

MILITARY SPECIFICATION SHEET

CONNECTOR ADAPTER, CLASS I

(COAXIAL, SERIES TWIN), TYPE UG-981/U

This specification is approved for use by all Departments and Agencies of the Department of Defense.

The complete requirements for procuring the adapter described herein shall consist of this document and the latest issue of Specification MIL-C-3655.

INACTIVE FOR NEW DESIGN

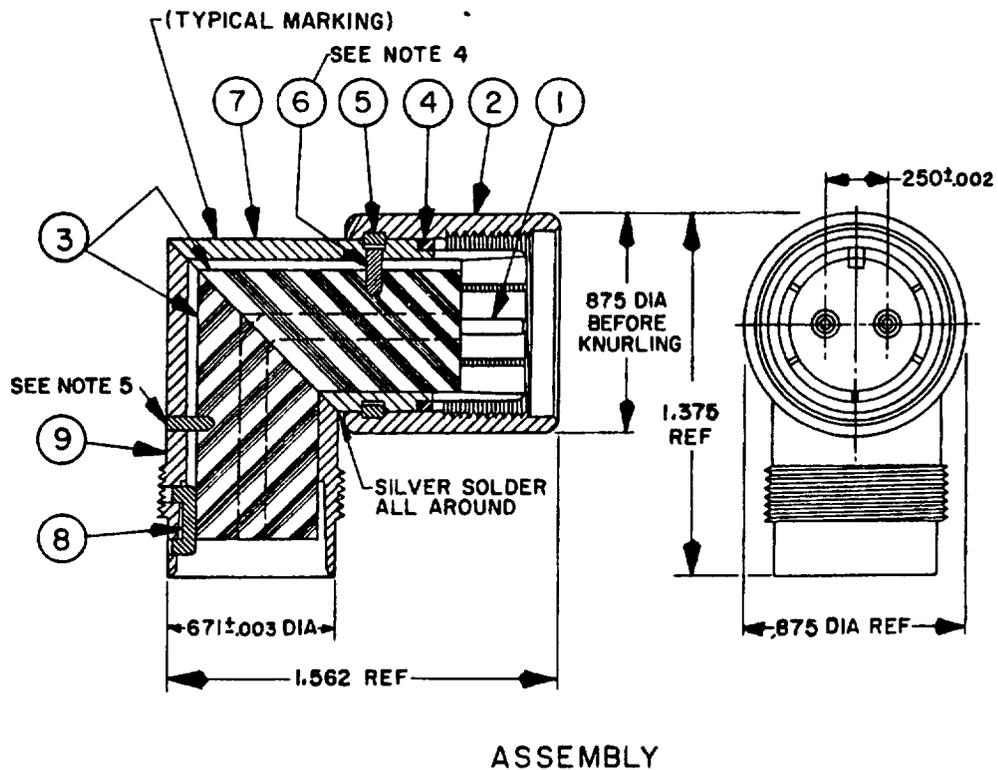


FIGURE 1. Type UG-981/U connector adapter.

Ⓑ denotes changes

Item	Description	Material	Quantity
1	Center contact	Copper beryllium <u>1/</u>	2
2	Coupling nut	Brass	1
3	Insulator	Plastic	2
4	Gasket	Silicone rubber	1
5	Spring	Phosphor bronze	1
6	Pin	Brass	2
7	Body	Brass	1
8	Key	Brass	1
9	Body	Brass	1

1/ For alternate two-piece construction, male portion shall be of brass, and female portion shall be of copper beryllium.

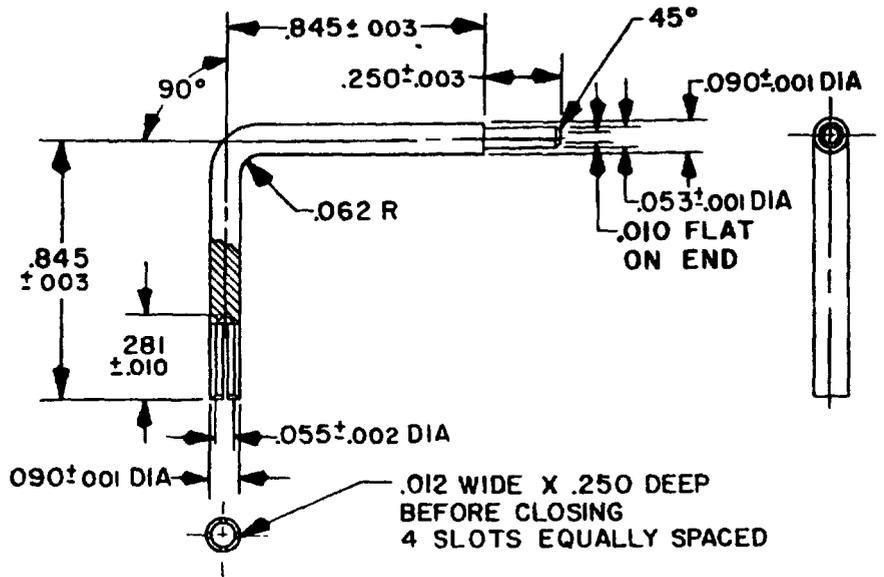
;

INCHES	MM	INCHES	MM	INCHES	MM	INCHES	MM	INCHES	MM
.0005	.013	.055	1.40	.125	3.18	.437	11.10	.687	17.45
.001	.03	.059	1.50	.156	3.96	.4375	11.112	.697	17.70
.002	.05	.061	1.55	.200	5.08	.438	11.13	.737	18.72
.003	.08	.062	1.57	.2175	5.524	.500	12.70	.750	19.05
.005	.13	.0625	1.588	.218	5.54	.530	13.46	.765	19.43
.010	.25	.063	1.60	.219	5.56	.531	13.49	.843	21.41
.012	.30	.087	2.21	.250	6.35	.535	13.59	.845	21.46
.015	.38	.090	2.29	.265	6.73	.585	14.86	.850	21.59
.018	.46	.091	2.31	.2800	7.112	.590	14.99	.875	22.22
.020	.51	.092	2.34	.281	7.14	.593	15.06	1.343	34.11
.028	.71	.093	2.36	.350	8.89	.605	15.37	1.375	34.92
.045	1.14	.096	2.44	.375	9.52	.620	15.75	1.445	36.70
.046	1.17	.105	2.67	.388	9.86	.625	15.88	1.562	39.67
.053	1.35	.109	2.77	.420	10.67	.671	17.04		

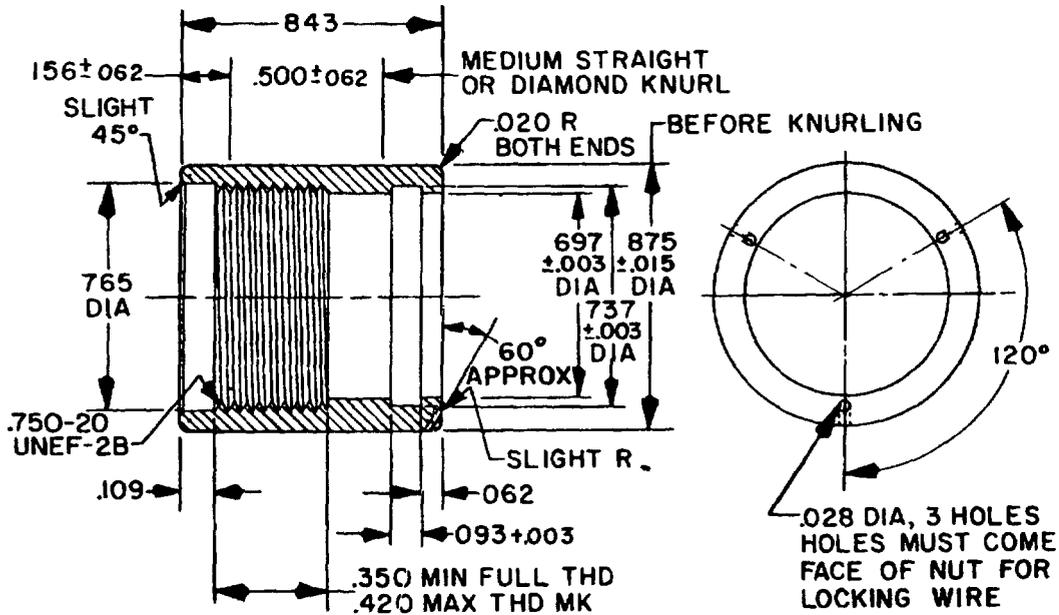
NOTES:

1. Dimensions are in inches.
2. Metric equivalents are given for general information only and are based upon 1.00 inch = 25.4 mm.
3. Unless otherwise specified, tolerance is ± 0.005 (.13 mm).
4. Press pin into hole flush with diameter of groove.
5. Press pin into hole flush with outside diameter.

FIGURE 1. Type UG-981/U connector adapter - Continued.

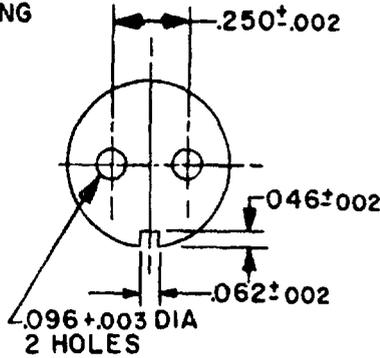
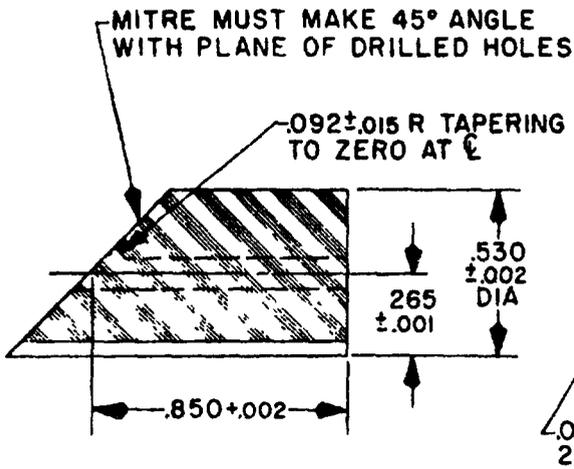


① CENTER CONTACT



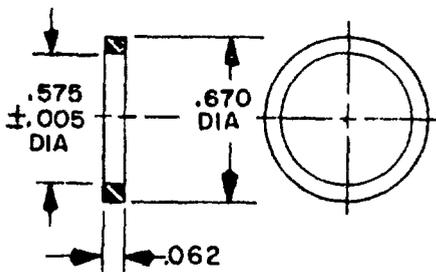
② COUPLING NUT

FIGURE 1. Type UG-981/U connector adapter - Continued.

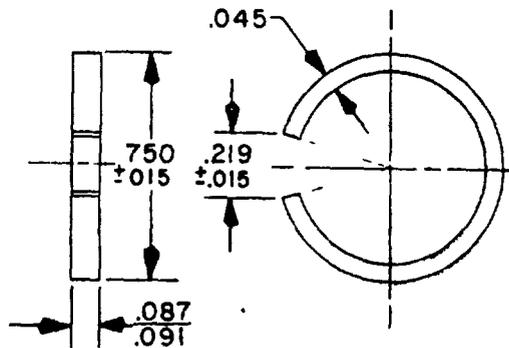


INCHES	MM
.001	.03
.002	.05
.003	.08
.005	.13
.015	.38
.045	1.14
.046	1.17
.062	1.57
.087	2.21
.091	2.31
.092	2.34
.219	5.56
.250	6.35
.265	6.73
.530	13.46
.575	14.60
.670	17.02
.671	17.04
.750	19.05
.875	22.22
1.562	39.67

③ INSULATOR



④ GASKET



⑤ SPRING

FIGURE 1. Type UG-981/U connector adapter - Continued.

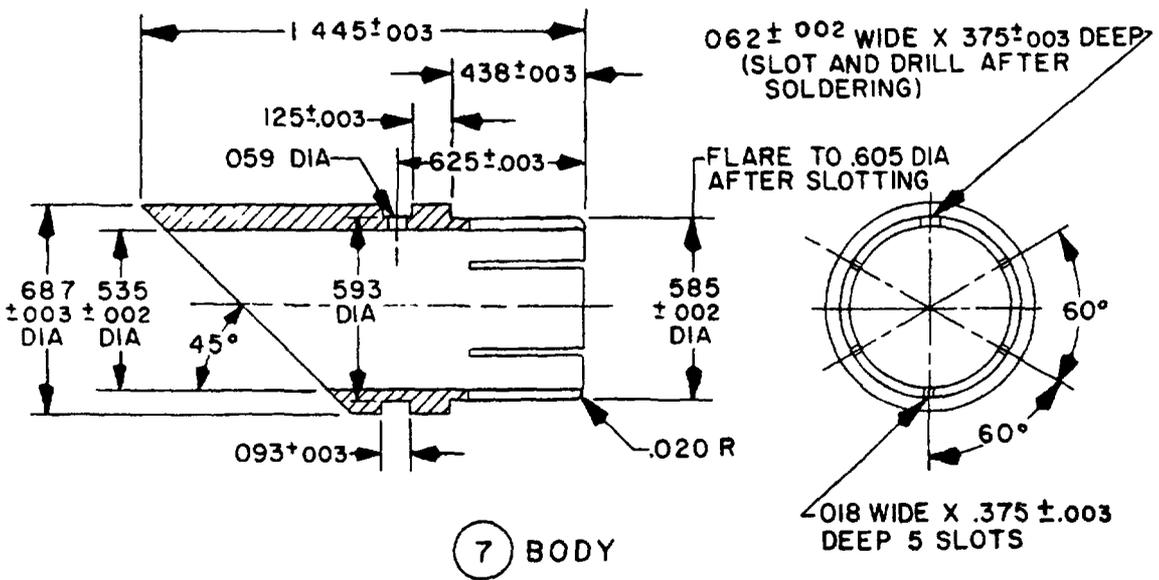
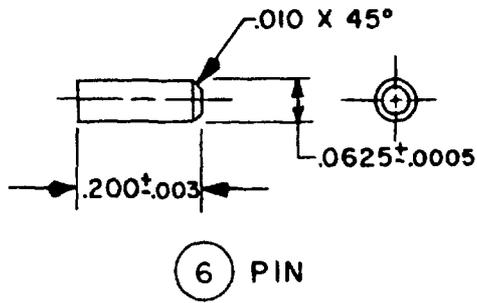


FIGURE 1 Type UG-981/U connector adapter - Continued.

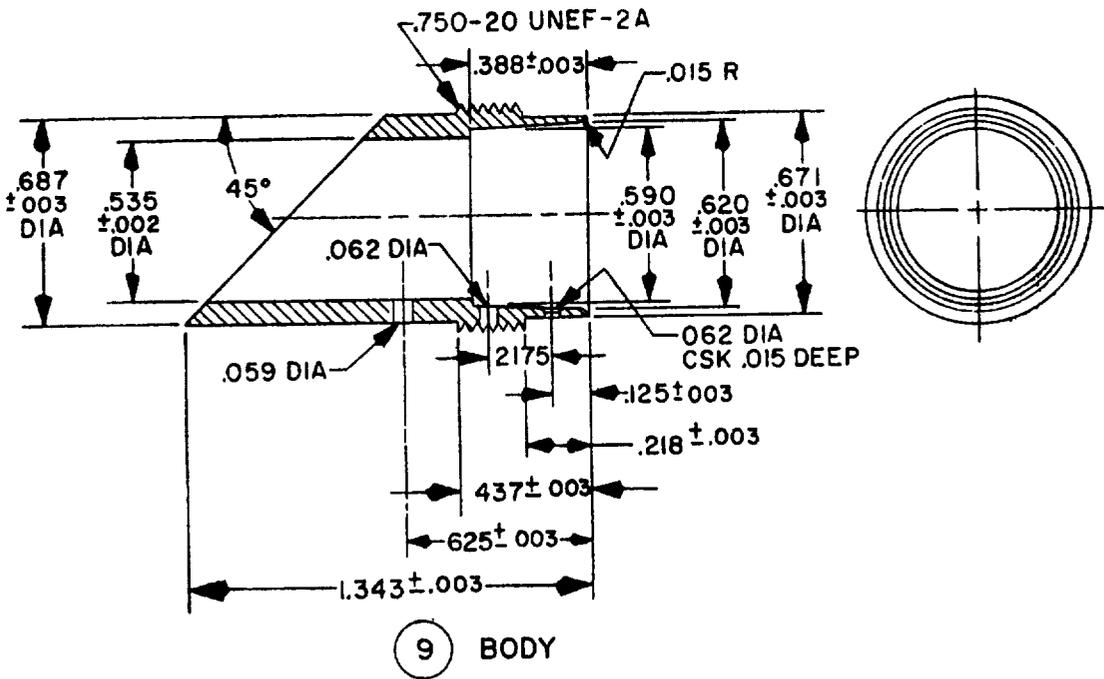
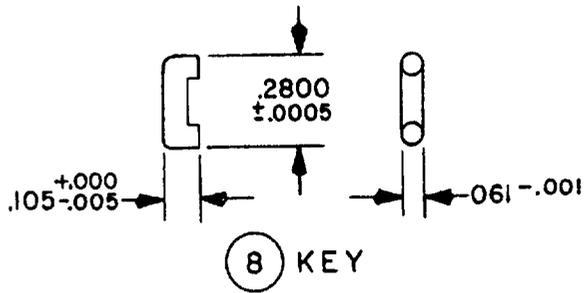
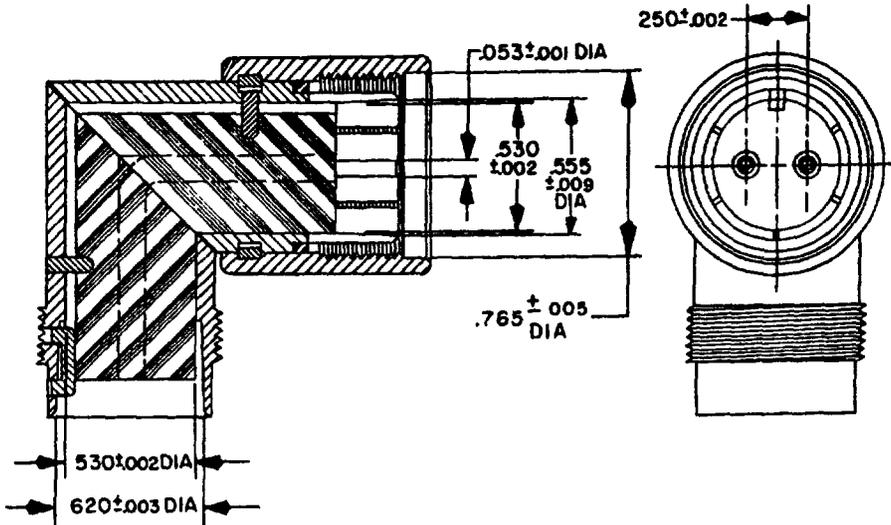


FIGURE 1. Type UG-981/U connector adapter - Continued.



INCHES	MM	INCHES	MM
.001	.03	.250	6.35
.002	.05	.530	13.46
.003	.08	.555	14.10
.005	.13	.620	15.75
.009	.23	.765	19.43
.053	1.35		

NOTES:

1. Dimensions are in inches.
2. Metric equivalents are given for general information only and are based upon 1.00 inch = 25.4 mm.

FIGURE 2. Visual mating requirements.

⑧ ENGINEERING DATA:

Nominal impedance. 95 ohms.

Frequency range: DC to 500 MHz, maximum.

Voltage rating: 500 volts peak at sea level.

Mating connector: M3655/1-0421 and M3655/2-0422.

Intended use: Type M3655/5-UG981 electrical connector is designed for use with receptacle shield M3655/11-0106.

⑧ REQUIREMENTS:

Design and construction: See figures 1 and 2.

Metal parts: All metal parts shall have silver plating of not less than 0.0002 inch thickness and of sufficient smoothness and density to withstand the salt spray (corrosion) test. Silver plating shall be in accordance with QQ-S-365.

Force to engage/disengage:

Torque: Not applicable.

Longitudinal force: Not applicable.

Coupling proof torque: 15 inch-pounds, minimum.

Mating characteristics (see figures 1 and 2 for dimensions):

Center contact:

Oversize test pin: 0.062 inch diameter, minimum (nonclosed entry contact only).

Test pin finish: 16 microinches.

Insertion depth: .093 inch, minimum.

Number of insertions: One.

Insertion force test:

Steel test pin diameter: 0.062 inch, minimum.

Test pin finish: 16 microinches.

Insertion depth: .125 inch, minimum.

Insertion force: 2 pounds, maximum.

Withdrawal force test:

Steel test pin diameter: .052 inch, maximum.

Test pin finish: 16 microinches.

Insertion depth: .125 inch, minimum.

Withdrawal force: 2 ounces, minimum.

Outer contact:

Test ring I.D.: .583 inch, maximum.

Test ring finish: 16 microinches.

Insertion force: 15 pounds maximum when inserted a minimum of .125 inch.

Contacts with slotted members: Shall contact a .605 inch minimum diameter ring within .031 inch of their tip ends.

Permeability: Applicable.

Hermetic seal: Applicable.

Leakage: Not applicable.

Insulation resistance: 5×10^9 ohms, minimum.

Contact insulator captivation: Not applicable.

Salt spray (corrosion): Applicable.

Connector durability: Applicable.

MIL-C-3655/5B

Contact resistance (milliohms, maximum)

	<u>Initial</u>	<u>After environment</u>
Inner conductor contacts	2.84	3.80
Outer conductor contacts.	.38	Not applicable
Braid to body:	.20	Not applicable

Dielectric withstanding voltage: 1,500 Vrms, minimum, at sea level.

Vibration, high frequency: Applicable.

Shock (specified pulse): Not applicable.

Temperature cycling. Applicable.

Humidity: Applicable, but no measurements shall be made at high humidity.

Insulation resistance shall be at least 2×10^8 ohms within 5 minutes after removal from the humidity chamber.

Cable retention force Applicable.

Coupling nut retention: Applicable.

Marking: In accordance with MIL-C-3655.
Part number. M3655/5-0981.

Qualification: Not required.

Custodians:

Army - CR
Navy - EC
Air Force - 85

Review activities:

Army - MI
Navy - OS
Air Force - 11, 17, 99
DLA - ES

User activities:

Army - AT
Navy - AS, MC, SH
Air Force - 19

Preparing activity:

Army - CR

Agent:

DLA - ES

(Project 5935-3086-5)

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