

COMMERCIAL ITEM DESCRIPTION

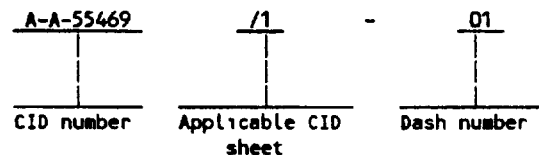
CONNECTORS, ELECTRICAL, PLUGS, TIP
(TEST POINT PLUG, BANANA PLUG)
GENERAL REQUIREMENTS FOR

The General Services Administration has authorized the use of this commercial item description (CID).

Abstract 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.

Classification. Connectors covered by this CID shall be single-contact or multiple-contact connectors, as specified in the applicable CID sheet (see notes section).

Part or Identifying Number (PIN) The PIN for the CID shall be as shown in the following example.

**Salient characteristics**

CID sheet. The electrical connectors (test point, banana plug etc.) shall be in accordance with the requirements specified herein and the applicable CID sheet.

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.

Metal parts

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

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.

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 QQ-N-290. Steel parts shall be passivated in accordance with QQ-P-35 to prevent corrosion.

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 QQ-N-290.

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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 ^{1/}, .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.

Plastic parts. Plastic parts shall be made of glass fiber-filled diallyl phthalate resin, polypropylene, polyamide, acrylonitrile butadiene styrene (ABS) in accordance with ASTM D1788 or ASTM D1457, 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.

Flammability Plastic material shall be limited to those certified by their manufacturers as self-extinguishing in accordance with method 2021, 2022, or 2023 of FED-STD-406.

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

Design, construction, and physical dimensions Connectors shall be of the design, construction, and physical dimensions specified in the applicable CID sheet. Unless otherwise specified in the applicable CID sheet, connectors shall have an operating temperature range of -65°C to +50°C.

Contacts. Contacts shall be of the design, construction, and physical dimensions specified in the applicable CID sheet.

Contact identification Contact positions on 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.

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

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

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 |

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

Identification marking Connectors shall be marked with the complete manufacturer's PIN and CAGE or trademark. Marking shall be located on the connector so that it will be visible after installation, unless this is impossible because of space limitations. In such cases, required marking shall be applied to an envelope, bag, box, or other intermediate container suitable for shelf storage.

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.

^{1/} The tin purity shall not exceed 97 percent.

Regulatory requirements This section is not applicable to this CID.

Quality assurance provisions

Responsibility for inspection Unless otherwise specified in the contract or purchase order, the contractor is responsible for the performance of all inspection, examination, and test requirements specified herein. Except as otherwise specified in the contract or purchase order, the contractor may use his own or any other facilities suitable for the inspection requirements specified herein, unless disapproved by the Government. The Government reserves the right to perform any of the inspections, examinations, or tests set forth in this description where such inspections, examinations, and tests are deemed necessary to assure supplies and services conform to prescribed requirements.

Contractor certification statement The contractor shall certify and maintain objective quality evidence that the product offered meets the requirements of this CID, and that the product conforms to the producer's own drawings, specifications, standards, quality assurance practices, and is the same as the product provided as a bid sample. The Government reserves the right to require proof of such conformance prior to the first delivery and thereafter as may be otherwise provided for under the provisions of the contract.

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

Packaging

Preservation, packaging, packing, labeling, and marking Preservation, packaging, labeling, and marking shall be as specified in the contract or purchase order.

Notes.

Referenced documents. The following documents, of the issue in effect on date of invitation for bids for request for proposal, form a part of this CID to the extent specified herein:

Federal Specifications

- QQ-N-290 - Nickel Plating (Electrodeposited)
- QQ-P-35 - Passivation Treatments for Austenitic, Ferritic, and Martensitic Corrosion-Resisting Steel (Fastening Devices)

Federal Standards

- FED-STD-H28 - Screw Thread Standards for Federal Services.
- FED-STD-406 - Plastic, Methods of Testing
- FED-STD-595 - Colors.

(Copies of federal specifications and standards are available from the Standardization Documents Order Desk, Building 4D, 700 Robbins Avenue, Philadelphia, PA 19111-5094.)

Other Publications

AMERICAN SOCIETY FOR TESTING AND MATERIALS (ASTM)

- ASTM B124 - Copper and Copper Alloy Forging Rod, Bar and Shapes
- ASTM B139 - Phosphor Bronze Rod, Bar and Shapes
- ASTM B194 - Copper Beryllium Alloy Plate, Sheet, Strip and Rolled Bar
- ASTM B196 - Copper Beryllium Alloy Rod and Bar
- ASTM B197 - Copper Beryllium Alloy Wire
- ASTM D1457 - Polytetrafluoroethylene (PTFE) Molding and Extrusion Materials
- ASTM D1788 - Plastic Rigid Acrylonitrile Butadiene Styrene (ABS)
- ASTM D4066 - Materials (PA) Nylon Injection And Extrusion, Standard Specification For

(Applications for copies should be addressed to the American Society for Testing and Materials, 1916 Race Street, Philadelphia, PA 19103.)

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Acquisition documents Contracting officers should select the preferred options permitted herein, and include the following information in acquisition documents

- (1) Title, number, and date of the CID
- (2) Title, number, and date of the applicable CID sheet as follows

A-A-55469/1 Connectors, Electrical, Plugs, Tip Single (Banana Plug)

Ordering data Acquisition documents should specify intermediate/exterior package quantities, labeling, and marking must be as specified in the contract and/or purchase order

Comments Comments on this CID should be directed to Defense Electronics Supply Center, 1507 Wilmington Pike, ATTN DESC-EMT, Dayton, OH 45444-5000, or telephone (513) 296-5391.

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

CIVIL AGENCY COORDINATING ACTIVITY

GSA - 7FXE

PREPARING ACTIVITY

DLA-ES

(Project 5935-D477)