INCH-POUND

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SUPERSEDING
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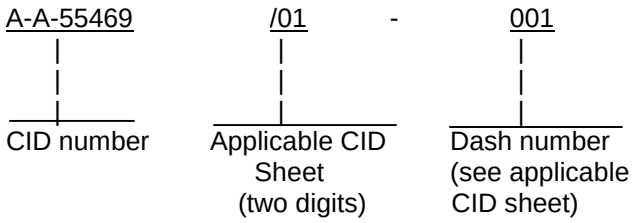
COMMERCIAL ITEM DESCRIPTION

CONNECTORS, ELECTRICAL, PLUGS, TIP (TEST POINT PLUG, BANANA PLUG) GENERAL REQUIREMENTS FOR

The General Services Administration has authorized the use of this Commercial Item Description (CID) for all federal agencies.

1. SCOPE. This CID covers the general requirements for test point plugs and banana plugs for use in electrical and electronic equipment. The test point connectors covered by this CID are primarily for use in airborne, ground support, and shipboard electrical and electronic equipment, for test purposes only. They are not intended for use as an integral part of the equipment for which the overall system operation is dependent. Connectors covered by this CID are intended for commercial/industrial applications and shall not be used in military systems needing stringent environmental and electrical requirements.

2. CLASSIFICATION/PART OR IDENTIFICATION NUMBER. This CID uses a classification system which is included in the Part Identification Number (PIN) as shown in the following example (see 7.1).



3. SALIENT CHARACTERISTICS.

3.1 Interface and physical dimensions. The connectors supplied to this CID shall be as specified on the applicable CID sheet.

Beneficial comments, recommendations, additions, deletions, clarifications, etc., and any data which may improve this document should be sent to: Defense Supply Center, Columbus, Attn: VAI, Post Office Box 3990, Columbus, Ohio, 43216-5000, or telephone (614) 692-0566, or facsimile (614) 692-6939.

AMSC N/A FSC 5935

3.2 Materials. Material shall be as specified herein; however, when a definite material is not specified, a material shall be used which will enable the connectors to meet the performance requirements of this CID. Acceptance or approval of any constituent material shall not be construed as a guaranty of the acceptance of the finished product.

3.3 Metal parts.

3.3.1 Nonmagnetic materials. All parts shall be made from materials which are classified as nonmagnetic.

3.3.2 Dissimilar metals. Where dissimilar metals are used in intimate contact with each other, protection against electrolysis and corrosion shall be provided. Dissimilar metals shall be defined as when metallic areas (finished or unfinished) to be placed in intimate contact by assembly presents a special problem, since intermetallic contact of the dissimilar metals results in electrolytic couples which promote corrosion through galvanic action. Dissimilar metals such as brass, copper, or passivated steel (except corrosion-resisting steel) shall not be used in intimate contact with aluminum or aluminum alloy.

3.3.3 Metals and finishes. All exposed metal parts, except electric contacts, terminals, and corrosion-resisting steel parts shall be nickel-plated in accordance with class I, type 2 of SAE-AMS-QQ-N-290. Steel parts shall be passivated in accordance with SAE-AMS-QQ-P-35 to prevent corrosion.

3.3.4 Contacts. Contacts and contact tabs shall be made of copper-beryllium in accordance with ASTM B194 or ASTM B196, ASTM B197 or (when specified in applicable CID sheet) phosphor bronze in accordance with ASTM B139 or nickel silver in accordance with ASTM B122. Contacts shall be gold plated (99.0 percent in purity, knoop hardness 130 through 200 inclusive) .00005 inch (0.0013 mm) thick minimum. Silver underplate shall not be used. Spring contacts are nickel silver and are nickel plated .0001 inch (0.002 mm) minimum, in accordance with SAE-AMS-QQ-N-290.

3.3.4.1 Terminals. Soldering terminals shall be made of a copper alloy material, and shall be gold plated (99.0 percent in purity, knoop hardness 130 through 200 inclusive) with an .0002-inch (0.005 mm) minimum thickness underplate of either copper or nickel, or shall be tin plated (The tin purity shall not exceed 97 percent.), .0004-inch (0.010 mm) thick minimum with a .0002-inch (0.005 mm) minimum thickness underplate of copper. Silver underplate shall not be used. Solder studs are tin plated .0001 inch (0.002 mm) minimum with no underplate.

3.3.5 Plastic parts. Plastic parts shall be made of glass fiber-filled diallyl phthalate resin, polypropylene, acrylonirtile butadiene styrene (ABS) in accordance with ASTM D4673 or ASTM D4894 and ASTM D4895, or nylon 6/6, in accordance with ASTM D4066. The color of the insulated portions shall be black number 17038 or red number 11136 in accordance with FED-STD-595.

3.3.6 Flammability. Plastic material shall be limited to those certified by their manufacturers as self-extinguishing in accordance with method ASTM D635 or ASTM D2863.

3.3.7 Threaded parts. Screw threads for threaded parts shall conform to FED-STD-H28 and shall be as specified in the applicable CID sheet.

3.3.8 Operating temperature. Unless otherwise specified in the applicable CID sheet, connectors shall have an operating temperature range of -65°C to +50°C.

3.3.9 Contact identification. Contact positions or multiple-contact connectors shall be permanently identified by legible letters or numerals, as specified in the applicable CID sheet, molded or stamped on the front and rear face of the connector body. Marking shall be arranged to avoid confusion between contacts.

3.3.10 Contact arrangement. The center-to-center distance between contacts shall be as specified in the applicable CID sheet.

3.3.11 Contact finish. Contact finish shall be smooth, free of shear lines, tear our or scratches, and shall show no signs of porosity or surface cracks.

3.3.12 Contact current rating. The current rating of contacts shall be as shown in table I, or as specified in the applicable CID sheet.

TABLE I. Contact current rating.

Contact diameter	Current rating (maximum)
Inch (mm)	Amperes
.040 (1.02 mm)	3
.080 (2.03 mm)	5
.150 (3.81 mm) through 170 (4.32 mm)	8

3.4 Cable mounting hardware. Screws, clamps, brackets, or similar means for mounting the cable shall be furnished.

3.5 Marking. Connectors supplied to this CID shall be marked with the manufacturers (MFR's) standard commercial PIN.

3.6 Workmanship. Connectors shall be processed in such a manner as to be uniform in quality and shall be free from pits, cracks, rough edges, and other defects that will affect life, serviceability, or appearance.

4. REGULATORY REQUIREMENTS. The offerer/contractor is encouraged to use recovered materials to the maximum extent practicable, in accordance with paragraph 23.403 of the Federal Acquisition Regulation (FAR).

5. PRODUCT CONFORMANCE PROVISIONS.

5.1 Product conformance. The products provided shall meet the salient characteristics of this CID, conform to the producer's own drawings, specifications, standards, and quality assurance practices, and be the same product offered for sale in the commercial market. The Government reserves the right to require proof of such conformance.

5.2 Certificate of compliance. At time of order, a certificate of compliance shall accompany all connectors supplied to this CID upon request.

6. PACKAGING. Preservation, packing, and marking shall be as specified in the contract or order.

7. NOTES.

7.1 PIN. The PIN should be used for Government purposes to buy commercial products to this CID. See section 2 for PIN format example.

7.2 Commercial and Government Entity (CAGE) code. For ordering purposes, inventory control, and submission of these connectors to DSCC under the Military Parts Control Advisory Group (MPCAG) evaluation program, CAGE code 58536 should be used.

7.3 Source of documents.

Federal Standards

FED-STD-H28	- Screw Thread Standards for Federal Services
FED-STD-595	- Colors

(Copies of the above federal standards are available from the Defense Printing Service, Detachment Office, Building 4D, Customer Service, 700 Robbins Avenue, Philadelphia, PA 19111-5094.)

Other Publications

SOCIETY OF AUTOMOTIVE ENGINEERS (SAE)

SAE-AMS-QQ-N-290	- Nickel Plating (Electrodeposited)
SAE-AMS-QQ-P-35	- Passivation Treatments for Corrosion-Resistant Steel

(Applications for copies should be addressed to the Society of Automotive Engineers, 400 Commonwealth Drive, Warrendale, Pennsylvania, 15096-0001.)

ASTM INTERNATIONAL

ASTM B122	- Standard Specification for Copper-Nickel-Tin Alloy, Copper-Nickel-Zinc Alloy (Nickel Silver), and Copper-Nickel Alloy Plate, Sheet, Strip, and Rolled Bar
ASTM B139	- Rod, Phosphor Bronze, Bar and Shapes
ASTM B194	- Copper Beryllium Alloy Plate, Sheet, Strip and Rolled Bar
ASTM B196	- Rod and Bar, Copper-Beryllium Alloy
ASTM B197	- Wire, Alloy Copper-Beryllium
ASTM D635	- Plastics in a Horizontal Position, Rate of Burning and/or Extent and Time of Burning Of
ASTM D2863	- Plastics, Measuring the Minimum Oxygen Concentration to Support Candle-Like Combustion Of (Oxygen Index)
ASTM D4066	- Standard Classification System for Nylon Injection and Extrusion Materials (PA)
ASTM D4673	- Molding and Extrusion Materials, Acrylonitrile-Butadiene-Styrene (ABS), Plastics and Alloys
ASTM D4894	- Standard Specification for Polytetrafluoroethylene (PTFE) Granular Molding and Ram Extrusion Materials
ASTM D4895	- Standard Specification for Polytetrafluoroethylene (PTFE) Resin Produced from Dispersion

(Applications for copies should be addressed to the ASTM International, PO Box C700, 100 Barr Harbor Drive, West Conshohocken, PA 19428-2959.)

7.4 Ordering data. The contract or order should specify the following:

a. CID document number, revision, and CID PIN.
b. Product conformance provisions.
c. Packaging requirement.

7.5 Government users. To acquire information on obtaining these connectors from the Government inventory system, contact Defense Supply Center, Columbus, ATTN: DSCC-VAI, Post Office Box 3990, Columbus, OH 43216-5000, or telephone (614) 692-0568.

7.6 Suggested sources of supply. Refer to the associated CID as specified herein.

CIVIL AGENCY COORDINATING ACTIVITY

GSA - 7FXE

PREPARING ACTIVITY

DLA-CC

(Project 5935-4519-000)