

INCH-POUND

MS27144C  
 17 June 2003  
 SUPERSEDING  
 MS27144B  
 16 February 1988

## DETAIL SPECIFICATION SHEET

CONNECTOR, PLUG, ELECTRICAL, SOCKET CONTACT,  
 NO. 14 AND 16 AWG, WATERPROOF

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.

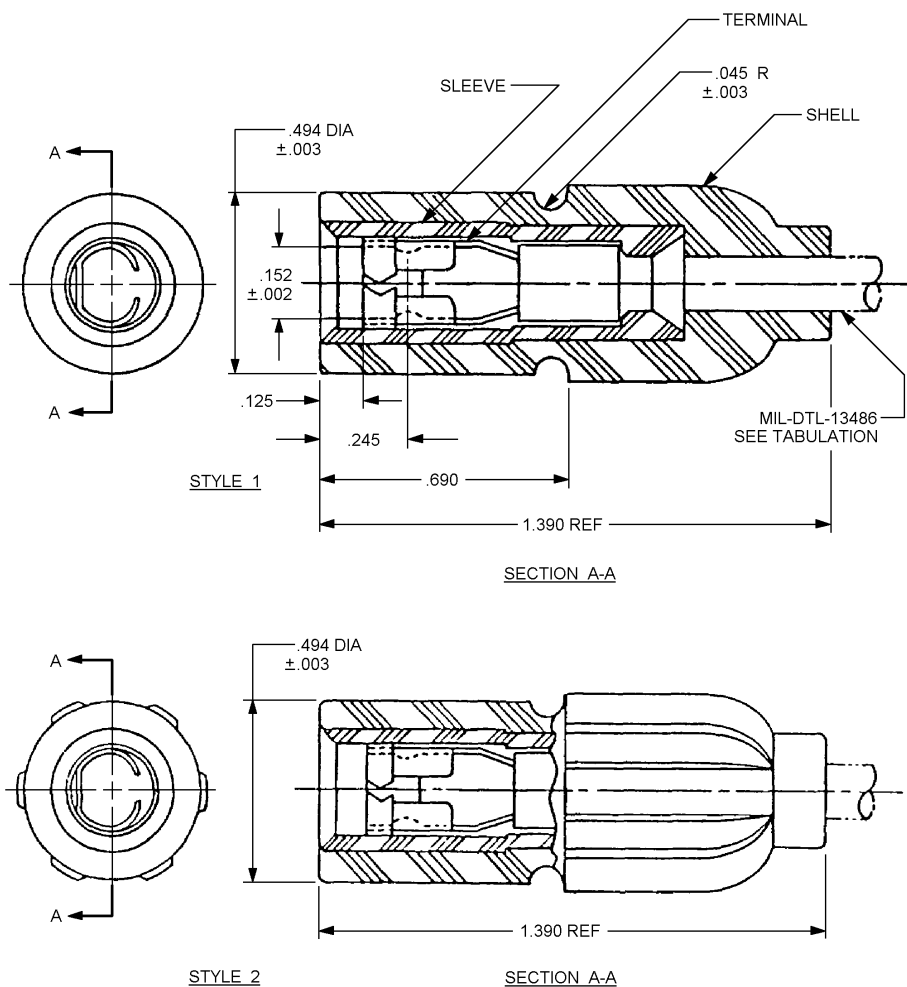


FIGURE 1. Configuration and dimensions.

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Inches	mm	Inches	mm
.002	.05	.152	3.86
.003	.07	.160	4.06
.010	.25	.245	6.22
.015	.38	.494	12.55
.045	1.10	.690	17.50
.125	3.18	1.390	35.30
.130	3.30		

MS dash no.	Reference drawing no. (assembly)	Style	Size	Wire gage	Shell number	Terminal number	Sleeve number	Cable dia	Cable MIL-DTL-13486 PIN
-1	8338560	1	1	14	8338561	8338564		.160±.010	M13486/1-5
-2	None	1	2	16	8724494	OR	8338562	.130±.015	M13486/1-3
-3	7982398	2	1	14	7982401	7982997		.160±.010	M13486/1-5

FIGURE 1. Configuration and dimensions - Continued.

## REQUIREMENTS:

## Material:

Shell: Rubber in accordance with ASTM D2000, M3BC610A14C12EO34F19.

Terminal: Brass composition, temper half hard minimum in accordance with ASTM B 36/B 36M, ASTM B 121/B 121M or ASTM B124/B 124M.

Terminal protective finish: Silver plate, grade D, class S, .0002-inch minimum thickness in accordance with ASTM B700.

## Mating connectors:

Style 1 size 1 mates with connector MS33800 and MS27142, size 2.

Style 1 size 2 mates with connector MS33800 and MS27142, size 3.

Style 2 size 1 to be used only with ribbed receptacle MS33800, style II to denote polarity.

When connectors are coupled, the following requirements shall apply:

Voltage drop: The voltage drop shall not exceed 20 millivolts and shall meet the requirements outlined in MIL-STD-202, method 307.

Dielectric strength: The assembly shall withstand dielectric strength test of 1000 volts, and meet the requirements of MIL-STD-202, method 302.

Waterproof requirements: The assembly shall be waterproof. Refer to MIL-HDBK-1184, or equivalent, for guidance on waterproof testing.

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Salt spray corrosion test: The assembly shall meet the requirements of salt spray corrosion test outlined in MIL-STD-202, method 101 (5% saline solution, 200 hours duration).

Pull test: Terminal number 8338564 to be crimped to cable. Terminal number 7982997 to be soldered to cable with solder composition SN-50 or SN-60, in accordance with J-STD-004, J-STD-005, and J-STD-006. The terminal shall withstand a pull test of 40 pounds (18 kilograms) for style 1 size 2, or 60 pounds (27 kilograms) for style 1 size 1, and style 2 size 1.

Separation force: The force required to uncouple the connectors shall not exceed 50 percent of the values expressed in the pull test above when tested at -55°C and at 85°C.

Part or Identifying Number (PIN): MS27144- (dash number as shown on figure 1).

Reference drawings may be obtained from the U.S. Army Tank Automotive Command, Warren, MI., 48397-5000.

(Marginal notations are not used in this revision to identify changes with respect to the previous issue due to the extent of the changes.)

## CONCLUDING MATERIAL

Custodians:

Army – AT  
Air Force – 11  
Navy – MC  
DLA - CC

Preparing activity:

DLA - CC

(Project 5935-4427-003)

Review activities:

Army – CR, CR4