



DEFENSE LOGISTICS AGENCY
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March 27, 2017

MEMORANDUM FOR MILITARY/INDUSTRY DISTRIBUTION

SUBJECT: Initial Draft of MIL-PRF-27/318C Amendment 1, MIL-PRF-27/319C Amendment 1, MIL-PRF-27/320C Amendment 1, MIL-PRF-27/321C Amendment 1, MIL-PRF-27/322E Amendment 1, MIL-PRF-27/323C Amendment 1, MIL-PRF-27/326C Amendment 1, MIL-PRF-27/328C Amendment 1; Project Numbers 5950-2017-020, -021, -022, -023, -024, -025, -026, -027.

The proposed initial drafts are being amended to add a dimension table to Figure 1 instead of dimensions on the figures. This change will help to expedite further document actions.

The initial draft for the subject documents, dated 27 March 2017, are now available for viewing and downloading from the DLA Land and Maritime-VA Web site:

<http://www.landandmaritimeapps.dla.mil/Programs/MilSpec/initialdrafts.aspx>

Concurrence or comments are required at this Center within 30 days from the date of this letter. Late comments will be held for the next coordination of the document. Any further coordination concerning these documents will be circulated only to firms and organizations that furnish comments or reply that they have an interest. Comments from military departments must be identified as either "Essential" or "Suggested". Essential comments must be justified with supporting data. Military review activities should forward comments to their custodians of this office, as applicable, in sufficient time to allow for consolidating the department reply

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/SIGNATURE ON FILE/

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Chief
Electronics Component Team

NOTE: This draft dated, 27 March 2017, prepared by DLA-CC has not been approved and is subject to modification.
DO NOT USE FOR ACQUISITION PURPOSES.

MIL-PRF-27/318C
 AMENDMENT 1
DRAFT
 SUPERSEDING
 MIL-PRF-27/318B
 22 April 2011

PERFORMANCE SPECIFICATION SHEET

TRANSFORMERS, POWER, 80 VOLT-AMPERES, 60 HERTZ

This specification is approved for use by all Departments and Agencies of the Department of Defense.

The complete requirements for procuring the transformer described herein shall consist of this document and the latest issue of specification MIL-PRF-27.

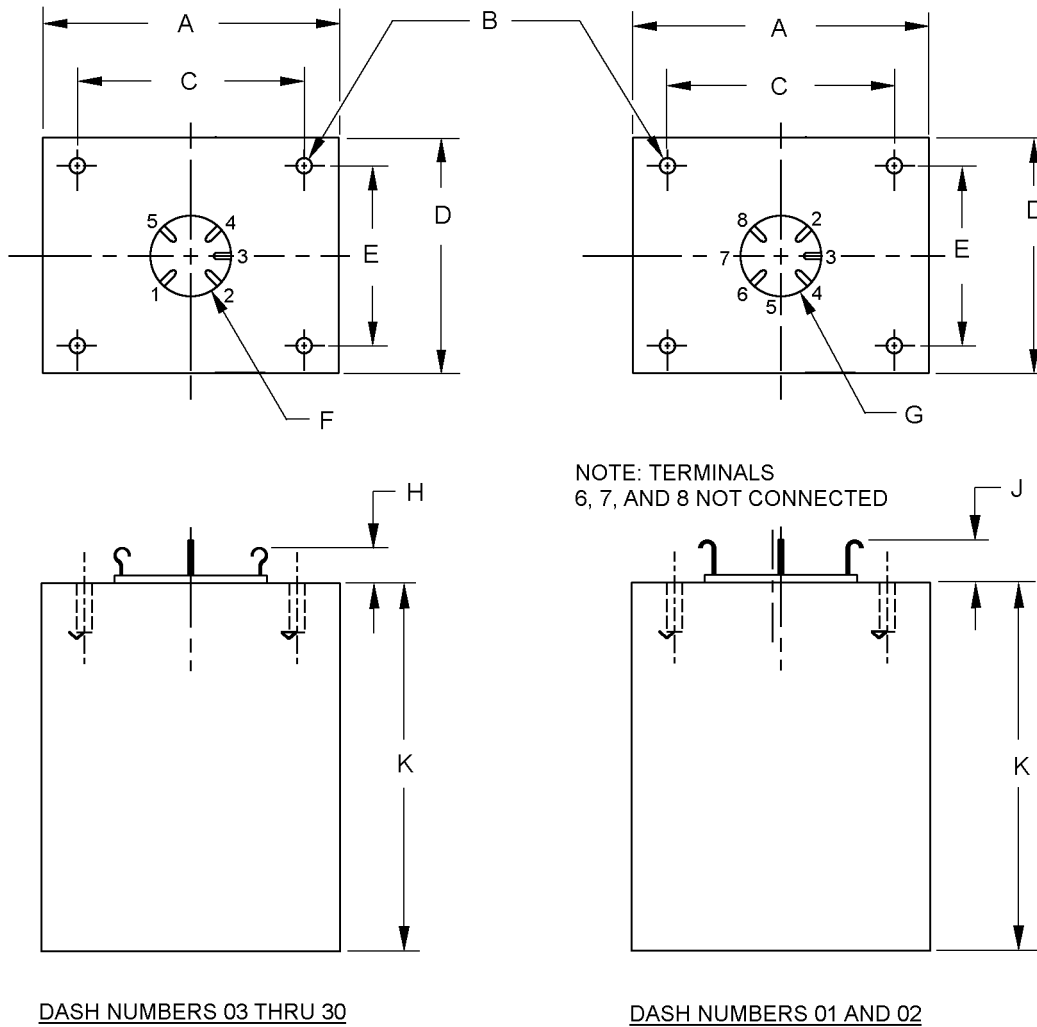
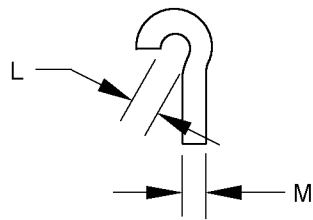
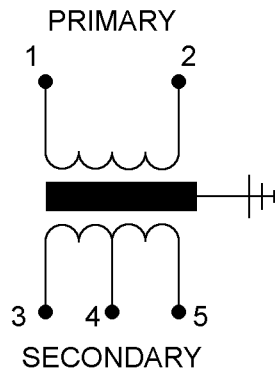


FIGURE 1. Dimensions and configurations.

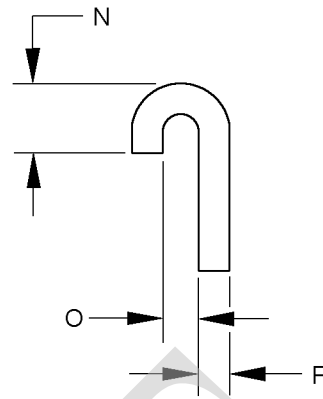




DASH NUMBERS 03 THRU 30



CIRCUIT DIAGRAM



DASH NUMBERS 01 AND 02

Dim	Inches	mm	Dim	Inches	mm
A	3.13 ±.031	79.5 ±0.79	J	.470 ±.031	11.94 ±0.79
B	.164-32 UNC-2B (4 PLACES) 8 FULL THDS min.		K	4.13	104.9
C	2.25 ±.016	57.2 ±0.41	L	.070 ±.005	1.78 ±0.13
D	2.63 ±.031	66.8 ±0.79	M	.062 ±.005	1.57 ±0.13
E	2.00 ±.016	50.8 ±0.41	N	.188 ±.005	4.78 ±0.13
F	.875 DIA	22.22 DIA	O	.094 ±.005	2.39 ±0.13
G	1.063 DIA	27.00 DIA	P	.080 ±.005	2.03 ±0.13
H	.375 ±.031	9.52 ±0.79			

NOTES:

1. Dimensions are in inches.
2. Metric equivalents are given for general information only.
3. Marking shall be on the sides of the case.
4. Unless otherwise specified, tolerance shall be ±.063 (1.60 mm).
5. Electrical values shall be marked as specified in table I, except DCR.
6. The mounting surface can be painted.

FIGURE 1. Dimensions and configurations – Continued.

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

Electrical ratings:

Primary voltage (1-2): 115 volts ac, 50 to 60 hertz.

Primary dc resistance: 3.7 ohms ± 25 percent.

Secondary voltage (3-5): See table I.

Volt-ampere rating: 80 volt-amperes.

Working voltage (1-2): 535 volts peak.

Design and construction:

Dimensions and configuration: See figure 1.

Duty cycle. Continuous.

Case: Metal enclosed.

Material: Steel.

Terminals: Solderable terminals.

<u>Dash numbers</u>	<u>Terminal type</u>	<u>Height (inches)</u>	<u>Diameter (inches)</u>
01 and 02	Hook	0.473 $\pm$.031	0.080 $\pm$.005
03 through 30	Hook	0.375 $\pm$.031	0.062 $\pm$.005

Weight: 5.0 pounds, maximum.

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

Altitude: 10,000 feet.

Terminal strength: MIL-STD-202-211, test condition A, 2.0 pounds.

Dielectric withstanding voltage (each winding) (at sea level): 1,500 volts rms.

Electrical characteristics:

Rated load: With 115 volts ac and 60 Hz across (1-2), and rated current in secondary, the voltage across (3-5) shall be as specified in table I.

Regulation:
$$\frac{\text{Voltage (no load)} - \text{Voltage (rated load)}}{\text{Voltage (rated load)}} \times 100$$

Shall not exceed 10 percent.

Polarity: Additive with terminals 2 and 3 connected.

Temperature rise: 35°C with 115 volts ac, 60 hertz across (1-2) at an ambient temperature of 95°C , full load terminals (3-5).

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Marking location: See figure 1.

Part or Identification Number (PIN): M27/318-(dash number from table I).

TABLE I. Electrical ratings.

Dash number M27/318-	Secondary (3-5)		
	Voltage (volts) ±3 percent	Current ^{1/} (amperes)	DC resistance (ohms) ±25 percent
01	5.0	16.00	0.011
02	6.3	12.70	0.016
03	8.0	10.00	0.037
04	10.0	8.00	0.050
05	12.6	6.35	0.070
06	14.0	5.72	0.100
07	16.0	5.00	0.120
08	18.0	4.44	0.160
09	20.0	4.00	0.190
10	22.0	3.64	0.25
11	25.0	3.20	0.30
12	28.0	2.86	0.40
13	31.0	2.58	0.45
14	35.0	2.28	0.50
15	39.0	2.05	0.70
16	43.0	1.85	0.94
17	48.0	1.63	1.00
18	55.0	1.46	1.50
19	63.0	1.27	1.70
20	70.0	1.14	2.40
21	80.0	1.00	2.70
22	90.0	0.890	3.80
23	100	0.800	4.20
24	110	0.726	5.70
25	123	0.650	6.50
26	138	0.580	9.50
27	157	0.510	10.5
28	175	0.457	14.8
29	200	0.400	17.0
30	220	0.364	23.0

^{1/} For 50 Hz operation, reduce secondary current by 10 percent.

VERIFICATION:

Extent of qualification:

Qualification testing and approval to M27/312-26 or M27/316-30, and M27/322-24 shall be sufficient to grant qualification approval to MIL-PRF-27/312 through MIL-PRF-27/322, inclusive, all parts.

Qualification testing and approval to M27/318-30 shall be sufficient to grant qualification approval M27/318-01 through M27/318-30.

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Referenced documents. In addition to MIL-PRF-27, this document references the following:

MIL-STD-202-211	MIL-PRF-27/312	MIL-PRF-27/313	MIL-PRF-27/314
MIL-PRF-27/315	MIL-PRF-27/316	MIL-PRF-27/317	MIL-PRF-27/319
MIL-PRF-27/320	MIL-PRF-27/321	MIL-PRF-27/322	

Amendment notations. The margins of this specification are marked with vertical lines to indicate modifications generated by this amendment. This was done as a convenience only and the Government assumes no liability whatsoever for any inaccuracies in these notations. Bidders and contractors are cautioned to evaluate the requirements of this document based on the entire content irrespective of the marginal notations.

Custodians:

Army - CR
Navy - EC
Air Force - 85
DLA - CC

Preparing activity:
DLA - CC

(Project 5950-2017-020)

Review activities:

Army – AR, CR4
Navy - AS, MC, OS, SH
Air Force - 99

NOTE: The activities listed above were interested in this document as of the date of this document. Since organizations and responsibilities can change, you should verify the currency of the information above using the ASSIST Online database at <https://assist.dla.mil>.