INCH-POUND
MIL-PRF-64266/9A
w/AMENDMENT 2
17 June 2019
SUPERSEDING
MIL-PRF-64266/9A
w/AMENDMENT 1
1 December 2014

PERFORMANCE SPECIFICATION SHEET

CONNECTORS, FIBER OPTIC, CIRCULAR, ALIGNMENT SLEEVE RETAINER (ASR), MULTIPLE REMOVABLE GENDERLESS TERMINI, SCREW THREADS, ENVIRONMENT RESISTING

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.

This specification sheet covers circular connector ASR's for interface with MIL-PRF-29504/18, /20 and lens termini. Previous versions of MIL-PRF-64266/9 covered circular connector ASR's only for interface with MIL-PRF-29504/18 and /20 termini.

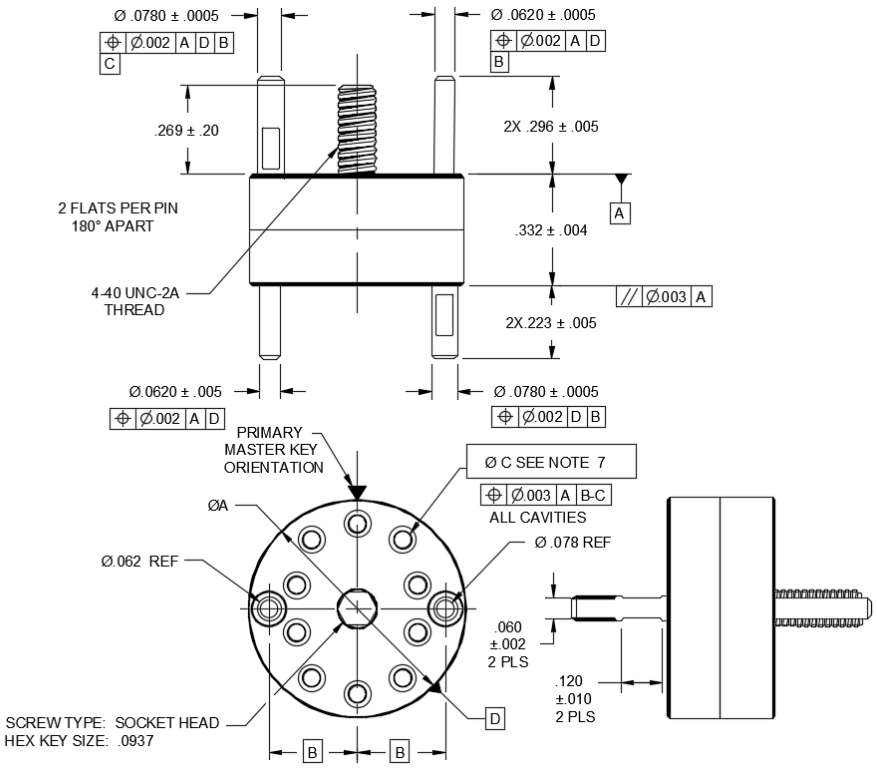


FIGURE 1. Alignment sleeve retainer (ASR).

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Shell size	A dia +/- .002	B basic (guidepins)
11	.410 (10.41)	.140 (3.56)
13	.486 (12.34)	.178 (4.52)
15	.664 (16.87)	.270 (6.86)
23	1.068 (27.13)	.400 (10.16)

Inches	mm	Inches	mm	Inches	mm	Inches	mm
.0005	0.01	.010	0.25	.062	1.58	.223	5.66
.002	0.05	.020	0.51	.078	1.98	.269	6.83
.003	0.08	.054	1.37	.0937	2.38	.296	7.52
.005	0.13	.060	1.52	.120	3.05	.332	4.43

NOTES:
1. Dimensions are in inches.
2. Metric equivalents are given for general information only.
3. Metric equivalents are in parentheses.
4. Dimensions apply to plated/finished part.
5. Alignment sleeve shall have an internal lead-in chamfer or radius in lieu of a sharp edge.
6. The cavity markings reflect the marking shown on the connector receptacle insert. The same insert marking is mirrored in the connector plug.
7. Diameter C (Ø C) is dependent upon terminus type used.
   Ø C = Ø .054 MIN for an ASR used with MIL-PRF-29504/18 and /20 termini.
   Ø C = Ø .070 MIN for an ASR used with lens termini.

FIGURE 1. Alignment sleeve retainer (ASR) - continued.

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REQUIREMENTS:

Dimensions and configurations: See figure 1 herein and appendix B of MIL-PRF-64266, figures B-1 through B-17 for termini cavity insert position and arrangement dimensions. ASR shall be marked with the identification number of the insert cavity positions on the face opposite the protruding threads of the socket head screw.

Screw retention: Socket head screw shall be retained (captive) within the ASR.

Weight (maximum): Weight shall not exceed the values as specified in table I for the applicable shell size and material.

TABLE I. Alignment sleeve retainer weights.

Shell size	Composite		Aluminum		Stainless steel	
	Ounces	Grams	Ounces	Grams	Ounces	Grams
11	0.10	2.8	0.12	3.4	0.20	5.7
13	0.12	3.4	0.14	4.0	0.30	8.5
15	0.14	4.0	0.21	6.0	0.50	14.2
23	0.30	8.5	0.50	14.2	1.30	36.9

Counterpart connectors: Receptacle and plug connectors specified in MIL-PRF-64266/1, MIL-PRF-64266/2 and MIL-PRF-64266/3.

Unless otherwise specified, the ASR shall be installed in the receptacle.

Termini: For an ASR with terminus type designator F, use with MIL-PRF-29504/18 and MIL-PRF-29504/20 termini.
For an ASR with terminus type designator L, use with lens termini.
An ASR with either terminus type designator F or L can be used with the MIL-PRF-29504/19 dummy terminus.

Alignment sleeves:
Material: Ceramic or equivalent.
Interface: Alignment sleeve shall have an internal lead-in chamfer or radius in lieu of a sharp edge.
Withdraw force:
Terminus type F. Alignment sleeve shall meet a withdraw force between 1.0 N to 2.5 N when tested for breakaway frictional force in alignment sleeves in accordance with TIA/EIA-455-158 using a gauge pin meeting the outside diameter (dimension CK), surface roughness and cylindrical requirements specified in figure 2.2.2 of TIA-604-10.
Terminus type L. Alignment sleeve shall meet a maximum engagement force of 30 ounces (8.3 N) using a 0.625 inch (1.588 mm) diameter gauge pin. This gauge pin diameter shall be 0.06248 ± .00001 (1.5870 ± 0.0002 mm) based on the outer lens holder diameter of 0.06248 ± .00002 inches (1.5870 ± .00005 mm). The separation force is not applicable. Only split alignment sleeves shall be used for the type L terminus (no solid alignment sleeves).

Guide pins: Use of a low strength thread locking compound on threaded guide pins is permissible providing the locking compound meets environmental requirements and does not migrate to the ferrule end faces of the fiber optic termini.

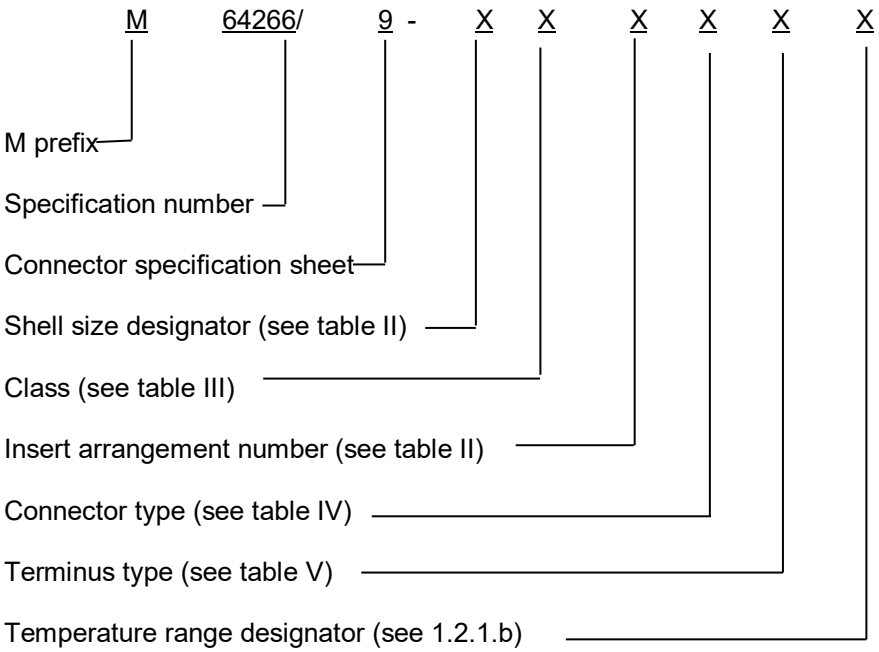
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Marking:

PIN: The PIN shall be marked on the ASR circular surface (side) and packaging (see figure I):

Connector and terminus type: The side of the connector shall be marked with the word “RECEPTACLE F, “RECEPTACLE L”, “PLUG F” or the word “PLUG L”. This marking is depending upon whether the identification numbers of the insert cavity positions on the front face are for a connector receptacle or for a connector plug. For shell size 11 connector receptacles, the wording “RECEPT” may be used in lieu of “RECEPTACLE”. The “F” designation is marked for ASR’s for use with MIL-PRF-29504/18 and /20 termini (making fiber-to-fiber contact). The “L” designation is marked for ASR’s for use with the lens termini (lens optical interface at the terminus end face).

Color.
Ø C = Ø .054 MIN for MIL-PRF-29504/18 and /20 termini. For a Class “D” (see table III) ASR, the ASR color shall be blue.
Ø C = Ø .070 MIN for lens termini. For ASR Class “D” (see table III), the ASR color shall be red for ASR’s used with the lens termini (lens optical interface at the terminus end face).



PIN Examples: M64266/9-BA1PF2
M64266/9-HC4RL2

NOTE: Shell size designators in MIL-PRF-64266 conform to those in MIL-DTL-38999 connector (Shell size 11 =B, shell size 13 = C, shell size 15 = D, shell size 23 = H). The shell size designators are not consistent with those in MIL-DTL-28840 or in MIL-PRF-28876 connectors (Shell size 11 =A, shell size 13 = B, shell size 15 = C, shell size 23 = F). Care should be taken when specifying the PIN for those use to specifying the PIN for MIL-DTL-28840 and MIL-PRF-28876 connectors.

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TABLE II. PIN designators.

Shell size	Shell size designator	Number of insert cavities	Insert arrangement number 1/
11	B	2	1
		4	2
13	C	6	1
		4 2/	2
15	D	8	1
		10	2
23	H	36	1
		18	2

1/ Insert arrangements are found in appendix B of MIL-PRF-64266.
2/ Shell size 13 connector with four cavity insert may be used for MIL-PRF-28876 retrofit applications for temperature range 1 shipboard applications.

TABLE III. Class.

Class	Material
A	Aluminum conductive plating (see 3.3.2).
B	CRES, passivated (see 3.3.2).
C	Composite with conductive plating (see 3.3.2).
D	Aluminum with non-conductive finish (see 3.3.2.3)

TABLE IV. Connector type.

Type	Description
R	Receptacle
P	Plug

Table V. ASR cavity diameter determined by terminus type.

Terminus type designator	Applicable termini	ASR Cavity Diameter	ASR color (Class D)
F	MIL-PRF-29504/18 MIL-PRF-29504/20	Ø C = Ø .054 MIN	Blue
L	Lens termini	Ø C = Ø .070 MIN	Red

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Qualification by similarity.

(1) Qualification of terminus type designator “F” ASR . Manufacturers who qualify under this specification sheet for the MIL-PRF-64266 connector of a specific shell size are qualified under this specification sheet for the terminus type designator “F” ASR for that shell size.

(2) Qualification of ASR with different terminus type designator. Manufacturers who qualify under this specification sheet for the terminus type designator “F” ASR (qualified as part of the MIL-PRF-64266 connector qualification) then perform testing and qualify lens shell size 15. This qualification by similarity is valid only when the same ASR is used except for a larger alignment sleeve, (but same drilling hole pattern), color and marking.

(3) Qualification of ASR with terminus type designator “L” ASR for different shell sizes. Manufactures who qualify under this specification sheet for the terminus type designator “L” ASR for shell size 15 and are qualified under this specification sheet for the terminus type designator “F” ASR of a specific shell size are qualified under this specification sheet for the terminus type designator “L” ASR for that same shell size. This qualification by similarity is valid only when the same ASR is used except for a larger alignment sleeve, (but same drilling hole pattern), color and marking.

Installation tools, removal tool, and ASR assembly tool for alignment sleeve: Tools shall be as specified in 3.5.4.2.

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.

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

MIL-DTL-28840	MIL-DTL-38999
MIL-PRF-28876	MIL-PRF-64266/1
MIL-PRF-29504/18	MIL-PRF-64266/2
MIL-PRF-29504/19	MIL-PRF-64266/3
MIL-PRF-29504/20	TIA/EIA-455-158
	TIA-604-10

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CONCLUDING MATERIAL

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

Preparing activity:
DLA - CC

(Project 6060-2018-010)

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

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.

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