

400 Hz MINIATURE POWER TRANSFORMERS

Reference for all Industrial and Military Standard 400 Hz Miniature Power Transformers

These 400 Hz Miniature Power Transformers are selected for use in all Military and Industrial applications requiring high performance in the smallest possible package size. They conform to all of the requirements of MIL-T-27, Class S (—55°C to +130°C). The minimum continuous operating life expectancy is 10,000 hours. This series is available having power ratings of 0.5 VA through 25 VA. The primaries are 115 Vrms with secondary voltages ranging from 5 Vrms through 300 Vrms.

It is recommended that these transformers be specified for all applications where space, weight, and cost effectiveness are prime considerations.

PART NUMBER EXAMPLE

0.5 S T 26
V.A. Rating (See Table I) Secondary Voltage (See Table II)
Package Style Schematic (See Table I)

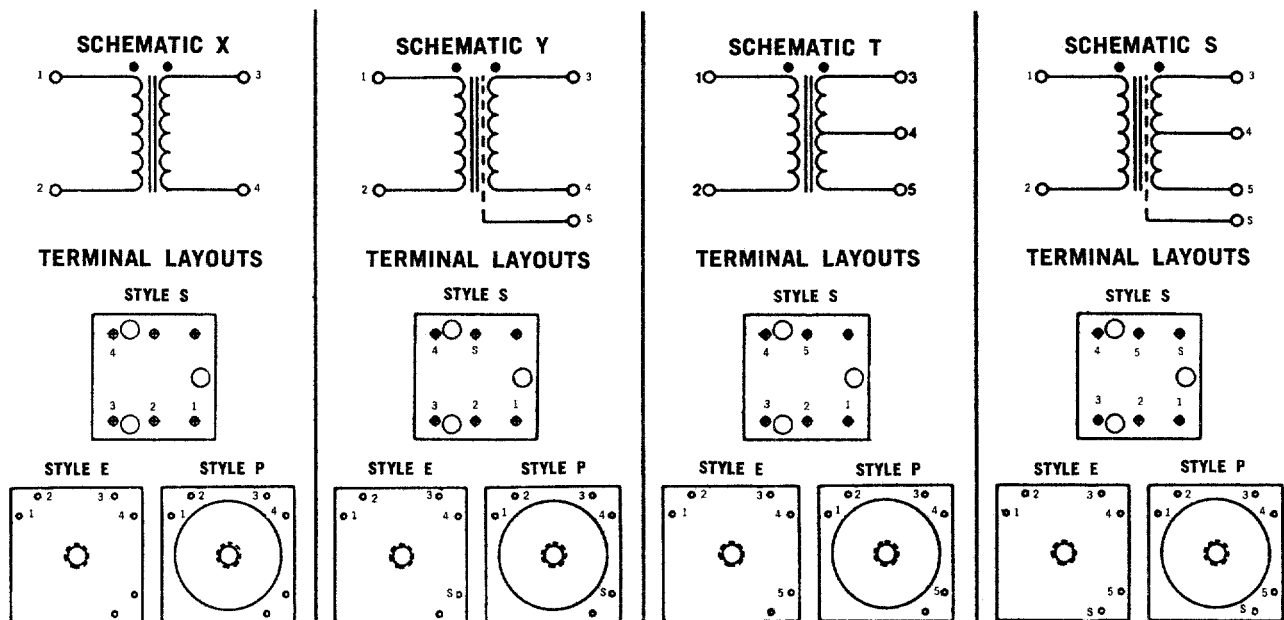
TABLE I

VA Rating	Package Style	Schematic	Size	Max. Height (Inches)	Regulation (%)		Available Secondary Voltages (VRMS)		Exciting Current (ma)	Efficiency (%)		Temperature Rise (°C) — MIL-T-27 No Heat Sink		Weight (Oz.)	
					Nom.	Max.	Min.	Max.		Min.	Nom.	Nom.	Max.	Nom.	Max.
0.5	S	T, X	—	—	15	18	5	300	1	65	70	10	15	0.38	0.4
0.5	S	S, Y	—	—	17	21	5	300	1	65	70	12	17	0.38	0.4
1.5	E, P	T, X	A	0.47	20	23	5	300	1.5	70	76	13	17	0.76	0.85
1.5	E, P	S, Y	A	0.59	15	18	5	300	3	70	76	13	17	0.97	1.1
2	E, P	T, X	A	0.78	3	3.7	5	300	6	72	87	10	15	1.5	1.65
2.4	E, P	S, Y	A	1.03	3	3.8	5	300	9	73	88	11	16	1.9	2.2
3	E, P	T, X	A	0.59	15	18	5	300	3	75	84	15	20	0.97	1.1
3	E, P	S, Y	A	0.78	10	12	5	300	6	75	84	15	20	1.5	1.65
3.6	E, P	T, X	A	1.03	3	3.8	5	300	9	76	87	10	15	1.9	2.2
6	E, P	T, X	A	0.78	10	12	5	300	6	81	88	18	25	1.5	1.65
6	E, P	S, Y	A	1.03	8	10	5	300	9	80	88	18	25	1.9	2.2
7.3	E, P	S, T, X, Y	B	0.97	3	3.5	5	300	16	84	92	15	23	3.2	3.4
9	E, P	T, X	A	1.03	8	10	5	300	9	83	89	23	30	1.9	2.2
13	E, P	S, T, X, Y	B	1.20	3	3.6	5	300	25	87	93	21	28	4.2	4.4
16	E, P	S, T, X, Y	B	0.97	7	8	5	300	16	87	92	25	32	3.2	3.4
25	E, P	S, T, X, Y	B	1.20	6	7	5	300	25	88	93	36	45	4.2	4.4

TABLE II INDUSTRY STANDARD SECONDARY VOLTAGES

Secondary Voltage	5	5.5	6	6.3	7	7.5	8	9	10	11	12	12.6	13	15	16	18	20	22	24	26	28	30	33
Maximum Working Voltage	325	325	325	325	325	325	325	325	325	325	325	325	325	325	325	325	325	325	325	325	325	325	325
Secondary Voltage	36	39	43	47	51	56	62	68	75	82	91	100	110	115	120	130	150	180	200	220	240	270	300
Maximum Working Voltage	325	325	325	325	325	325	325	325	325	325	325	325	325	325	325	325	325	325	440	440	440	580	580

SCHEMATIC AND TERMINAL CONFIGURATIONS



TRANSFORMERS

TOROTEL PRODUCTS INC./13402 South 71 Highway/Grandview, MO 64030/(816) 761-6314 TWX 910-777-7037

400 Hz MINIATURE POWER TRANSFORMERS

Reference for all Industrial and Military
Standard 400 Hz Miniature Power Transformers

PHYSICAL SPECIFICATIONS

Size: Sizes for Standard VA Types are given in Table I, and Outline Drawings.

Construction: MIL-T-27, Grade 5; Black Epoxy Encapsulated.

Terminals: Printed circuit pins — tinned brass.

Terminal Strength (Method 211 of MIL-STD-202, Test Condition A): 2.0 pounds.

Marking: Includes MIL-T-27 Type Designation, winding ratings, maximum working voltage, schematic, Torotel name, and part number.

ENVIRONMENTAL SPECIFICATIONS

Operating Temperature Range: -55°C to $+130^{\circ}\text{C}$ (ambient plus temperature rise).

Altitude: 70,000 feet, maximum.

Vibration: MIL-STD-202, Method 204, Test Condition D.

Life Expectancy: 10,000 hours minimum.

Other Environmental Specifications: In accordance with MIL-T-27, Grade 5 Class S, Family 03.

ELECTRICAL SPECIFICATIONS

Primary Voltage: 115 volts rms $\pm 10\%$.

Frequency: 400 Hz $\pm 5\%$.

Secondary Voltage: See Table II.

Secondary Voltage Tolerance: $\pm 3\%$ at full load and 115 volts, 400 Hz applied to primary.

Electrostatic Shielding (Schematics S and Y): 5 to 1 minimum voltage ratio at 20 KHz.

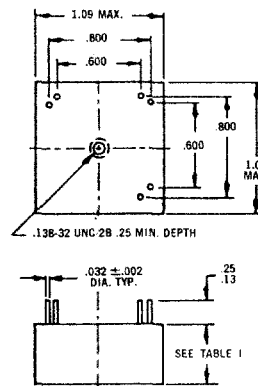
Phase Shift: 1.0 electrical degree between primary and secondary voltage at rated load, maximum.

Insulation Resistance: 10,000 megohms minimum at 500 VDC.

Dielectric Strength: At sea level—2.8 times the maximum working voltage.
At reduced barometric pressure—1.25 times the maximum working voltage.

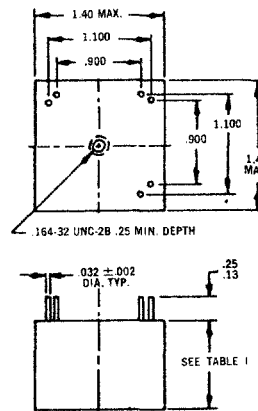
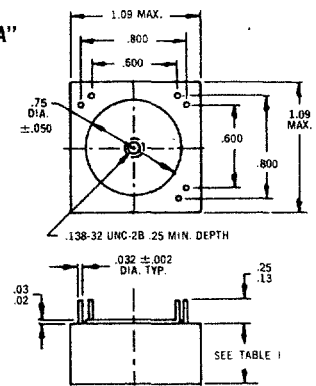
Mech. Tol. = $\pm .005$ unless indicated.

PACKAGE STYLE E

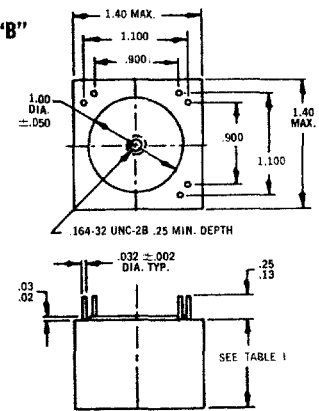


PACKAGE STYLE P

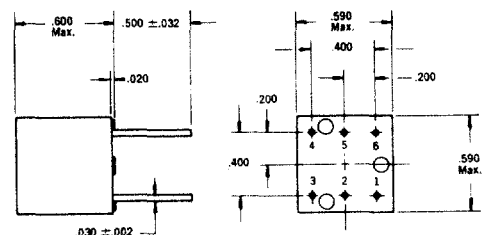
SIZE "A"



SIZE "B"



PACKAGE STYLE S



MECH. TOL. FOR STYLE "S" = $\pm .010$ UNLESS INDICATED.