

INCH - POUND

A-A-55094A  
18 October 2012  
SUPERSEDING  
A-A-55094  
15 March 1994

## COMMERCIAL ITEM DESCRIPTION

### CONNECTORS, ELECTRICAL, RECTANGULAR, MINIATURE, POLARIZED SHELL, PLUG, 24 POSITION, DISCRETE WIRE CABLE TERMINATING, BAIL LOCKING

The General Services Administration has authorized the use of this commercial item description for all federal agencies.

1. **SCOPE.** This commercial item description (CID) covers the general requirements for a polarized shell, plug, electrical digital interface bus connector for use in applications that require termination of a discrete wire type cable. Connectors covered by this CID are intended for commercial/industrial applications.
2. **CLASSIFICATION/PART OR IDENTIFICATION NUMBER (PIN).** This CID uses a classification system which is included in the PIN as shown in the following example (see 7.1).

<u>A-A-55094</u>	-	<u>01</u>
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CID number		Dash number

#### . SALIENT CHARACTERISTICS.

3.1 Interface and physical dimensions. Connectors supplied to this CID shall be as specified herein (see figure 1).

3.1.1 Design, construction, and dimensions. Design, construction, and dimensions shall be as specified on figure 1.

3.2 Contacts. The contacts shall be formed of a high conductive, high strength copper alloy with gold over nickel plating in the contact area.

3.3 Connector housings. Connector housings shall be molded from self-extinguishing black thermoplastic material for high impact and dielectric strength.

3.4 Termination wire range. Terminations shall be insulation displacement type which accommodate wire ranges of 24-26 AWG solid or 24 AWG stranded (7 strand) wire.

3.5 Contact rating. Contacts shall be rated at 3.5 amperes maximum at +25°C for 22 AWG.

3.6 Termination resistance. The contact resistance shall be 20 milliohms maximum initial.

Beneficial comments, recommendations, additions, deletions, etc., and data that may improve this document should be sent to: DLA, Land and Maritime, ATTN: VAI, P.O. Box 3990, Columbus, OH 43218-3990, or email to [RectangularConnector@dla.mil](mailto:RectangularConnector@dla.mil). Since contact information can change, you may want to verify the currency of this address information using the ASSIST Online database at <https://assist.dla.mil/>.

3.7 Dielectric withstanding voltage. There shall be no breakdown of the insulating material when subjected to 1000 V ac for 1 minute between adjacent contacts of the mated connector assemblies.

3.8 Mating force. Connector mating force shall not exceed 2.67 newtons (0.6 pound) maximum per contact.

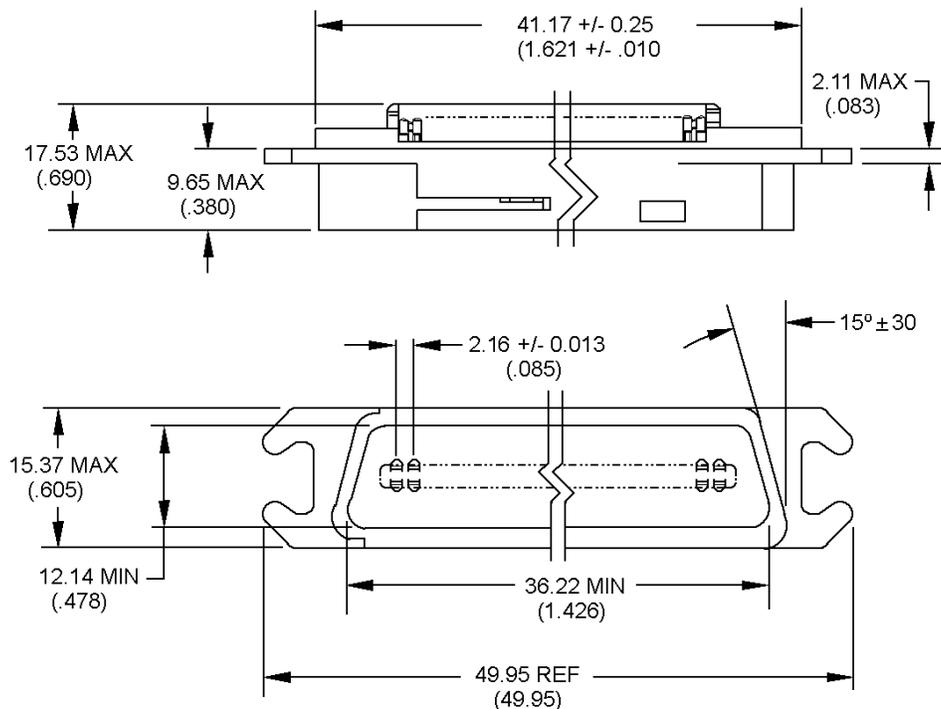
3.9 Unmating force. Connector unmating force shall not exceed 0.67 newton 0.15 pound) minimum per contact.

3.10 Contact retention. Contact retention force shall be 13.34 newtons (3 pounds) minimum.

3.11 Durability. Durability shall consist of 200 cycles of mating and unmating and upon completion the termination resistance shall not exceed 26.5 milliohms maximum. There shall be no indication of physical damage.

3.12 Operating temperature. The operating temperature range shall be from -40°C to +75°C.

3.13 Vibration. The connector, or hardware when assembled to the connector, shall exhibit no evidence of breaking, cracking, or loosening of parts when subjected to vibration of 10-55-10 Hz traversed in 1 minute at 1.52 mm (.060 inch) total excursion for 2 hours in each of three mutually perpendicular planes.



NOTES:

1. Dimensions are in millimeters.
2. Inches are in parentheses.
3. This item was designed using inch-pound units of measurement. In case of problems involving conflicts between the metric and inch-pound units, the inch-pound units shall rule.

FIGURE 1. Connector, plug, 24 position, bail locking.

3.14 Physical shock. The connector or hardware when assembled to the connector, shall exhibit no evidence of breaking, cracking, or loosening of parts when subjected to 50 G's half-sine wave shock of 11 milliseconds duration, 3 shocks in each direction applied along the three mutually perpendicular planes for a total of 18 shocks.

3.15 Marking. Connectors supplied to this CID shall be marked with the Manufacturer's standard commercial PIN.

3.16 Recycled, recovered, or environmentally preferable materials. Recycled, recovered, or environmentally preferable materials should be used to the maximum extent possible provided that the material meets or exceeds the operational and maintenance requirements, and promotes economically advantageous life cycle costs.

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

4. REGULATORY REQUIREMENTS. The offeror/contractor is encouraged to use recovered materials to the maximum extent practicable, in accordance with 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 Commercial Item Description, conform to the producer's own drawings, specifications, standards, and quality assurance practices, and be the same product offered for sale in the commercial marketplace. The government reserves the right to require proof of such conformance.

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 Environmentally preferable material. Environmentally preferable materials should be used to the maximum extent possible to meet the requirements of this specification. As of the dating of this document, the U.S. Environmental Protection Agency (EPA) is focusing efforts on reducing 31 priority chemicals. The list of chemicals and additional information is available on their website <http://www.epa.gov/osw/hazard/wastemin/priority.htm> Included in the EPA list of 31 priority chemicals are cadmium, lead, and mercury. Use of these materials on the list should be minimized or eliminated unless needed to meet the requirements specified herein (see Section 3).

7.3 Commercial and Government Entity (CAGE) code. For ordering purposes, inventory control, and submission of these fuse plugs to DLA Land and Maritime under the Military Parts Control Advisory Group (MPCAG) evaluation program, CAGE code 58536 should be used.

7.4 Source of documents

### FEDERAL REGULATIONS

FAR - Federal Acquisition Regulations (FAR)

(Copies of this document are available online at <http://www.acquisition.gov/comp/far/index.html> from the U.S. Government Printing Office, 732 North Capital Street, NW, Washington D.C. 20401-0001.)

7.5 Ordering data. The contractor order should specify the following:

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

7.6 Commercial products. As part of the market analysis and research effort, this CID was coordinated with the following manufacturers of commercial products. At the time of CID preparation and coordination, these manufacturers were known to have commercial product that would meet the requirements of the CID. (NOTE: This information should not be considered as a list of approved manufacturers or be used to restrict procurement to only the manufacturers shown.)

<u>Manufacturer CAGE number</u>	<u>Manufacturer name and address</u>
00779	TE Connectivity/AMP, 2901 Fulling Mill Road Middleton, PA 17057-3163

7.7 Part number (P/N) supersession data. These CID PINs supersede the following MFR's P/N's as shown. This information is being provided to assist in reducing proliferation in the Government inventory system.

TABLE I. PIN supersession data.

CID PIN A-A-55094-	MFR's CAGE 00779 PIN 1/
01	552272-1

1/ The manufacturer's PIN shall not be used for procurement to the requirements of this CID. At the time of preparation of this CID, the aforementioned commercial products were reviewed and could be replaced by the CID PIN shown. For actual part marking requirements, see 3.15.

7.8 Government users. To acquire information on obtaining these connectors from the Government inventory system, contact DLA Land and Maritime, ATTN: Land and Maritime-FMV, P.O. Box 3990, Columbus, OH 43218-3990, or telephone (614) 692-7656.

7.8.1 National Stock Numbers (NSNs). The following is a list of NSN's assigned which correspond to this CID. The list is for information only and may not be indicative of all possible NSN's associated with the CID. For up to date information on assigned NSN's, please contact the aforementioned DLA Land and Maritime office (See 7.8).

Dash number (see table I) AA55094-	NSN
01	5935-01-227-4074

7.9 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.

MILITARY INTERESTS:

Custodian:  
DLA - CC

CIVIL AGENCY COORDINATING ACTIVITY:

GSA – 7FXE

Preparing activity:  
DLA – CC

(Project 5935-2012-055)

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