

METRIC

MIL-C-83522/16A
25 June 1992
SUPERSEDING
MIL-C-83522/16
7 May 1991

MILITARY SPECIFICATION SHEET

CONNECTOR, FIBER OPTIC, SINGLE TERMINUS, PLUG, ADAPTER STYLE,
2.5 MILLIMETERS BAYONET COUPLING, EPOXY

This specification 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 the
issue of the following specification listed in that issue of the Department of Defense Index of Specifications
and Standards (DODISS) specified in the solicitation: MIL-C-83522.

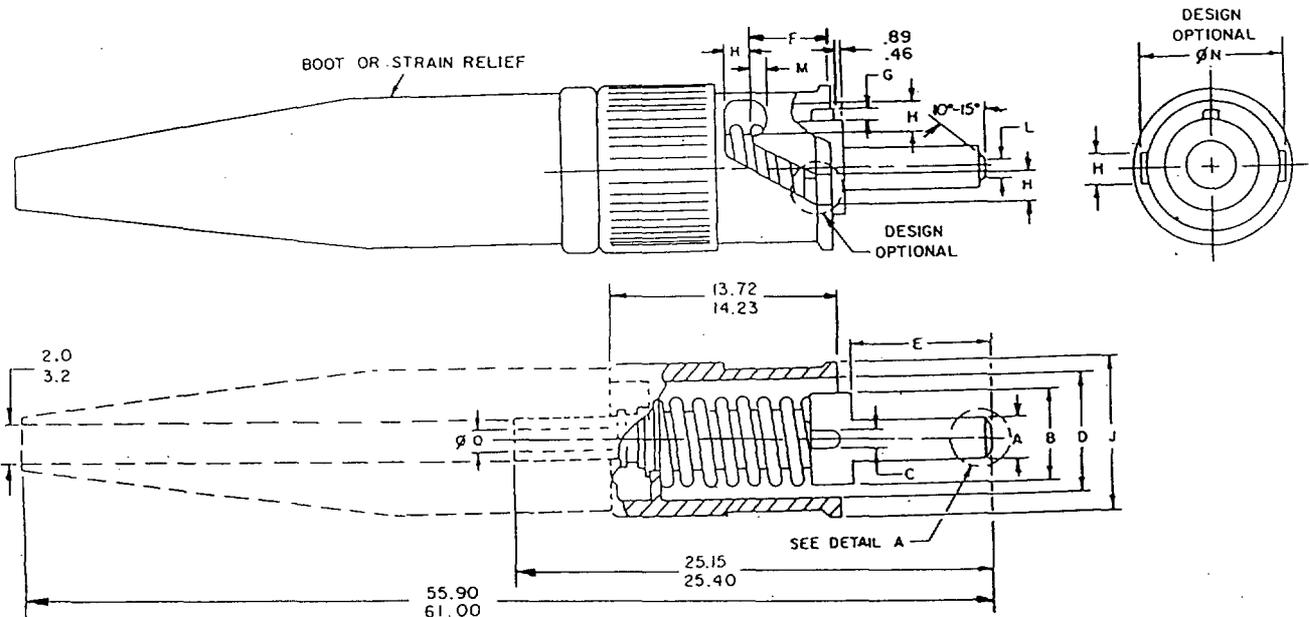


FIGURE 1. Dimensions and configuration.

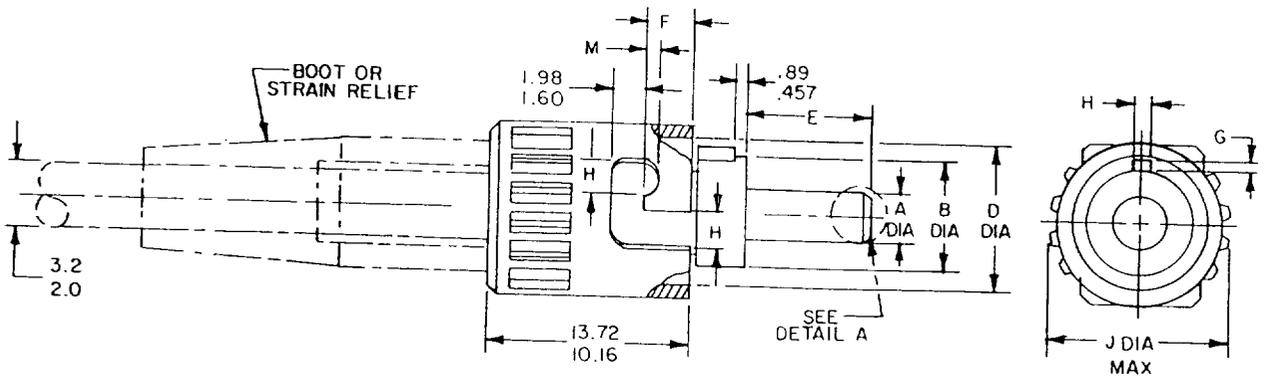
AMSC N/A

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FSC 6060

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Style B

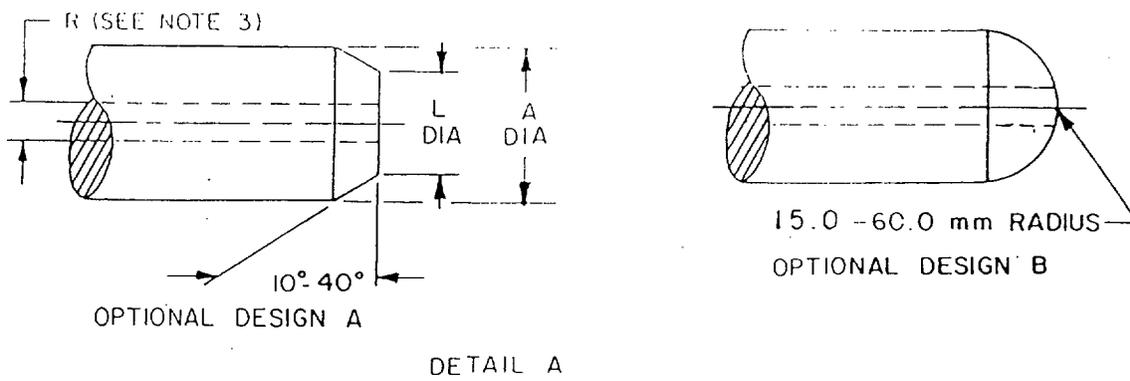


mm	Inches
0.457	.018
0.89	.035
1.60	.063
1.98	.078
2.0	.079
3.2	.119
10.16	.400
13.72	.540

NOTES:

1. Dimensions are in millimeters.
2. Inch equivalents are given for general information only.

FIGURE 1 Dimensions and configuration - Continued.



DETAIL A

Letter	Millimeters		Inches	
	Min	Max	Min	Max
4/ A (MM/SM)	2.498	2.500	0.0983	0.0984
4/ A (MM)	2.498	2.501	0.0983	0.0985
B	5.25	5.41	0.206	0.213
C	0.81	1.07	0.032	0.042
D	7.06	7.37	0.278	0.290
E	7.80	7.95	0.307	0.313
F	2.03	4.50	0.080	0.177
G	0.51	0.89	0.020	0.035
H	1.60	2.13	0.063	0.084
J	9.40	10.16	0.370	0.400
L	0.56	2.10	0.022	0.083
M	0.64	1.12	0.025	0.044
5/ N	8.56	8.79	0.337	0.346
Q	1.04	1.60	0.041	0.063

NOTES:

1. Dimensions are in millimeters.
2. Inch equivalents are given for general information only.
3. R dimension is for reference or conceptual design considerations only. This dimension is critical to fiber alignment. Dimensions for fiber optic fiber shall be in accordance with DOD-F-49291
4. Use A (SM/MM) for single mode applications. Use A (SM/MM) or A (MM) for multimode applications.
5. Design optional

FIGURE 1. Dimensions and configuration - Continued.

REQUIREMENTS:

Metals: The plug housing and other metal components shall be of corrosion resistant steel in accordance with QQ-S-763, class 303/316L or nickel plated brass in accordance with QQ-B-626.

The dust cover and strain relief foot shall be made of thermoplastic.

Epoxies: Use Trabond 230, Eccobond 144B, Epotec 300 Tera-bond 113, Hysol 0151 or an equivalent epoxy approved by the qualifying activity.

Dimensions and configuration: See figure 1.

Fiber optic cable requirements:

Optical alignment method: Sleeve/ferrule (bayonet).

Cable configuration: In accordance with DOD-C-85045.

Fiber diameter: 50/125 μm , 62,5/125 μm , and 100/140 μm , with the following respective tolerances: $125 \pm 2 \mu\text{m}$ (MM), $125 \pm 1 \mu\text{m}$ (MM), $140 \pm 2 \mu\text{m}$ (MM).

Fiber optic contact:

Method optical alignment: Sleeve/ferrule (bayonet).

Lens configuration: Not applicable

Coating requirements: Not applicable.

Optical requirements:

Nuclear radiation resistance: Not applicable.

Weight: 20 grams maximum.

Polarization: Key/slot (bayonet).

Safety wire holes: Not required.

Force to engage and disengage:

Longitudinal force: Not applicable.

Torque: Not applicable.

Water Submersion: Not applicable.

Coupling proof torque: Not applicable.

Coupling mechanism retention force: Not applicable.

Tensile loading: The load shall be 230 newtons minimum and shall not result in any physical damage. Optical properties shall be monitored before and after load. The load shall not be applied to the coupling mechanism. Optical transmittance measurements are not required during the test for the nonlocking connectors.

Ozone exposure: Not applicable.

High impact shock: Applicable to single mode and multimode locking and nonlocking connectors.

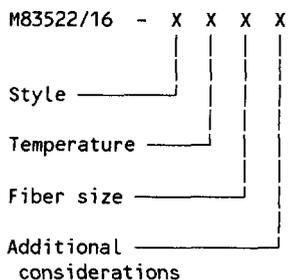
Fluid immersion: Not applicable

Residual magnetism: Not applicable.

Plug accessories: Each plug shall be packaged with a minimum of one clamp ferrule, one dust cover, and one strain relief foot.

The bayonet connector mates with MIL-C-83522/17 adapter bayonet and MIL-C-83522/18 PC mount.

Part or Identifying Number (PIN) is a new term encompassing previous terms used in specifications such as part number, type designator, or identification number and is as follows:



Style:

- A (locking boot, long cap)
- B (nonlocking boot, short cap)
- C (nonlocking, long cap)
- D (indifferent)

Temperature:

- H (high)
- N (normal)

Fiber size:

- X (type I) (125 μ m, MM)
- Y (type II) (125 μ m, MM/SM)
- Z (type I) (140 μ m, MM)

Additional Consideration:

- S - qualified to space flight requirements

Patent notice: The US Government has a royalty free license under the following patents for the benefit of manufacturers of the item, either for the Government or for use in equipment to be delivered to the Government. That is, adoption of a design for military specifications or the granting of qualifications to a supplier or manufacturer is conditional upon the existence of a royalty free license from the patent holder.

Patent number and section

4812009
item 62
items 86 through 89

Patent expiration date

March 14, 1996

CONCLUDING MATERIAL

Custodians:

Army - CR
Navy - EC
Air Force - 85

Review activities:

Navy - SH

Preparing activity:

Air Force - 85

Agent:

DLA - ES

(Project 6060-0098-01)

STANDARDIZATION DOCUMENT IMPROVEMENT PROPOSAL

INSTRUCTIONS

1. The preparing activity must complete blocks 1, 2, 3, and 8. In block 1, both the document number and revision letter should be given.
2. The submitter of this form must complete blocks 4, 5, 6, and 7.
3. The preparing activity must provide a reply within 30 days from receipt of the form.

NOTE: This form may not be used to request copies of documents, nor to request waivers, or clarification of requirements on current contracts. Comments submitted on this form do not constitute or imply authorization to waive any portion of the referenced document(s) or to amend contractual requirements.

I RECOMMEND A CHANGE:	1. DOCUMENT NUMBER MIL-C-83522/16A	2. DOCUMENT DATE (YYMMDD) 92-06-25
3. DOCUMENT TITLE CONNECTOR, FIBER OPTIC, SINGLE TERMINUS, PLUG, ADAPTER STYLE, 2.5 MILLIMETERS BAYONET COUPLING, EPOXY		
4. NATURE OF CHANGE <i>(Identify paragraph number and include proposed rewrite, if possible. Attach extra sheets as needed.)</i>		
5. REASON FOR RECOMMENDATION		
6. SUBMITTER		
a. NAME <i>(Last, First, Middle Initial)</i>	b. ORGANIZATION	
c. ADDRESS <i>(Include Zip Code)</i>	d. TELEPHONE <i>(Include Area Code)</i>	7. DATE SUBMITTED <i>(YYMMDD)</i>
	(1) Commercial (2) AUTOVON <i>(if applicable)</i>	
8. PREPARING ACTIVITY		
a. NAME 2750 LOG/ES GENTILE AFS	b. TELEPHONE <i>(Include Area Code)</i> (1) Commercial (513) 296-5517	(2) AUTOVON 986-5517
c. ADDRESS <i>(Include Zip Code)</i> 1060 HAMILTON STREET DAYTON, OH 45444-5400	IF YOU DO NOT RECEIVE A REPLY WITHIN 45 DAYS, CONTACT: Defense Quality and Standardization Office 5203 Leesburg Pike, Suite 1403, Falls Church, VA 22041-3466 Telephone (703) 756-2340 AUTOVON 289-2340	