

**Description**

Amphenol C connectors are medium size and weatherproof. Coupling is two-stud bayonet lock. C connectors provide constant 50 ohm impedance. They may be used with 75 ohm cable, at lower frequencies (below 300 MHz) where no serious mismatch is introduced.

Amphenol HN connectors are medium size weatherproof units designed for high voltage applications. HN connectors feature captivated contact design which prevents contact recession under temperature extremes and mechanical stresses. Coupling is 3/4-20 threaded.

Amphenol SC connectors are medium size, constant 50 ohm impedance units manufactured to meet MIL-C-39012 category D, Specification sheets 35 through 43, meeting all of the mechanical and electrical requirements of the Limited Co-ordination Specification (LC Spec.) as generated by the U.S. Air Force.

Connector mating is a .687-24 UNEF screw thread.

**Features/Benefits**

- C — two-stud bayonet lock allows quick & easy coupling.
- HN — 3/4-20 thread withstands rugged applications.
- SC — MIL qualified per M39012 provides consistent performance and dependability.

**Applications**

- Instrumentation
- Cable Assemblies
- Components
- MIL Aerospace
- Airframe
- Test & Measurement



**C**

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**HN**

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**SC**

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## ELECTRICAL

Impedance	50 Ohm constant
Frequency range	0-11 GHz, 1500 V typ.
Voltage Rating 1500 x .707 (1060 rms)	1500 volts peak, std.
Dielectric Withstanding	3000 volts RMS
Voltage VSWR	1500 volt type; 1.35 max. to 11 GHz max. 2 Amps current @ 100 MHz @ 1500 volts peak

## ENVIRONMENTAL

Temperature range	-65°C to +165°C
Weatherproof	Except as noted, all C series connectors are weatherproof
Hermetic Seals	Pass helium leak test of $2 \times 10^{-8}$ c/sec
Pressurized	Compression seal

## MECHANICAL

Mating	2-stud Bayonet lock
Cable affixment	Braid clamp

## MATERIAL

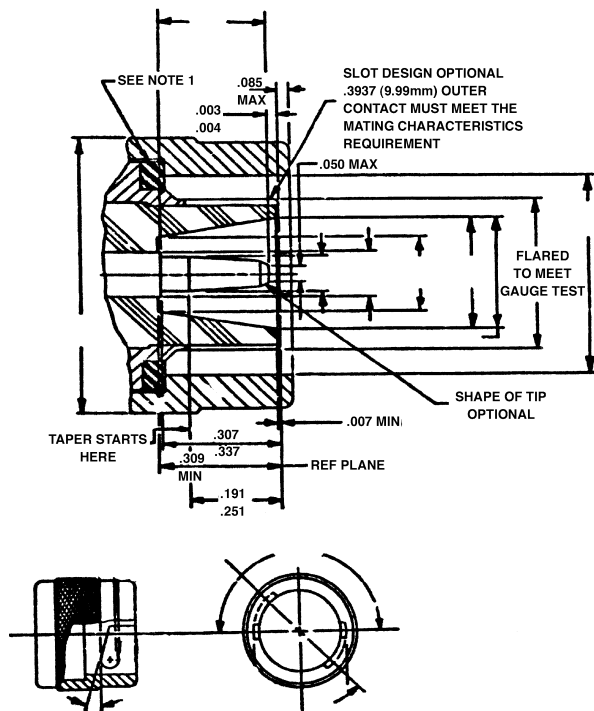
Contacts	Male: brass Female & Outer beryllium copper. Silver plated except M39012 gold.
Other metal parts	Brass: ASTROplate® finish except M39012 silver
Insulators	TFE, glass-TFE (hermetically sealed)
Weatherproof gaskets	Silicone rubber

## MILITARY SPECIFICATIONS

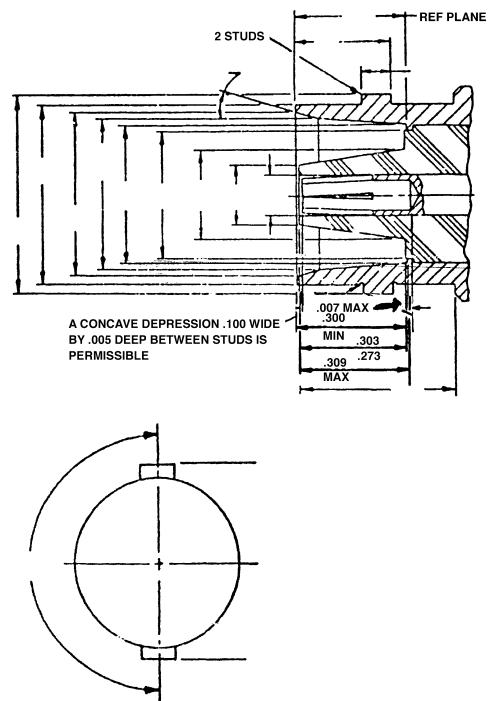
MIL-C-39012 & MIL-A-55339	where applicable
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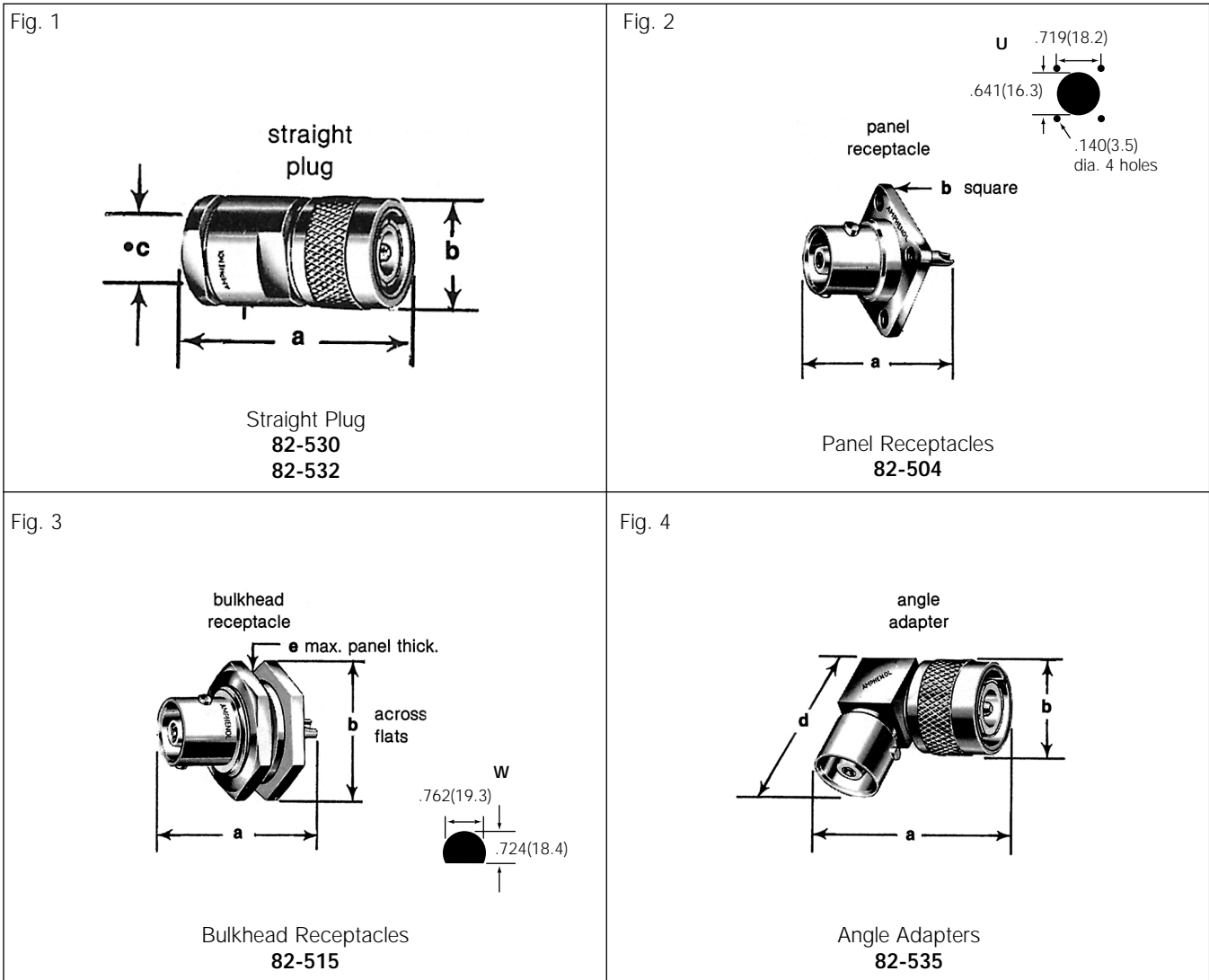
NOTE: These characteristics are typical and may not apply to all connectors.

## PLUG



## JACK





## STRAIGHT PLUGS

Cable RG-/U	Dimensions, inches (millimeters)					Construction Notes			Military Number	Amphenol Number	Fig
	a	b	c	d	e	CAI	Plt.	Ins.			
8, 9, 87A, 213, 214, 225	1.48 (37.7)	.750 (19.1)	.444 (11.3)	—	—	C16	P1	D1	UG-573A	82-530	1
	1.75 (44.5)	.750 (19.1)	.444 (11.3)	—	—	C16	P1	D1	UG-628A (4000 V Peak)	82-532	1

## PANEL RECEPTACLES

Description	Dimensions, in. (mm)				MTG Hole	Construction Notes			Military Number	Amphenol Number	Fig
	a	b	d	e		CAI	Plt.	Ins.			
#6-32 tapped flange holes/female contacts	1.09 (27.8)	1.00 (25.4)	—	—	U	—	P1	D1	UG-568	82-504	2
4000 volts peak	1.31 (33.3)	1.00 (25.4)	—	1.56 (4.0)	W	—	P1	D1	UG-634	82-515	3

## ANGLE ADAPTER

Description	Dimensions, in. (mm)				MTG Hole	Construction Notes			Military Number	Amphenol Number	Fig
	a	b	d	e		CAI	Plt.	Ins.			
Jack-plug/non-weatherproof	1.25 (31.8)	.766 (19.4)	1.25 (31.8)	—	—	—	P4	D1	UG-567A	82-535	4

### ELECTRICAL

Impedance	50 Ohms
Frequency range	0-4 GHz
Voltage Rating	1500 volts peak, std.
Dielectric Withstanding Voltage	5000 volts RMS

### ENVIRONMENTAL

Temperature range	TFE -65°C to +165°C Copolymer of styrene: -55°C to +85°C
Weatherproof	All HN Series are weatherproof
Hermetic Seals	Pass helium leak test of $2 \times 10^{-8}$ cc/sec
Pressurized	Compression Seal

### MECHANICAL

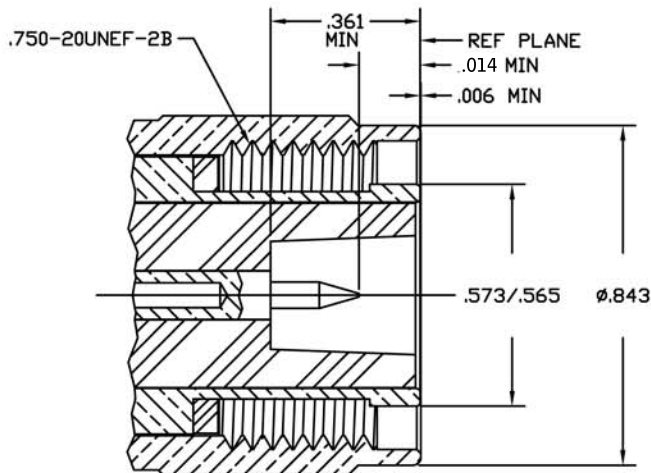
Mating	3/4-20 threaded coupling
Cable affixment	Screw-thread nut and braid clamp

### MATERIAL

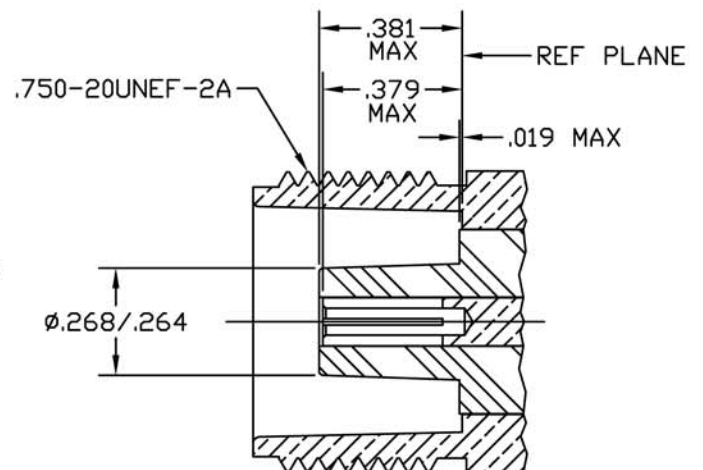
Contacts	Male: brass Female: beryllium copper. Outer: brass Finish: silver or gold
Other metal parts	Brass: ASTROplate® finish
Insulators	TFE, glass-TFE Copolymer of styrene: (hermetically sealed)
Weatherproof gaskets	Silicone rubber; Synthetic rubber

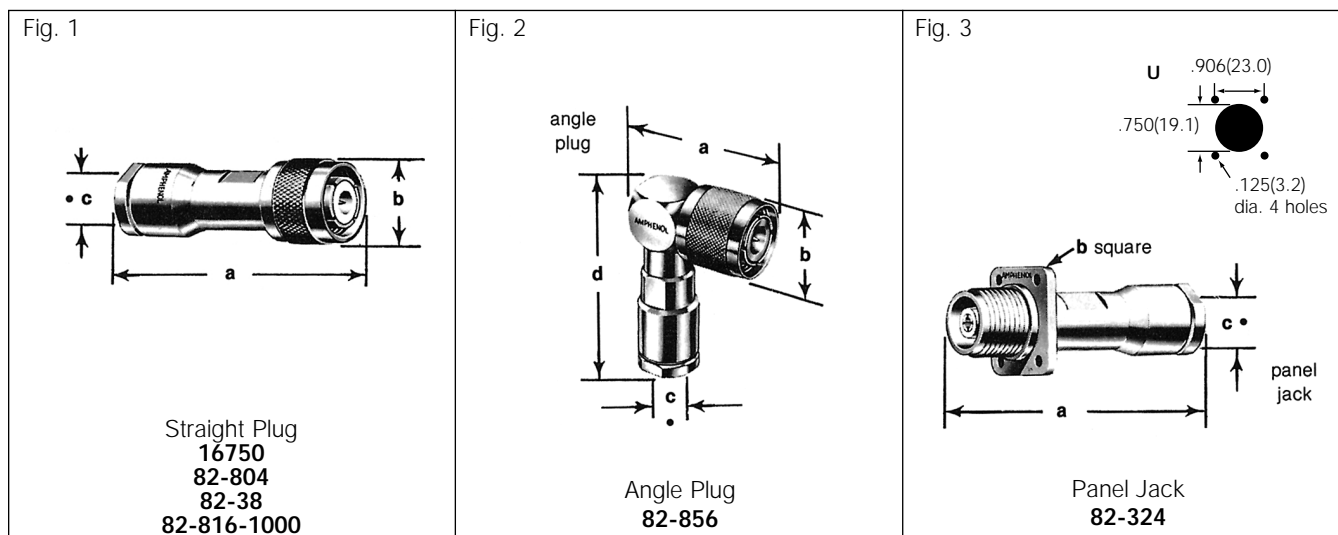
NOTE: These characteristics are typical and may not apply to all connectors.

### PLUG



### JACK





C, HN, SC

## STRAIGHT PLUGS

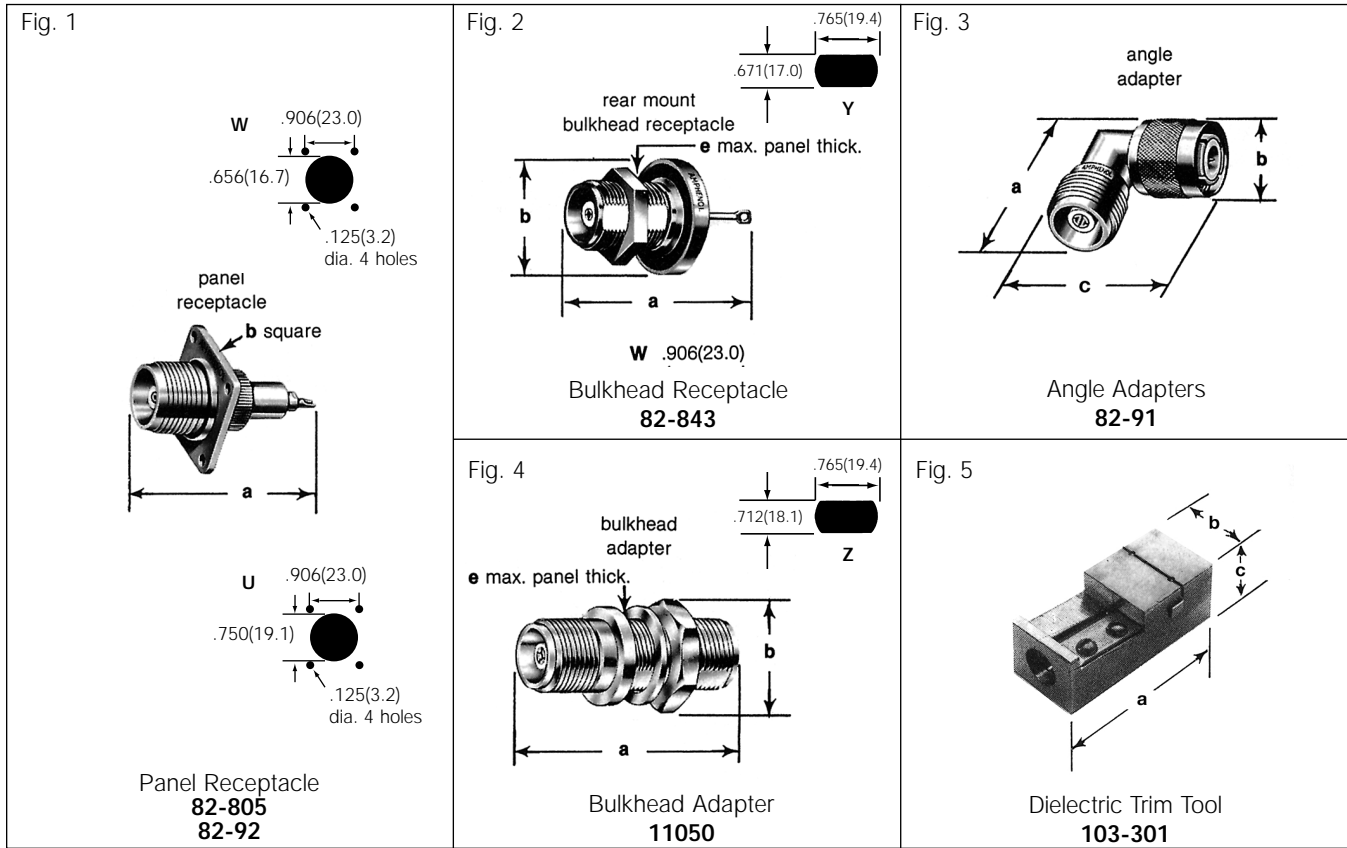
Description	Cable Termination	Dimensions, in. (mm)				MTG Hole	Construction Notes			Military Number	Amphenol Number	Fig
		a	b	c	d		CAI	Plt.	Ins.			
58, 141, 142	TYP-Clamp	1.81 (46.0)	.844 (21.4)	.214 (5.4)	—	—	C18	P1	D1	—	16750	1
8, 9, 213, 214	TYP-Clamp	2.38 (60.3)	.875 (22.2)	.444 (11.3)	—	—	C20	P1	D6	UG-59A	82-38	1
54A	TYP-Clamp	1.81 (46.0)	.875 (22.2)	.257 (6.5)	—	—	C18	P4	D6	—	82-816-1000	1
8, 9, 87A, 213, 214, 225	TYP-Clamp	2.38 (60.3)	.875 (22.2)	.444 (11.3)	—	—	C17	P1	D1	UG-59B	82-804	1

## ANGLE PLUG

Description	Cable Termination	Dimensions, in. (mm)				MTG Hole	Construction Notes			Military Number	Amphenol Number	Fig
		a	b	c	d		CAI	Plt.	Ins.			
8, 9, 87A, 213, 214, 225	TYP-Clamp	1.50 (38.1)	.875 (22.2)	.444 (11.3)	2.31 (58.7)	—	C17	P1	D1	—	82-856	2

## PANEL JACKS

Description	Cable Termination	Dimensions, in. (mm)				MTG Hole	Construction Notes			Military Number	Amphenol Number	Fig
		a	b	c	d		CAI	Plt.	Ins.			
8, 9, 87A, 213, 214, 225	C.C.-Clamp	2.94 (74.6)	1.19 (30.2)	.444 (11.3)	—	U	C17	P1	D1	UG-1215	82-324	3



## PANEL RECEPTACLES

Description	Dimensions, in. (mm)				MTG Hole	Construction Notes			Military Number	Amphenol Number	Fig
	a	b	c	e		CAI	Plt.	Ins.			
Solder Cup Terminal	1.88 (47.6)	1.19 (30.2)	—	—	W	—	P1	D1	UG-560	82-805	1
Solder Cup Terminal (Copolymer Styrene Ins.)	1.53 (38.9)	1.19 (30.2)	—	—	U	—	P1	D6	UG-496	82-92	1

## BULKHEAD RECEPTACLES

Description	Dimensions, in. (mm)				MTG Hole	Construction Notes			Military Number	Amphenol Number	Fig
	a	b	c	e		CAI	Plt.	Ins.			
Rear Mount/Spade Terminal	1.77 (44.8)	1.25 (31.8)	—	.187 (4.7)	Y	—	P1	D1	—	82-843	2

## ANGLE ADAPTERS

Description	Dimensions, in. (mm)				MTG Hole	Construction Notes			Military Number	Amphenol Number	Fig
	a	b	c	e		CAI	Plt.	Ins.			
Jack-Plug (Copolymer Styrene Ins.)	1.53 (38.9)	.875 (22.2)	1.46 (37.3)	—	—	—	P1	D6	UG-212A	82-91	3

## BULKHEAD ADAPTERS

Description	Dimensions, in. (mm)				MTG Hole	Construction Notes			Military Number	Amphenol Number	Fig
	a	b	c	e		CAI	Plt.	Ins.			
Jack-Jack	1.97 (50.0)	1.00 (25.4)	—	.343 (8.7)	Z	—	P1	D1	UG-1019	11050	4

## DIELECTRIC TRIM TOOL

Description	Dimensions, in. (mm)				MTG Hole	Construction Notes			Military Number	Amphenol Number	Fig
	a	b	c	e		CAI	Plt.	Ins.			
Dielectric Trim Tool	1.47 (37.3)	.625 (15.9)	.500 (12.7)	—	—	—			MX-103/U	103-301	5

## ELECTRICAL

Impedance	50 Ohm constant
Frequency range	0-11 GHz, 1500 V typ.
Voltage Rating	1000 volts peakd
Dielectric Withstanding Voltage	3000 volts RMS
VSWR (MIL-C-39012 Cable Connectors)	1.35 max. 0-11 GHz
Other (MIL-C-39012 Cable Connectors)	Contact Resistance Center contact 1.0 milliohm Outer contact .15 milliohm Braid to Body .05 milliohm RF Leakage: — 90 dB minimum at 3 GHz Insertion loss: .15 dB maximum at 9 GHz Insulation resistance: 5000 megohms. (min.)

NOTE: 13 lb. push required to captivate contact into connector body.

## ENVIRONMENTAL

Temperature range	TFE -65°C to +165°C -65°C to +165°C
Shock	MIL-Std-202 method 213
Vibration	MIL-Std-202 method 204 (test condition B)
Moisture Resistance	MIL-Std-202 method 106
Corrosion	MIL-Std-202 method 101 (test condition B)
Temperature cycling	MIL-Std-202 method 102 (test condition C)

## MECHANICAL

Mating	11/16-24 UNEF screw threads. Plug coupling nut has safety wire holes.
Cable Affixment	Crimp-crimp: hex-crimp jacket, braid, center contact per MIL-C-39012 Category D.
Contact	Captivated
Cable Retention	.155" to .189" dia. cable: 50 lbs. min. .190" to 229" dia. cable: 60 lbs. min. .230" to .249" dia. cable: 75 lbs. min. .250" dia. and larger: 90 lbs. min.

## MATERIAL

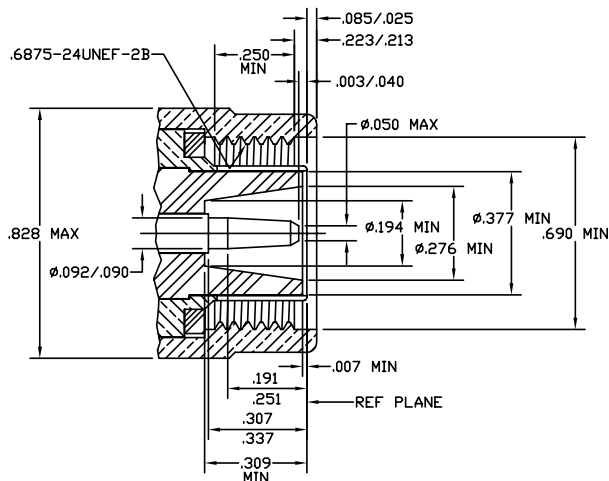
Contacts	Male: brass; female; beryllium copper or phosphor bronze, gold plated
Insulators	TFE
Crimp Ferrule	Copper
Other metal parts	Brass

## MILITARY SPECIFICATIONS

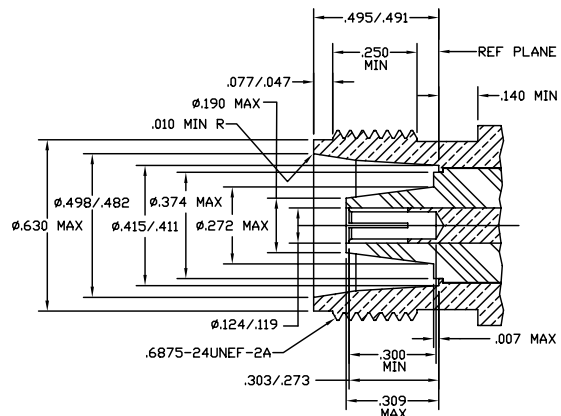
MIL-C-39012	where applicable
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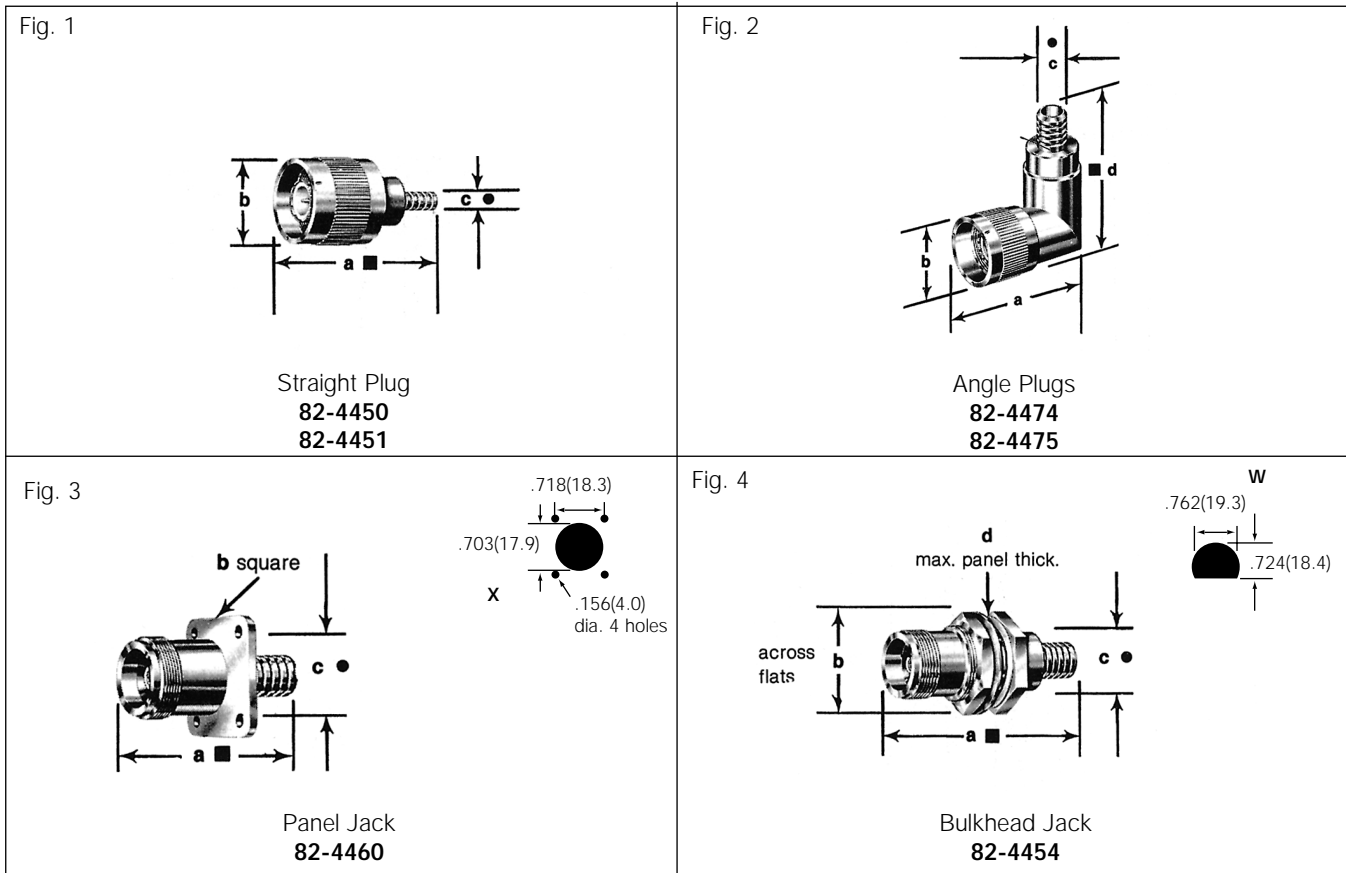
NOTE: These characteristics are typical and may not apply to all connectors.

## PLUG



## JACK





**STRAIGHT PLUGS • Safety Wire Holes**

Cable RG-/U	Cable Termination	Dimensions, in. (mm)				MTG Hole	Tool Data Die Set P/N	Construction Notes			Military Number	Amphenol Number	Fig
		a	b	c	d			CAI	Pit.	Ins.			
9, 214, 225, 393	crimp-crimp	1.68 (42.9)	1.83 (21.0)	.444 (11.3)	—	—	227-1221-25	C21	P3	D1	M39012/35-0501	82-4450	1
142B, 400	crimp-crimp	1.68 (42.9)	1.83 (21.0)	.195 (5.0)	—	—	227-1221-57	C21	P3	D1	M39012/35-0503	82-4451	1

**ANGLE PLUGS • Safety Wire Holes**

Cable RG-/U	Cable Termination	Dimensions, in. (mm)				MTG Hole	Tool Data Die Set P/N	Construction Notes			Military Number	Amphenol Number	Fig
		a	b	c	d			CAI	Pit.	Ins.			
9, 214, 225, 393	crimp-crimp	1.50 (38.1)	1.83 (21.0)	.444 (11.3)	2.12 (53.9)	—	227-1221-25	C21	P3	D1	M39012/39-0501	82-4474	2
142B, 400	crimp-crimp	1.50 (38.1)	1.83 (21.0)	.195 (5.0)	2.12 (53.9)	—	227-1221-57	C21	P3	D1	M39012/39-0503	82-4475	2

**PANEL JACKS • #6-32 Flange Holes - Rear Mount**

Cable RG-/U	Cable Termination	Dimensions, in. (mm)				MTG Hole	Tool Data Die Set P/N	Construction Notes			Military Number	Amphenol Number	Fig
		a	b	c	d			CAI	Pit.	Ins.			
9, 214, 225, 393	crimp-crimp	1.56 (39.7)	1.00 (25.4) sq.	.444 (11.3)	—	X	227-1221-25	C21	P3	D1	M39012/38-0501	82-4460	3

**BULKHEAD JACKS • Rear Mount**

Cable RG-/U	Cable Termination	Dimensions, in. (mm)				MTG Hole	Tool Data Die Set P/N	Construction Notes			Military Number	Amphenol Number	Fig
		a	b	c	d			CAI	Pit.	Ins.			
214, 225, 393	MIL-crimp	1.97 (50.0)	1.00 (25.4) hex.	.438 (11.1)	—	W	227-1221-25	C21	P3	D1	M39012/40-0501	82-4454	4