

INCH-POUND

MIL-DTL-28754/11F

21 November 2014

SUPERSEDING

MIL-C-28754/11E

1 October 1990

DETAIL SPECIFICATION SHEET

CONNECTORS, ELECTRICAL, MODULAR, TYPE IV,  
40 CONTACT, RIGHT ANGLE (FOR SOLID OR DIP FRAME)

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 sheet and MIL-C-28754.



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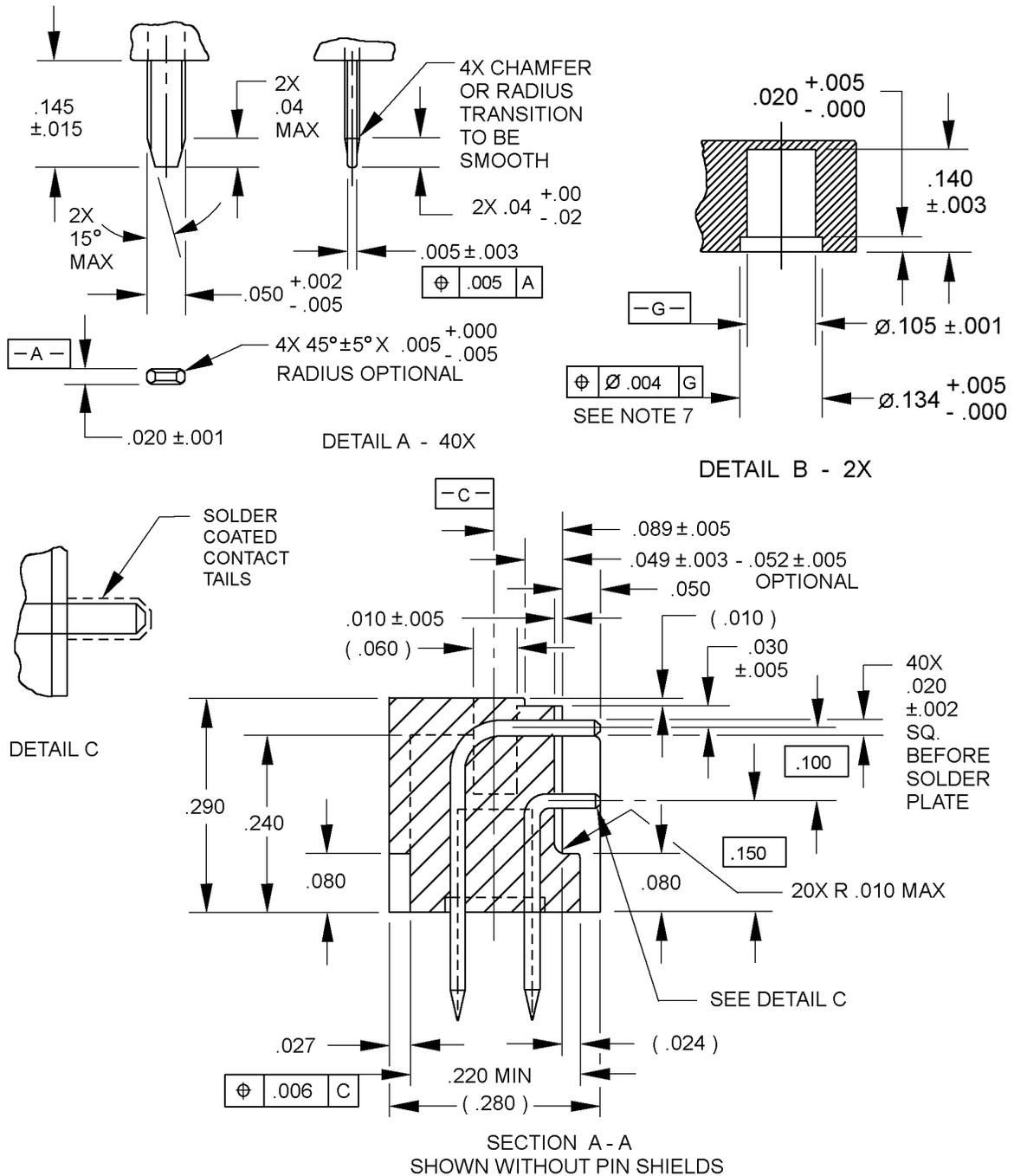


FIGURE 1. Dimensions and configurations – Continued.

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Inches	mm	Inches	mm	Inches	mm	Inches	mm
0.001	0.025	0.030	0.762	0.100	2.540	0.240	6.096
0.002	0.051	0.032	0.813	0.105	2.667	0.270	6.858
0.003	0.076	0.040	1.016	0.107	2.718	0.280	7.112
0.004	0.102	0.045	1.143	0.110	2.794	0.290	7.366
0.005	0.129	0.049	1.245	0.134	3.404	1.940	49.276
0.006	0.152	0.050	1.270	0.138	3.505	2.043	51.892
0.008	0.203	0.052	1.321	0.140	3.556	2.100	53.340
0.010	0.254	0.055	1.397	0.145	3.683	2.200	55.880
0.01	0.25	0.06	1.52	0.1475	3.7465	2.440	61.976
0.015	0.381	0.060	1.524	0.150	3.810		
0.020	0.508	0.062	1.575	0.170	4.318		
0.024	0.610	0.080	2.032	0.220	5.588		
0.027	0.686	0.089	2.261	0.230	5.842		

NOTES:

1. Dimensions are in inches.
2. Metric equivalents are given for information.
3. Unless otherwise specified, tolerances are  $\pm 0.005$  inch (0.125 mm) on three place decimals,  $\pm 0.01$  inch (0.25 mm) on two place decimals and  $\pm 2^\circ$  on angles.
4. Marking in this area shall be in color contrasting characteristics, 0.06 inch (1.52 mm) high.
5. The letters CONN are to be marked in white characters, 0.060 inch (1.52 mm) high and are to precede the military Part or Identifying Number (PIN), but are not to be included in the PIN.
6. The flash around the blade contacts is not to exceed 0.010 inch (0.254 mm) from the body and shall be firmly attached.
7. Taper permitted within dimensional tolerances. For dash 03, the key pin hole is  $0.095 \pm 0.001$  inch ( $2.41 \pm 0.003$  mm) diameter x 0.150 inch (3.81 mm) deep.
8. Datum -C- is established by a plane passing thru the center of the keying pin holes located by the 2.200 dimension.
9. The 0.1475 maximum indicates the maximum eccentricity allowed on either side of Datum -C- but not both.
10. Contact numbers 1, 20, 21, and 40 shall be marked on the pin shield in color contrasting characters, 0.06 inch high.
11. For aluminum alloy, break all sharp corners and edges  $0.004 \pm 0.001$  R.

FIGURE 1. Dimensions and configurations – Continued.

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REQUIREMENTS:

Dimensions and configurations: See figure 1.

Insulator: Diallyl phthalate in accordance with ASTM D5948, type SDG-F.

Contacts: See figure 1. Pins shall be brass, half hard, UNS C26000 in accordance with ASTM B36/B36M..

Plating: Contact plating shall be per MIL-C-28754. Solder coated contact tails shall be tinned (see detail C) with solder to a thickness of 0.0005 inch (0.013 mm) to 0.003 inch (0.08 mm) and solder shall cover tails. Solder used shall be in accordance with J-STD-006, type Sn60, form B, no-fluxed. A noncorrosive flux may be used in accordance with J-STD-004, flux designator R0M0 or R0M1.

Pin shields:

Dash number 01: Aluminum alloy 5052, H38, H32, H34, in accordance with SAE-AMS-QQ-A-250/8. Anodized black in accordance with MIL-A-8625, type II, class 2.

Dash number 02 (insulated): Aluminum alloy 5052, H38, H32, H34, in accordance with SAE-AMS-QQ-A-250/8. Anodized black in accordance with MIL-A-8625, type III, class 2. Racking points shall be allowed and located at the manufacturer's option. The anodize shall not be required to be continuous at these points.

Dash number 03 (insulated): Ultem shell, polyetherimide, type GLT-20F or 30F, molded thermoplastic, in accordance with MIL-M-24519 with diallyl phthalate body.

Alternate material: Unclad E-glass, woven reinforcement material and flame resistant epoxy resin system in accordance with ASTM D1867.

Contact resistance: Voltage drop shall not exceed 20 millivolts.

Current rating: 3 amperes.

Solderability: In accordance with MIL-C-28754.

Temperature rating: -55 to +105°C.

Voltage rating: 300 volts, ac (rms) at sea level.

Durability: Voltage drop shall not exceed 20 millivolts.

Marking: In accordance with MIL-C-28754, table I, and figure 1.

PIN: M28754/11- (dash number from table I).

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TABLE I. Dash numbers and applicable connector assembly.

Dash number	Applicable connector assembly
01 1/	M28754/12-01, M28754/12-02, M28754/9-01
02	M28754/09-02, M28754/12-03 through /12-05, M28754/78-01 through /78-10
03	M28754/09-04, M28754/12-06 through /12-08, M28754/78-11 through /78-20

NOTE:

1/ Inactive for new design; use -02.

Caution: The GLT-20F or GLT-30F may be susceptible to stress cracking when exposed to certain cleaning solvents.

First article testing: Perform the applicable tests as specified in MIL-C-28754 and the appendix thereto.

Changes from previous issue. The margins of this specification are marked with vertical lines to indicate where changes from the previous issue were made. This was done as a convenience only and the Government assumes no liability whatsoever for any inaccuracies in these notations. Bidders and contractors are cautioned to evaluate the requirements of this document based on the entire content irrespective of the marginal notations and relationship to the previous issue.

Referenced documents. In addition to MIL-C-28754, this document references the following:

MIL-A-8625  
MIL-M24519  
ASTM B36/B36M  
ASTM D1867  
ASTM D5948  
J-STD-004  
J-STD-006  
SAE-AMS-QQ-250/8

CONCLUDING MATERIAL

Custodians:  
Army – CR  
Navy – AS  
Air Force – 85  
DLA - CC

Preparing activity:  
DLA - CC  
  
(Project 5935-2014-063)

Review activities:  
Army AR, MI  
Navy – MC  
Air Force – 99

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