



REQUIREMENTS: (When numbers in parentheses i.e. (1-2) are used, they indicate the winding and the extreme terminals of the winding.)

Electrical ratings: See table I.

Primary voltage (1-2): 115 volts  $\pm$ 10 percent, 400 Hz  $\pm$ 5 percent.

Design and construction:

Dimensions and configuration: See figure 1.

Weight: 18.7 ounces, maximum.

Duty cycle: Continuous.

Case: Metal enclosed.

Material: Steel.

Altitude: 70,000 feet, maximum.

Operating temperature range:  $-55^{\circ}\text{C}$  to  $+130^{\circ}\text{C}$  maximum.

Terminals: Feed thru.

Terminal height: 0.390 inch, maximum.

Terminal strength: Method 211 of MIL-STD-202, test condition A, 5 pounds.

Dielectric withstanding voltage:

At sea level: 2.8 times the maximum working voltage specified in table I.

At reduced barometric pressure: 1.25 times the maximum working voltage specified in table I.

Electrical characteristics:

No load: With 115 volts, 400 Hz across (1-2): Current in (1-2) shall not exceed 75 mA rms.

Rated load: With 115 volts, 400 Hz across (1-2) and a resistive load with current as specified in table I in (3-5), the voltage across (3-5) shall be as specified in table I.

Efficiency: 93 percent minimum at rated load.

Polarity: Additive with terminals 2 and 3 connected.

Regulation: 
$$\frac{\text{Voltage (no load)} - \text{Voltage (rated load)}}{\text{Voltage (rated load)}} \times 100$$
 shall not exceed 2.5 percent.

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

Temperature rise:  $43^{\circ}\text{C}$ , maximum with 115 volts, 400 Hz across (1-2) at an ambient temperature of  $87^{\circ}\text{C}$ .

Vibration: MIL-STD-202, method 204, test condition D.

Marking location: See figure 1.

© QUALITY ASSURANCE PROVISIONS:

Extent of qualification:

## MIL-T-27/59C

Qualification testing and approval to M27/49-44 A or B, M27/51-44 A or B, M27/53-44 A or B, M27/56-44 and M27/66-27 shall be sufficient to grant qualification approval to MIL-T-27/48 through MIL-T-27/66 inclusive, all parts.

Qualification testing and approval to M27/59-36 shall be sufficient to grant qualification approval to M27/59-01 through M27/59-36.

Part number: M27/59-(dash number from table I).

TABLE I. Electrical ratings.

Dash no.	Secondary voltage (3-5) (V rms) ±3%	Secondary current (3-5) (amps rms)	Working voltage (V rms max)
01	12	8.33	325
02	12.6	7.94	"
03	13	7.69	"
04	15	6.67	"
05	16	6.25	"
06	18	5.56	"
07	20	5.00	"
08	22	4.55	"
09	24	4.17	"
10	26	3.85	"
11	28	3.57	"
12	30	3.33	"
13	33	3.03	"
14	36	2.78	"
15	39	2.56	"
16	43	2.33	"
17	47	2.13	"
18	51	1.96	"
19	56	1.79	"
20	62	1.61	"
21	68	1.47	"
22	75	1.33	"
23	82	1.22	"
24	91	1.10	"
25	100	1.00	"
26	110	0.91	"
27	115	0.87	"
28	120	0.83	"
29	130	0.77	"
30	150	0.67	"
31	180	0.56	"
32	200	0.50	440
33	220	0.45	440
34	240	0.42	440
35	270	0.37	580
36	300	0.33	580

Custodians:

Army - ER  
Navy - EC  
Air Force - 85

Preparing activity:  
Army - ER

(Project 5950-0623-25)

Review activities:

Army - MI  
Navy - OS  
Air Force - 11, 17, 99  
DLA - ES

User activities:

Army - ME  
Navy - MC, AS  
Air Force - 19

Agent:

DLA - ES