

INCH-POUND

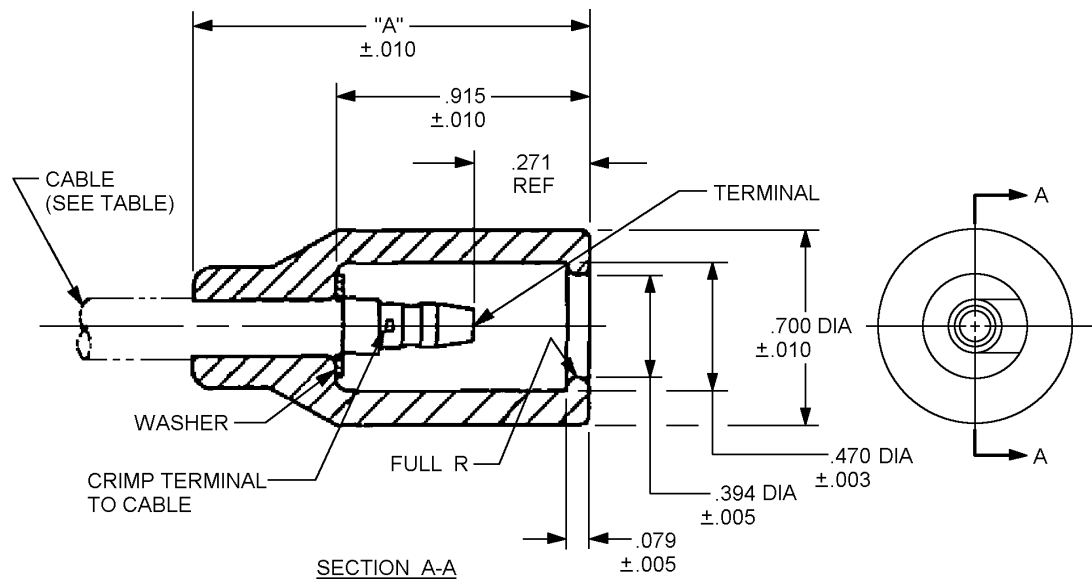
MS27142D
 17 June 2003
 SUPERSEDING
 MS27142C
 23 October 1984

DETAIL SPECIFICATION SHEET

CONNECTOR, PLUG, ELECTRICAL-PIN CONTACT,
 NO. 12, 14, 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.



Inches	mm	Inches	mm
.003	.076	.271	6.88
.005	.127	.394	10.01
.010	.254	.470	11.94
.015	.381	.700	17.78
.079	2.00	.915	23.24
.135	3.43	1.328	33.73
.160	4.06	1.421	36.09
.235	5.96		

FIGURE 1. Configuration and dimensions.

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MS dash no.	Reference drawing no. (assembly)	Size	Shell number	Washer number	Terminal number	A	Cable diameter	AWG size	Cable MIL-DTL-13486 PIN
-1	8338571	1	8338572	8338573	MS-27148-1	1.421	.235 ± .010	12	M13486/1-7
-2	8338565	2	8338566	8338567	MS-27148-2	1.328	.160 ± .010	14	M13486/1-5
-3	None	3	8724495	8724497	MS-27148-3	1.328	.135 ± .015	16	M13486/1-3

FIGURE 1. Configuration and dimensions - Continued.

REQUIREMENTS:

Material:

Washer: Brass alloy C24000, C26000 or C26800, temper H02, in accordance with ASTM B 36/B 36M.

Shell: Rubber in accordance with ASTM D2000, M3BC610A14C12EO34F19.

Mating connectors:

Size 1 mates with connector MS 27143.

Size 2 mates with connector MS 27144, style 1, size 1.

Size 3 mates with connector MS 27144, style 1, size 2.

Electrical requirements:

Voltage rating: 30 volts DC.

Current rating:	AWG size	Current (AMPS)
	16	13
	14	17
	12	23

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

Dielectric strength: When connectors are coupled, the assembly shall meet the requirements of the dielectric strength test (1000 volts) outlined in MIL-STD-202, method 302.

Corrosion test: When connectors are coupled, the assembly shall meet the salt spray corrosion test outlined in MIL-STD-202, method 101 (5% saline solution, 200 hours duration).

Waterproof requirements: When connectors are coupled, the assembly shall be waterproof. Refer to MIL-HDBK-1184, or equivalent, for guidance on waterproof testing.

Pull test: The terminal crimped to the cable shall withstand a pull test of 90 pounds (40 kilograms) on size 1, 60 pounds (27 kilograms) on size 2, and 40 pounds (18 kilograms) on size 3.

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

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Part or Identifying Number (PIN): MS27142 - (dash number as shown on figure 1).

Reference drawings may be obtained from the U.S. Army Tank Automotive Command, Warren, MI., 48090.

(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 - 99
Navy - MC
DLA - CC

Preparing activity:

DLA - CC

(Project 5935-4427-001)

Review activities:

Army - CR4
Air Force - 11