

INCH-POUND

MIL-PRF-15733/75A
w/AMENDMENT 2
1 June 2016
SUPERSEDING
MIL-PRF-15733/75A
w/AMENDMENT 1
18 November 2005

PERFORMANCE SPECIFICATION SHEET
FILTERS, RADIO FREQUENCY INTERFERENCE,
HERMETICALLY SEALED, STYLE FL98

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

The complete requirements for acquiring the filters described herein
shall consist of this specification sheet and MIL-PRF-15733.

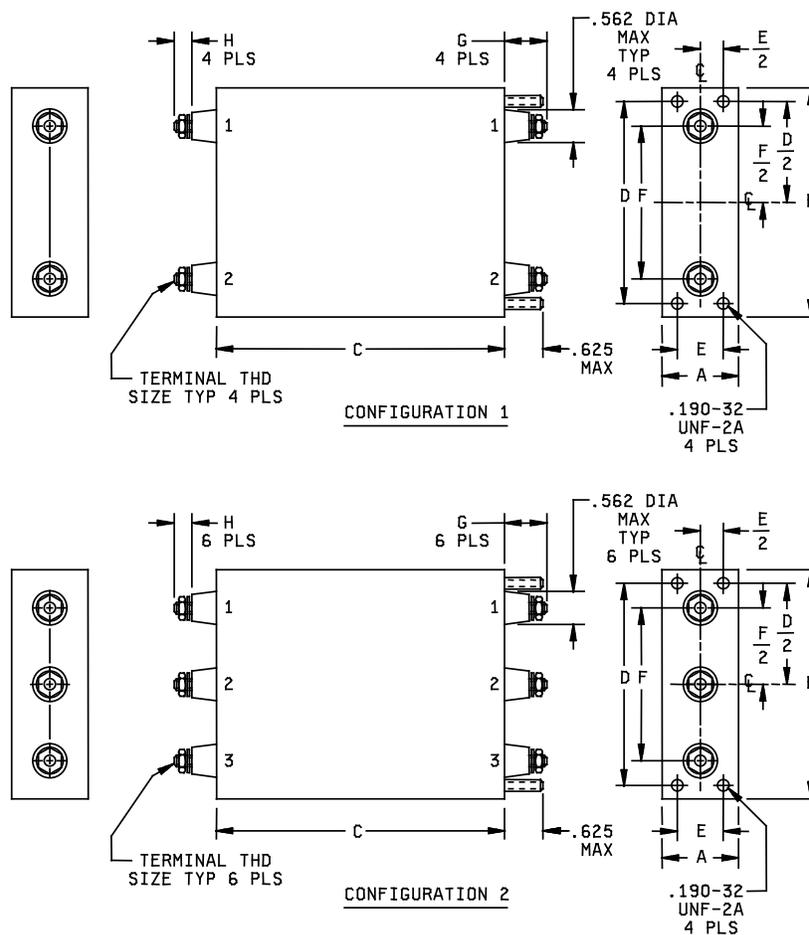


FIGURE 1. Case dimensions and circuit diagrams.



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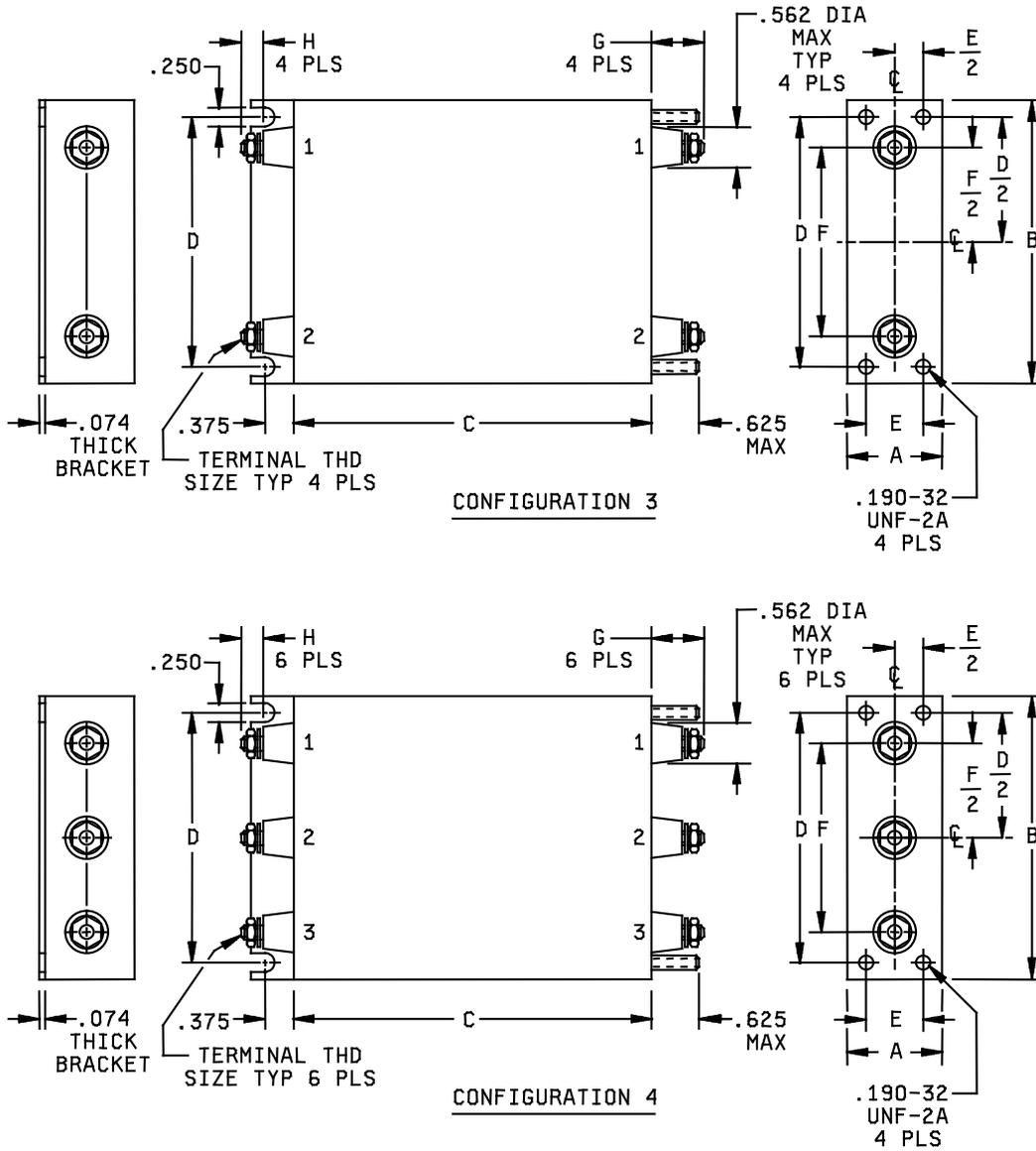
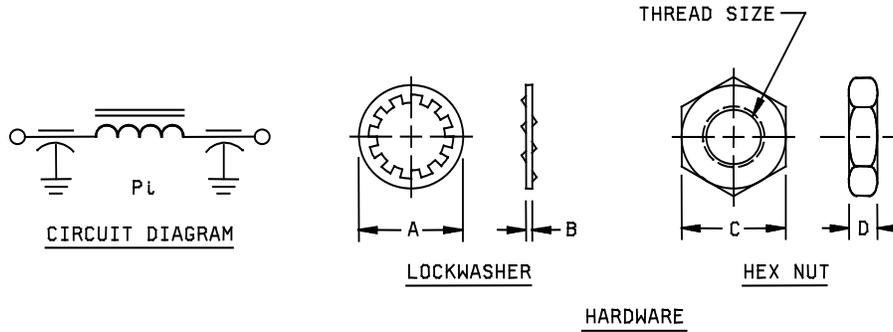


FIGURE 1. Case dimensions and circuit diagrams - Continued.

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| Inches | mm |
|--------|-------|
| .074 | 1.88 |
| .190 | 4.83 |
| .250 | 6.42 |
| .375 | 9.53 |
| .562 | 14.27 |
| .625 | 15.88 |



| Mounting Hardware | | | | |
|-------------------|---------------|-----------------|----------------|----------------|
| A | B | C | D | Thread size |
| ±.005 | ±.005 | ±.010 | ±.005 | |
| .375 (9.53) | .022 (.56) | .375 (9.53) | .125 (3.18) | .190-32 UNF-2B |
| Terminal Hardware | | | | |
| .330 (8.38) | .02 (.5) | .344 (8.74) | .125 (3.18) | .164-32 UNC-2B |
| .375 (9.53) | .022 (.56) | .375 (9.53) | .125 (3.18) | .190-32 UNF-2B |
| .472 (11.99) | .025 (.64) | .437 (11.10) | .156 (3.96) | .250-20 UNC-2B |

NOTES:

1. Dimensions are in inches.
2. Metric equivalents are given for general information only.
3. Metric equivalents are in parentheses.
4. Circuit diagram is for information only.
5. Mounting hardware shall be supplied with filter.
6. Terminal hardware shall be supplied with filter.
7. Recommended mounting torque 192 oz-in maximum.
8. Tolerances, unless otherwise specified shall be ±.031.
9. Marking shall include the numbers shown in figure 1 next to the terminals.

FIGURE 1. Case dimensions and circuit diagram - Continued.

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| Dash number | A ±.03 | B ±.03 | C ±.03 | D ±.020 | E ±.015 | F ±.03 | G Maximum | H Minimum | Terminal thread | Config-uration number | Weight pounds max. (kg) |
|-------------|----------------|-----------------|-----------------|-------------------|------------------|-----------------|----------------|----------------|-------------------|-----------------------|-------------------------|
| 0001 | 1.13 (28.7) | 2.25 (57.2) | 3.58 (90.9) | 1.750 (44.45) | .625 (15.88) | .75 (19.05) | .69 (17.5) | .290 (7.37) | .164-32 UNC-2A | 1 | .93 (.42) |
| 0002 | 1.50 (38.1) | 3.00 (76.2) | 4.94 (125.5) | 2.500 (63.5) | 1.000 (25.4) | 1.50 (38.1) | .69 (17.5) | .290 (7.37) | .164-32 UNC-2A | 1 | 1.79 (.81) |
| 0003 | 1.25 (31.8) | 2.50 (63.5) | 4.71 (119.6) | 2.000 (50.8) | 0.750 (19.05) | 1.25 (31.8) | .69 (17.5) | .290 (7.37) | .164-32 UNC-2A | 1 | 1.17 (.53) |
| 0004 | 1.50 (38.1) | 3.00 (76.2) | 5.57 (141.5) | 2.500 (63.5) | 1.000 (25.4) | 1.50 (38.1) | .69 (17.5) | .290 (7.37) | .164-32 UNC-2A | 1 | 2.07 (.94) |
| 0005 | 1.50 (38.1) | 3.00 (76.2) | 5.37 (136.4) | 2.500 (63.5) | 1.000 (25.4) | 1.50 (38.1) | .69 (17.5) | .290 (7.37) | .164-32 UNC-2A | 1 | 2.15 (.98) |
| 0006 | 2.25 (57.2) | 4.50 (114.3) | 6.44 (163.6) | 4.000 (101.6) | 1.750 (44.45) | 2.25 (57.2) | .69 (17.5) | .290 (7.37) | .164-32 UNC-2A | 3 | 4.38 (1.99) |
| 0006A | 2.25 (57.2) | 4.50 (114.3) | 6.44 (163.6) | 4.000 (101.6) | 1.750 (44.45) | 2.25 (57.2) | .69 (17.5) | .290 (7.37) | .164-32 UNC-2A | 3 | 4.38 (1.99) |
| 0007 | 1.75 (44.5) | 3.50 (88.9) | 6.19 (157.2) | 3.000 (76.2) | 1.250 (31.75) | 1.75 (44.5) | .69 (17.5) | .290 (7.37) | .164-32 UNC-2A | 3 | 2.88 (1.31) |
| 0008 | 2.25 (57.2) | 4.50 (114.3) | 6.08 (154.4) | 4.000 (101.6) | 1.750 (44.45) | 2.25 (57.2) | .69 (17.5) | .290 (7.37) | .190-32 UNF-2A | 3 | 4.41 (2.00) |
| 0009 | 2.25 (57.2) | 4.50 (114.3) | 6.94 (176.3) | 4.000 (101.6) | 1.750 (44.45) | 2.25 (57.2) | 1.25 (31.8) | .600 (15.2) | .250-20 UNC-2A | 3 | 5.24 (2.38) |
| 0010 | 1.13 (28.7) | 3.38 (85.9) | 3.58 (90.9) | 2.875 (73.03) | .625 (15.88) | 2.00 (50.8) | .69 (17.5) | .290 (7.37) | .164-32 UNC-2A | 2 | 1.28 (.58) |
| 0011 | 1.50 (38.1) | 4.50 (114.3) | 4.94 (125.5) | 4.000 (101.6) | 1.000 (25.4) | 3.00 (76.2) | .69 (17.5) | .290 (7.37) | .164-32 UNC-2A | 2 | 2.67 (1.21) |
| 0012 | 1.25 (31.8) | 3.75 (95.3) | 4.71 (119.6) | 3.250 (82.55) | .750 (19.05) | 2.50 (63.5) | .69 (17.5) | .290 (7.37) | .164-32 UNC-2A | 2 | 1.91 (.87) |
| 0013 | 1.50 (38.1) | 4.50 (114.3) | 5.57 (141.5) | 4.000 (101.6) | 1.000 (25.4) | 3.00 (76.2) | .69 (17.5) | .290 (7.37) | .164-32 UNC-2A | 2 | 3.1 (1.4) |
| 0014 | 1.50 (38.1) | 4.50 (114.3) | 5.37 (136.4) | 4.000 (101.6) | 1.000 (25.4) | 3.00 (76.2) | .69 (17.5) | .290 (7.37) | .164-32 UNC-2A | 2 | 2.82 (1.3) |
| 0015 | 2.25 (57.2) | 6.57 (166.9) | 6.44 (163.6) | 6.250 (158.75) | 1.750 (44.45) | 4.50 (114.3) | .69 (17.5) | .290 (7.37) | .164-32 UNC-2A | 4 | 6.82 (3.1) |
| 0016 | 1.75 (44.5) | 5.25 (133.6) | 6.19 (157.2) | 4.750 (120.65) | 1.250 (31.75) | 3.50 (88.9) | .69 (17.5) | .290 (7.37) | .164-32 UNC-2A | 4 | 4.29 (1.9) |
| 0017 | 2.25 (57.2) | 6.75 (171.5) | 6.08 (154.4) | 6.250 (158.75) | 1.754 (44.45) | 4.50 (114.3) | .69 (17.5) | .290 (7.37) | .190-32 UNF-2A | 4 | 6.62 (3.0) |
| 0018 | 2.25 (57.2) | 6.75 (171.5) | 6.94 (176.3) | 6.250 (158.75) | 1.750 (44.45) | 4.50 (114.3) | 1.25 (31.8) | .600 (15.2) | .250-20 UNC-2A | 4 | 6.87 (3.1) |

FIGURE 1. Case dimensions and circuit diagrams - Continued.

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REQUIREMENTS

Design and construction:

Dimensions and configuration: See figure 1.

Case: Metal.

Case and hardware finish: In accordance with [MIL-PRF-15733](#). Pure tin finish is prohibited.

Weight: See figure 1.

Rated voltage (each circuit): 400 volts dc, 115 volts ac from dc to 400 Hz.

Rated current (each circuit): See table I.

Insertion loss: In accordance with [MIL-PRF-15733](#) and the following:

At +25°C, each circuit: Insertion loss shall be as specified in table I.

At -55°C and +85°C, each circuit: Insertion loss shall be as specified in table I with exception of up to 10 MHz, a degradation of 2 dB from the value specified in table I shall be allowed.

Operating temperature range: -55°C to +85°C.

Seal: In accordance with [MIL-PRF-15733](#).

Temperature rise: In accordance with [MIL-PRF-15733](#) except all circuits of the filter shall be energized with rated current at maximum rated frequency in still air.

25°C maximum for parts rated up to and including 10 amperes per circuit.

35°C maximum for parts rated above 10 amperes per circuit.

Barometric pressure (reduced): Each circuit of the filter shall be tested in accordance with [MIL-PRF-15733](#).

Insulation resistance: In accordance with [MIL-PRF-15733](#). The insulation resistance of each circuit of the filter shall be 1000 megohms minimum.

Voltage drop: 1.15 volts ac (rms) or dc maximum for each circuit.

Overload: Each circuit of the filter shall be tested in accordance with [MIL-PRF-15733](#).

Terminal strength: In accordance with [MIL-PRF-15733](#) and [MIL-STD-202-211](#); test condition E.

Resistance to soldering heat: Not applicable.

Solderability: Not applicable.

Salt atmosphere (corrosion): In accordance with [MIL-PRF-15733](#) and [MIL-STD-202-101](#); test condition B.

Shock (specified pulse): In accordance with [MIL-PRF-15733](#) and [MIL-STD-202-213](#); test condition I (100g's).

Vibration, low frequency: In accordance with [MIL-PRF-15733](#) except following the vibration test the filters shall be visually examined for evidence of physical damage. Each circuit of the filter shall be subjected to the insertion loss test and shall meet the initial requirements.

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TABLE I. Electrical characteristics.

| Dash number | Number of circuits | Rated current (amps) (each circuit) | Minimum insertion loss (dB) in accordance with MIL-STD-220 ^{1/} (each circuit) | | | | | | | | |
|-------------|--------------------|-------------------------------------|---|---------|---------|-------|--------|--------|---------|-------|--------|
| | | | At +25°C | | | | | | | | |
| | | | 150 kHz | 300 kHz | 500 kHz | 1 MHz | 10 MHz | 50 MHz | 100 MHz | 1 GHz | 10 GHz |
| 0001 | 2 | 3 | 60 | 80 | 80 | 80 | 80 | 80 | 80 | 80 | 80 |
| 0002 | 2 | 3 | 80 | 80 | 80 | 80 | 80 | 80 | 80 | 80 | 80 |
| 0003 | 2 | 5 | 60 | 80 | 80 | 80 | 80 | 80 | 80 | 80 | 80 |
| 0004 | 2 | 5 | 80 | 80 | 80 | 80 | 80 | 80 | 80 | 80 | 80 |
| 0005 | 2 | 10 | 60 | 80 | 80 | 80 | 80 | 80 | 80 | 80 | 80 |
| 0006 | 2 | 10 | 80 | 80 | 80 | 80 | 80 | 80 | 80 | 80 | 80 |
| 0006A | 2 | 10 | 80 | 80 | 80 | 80 | 80 | 80 | 80 | 80 | 80 |
| 0007 | 2 | 20 | 60 | 80 | 80 | 80 | 80 | 80 | 80 | 80 | 80 |
| 0008 | 2 | 30 | 60 | 80 | 80 | 80 | 80 | 80 | 80 | 80 | 80 |
| 0009 | 2 | 50 | 60 | 80 | 80 | 80 | 80 | 80 | 80 | 80 | 80 |
| 0010 | 3 | 3 | 60 | 80 | 80 | 80 | 80 | 80 | 80 | 80 | 80 |
| 0011 | 3 | 3 | 80 | 80 | 80 | 80 | 80 | 80 | 80 | 80 | 80 |
| 0012 | 3 | 5 | 60 | 80 | 80 | 80 | 80 | 80 | 80 | 80 | 80 |
| 0013 | 3 | 5 | 80 | 80 | 80 | 80 | 80 | 80 | 80 | 80 | 80 |
| 0014 | 3 | 10 | 60 | 80 | 80 | 80 | 80 | 80 | 80 | 80 | 80 |
| 0015 | 3 | 10 | 80 | 80 | 80 | 80 | 80 | 80 | 80 | 80 | 80 |
| 0016 | 3 | 20 | 60 | 80 | 80 | 80 | 80 | 80 | 80 | 80 | 80 |
| 0017 | 3 | 30 | 60 | 80 | 80 | 80 | 80 | 80 | 80 | 80 | 80 |
| 0018 | 3 | 50 | 60 | 80 | 80 | 80 | 80 | 80 | 80 | 80 | 80 |

^{1/} Full-load insertion loss measurements shall be performed over the frequency range of 150 kHz to 10 MHz, inclusive. Measurements below or above this frequency range shall be performed at no-load.

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Life: In accordance with [MIL-PRF-15733](#) and [MIL-STD-202-108](#); test condition D (1,000 hrs) for qualification; test condition B (250 hrs) for group C inspection.

Part or Identifying Number (PIN): M15733/75- (dash number from table I).

Extension of qualification:

Qualification testing and approval to M15733/75-0002 and M15733/75-0009 shall be sufficient to grant qualification approval to M15733/75-0001 through M15733/75-0009, inclusive.

Qualification testing and approval to M15733/75-0011 and M15733/75-0018 shall be sufficient to grant qualification approval to M15733/75-0001 through M15733/75-0018.

Marking: In accordance with [MIL-PRF-15733](#). In addition, the filter case shall be marked next to the terminals with the numbers as shown in figure 1.

Recommended terminal torque as follows:

| <u>Thread</u> | <u>Torque</u> |
|----------------|----------------|
| .164-32 UNC-2A | 64 oz-in max. |
| .190-32 UNF-2A | 96 oz-in max. |
| .250-20 UNC-2A | 192 oz-in max. |

Referenced documents. In addition to [MIL-PRF-15733](#), this specification sheet references the following documents:

[MIL-STD-202-101](#)
[MIL-STD-202-108](#)
[MIL-STD-202-211](#)
[MIL-STD-202-213](#)
[MIL-STD-220](#)

Amendment notations. The margins of this specification sheet 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.

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

Preparing activity:
DLA - CC

(Project 5915-2016-003)

Review activities:
Army - AR, AT, AV
Navy - AS, MC, OS, SH
Air Force - 19, 99

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