A-A-55467A
August 12, 1994
SUPERSEDING
A-A-55467
October 1, 1993

COMMERCIAL ITEM DESCRIPTION

CONNECTORS, ELECTRICAL, POWER, CRIMP TO WIRE, SPLIT PIN

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

Abstract. This commercial item description (CID) covers the general requirements for connector, electrical, power, crimp to wire, split pin. This pin can be used in applications that require crimp to discrete stranded wires, size 14 AWG through 24 AWG. Pins covered by this CID are intended for commercial/industrial applications and shall not be used in military systems needing stringent environmental and electrical requirements.

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

A-A-55467	-	01
CID number		Dash number

Salient characteristics.

CID sheet. The electrical connectors shall be in accordance with the requirements specified herein.

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

Operating temperature. The operating temperature range shall be from -55°C to +105°C.

Contact material. The contact material shall be brass or phosphor bronze.

Plating. Plating shall be pre-tin or .76 microns (30 microinches) minimum localized gold in contact area, over 1.27 microns (50 microinches) minimum of nickel.

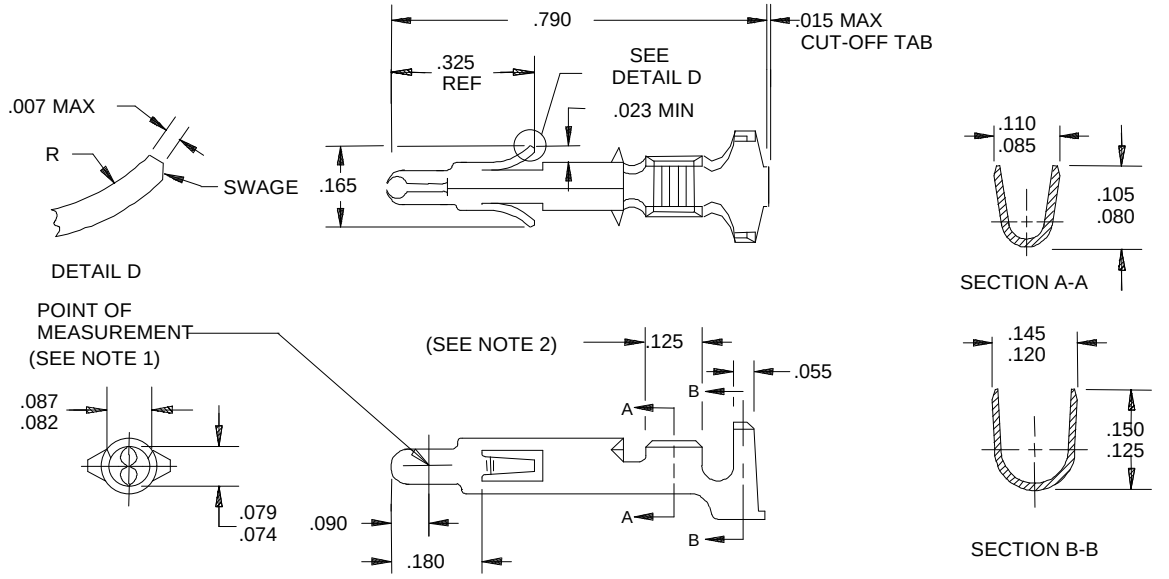
Mating force. Connector mating force shall not exceed 6.67 newtons (1.5 pounds).

Unmating force. Connector unmating force shall not exceed 2.22 newtons (0.5 pound) minimum.

Contact insertion. Contact insertion force shall be 8.90 newtons (2 pounds) maximum per contact.

Contact retention. Contact retention force shall be 66.72 newtons (15 pounds) minimum.

Crimp tensile strength. The crimp tensile strength of the wire-to-contact termination shall not be less than the value specified in table I when tested at a cross-head parting speed of 25.4 millimeters (1 inch) per minute, maximum.



LOOSE PIECE (24-18 AWG)
Configuration A

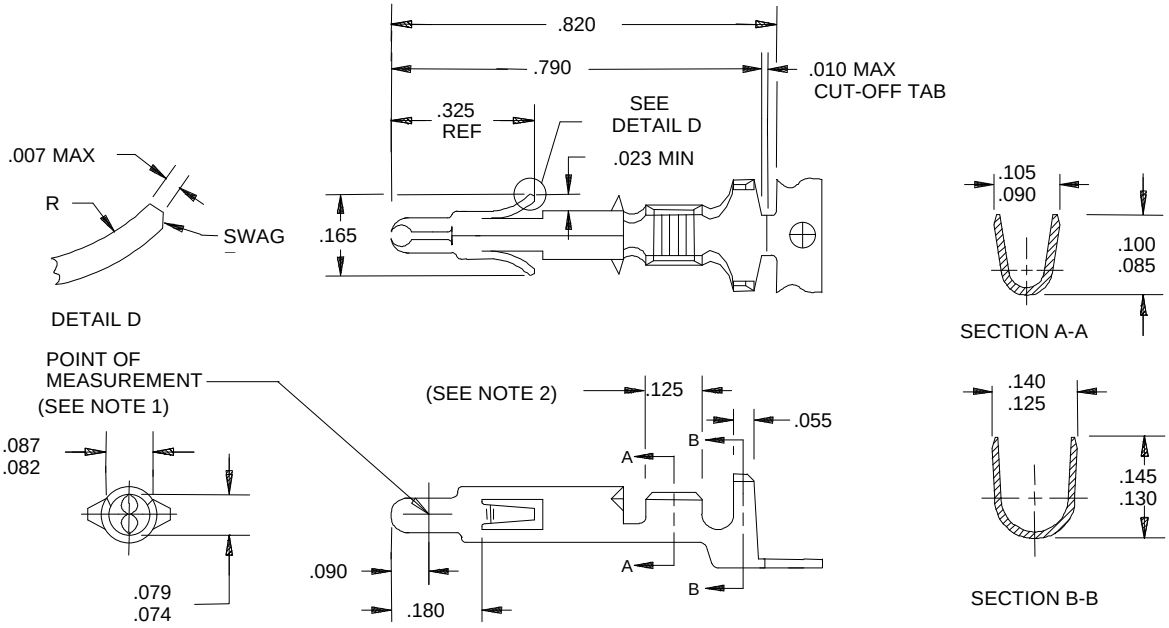
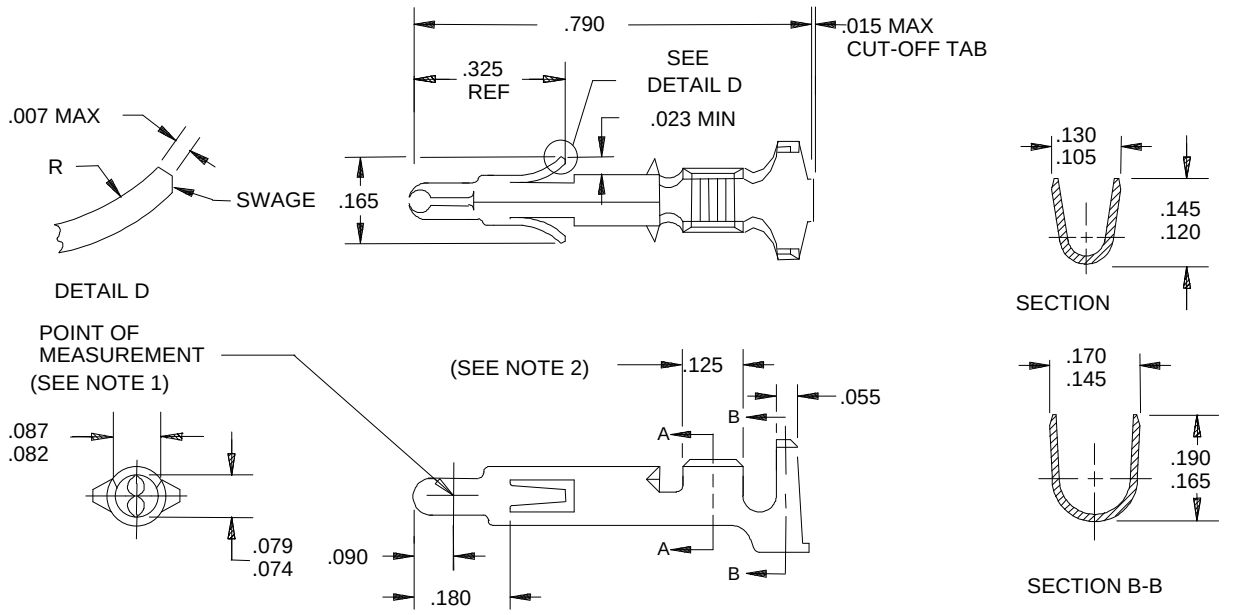
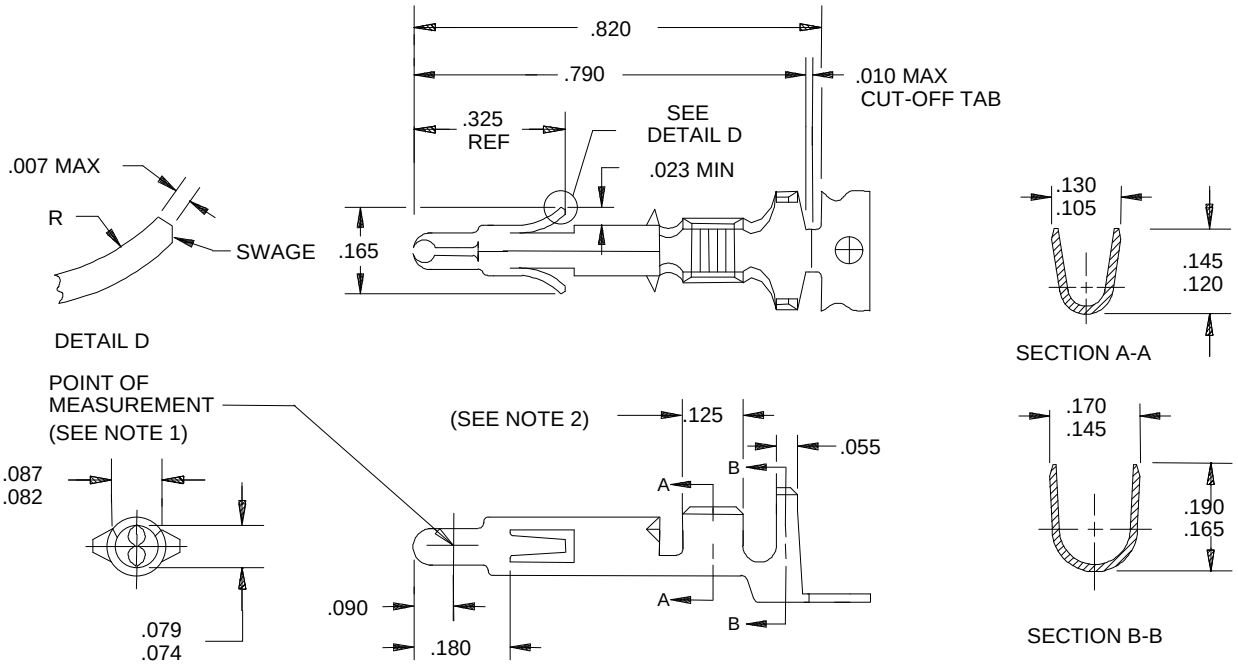


FIG 1B. STRIP (24-18 AWG)
Configuration B

Figure 1. Dimensions and configurations.



Loose piece (20-14 AWG)
Configuration C



Strip (20-14 AWG)
Configuration D

Figure 1. Dimensions and configurations - Continued.

mm	Inches
0.18	.007
0.25	.010
0.38	.015
0.58	.023
1.40	.055
1.88	.074
2.01	.079
2.08	.082
2.21	.087
2.29	.090
3.18	.125
4.57	.180
8.26	.325
20.07	.790
0.83	.820

NOTES:
1. Plated with 30 microinches (.76 microns) of gold, over 50 microinches (1.27 microns) of nickel underplate.
2. Plated with 30 microinches (.76 microns) of gold, over 50 microinches (1.27 microns) of nickel underplate.
3. Unless otherwise specified tolerances shall be ±.015 inch (0.38 millimeters).
4. Dimensions are in inches.
5. Millimeters are in parentheses.
6. 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. Dimensions and configurations - Continued.

Table I. Crimp tensile strength.

Wire Size (AWG)	Tensile strength kilograms (pounds)
24	3.63 (8)
22	6.35 (14)
20	6.35 (14)
18	13.61 (30)
16	20.41 (45)
14	22.68 (50)

Table II. Split pin - loose piece

CID dash number	Wire gage	figure number 1, configuration	Insulation range diameter.	Wire barrel height A-A width:height	Insulation barrel Height B-B width:height
A-A-55467-01	24-18	A	.040-.100	.110/.085:.105/.080	.145/.120:.150/.125
A-A-55467-02	24-18	A	.040-.100	.110/.085:.105/.080	.145/.120:.150/.125
A-A-55467-03	24-18	A	.040-.100	.110/.085:.105/.080	.145/.120:.150/.125
A-A-55467-04	20-14	C	.060-.130	.130/.105:.145/.120	.170/.145:.190/.165
A-A-55467-05	20-14	C	.060-.130	.130/.105:.145/.120	.170/.145:.190/.165
A-A-55467-06	20-14	C	.060-.130	.130/.105:.145/.120	.170/.145:.190/.165
A-A-55467-07	20-14	C	.130-.200	.130/.105:.145/.120	.240/.215:.240/.215
A-A-55467-08	20-14	C	.130-.200	.130/.105:.145/.120	.240/.215:.240/.215
A-A-55467-09	20-14	C	.130-.200	.130/.105:.145/.120	.240/.215:.240/.215

Table III. Split pin - strip

CID dash number	Wire gage	figure number 1, configuration	Insulation range diameter.	Wire barrel height A-A width:height	Insulation barrel Height B-B width:height
A-A-55467-10	24-18	B	.040-.100	.105/.090:.100/.085	.140/.125:.145/.130
A-A-55467-11	24-18	B	.040-.100	.105/.090:.100/.085	.140/.125:.145/.130
A-A-55467-12	24-18	B	.040-.100	.105/.090:.100/.085	.140/.125:.145/.130
A-A-55467-13	24-18	B	.040-.100	.105/.090:.100/.085	.140/.125:.145/.130
A-A-55467-14	20-14	D	.060-.130	.130/.105:.145/.120	.170/.125:.190/.165
A-A-55467-15	20-14	D	.060-.130	.130/.105:.145/.120	.170/.125:.190/.165
A-A-55467-16	20-14	D	.060-.130	.130/.105:.145/.120	.170/.125:.190/.165
A-A-55467-17	20-14	D	.060-.130	.130/.105:.145/.120	.170/.125:.190/.165
A-A-55467-18	20-14	D	.130-.200	.130/.105:.145/.120	.240/.215:.240/.215
A-A-55467-19	20-14	D	.130-.200	.130/.105:.145/.120	.240/.215:.240/.215
A-A-55467-20	20-14	D	.130-.200	.130/.105:.145/.120	.240/.215:.240/.215
A-A-55467-21	20-14	D	.130-.200	.130/.105:.145/.120	.240/.215:.240/.215

Dielectric withstanding voltage. There shall be no breakdown of the insulating material when subjected to 5000 V ac for 1 minute between adjacent contacts of the mated connector assemblies.

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 millimeters (.06 inch) total excursion for 2 hours in each of three mutually perpendicular planes. The contacts shall evidence no discontinuity greater than 10 microseconds and termination resistance, dry circuit not to exceed 5.0 milliohms.

Physical shock. The connector, or hardware when assembled to the connector, shall be subjected to 50 G's at 10 milliseconds; 3 shocks in each direction applied along the three mutually perpendicular planes, total 18 shocks. The contacts shall evidence no discontinuity greater than 10 microseconds and the termination resistance, dry circuit not to exceed 6.0 milliohms.

Thermal shock. The connector, when mated, shall be subjected to 25 cycles between -55°C and +85°C, dielectric withstanding voltage; 3.75 milliohms maximum termination resistance, dry circuit.

Temperature-humidity cycling. The connector, when mated, shall be subjected to temperature-humidity cycling between +25°C and +65°C at 95 percent RH, with cold shock at -10°C during any 5 of the first 9 cycles.

Durability. Durability shall consist of 50 cycles of mating and unmating and upon completion the termination resistance, dry circuit shall not exceed 3.6 milliohms. There shall be no indication of physical damage.

Corrosion. Corrosion shall be 48 hours at 5 percent salt concentration. After exposure of the mated and unmated connectors, the termination resistance, dry circuit will not exceed 7.0 milliohms.

Loose piece and strip form ordering data. Loose piece and strip form ordering data shall be as specified in tables III and IV.

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 assurances 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. A certificate of compliance shall accompany all parts supplied to this CID.

Packaging.

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

Notes. This section contains relevant information which is useful to buyers, users and suppliers in the process of procuring the item, but is not mandatory.

Ordering data. Acquisition documents should specify the following:

a. CID document number and revision and CID PIN.

b. Quality assurance provisions.

c. Packaging requirements.

d. Color (if applicable).

Comments. Comments on this CID should be directed to Defense Electronics Supply Center, 1507 Wilmington Pike, ATTN: DESC-ELDI Dayton, OH 45444-5270, or telephone (513) 296-5391.

Sources of supply. A suggested source of supply is listed in table IV. Additional sources will be added as they become available.

TABLE IV. Split pin loose piece ordering data.

Split pin loose piece ordering data							
CID dash number	Vendor commercial PIN	Figure number 1, configuration	Wire gauge	Base material	Overplate	Under-plate	Vendor CAGE Number
A-A-55467-01	350706-1	A	24-18	Brass	Pre-tin	---	00779
A-A-55467-02	350706-2	A	24-18	Brass	Gold 1/	Nickel	00779
A-A-55467-03	350706-7	A	24-18	Brass	Gold 2/	Nickel	00779
A-A-55467-04	350705-1	C	20-14	Brass	Pre-tin	---	00779
A-A-55467-05	350705-2	C	20-14	Brass	Gold 1/	Nickel	00779
A-A-55467-06	350705-7	C	20-14	Brass	Gold 2/	Nickel	00779
A-A-55467-07	350707-1	C	20-14	Brass	Pre-tin	---	00779
A-A-55467-08	350707-2	C	20-14	Brass	Gold 1/	Nickel	00779
A-A-55467-09	350707-7	C	20-14	Brass	Gold 2/	Nickel	00779

Table IV. Suggested sources of supply - continued.

Split pin strip form ordering data							
CID dash number	Vendor commercial PIN	Figure number 1, configuration	Wire gauge	Base material	overplate	Under- plate	Vendor CAGE Number
A-A-55467-10	350699-1	B	24-18	Brass	Pre-tin	---	00779
A-A-55467-11	350699-2	B	24-18	Brass	Gold 1/	Nickel	00779
A-A-55467-12	350699-3	B	24-18	Ph. Br.	Pre-tin	---	00779
A-A-55467-13	350699-7	B	24-18	Brass	Gold 2/	Nickel	00779
A-A-55467-14	350687-1	D	20-14	Brass	Pre-tin	---	00779
A-A-55467-15	350687-2	D	20-14	Brass	Gold 1/	Nickel	00779
A-A-55467-16	350687-3	D	20-14	Ph. Br.	Pre-tin	---	00779
A-A-55467-17	350687-7	D	20-14	Brass	Gold 2/	Nickel	00779
A-A-55467-18	350700-1	D	20-14	Brass	Pre-tin	---	00779
A-A-55467-19	350700-2	D	20-14	Brass	Gold 1/	Nickel	00779
A-A-55467-20	350700-3	D	20-14	Ph. Br.	Pre-tin	---	00779
A-A-55467-21	350700-7	D	20-14	Brass	Gold 2/	Nickel	00779

1/ Plated with 30 microinches (.76 microns) minimum of gold in mating area and inside wire barrel over 50 microinches (1.27 microns) minimum nickel underplate on entire contact.
2/ Gold plated with 30 microinches (.76 microns) minimum in mating area over 50 microinches (1.27 microns) minimum nickel underplate on entire contact.

Vendor CAGE number	Vendor name and address
00779	AMP, Incorporated P.O. Box 3608 Harrisburg, PA 17105-3608

Supersession data. Supersession data shall be as specified in table V.

TABLE V. Supersession data.

Superseded (old) PIN 87100-	Superseding (new) PIN A-A-55467-	Superseded (old) PIN 87100-	Superseding (new) PIN A-A-55467-
021	01	N/A	12
N/A	02	012	13
024	03	001	14
013	04	N/A	15
N/A	05	N/A	16
016	06	004	17
N/A	07	N/A	18
N/A	08	N/A	19
N/A	09	N/A	20
009	10	N/A	21
N/A	11		

CIVIL AGENCY COORDINATING ACTIVITY:

GSA - 7FXE

PREPARING ACTIVITY:

DLA-ES

(Project 5935-D524