

INCH-POUND

MIL-DTL-24231/1E(SH)

26 April 2013

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SUPERSEDING

MIL-C-24231/1D(SH)

15 May 1987

## DETAIL SPECIFICATION SHEET

### CONNECTOR, PLUG, TYPE I, MOLDED, THREE-, FOUR-, AND FIVE-CONDUCTOR

This specification is approved for use by the Naval Sea Systems Command and is available 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-24231.

#### REQUIREMENTS:

1. Dimensions and configuration: see [figures 1](#) through [6](#).
2. See table of cable types for molded plugs in MIL-DTL-24231.
3. Ni-Cu plug sleeves shall be coated with plasma spray non-conductive material in accordance with S9320-AM-PRO-030/MLDG.
4. All dimensions are in inches.
5. Tolerances shall be as follows, or as stated:
  - a. Decimals –  $\pm 0.005$  inch.
  - b. Fractions –  $\pm \frac{1}{64}$  inch.
  - c. Angular dimensions –  $\pm \frac{1}{2}$  degree.
6. Outside diameter may vary slightly after machine clean-up when 2-inch bar stock is used.

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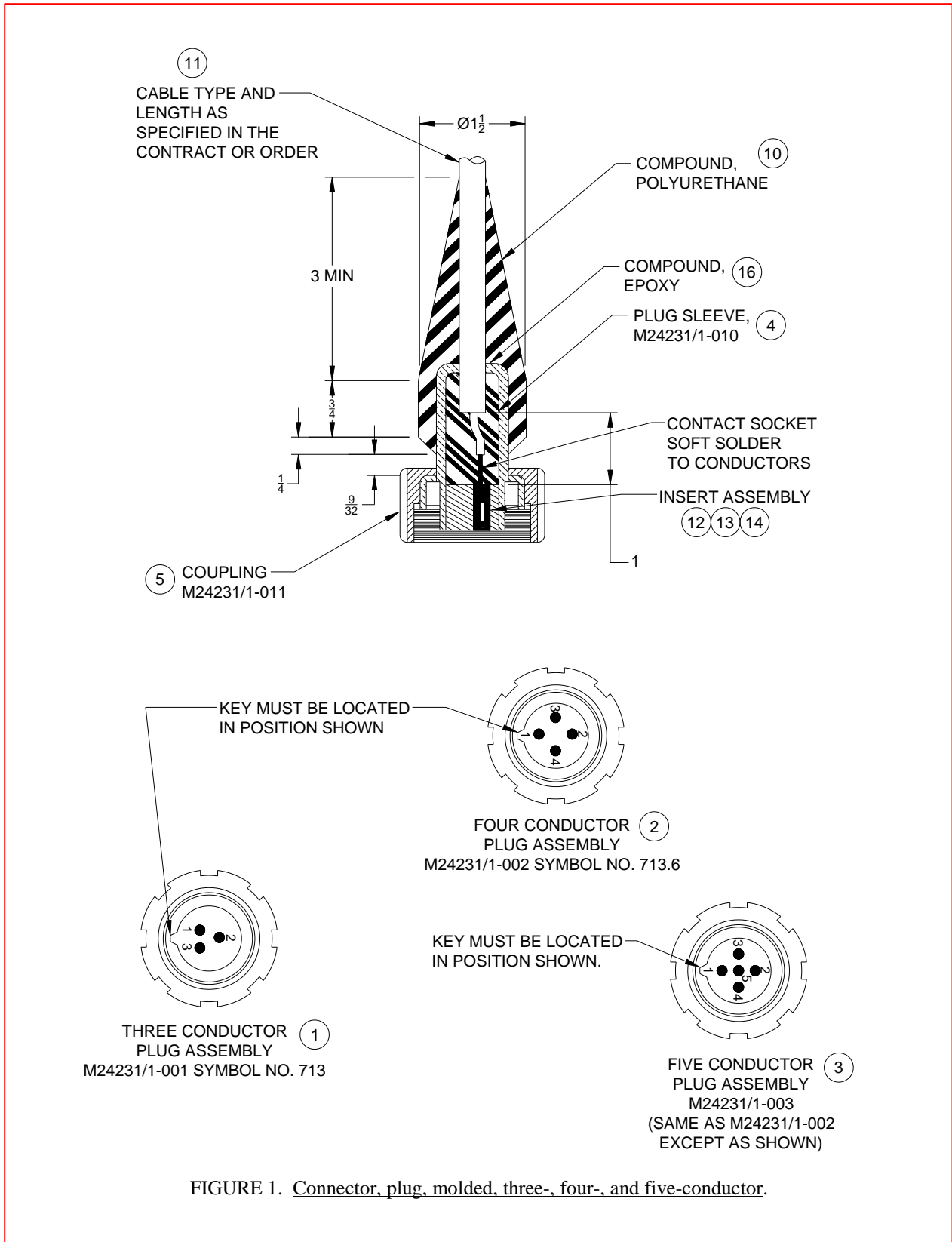
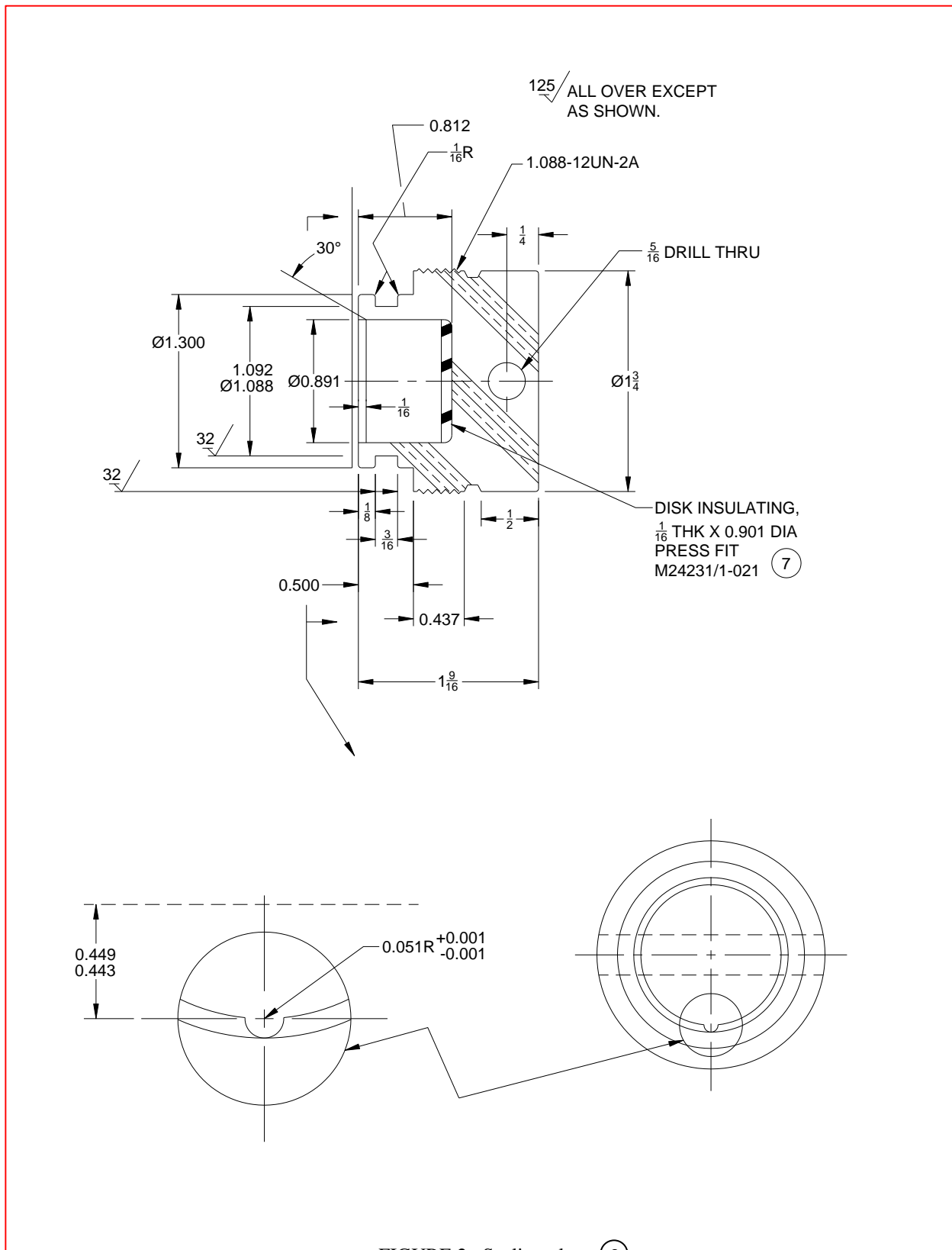


FIGURE 1. Connector, plug, molded, three-, four-, and five-conductor.

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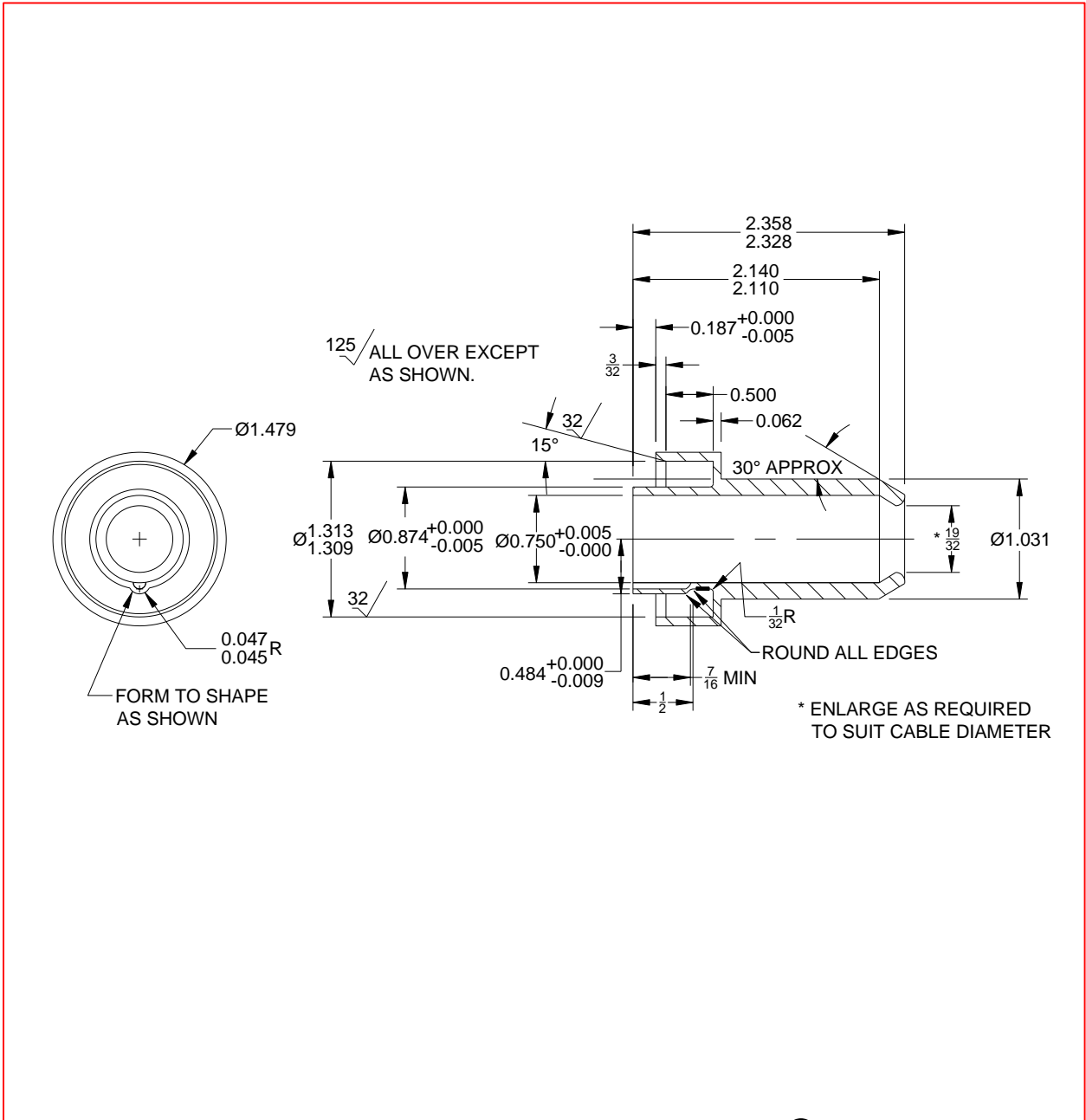


FIGURE 3. Plug sleeve – M24231/1-010. (4)

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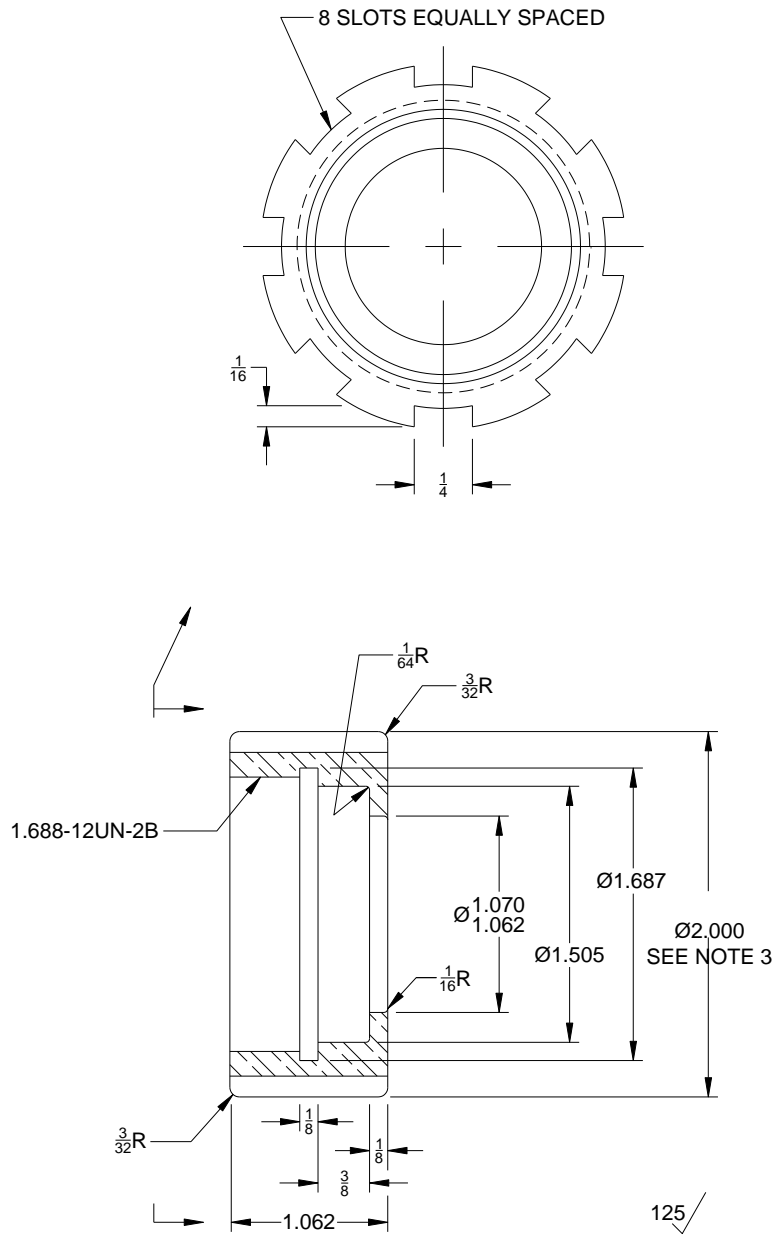


FIGURE 4. Coupling – M24231/1-011. (5)

FIGURE 4. Coupling - M24231/1-011. 5

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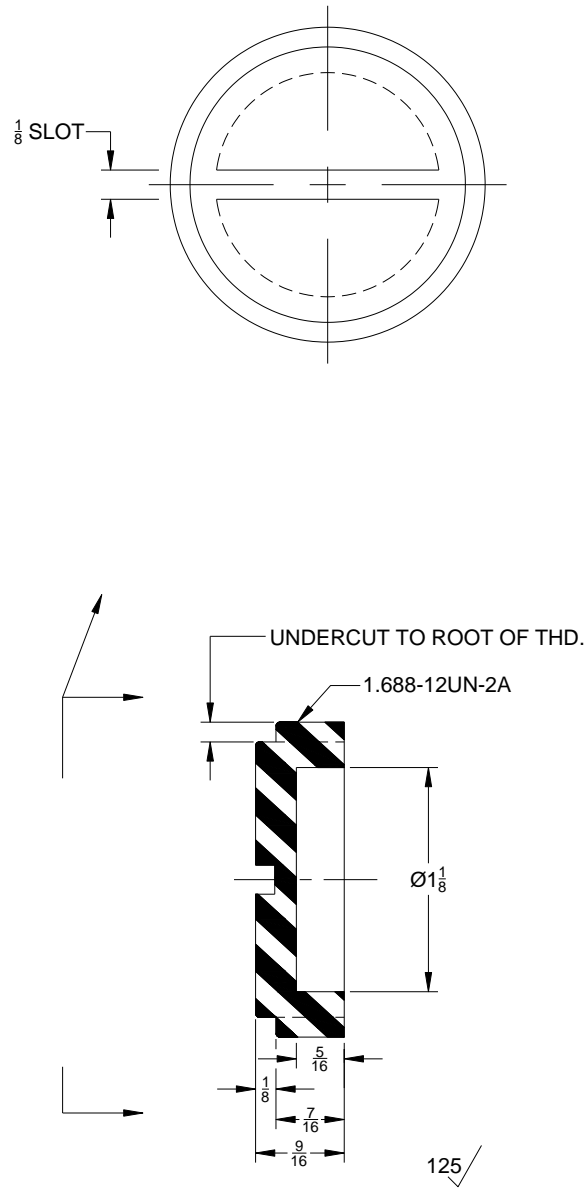


FIGURE 5. Protective cap – M24231/1-012. (6)

FIGURE 5. Protective cap - M24231/1-012 6

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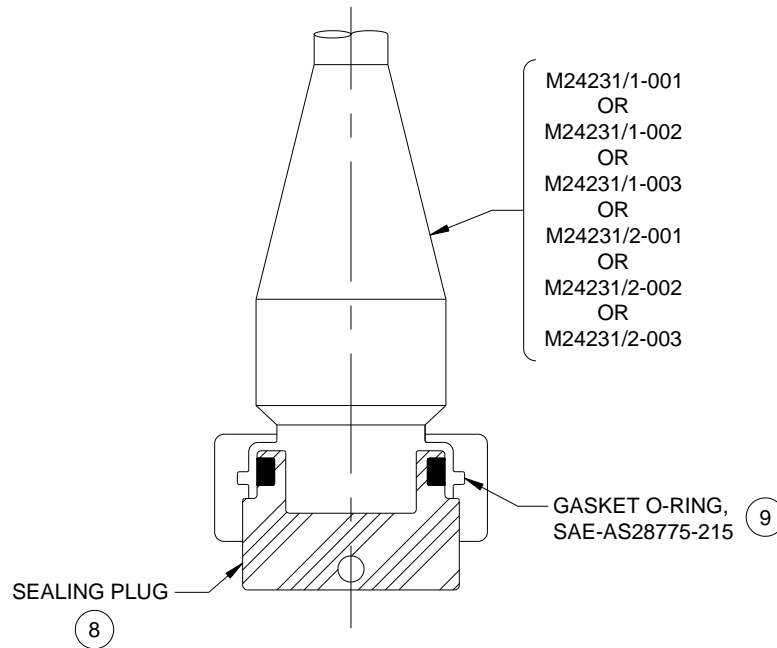


FIGURE 6. Sealing plug assembly – M24231/1-020. 15

## MIL-DTL-24231/1E(SH)

TABLE I. Parts list.

Item no. <sup>1/</sup>	Description <sup>2/</sup>	Quantity for M24231/1- <sup>3/</sup>			Material/specification	Remarks
		001	002	003		
1	Plug assembly, 3-conductor, symbol no. 713	1			<sup>4/</sup>	See <a href="#">figure 1</a> .
2	Plug assembly, 4-conductor symbol no. 713.6		1		<sup>4/</sup>	See <a href="#">figure 1</a> .
3	Plug assembly, 5-conductor			1	<sup>4/</sup>	See <a href="#">figure 1</a> .
4	Sleeve, plug	1	1	1	Ni-Cu, Class A, QQ-N-281 or glass reinforced epoxy (GRE) <sup>5/</sup>	See <a href="#">figure 3</a> and requirement 3.
5	Coupling	1	1	1	Ni-Al-BRZ, ASTM B150/B150M	See <a href="#">figure 4</a> .
6	Cap, protective	1	1	1	Plastic, Type MFI-20 or MAI-60, ASTM D5948 or polycarbonate, ASTM D3935 <sup>6/</sup>	Nonpressure-proof, see <a href="#">figure 5</a> .
7	Disk, insulating	1	1	1	Non-laminated plastic, composition A, Type II, Grade GU, L-P-535	See <a href="#">figure 2</a> .
8	Sealing plug	1	1	1	Ni-Cu, Class A, QQ-N-281	Pressure-proof, see <a href="#">figure 2</a> .
9	Gasket, O-ring	1	1	1	SAE-AS28775-215	Lubricate with silicone compound, SAE-AS8660; see <a href="#">figure 6</a> .
10	Compound, polyurethane	As required			<sup>7/</sup>	See <a href="#">figure 1</a> .
11	Cable	As required			<sup>8/</sup>	See <a href="#">figure 1</a> .
12	Insert assembly (3-pin)	1			M24231/29-001	See <a href="#">figure 1</a> .
13	Insert assembly (4-pin)		1		M24231/29-002	See <a href="#">figure 1</a> .
14	Insert assembly (5-pin)			1	M24231/29-010	See <a href="#">figure 1</a> .
15	Sealing plug assembly <sup>9/</sup>	1	1	1	See items 8 and 9	See <a href="#">figure 6</a> .
16	Compound, epoxy	As required			Cast epoxy resin compound <sup>10/</sup>	Base EE4183 or RE2039, hardener HD-3561; see <a href="#">figure 1</a> .



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TABLE I. Parts list – Continued.

## NOTES:

- <sup>1/</sup> Item numbers are the same as encircled numbers shown on figures.
- <sup>2/</sup> See applicable figure or table listed in remarks column for part numbers and dimensions.
- <sup>3/</sup> Quantity is for one complete assembly of each size.
- <sup>4/</sup> When plugs are purchased as a kit, the inserts are not molded in accordance with MIL-DTL-24231/29. The socket contacts and sleeving are individually provided.
- <sup>5/</sup> GRE plug sleeves may be obtained from D.G. O'Brien, Inc., Sea Con/Phoenix, Inc. or equal.
- <sup>6/</sup> May be Ni-Al-BRZ in accordance with ASTM B150/B150M at the option of the manufacturer.
- <sup>7/</sup> Molding compound to be procured in accordance with S9320-AM-PRO-020.
- <sup>8/</sup> For cable type, see table for cross indexing of mating plugs, receptacles, adapters, and single and multiple cable connectors of MIL-DTL-24231.
- <sup>9/</sup> To be supplied when specified (see acquisition requirements in MIL-DTL-24231).
- <sup>10/</sup> Hysol base EE4183 or RE2039, hardener HD-3561, Hysol Division, Dexter Corporation, Olean, NY, CAGE 04347, or equal.

CHANGES FROM PREVIOUS ISSUE. Marginal notations are not used in this revision to identify changes with respect to the previous issue due to the extent of the changes.

Preparing activity:  
Navy – SH  
(Project 5935-2011-050)

NOTE: The activities listed above were interested in this document as of 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>.