

INCH-POUND

MS27488M
 29 September 2000
 SUPERSEDING
 MS27488L
 15 March 1985

DETAIL SPECIFICATION SHEET

PLUG, END SEAL, ELECTRICAL CONNECTOR

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

The requirements for acquiring the product described herein shall consist of this specification sheet and MIL-DTL-5015.

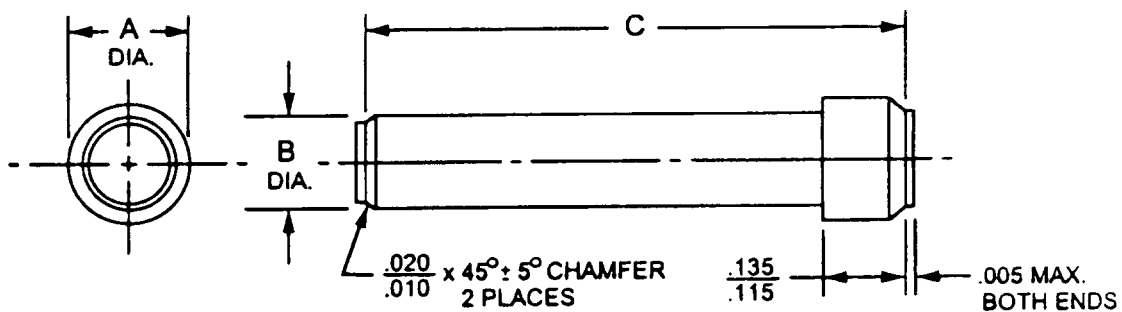


FIGURE 1. Sealing plug configuration.

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TABLE I. Sealing plug dimensions.

Dash No.	Color Code	A DIA.	B DIA.	C Dim.	Connector Contact Size (grommet cavity size)
-22-1	Black	0.066 0.058	0.045 0.038	0.796 0.746	23-22
-20-1	Red	0.090 0.080	0.058 0.048	0.805 0.755	20
-16-1	Blue	0.130 0.120	0.079 0.069	1.472 1.422	16
-12-1	Yellow	0.170 0.160	0.125 0.115	1.441 1.391	12
-8-1	Red	0.315 0.305	0.175 0.165	1.189 1.139	8
-4-1	Blue	0.414 0.404	0.283 0.273	1.189 1.139	4
-0-1	Yellow	0.606 0.596	0.431 0.416	1.071 1.021	0

NOTE: Dimensions are in inches

TABLE II. Metric equivalents.

Inch	Millimeter	Inch	Millimeter	Inch	Millimeter	Inch	Millimeter
0.010	0.254	0.120	3.048	0.404	10.262	1.139	28.931
0.020	0.508	0.125	3.175	0.414	10.516	1.189	30.200
0.038	0.965	0.130	3.302	0.416	10.566	1.391	35.331
0.045	1.143	0.135	3.429	0.431	10.947	1.422	36.119
0.048	1.219	0.160	4.064	0.596	15.128	1.441	36.601
0.058	1.473	0.165	4.191	0.606	15.393	1.472	37.389
0.066	1.676	0.170	4.318	0.746	18.948		
0.069	1.753	0.175	4.445	0.755	19.177		
0.079	2.007	0.273	6.934	0.796	20.218		
0.080	2.032	0.283	7.188	0.805	20.447		
0.090	2.286	0.305	7.747	1.021	25.933		
0.115	2.921	0.315	8.001	1.071	27.203		

NOTE: Metric equivalents (to the nearest .001 mm) are given for general information only and are based upon 1 inch = 25.4 mm.

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REQUIREMENTS:

1. MIL-DTL-5015: 3.2 through 3.32 and 4.1 through 4.6.25, not required.
2. Material. Plastic rod, molded and extruded - temperature limit 200 °C minimum. The material used to fabricate sealing plugs shall be Polytetrafluoroethylene (PTFE) in accordance with ASTM-D1710, Fluorinated Ethylene Propylene (FEP) in accordance with ASTM-D2116, Perfluoroalkoxy (PFA) in accordance with ASTM-D3307, or Polyphenylsulfone (PPSU) in accordance with ASTM-D6394.
3. Color. Color of items shall be in accordance with EIA-359.
4. Resistivity. Material resistivity shall be not less than 100 megohms when tested in accordance with ASTM-D257.
5. Installation. When installing sealing plugs in connector or module grommets, the head of the sealing plug shall be inserted first. The sealing plug shall then be pushed into the grommet until the head is positioned against the end of the unwired contact or empty grommet cavity. See note 7 for additional information regarding sealing plug installation and note 8 for installing tool guidance.
6. Workmanship. The item shall be free from flash and burrs. The length of diameter B shall be free of all molding marks, protrusions, and blemishes. Molding marks, protrusions, and blemishes from gate cutoffs are permissible but only on the plug ends or side of the head and shall not be greater than .005 inch in height.
7. Part marking. Marking is not required. Items shall be identified at the bag or higher packaging level.
8. Manufacturers, their distributors, and agents supplying military connectors and modules as noted, shall only furnish end seal plugs in accordance with this specification.

NOTES:

1. Dimensioning and tolerancing per ANSI-Y14.5M.
2. Table III lists the documents that use MS27488 Sealing Plugs along with their status and superseding document information.

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TABLE III. Document status and supersession information.

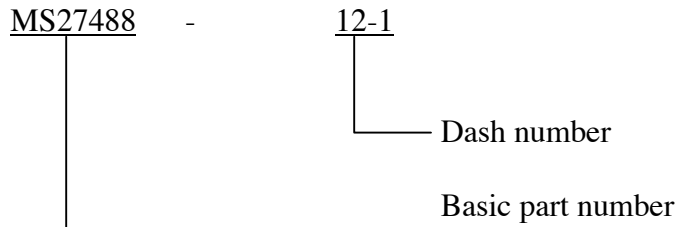
Document	Status	Superseding Document
MIL-DTL-5015	Active	None
MIL-W-5088	Inactive for New Design	SAE-A550881
MIL-PRF-22885/103	Active	None
MIL-PRF-22885/108	Active	None
MIL-S-24317/12	Inactive for New Design	None
MIL-C-26482, Series 1 and 2	Inactive for New Design	None
MIL-C-26500	Inactive for New Design	None
MIL-DTL-26518	Inactive for New Design	None
MIL-DTL-28804	Active	None
MIL-C-29600	Active	None
MIL-DTL-38999	Active	None
MIL-C-81511, Series 3 and 4	Inactive for New Design	None
MIL-C-81582/2	Active	None
MIL-C-81659	Active	None
MIL-C-81703	Inactive for New Design	SAE-AS81703
MIL-C-81714	Active	None
MIL-T-81714/1	Inactive for New Design	SAE-AS81714/1
MIL-T-81714/2	Inactive for New Design	SAE-AS81714/2
MIL-T-81714/3	Inactive for New Design	SAE-AS81714/3
MIL-T-81714/4	Inactive for New Design	SAE-AS81714/4
MIL-T-81714/6	Inactive for New Design	SAE-AS81714/6
MIL-T-81714/7	Inactive for New Design	SAE-AS81714/7
MIL-T-81714/8	Inactive for New Design	SAE-AS81714/8
MIL-T-81714/9	Inactive for New Design	SAE-AS81714/9
MIL-T-81714/17	Active	None
MIL-T-81714/25	Active	None
MIL-T-81714/26	Active	None
MIL-T-81714/27	Active	None
MIL-T-81714/28	Active	None
MIL-T-81714/30	Active	None
MIL-T-81714/31	Active	None
MIL-T-81714/60	Active	None
MIL-T-81714/61	Active	None
MIL-T-81714/63	Active	None
MIL-C-83527	Active	None
MIL-C-83538	Active	None
MIL-C-83723, Series II and III	Active	None
MIL-C-83723/66	Active	None

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TABLE III. Document status and supersession information – Continued.

Document	Status	Superseding Document
MIL-C-83723/67	Active	None
MIL-C-83723/68	Active	None
MIL-C-83723/69	Active	None
MS21346	Active	None
MS21347	Active	None
MS27722	Active	None
MS27723	Active	None
MS27724	Active	None
MS27781	Active	None
MS27782	Active	None
MS27783	Active	None
MS27784	Active	None
MS27785	Active	None
MS27786	Active	None
MS27787	Active	None
MS27788	Active	None
MS27789	Active	None
MIL-STD-1760	Active	None

3. Example of part or identifying number:



4. MS27488 part numbers supersede part numbers from MIL-C-81511/39, MIL-C-83723/28, MS3187, MS25251, MS27186, MS27187, and MS27488, revision L as follows:

- a. MS27488-22-1 supersedes M81511/39-22 and MS27488-22.
- b. MS27488-20-1 supersedes M81511/39-20, M83723/28-20, MS3187-20-2, MS25251-20, MS27186-1, MS27187-3, and MS27488-20.
- c. MS27488-16-1 supersedes M81511/39-16, M83723/28-16, MS3187-16-2, MS25251-16, MS27186-2, MS27187-1, and MS27488-16.
- d. MS27488-12-1 supersedes M81511/39-12, M83723/28-12, MS3187-12-2, MS25251-12, MS27186-3, MS27187-2, and MS27488-12.
- e. MS27488-8-1 supersedes M83723/28-8, MS3187-8-2, MS25251-8, and MS27488-8.

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- f. MS27488-4-1 supersedes M83723/28-4, MS3187-4-2, MS27187-4, and MS27488-4.
g. MS27488-0-1 supersedes M83723/28-0, MS3187-0-2, and MS27488-0.
5. The MS27488 dash number given as part of the part number matches the connector contact size and grommet cavity size for which the corresponding end seal plug is used.
6. For design purposes, this specification sheet takes precedence over acquisition documents referenced herein.
7. After placement, the portion of the plug that protrudes outside the grommet can be cut off to .100 inch from the grommet face.
8. Contact installing tools listed in table IV may be used for installing the seal plugs. The use of tools for seal plug sizes 12 and smaller will aid in the installation by supporting the plug during head first insertion. The tool rides against the shoulder on the back of the plug head during insertion rather than pushing on the tail end of the unsupported plug. The tools will not remove the seal plugs. Plugs must be removed by grasping the tail end of the plug that is left protruding outside the grommet. The tools are not recommended for seal plug sizes 8 and larger.

TABLE IV. Installation tools.

Seal Plug	Tool Part Number
MS27488-22-1	M81969/14-01
MS27488-20-1	M81969/14-11
MS27488-16-1	M81969/14-03
MS27488-12-1	M81969/14-04

CONCLUDING MATERIAL

Custodians:
Army - CR
Navy - AS
Air Force - 11

Preparing activity:
Navy - AS

(Project No. 5935-4135)

Review activities:
Army - AR, MI
Navy - EC
Air Force - 19, 99