INCH-POUND

MS14056B
1 April 2009
SUPERSEDING
MS14056A
3 January 2003

DETAIL SPECIFICATION SHEET

CONTACTS, ELECTRICAL CONNECTOR, SHIELDED CABLE APPLICATIONS, SIZE 8

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-DTL-22992.

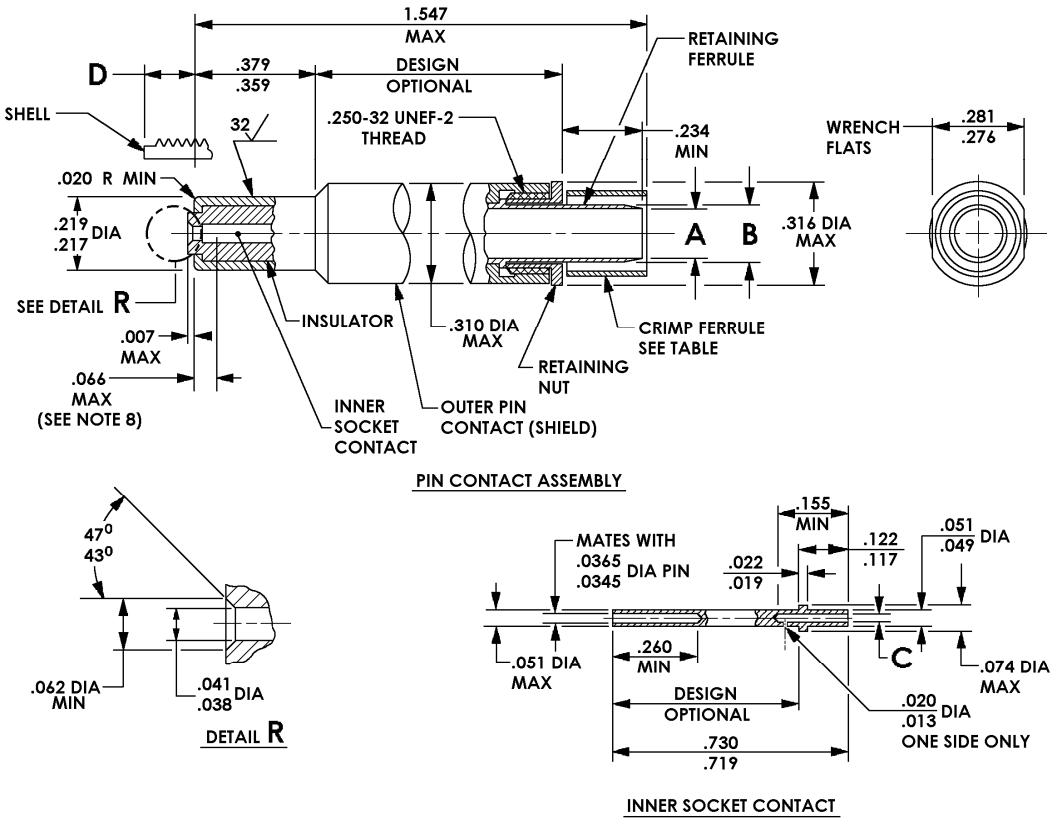


FIGURE 1. Pin.

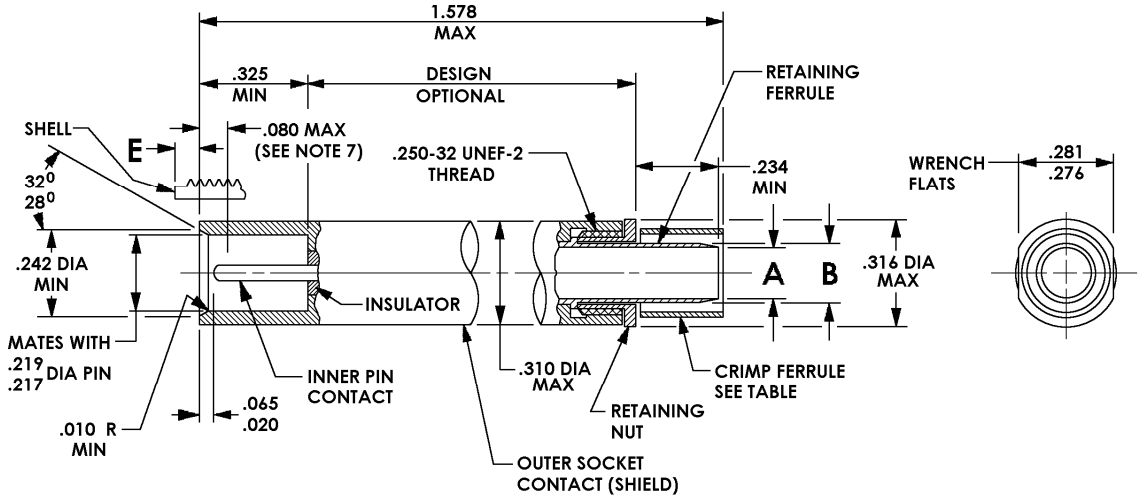
NOTES:

1. All dimensions are in inches and are after plating.
2. Metric equivalents (to the nearest .01 mm) are given for general information only and are based upon 1 inch = 25.4 mm.
3. Surface roughness to be 63 or better in accordance with ASME-B46. 1 unless otherwise specified.
4. Remove all burrs and sharp edges .003-.005 (.08 -.13 mm) R unless otherwise specified.
5. All diameters to be concentric to each other within .005 (.13mm) total indicator reading (TIR), unless otherwise specified.
6. Outer contacts (shields) shall be crimped with a tool conforming to MIL-C-22520/5 with appropriate dies (see figure 3). The inner pin and socket contacts shall be either crimped with a MIL-C-22520/2 crimp tool or soldered in accordance with manufacturer's instructions.
7. Point at which a square ended .218 (5.54 mm) dia pin first engages the outer socket contact spring.
8. Point at which a square ended .0355 (.90 mm) dia pin first engages the inner socket contact spring.
9. Materials:
   Outer socket contact, inner socket contact – beryllium copper in accordance with ASTM-B196/B196M, ASTM-B197/B197M, and ASTM-B194.
   Outer pin contact, retaining ferrule, retaining nut – brass in accordance with ASTM-B121/B121M, ASTM-B36/B36M, ASTM-B16/B16M and ASTM-B124/B124M.
   Inner pin contact – brass in accordance with ASTM-B159/B159M and ASTM-B206/B206M.
   Insulators – polyetrafluoroethylene (TFE) or fluorinated – ethylene – propylene (FEP) resin.
10. Engaging and separation forces – test pins to be in accordance with SAE-AS31971 except for the diameters listed below:
    A. Outer socket contact – 48 oz max engaging force with .2192/.2190 (5.568/5.563 mm) dia pin 4 oz min separation force with a .2170/.2168 (5.512/5.507 mm) dia pin.
    B. Inner socket contact – 18 oz max engaging force with .0367/.-0365 (.932/.927 mm) dia pin. 3/4 oz min separation force with a .0345/.0343 (.876/.871 mm) dia pin.
11. Dielectric withstanding voltage – 1500 vac rms, applied between inner and outer contacts.
12. Insulation resistance – measured between inner and outer contacts.
13. Probe damage – not applicable.
14. Crimp tensile strength:

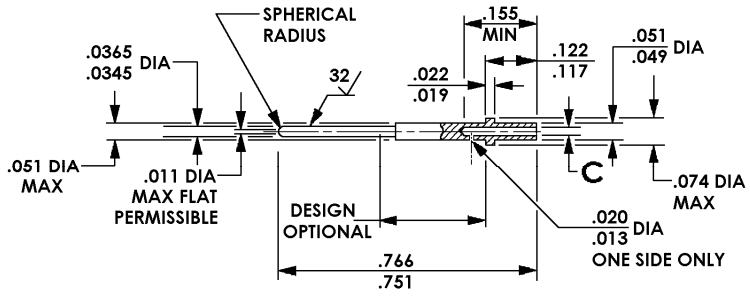
Dash no.	Tensile strength (lbs. min)	
	Inner contact	Outer contact
-1	4	18
-2	20	60

15. Contact retention:
    A. Outer contact. 20 pounds.
    B. Inner contact: 5 pounds.
16. Contact resistance:
    A. Outer contact: 5 mv at 1 amp.
    B. Inner contact: 15 mv at 1 amp.

FIGURE 1. Pin – Continued.



SOCKET CONTACT ASSEMBLY



INNER PIN CONTACT

FIGURE 2. Socket.

NOTES:

1. All dimensions are in inches and are after plating.
2. Metric equivalents (to the nearest .01 mm) are given for general information only and are based upon 1 inch = 25.4 mm.
3. Surface roughness to be 63 or better in accordance with ASME-B46. 1 unless otherwise specified.
4. Remove all burrs and sharp edges .003-.005 (.08 -.13 mm) R unless otherwise specified.
5. All diameters to be concentric to each other within .005 (.13mm) total indicator reading (TIR), unless otherwise specified.
6. Outer contacts (shields) shall be crimped with a tool conforming to MIL-C-22520/5 with appropriate dies (see figure 3). The inner pin and socket contacts shall be either crimped with a MIL-C-22520/2 crimp tool or soldered in accordance with manufacturer's instructions.
7. Point at which a square ended .218 (5.54 mm) dia pin first engages the outer socket contact spring.
8. Point at which a square ended .0355 (.90 mm) dia pin first engages the inner socket contact spring.
9. Materials:
   Outer socket contact, inner socket contact – beryllium copper in accordance with ASTM-B196/B196M, ASTM-B197/B197M, and ASTM-B194.
   Outer pin contact, retaining ferrule, retaining nut – brass in accordance with ASTM-B121/B121M, ASTM-B36/B36M, ASTM-B16/B16M and ASTM-B124/B124M.
   Inner pin contact – brass in accordance with ASTM-B159/B159M and ASTM-B206/B206M.
   Insulators – polyetrafluoroethylene (TFE) or fluorinated – ethylene – propylene (FEP) resin.
10. Engaging and separation forces – test pins to be in accordance with SAE-AS31971 except for the diameters listed below:
    a. Outer socket contact – 48 oz max engaging force with .2192/.2190 (5.568/5.563 mm) dia pin 4 oz min separation force with a .2170/.2168 (5.512/5.507 mm) dia pin.
    B. Inner socket contact – 18 oz max engaging force with .0367/.-0365 (.932/.927 mm) dia pin. 3/4 oz min separation force with a .0345/.0343 (.876/.871 mm) dia pin.
11. Dielectric withstanding voltage – 1500 vac rms, applied between inner and outer contacts.
12. Insulation resistance – measured between inner and outer contacts.
13. Probe damage – not applicable.
14. Crimp tensile strength:

Dash no.	Tensile strength (lbs. min)	
	Inner contact	Outer contact
-1	4	18
-2	20	60

15. Contact retention:
    a. Outer contact. 20 pounds.
    b. Inner contact: 5 pounds.
16. Contact resistance:
    a. Outer contact: 5 mv at 1 amp.
    b. Inner contact: 15 mv at 1 amp.

FIGURE 2. Socket – Continued.

Dash NO.	Coaxial cable	A dia min	B dia	C dia min	Crimp Ferrule	Hex crimp dies (see note 6)
-1	M17/94-RG179	.067	.110 .106	.014	MS21980-128 MS21981-058	M22520/5-35
-2	M17/184-00001 M17/185-00001 M17/97-RG210	.152	.185 .181	.027	MS21980-225 MS21981-134	M22520/5-45

DASH NO.	D				E			
	MIL-DTL-5015		MIL-DTL-22992		MIL-DTL-5015		MIL-DTL-22992	
	Plug	Receptacle	Plug	Receptacle	Plug	Receptacle	Plug	Receptacle
-1								
-2	.269 .204	.267 .207	.269 .204	.314 .254	.240 .174	.237 .177	.240 .174	.284 .224

FIGURE 3. General dimensions.

Inches	mm	Inches	mm	Inches	mm	Inches	mm
.007	.18	.074	1.88	.240	6.10	.731	19.08
.010	.25	.080	2.03	.242	6.15	.766	19.46
.011	.28	.106	2.69	.250	6.35	1.547	39.29
.013	.33	.110	2.79	.254	6.45	1.578	40.08
.014	.36	.117	2.97	.260	6.60		
.019	.48	.122	3.10	.264	6.71		
.020	.51	.152	3.86	.267	6.78		
.022	.56	.155	3.94	.269	6.83		
.027	.69	.174	4.42	.276	7.01		
.034	.88	.177	4.50	.281	7.14		
.036	.93	.179	4.55	.284	7.21		
.038	.97	.181	4.60	.310	7.87		
.041	1.04	.185	4.70	.314	7.98		
.049	1.24	.207	5.26	.316	8.03		
.051	1.30	.217	5.51	.325	8.26		
.062	1.57	.219	5.56	.359	9.12		
.065	1.65	.224	5.69	.379	9.63		
.066	1.68	.234	5.94	.719	18.26		
.067	1.70	.237	6.02	.730	18.54		

FIGURE 3. General dimensions – Continued.

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.

Referenced documents. In addition to MIL-DTL-22992, this document references the following:

MIL-C-22520/2
MIL-C-22520/5
MIL-DTL-5015
ASME-B46.1
ASTM-B196/B196M
ASTM-B197/B197M
ASTM-B194
ASTM-B121/B121M
ASTM-B36/B36M
ASTM-B16/B16M
ASTM-B124/B124M
ASTM-B159/B159M
ASTM-B206/B206M
SAE-AS31971

CONCLUDING MATERIAL

Custodians:
Army – CR
Navy – EC
Air Force – 85
DLA – CC

Preparing activity:
DLA – CC

Review activities:
Army – MI
Navy – AS, CG, OS, SH
Air Force – 19

(Project 5935–2008-154)

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 http://assist.daps.dla.mil.