INCH-POUND

MIL-PRF-64266/26
3 February 2014

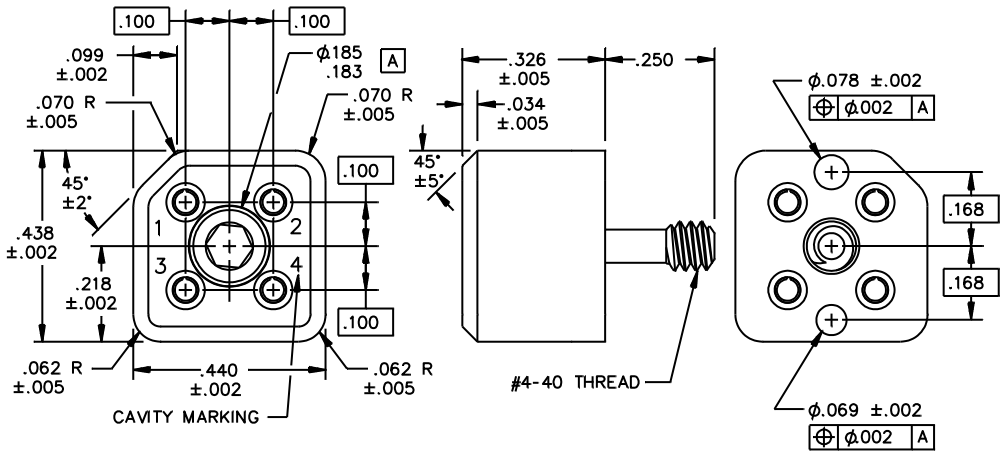
PERFORMANCE SPECIFICATION SHEET

CONNECTORS, FIBER OPTIC, RECTANGULAR, ALIGNMENT SLEEVE RETAINER (ASR), BOTH BACKPLANE AND CARD FRONT EDGE STYLE, MULTIPLE REMOVABLE TERMINI, SINGLE FIBER CABLES, NONENVIRONMENT RESISTING, TEMPERATURE RANGES 1 & 2

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

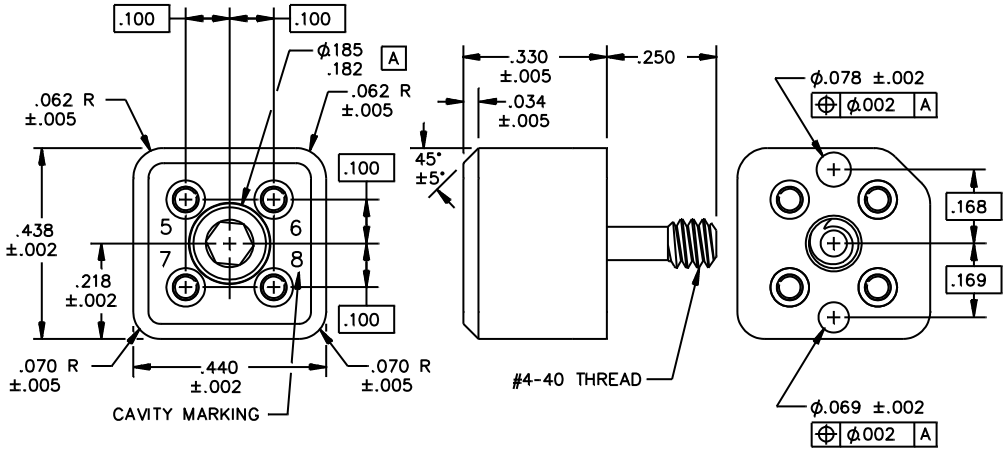
The requirements for acquiring fiber optic connectors described herein shall consist of this specification sheet and MIL-PRF-64266.

SCOPE. The performance requirements specified herein cover an Alignment Sleeve Retainer (ASR) that is affixed to the front surface of a rectangular connector plug. The connector plug is the type that is mated with a connector receptacle mounted onto a circuit card or printed circuit board (PCB). Mating of the connector plug to the connector receptacle is accomplished after or while the PCB is inserted into the backplane or rack. The different rectangular ASR configurations in this specification sheet cover those affixed to rectangular connector plugs. This ASR configuration is for the connector plug type that mates with connector receptacles on the PCB front edge (MIL-PRF-64266/25). This same ASR configuration is for the rectangular connector plug mounted in the backplane (MIL-PRF-64266/23).

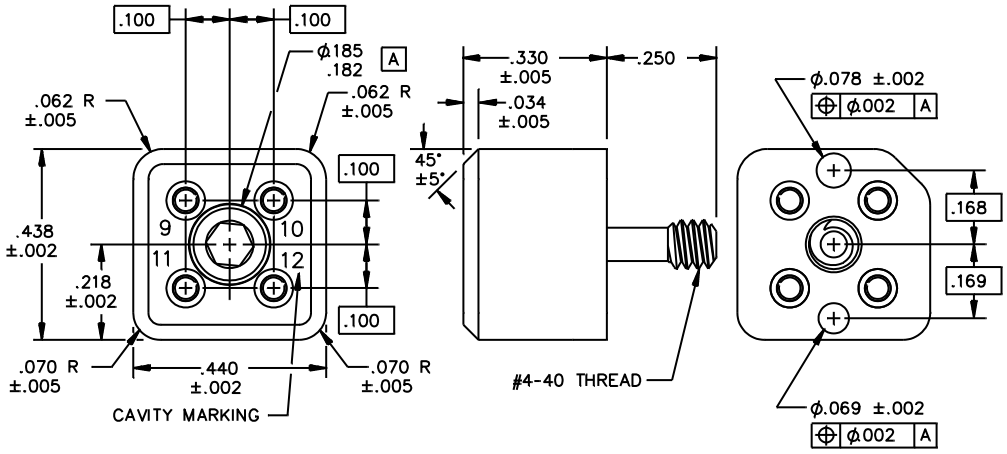


ASR 1 for Four, Eight and Twelve Cavity Connectors

FIGURE 1. Footprint dimensions.



ASR 2 for Eight and Twelve Cavity Connectors



ASR 3 for Twelve Cavity Connector

FIGURE 1. Footprint dimensions - Continued.

Notes:
1. Dimensions are in inches.
2. Metric equivalents are given for general information only.
3. Dimensions apply to plated/finished part.
4. Metric equivalents are in millimeters (mm).
5. ASR internal configuration is not shown. Pieces comprising the ASR (including the alignment sleeves) are to be captive in one assembly.
6. A 4-40 UNC-2A socket head cap screw, that is captive within the ASR, shall be used to affix the ASR to the connector plug. The 4-40 socket head cap screw used shall be fastened using a 3/32 inch hex wrench.
7. Envelop length dimensions are specified to one decimal place to expedite inspection process unless otherwise indicated.

FIGURE 1. Footprint dimensions - Continued.

REQUIREMENTS:

Dimensions and configurations. See figure 1 herein.

Temperature ranges.

Operating:	-67^0F to 329^0F	(-55^0C to 165^0C)
Non-operating:	-40^0F to 168^0F	(-40^0C to 70^0C)
Storage:	-40^0F to 168^0F	(-40^0C to 70^0C)

Weight. Weight shall not exceed the specified value in table I for the applicable number of cavities and material.

TABLE I. ASR weight (without alignment sleeves).

Cavity designator	Cavity positions	Composite		Aluminum		Stainless steel	
		ounce	grams	ounce	grams	ounce	grams
N	1,2,3,4	.07	2	.11	3	.25	7
R	5,6,7,8	.07	2	.11	3	.25	7
T	9,10,11,12	.07	2	.11	3	.25	7

Fabrication procedure. Standard fabrication procedure for both the terminus termination (placement of the terminus onto the end of a fiber optic cable) and the assembly of the connector and backshell onto the fiber optic cabling shall be used. Standard fabrication procedure shall be in accordance with MIL-STD-1678-4. Copies of these documents are available online at http://quicksearch.dla.mil or from the Standardization Document Order Desk, 700 Robbins Avenue, Building 4D, Philadelphia, PA 19111-5094.

Qualification. Qualification shall consist of performing testing as part of the connector plug per specification sheet MIL-PRF-64266/23 or MIL-PRF-64266/25. There is no separate qualification for only the rectangular ASR.

Termini. The ASR in the specification sheet shall use the MIL-PRF-29504/18 and MIL-PRF-64266/20 termini. For qualification, all cavities shall be populated with qualified MIL-PRF-64266/20 termini.

Alignment Sleeve Retainer (ASR): A MIL-PRF-64266/26 ASR shall be provided as a separate component when obtained under this PIN. Otherwise, the MIL-PRF-64266/26 ASR shall be provided with the applicable rectangular connector plug under a separate PIN (such as M64266/23 or

M64266/25).

Identification marking. Applicable. Both initial and after environmental testing.

ASR retention radial strength. Applicable except that both a clockwise and counterclockwise radial torque shall be applied to ASR (Alignment Sleeve Retainer) while the ASR is affixed to the connector plug. In each direction, the radial torque shall be applied at 15 +5/-0 in-lb (85 N-cm) and maintained for at least one minute. There shall be no rotational displacement between the ASR and the connector plug or any cracking of the alignment sleeves.

ASR retention axial strength. Applicable except that a pressure shall be applied to the mating surface of ASR while the ASR is affixed to the connector plug. The mating surface for this test is the surface that comes into contact with the connector receptacle. An axial pressure shall be applied on the ASR mating surface at 100 +5/-0 lb/sq in (0.69 MPa) and maintained for at least one minute. The test shall be repeated with the axial pressure applied to the connector plug back surface (i.e., surface that mates with the backshell). There shall be no axial displacement between the ASR and the connector plug or any cracking of the alignment sleeves.

Maintenance aging, ASR (Alignment Sleeve Retainer). Applicable except that the ASR shall be tightened to the connector plug when reaffixed with the torque specified in table II. Both connector plug and ASR shall show no wear or damage. No cracking or other damage shall occur to the alignment sleeves.

TABLE II. Torque to install ASR.

Cavity designator	ASR torque 1/ +/- 1 in-lb (+/- .11 N-m)			
	Composite		Metal	
	in-lb	N-m	in-lb	N-m
N	2.0	.25	4.0	.50
R	2.0	.25	4.0	.50
T	2.0	.25	4.0	.50

1/ Increments are rounded to nearest 0.05 N-m for compatibility with a torque wrench.

Cable pull-out force. Not applicable.

External bending moment. Not Applicable.

Cable seal flexing. Not applicable.

Twist. Applicable.

Mating durability. Applicable.

Backshell mating durability. Not Applicable.

Impact. Applicable except that tested as specified in MIL-PRF-64266/25 with an unmated connector plug in accordance with MIL-PRF-64266/25.

Crush. Not Applicable.

Water pressure. Not Applicable.

Banding strap attachment integrity. Not Applicable.

Compression fitting engagement integrity. Not Applicable.

Freezing water. Not Applicable.

Sand and dust. Not Applicable.

Electromagnetic effects. Not Applicable.

Salt spray. Applicable.

Shell-to-shell conductivity. Applicable. Not Applicable.

Modified SO_2/salt spray. Not Applicable.

Altitude immersion. Applicable.

Fluid immersion. Not Applicable.

Qualification by similarity.

Alternate material. If an ASR in this specification sheet made from aluminum is qualified, and an ASR made from composite or stainless steel in this specification sheet meet the alternative material inspections in the MIL-PRF-64266/25 specification sheet when tested with the MIL-PRF-64266/25 connector plug, then the ASR of the alternate material inspected is qualified.

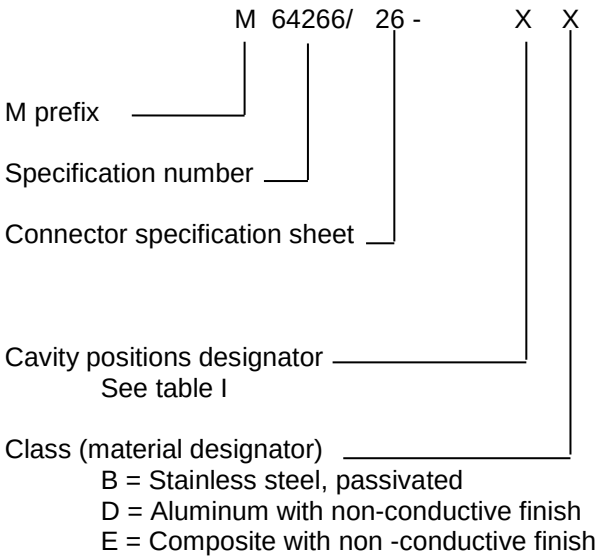
Alternate plating or plating process. If an ASR with one plating or plating process in this specification sheet is qualified, and an ASR made with an alternate (different type) plating or same type plating using an alternate plating process in this specification sheet meet the plating and plating process specified in 4.7.5.5 of the MIL-PRF-64266 base specification, then the ASR with the alternate plating or plating process, as applicable, inspected is qualified.

Marking.

Part or Identification Number (PIN). Marked on one of ASR side surfaces (i.e., surface in plane of alignment sleeve length (ASR depth) and larger rectangular length) and on packaging.

Cavity position numbers. The number assigned for each cavity position shall be placed on the ASR front face.

Part or Identifying Number (PIN).



PIN example: M64266/26-RD

Installation and removal tools. ASR shall be affixed onto the connector plug using only the tools and equipment listed in MIL-STD-1678-6 for the termini termination and connector assembly procedures.

Mating counterpart connector. M64266/23 or M64266/25

Referenced documents. In addition to MIL-PRF-64266, this specification sheet references the following documents:

MIL-PRF-29504/18
MIL-PRF-64266/20
MIL-PRF-64266/23
MIL-PRF-64266/25
MIL-STD-1678-4
MIL-STD-1678-6
MIL-PRF-28876

Standardization based on lessons learned. For the older, existing fiber optic, multiple termini connectors; each vendor has a different mechanism and assembly process. The logistic support is taxing the system. For instance, at several JFOWG (Joint Fiber Optic Working Group) meetings, the Navy school house reported that training on the MIL-PRF-28876 connector assembly took a significant portion of the time and cost for the fiber optic curriculum. This leads to logistic difficulties in adding new training material and obtaining (paying for) parts needed in this connector assembly. The implementation of this lesson learned is that the connector configuration and assembly process for any new connector and any new backshell configuration introduced must be standardized to the maximum extent feasible.

CONCLUDING MATERIAL

Custodians:
Army - CR
Navy - SH
Air Force - 85
DLA – CC

Preparing activity:
DLA-CC

Review activities:
Navy - AS
Air Force - 13, 19, 93, 99
DIA - DI
NASA - NA

(Project 6060-2013-024)

NOTE: The activities listed above were interested in this document on 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.