
				0-140	5.0	0.7	CCW	1-2	--	1-3	4-5	--	3-4

## STACKED UNITS

501-2 M501-2	1-Phase Series	240	50/60	0-240	5.0	1.2	CW	1-1	4-4	3-3	4-4	1-1	3-3
							CCW	4-4	1-1	3-3	1-1	4-4	3-3
				0-280	5.0	1.4	CW	5-5	4-4	3-3	2-2	1-1	3-3
							CCW	2-2	1-1	3-3	5-5	4-4	3-3
	3-Phase Open Delta	120	50/60	0-120	5.0	1.04	CW	1-4-1	4-4	3-4-3	4-1-4	1-1	3-1-3
							CCW	4-1-4	1-1	3-1-3	1-4-1	4-4	3-4-3
				0-140	5.0	1.2	CW	5-4-5	4-4	3-4-3	2-1-2	1-1	3-1-3
							CCW	2-1-2	1-1	3-1-3	5-4-5	4-4	3-4-3
501-3 M501-3	3-Phase Wye	240	50/60	0-240	5.0	2.08	CW	1-1-1	4-4-4	3-3-3	4-4-4	1-1-1	3-3-3
							CCW	4-4-4	1-1-1	3-3-3	1-1-1	4-4-4	3-3-3
							CW	5-5-5	4-4-4	3-3-3	2-2-2	1-1-1	3-3-3
				0-280	5.0	2.4	CCW	2-2-2	1-1-1	3-3-3	5-5-5	4-4-4	3-3-3

# MOUNTING FOR STACKED OR MOTORIZED 501

TEMPLATE NO.2 FOR 4 HOLE MOUNTING



## PORTABLE UNITS

Type	Wiring	Input	Output	Voltage Increase
3PN501 2PF501	(PORTABLE)	120 VAC 50/60 CPS	0-120/0-140 VAC 5 AMPS	CW

## REPLACEMENT PARTS

### BRUSHES

1. 501 Series: 808-0128

**NOTE:** It is imperative that newly installed or re-installed brushes be properly seated. With power off, insert a piece of fine garnet paper (non-metallic) between the brush and the commutating surface with the rough side toward the brush. A few swings of the brush over the garnet paper will mate the brush contact face to the commutating surface. Remove the garnet paper and blow loose particles from the commutating surface before applying power.

### Zero Voltage Adjustment

(Newly installed brushes): When the knob is at zero and the rotor is against its stop, the end of the brush should cover the first bar on the commutating surface.

To adjust: Loosen brush holder screw, press holder to the side.

### FUSES

Fuses may be purchased from local electronics distributor.

**STACO**  
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