

DESCRIPTION/SPECIFICATIONS/INTERFACE DIMENSIONS

TNC series RF connectors are basically BNC connectors with threaded coupling and improved electrical performance at higher frequencies. Frequency range is 0 to 11 GHz. The TNC connector is a miniature 50 ohm constant impedance connector that accommodates cables basically from .150" to .250" OD with designs available for .078" to .437" cables. The TNC is a weatherproof unit and with its threaded coupling, ensures low noise and withstands shock and vibration. Their reliability has made them a standard in the airframe, missile, radar and precision electronic equipment industries. Items qualified to MIL-PRF-39012 are included in the listings, and also appear in the latest QPL list for MIL-PRF-39012.

All TNC connectors listed, except where noted, are recognized under the Component Program of Underwriters Laboratories, Inc.

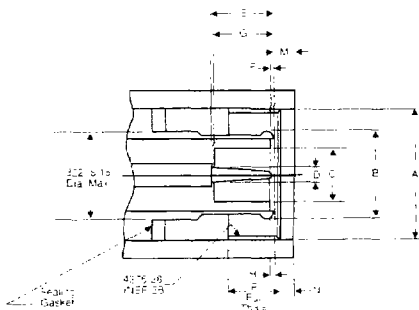
FINISHES

Contacts	1. Standard finish on all MIL-PRF-39012 items .00005 (.0012mm) min. hard gold plate per MIL-G-45204 over .00005 (.0012mm) min. nickel plate per QQ-N-290. 2. All other items .00005 (.0012mm) min. hard gold plate per MIL-G-45204 over copper, unless otherwise specified.
Bodies & Fittings	1. Standard finish .0002 (.005mm) min. silver plate, electro-deposited per QQ-S-365A plus Kings TR-4 ¹ electrolytic chromate treatment 2. TR-5 ¹ - Kings tarnish resistant alloy electrodeposit finish

INTERFACE

Per MIL-PRF-39012 or MIL-STD-348 as applicable

PLUG



Dim Ltr	inches (mm)	Dim Ltr	inches (mm)	
	Minimum	Maximum	Minimum	
A	.440 (.1118)	.228 (.579)	G	.208 (.528)
B	Gauge Test	.040 (.102)	H	.003 (.008)
C	.190 (.483)	.076 (.198)	M	
D	.052 (.132)	.054 (.137)	N	.063 (.160)
E	.210 (.533)	.230 (.584)	P	.156 (.396)
F	.006 (.015)			

SPECIFICATIONS

ELECTRICAL

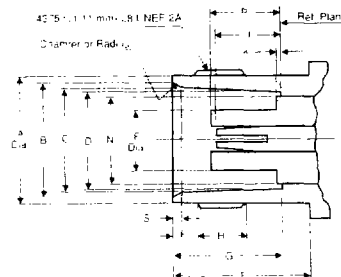
Nominal Impedance	50 ohms
Frequency Range	0 to 11 GHz
Voltage Rating	500 volts rms
Dielectric Withstanding Voltage	1500 volts rms
Insulation Resistance	5000 megohms
VSWR (MIL-PRF-39012 cable connectors)	1.30 max. .5-11 GHz
Contact Resistance (MIL-PRF-39012 cable connectors)	
Center Contacts	1.5 millionms
Outer Contacts (silver plate)	2 millionms
Insertion Loss (MIL-PRF-39012 cable connectors)	18 dB max. at 9 GHz

ENVIRONMENTAL

Temperature Range	PTFE Insulators: -65 F to +329 F (-65 C to +165 C)
Vibration	MIL-STD-202 Method 204, test condition B
Shock	MIL-STD-202 Method 213, test condition G
Corrosion (salt spray)	MIL-STD-202 Method 101, test condition B
Moisture Resistance	MIL-STD-202 Method 106
Hermetic Seals	Leakage shall not exceed 1 x 10 ⁻⁶ cc/sec of tracer gas at atmospheric pressure
Compression Seals	Gasketed units show no leakage at 50 psi

Specifications are typical for straight plug configurations designed to MIL-PRF-39012 and may not apply to all connectors.

JACK



Dim Ltr	inches (mm)	Dim Ltr	inches (mm)	
	Minimum	Maximum	Minimum	
A	.378 (.960)	.351 (.968)	H	.187 (.475)
B	.346 (.879)	.356 (.904)	J	.186 (.472)
C	.327 (.831)	.333 (.846)	K	.006 (.015)
D	.319 (.810)	.321 (.815)	N	.256 (.650)
E		.186 (.472)	P	.188 (.478)
F	.068 (.173)	.088 (.224)	R	.414 (.1052)
G	.327 (.831)	.335 (.851)	S	.015 (.038)

MECHANICAL

Mating	.4375-28 threaded coupling per MIL-PRF-39012 or MIL-STD-348 as applicable
Cable Retention	
Non-Crimp	40 pounds min.
Crimp	10 to 40 lbs. depending on cable size.
Center Contact Retention	6 lbs. min. axial force. Applicable to captivated center contact connectors only.
Connector Durability	500 cycles min.

MATERIAL

Except as noted in connector listings

Bodies & Fittings	1. Brass, ASTM-B-16 2. Stainless Steel, ASTM-A-582
Crimp Sleeves	Commercial Bronze, Alloy 220
Male Center Contacts	Brass, ASTM-B-16
Female Center Contacts	Beryllium Copper, ASTM-B-196
Male Outer Contacts	Beryllium Copper, ASTM-B-196
Insulators	PTFE, ASTM D-4894
Gaskets & Seals	Silicone Rubber ZZ-R-765a, Class IIa, Grade 50

CABLE GROUPS - RG/U, M17

A		178, 178A, 178B, 196, 196A, M17-93-RG175, M17-93-00001
B	B-1	174, 188, 188A, 316, M17-119-RG174, M17-138-00001, M17-113-RG316
	B-2	179A, 179B, 187, 187A, M17-94-RG179, M17-136-00001
C	C-1	122, M17-54-RG122
	C-2	180, 180A, 180B, 135, 195A, M17-95-RG180, M17-137-00001
	C-3	Essex 21-597, Belden 8218
D		58*, 58A*, 58C, 141, 141A, M17-28-RG58, M17-111-RG303
E	E-1	55A, 142, 142A, 223, 400, M17-84-RG223, M17-60-RG142, M17-128-RG400
	E-2	55*, 55B*, 142B, M17-84-RG223, M17-60-RG142
G	G-1	59, 59A, 59B, 62, E2A, 62B, 62C, 210, M17-29-RG59, M17-30-RG62, M17-97-RG210
	G-2	71, 71A, 71B, M17-90-RG71
M	M-1	8, 8A, 213, M17-74-RG213
	M-2	11, 11A, M17-6-FG11
N	N-1	9, 9A, 9B, 214, M17-75-RG214
	N-2	13A, 216, M17-77-RG216
	N-3	225, M17-127-RG225
F		S93, M17-127-RG393

*For these cables, crimping the center contact is not recommended when crimp contact is indicated.

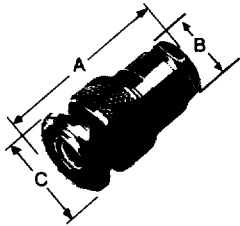


FIGURE 1

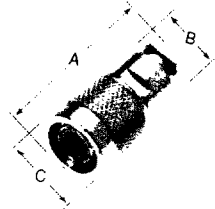


FIGURE 2

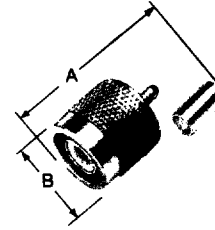


FIGURE 3

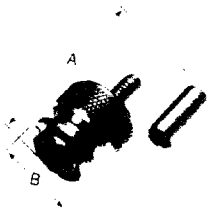


FIGURE 4



FIGURE 5

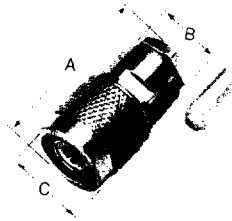


FIGURE 6

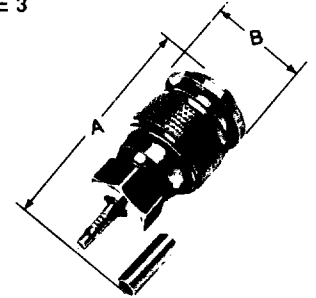


FIGURE 7

TNC

CONVENTIONAL CONSTRUCTION

CABLE GROUP	KINGS PART NUMBER		MILITARY NUMBER (SILVER ONLY)	FIG. NO.	NOTES	DIMENSIONS						CABLING
	SILVER FINISH (or as noted)	TR-5 FINISH				A		B		C		
						in	mm	in	mm	in	mm	CABLE TRIM CODE
B	KA-59-219		M39012:26-0018	1	Captive Contact	1.08	27.4	0.59	12.7	0.63	16.0	1350
DE	KA-59-22	KA-59-171	M39012:26-0101	1	Captive Contact	1.08	27.4	0.59	12.7	0.63	16.0	1050
DE	KA-51-18			2		1.09	27.7	0.59	12.7	0.59	15.0	1004
MN	KA-51-19			2		1.67	42.4	0.75	19.1	0.59	15.0	1005

K-GRIP, JR. CONSTRUCTION

CABLE GROUP	KINGS PART NUMBER		MILITARY NUMBER (SILVER ONLY)	FIG. NO.	NOTES	DIMENSIONS						CABLING	
	SILVER FINISH	TR-5 FINISH				A		B		C		CABLE TRIM CODE	CRIMP DIE
						in	mm	in	mm	in	mm		
B	KA-59-08			3	Crimp & Captive Contact	0.94	23.9	0.59	15.0			406	KTH-2032
C-2	KA-59-281		M39012:26-0502	4	Crimp & Captive Contact	1.11	28.2	0.63	16.0			465	KTH-2007
D	KA-59-231		M39012:26-0010	4	Crimp & Captive Contact	1.08	27.4	0.63	16.0			465	KTH-2001
D	KA-59-287		M39012:26-0504	4	Crimp & Captive Contact	1.11	28.2	0.63	16.0			465	KTH-2001
D		KA-59-406-M06		3	Crimp & Captive Contact	1.10	27.9	0.59	15.0			401	KTH-2001
E-1	KA-59-239		M39012:26-0011	4	Crimp & Captive Contact	1.08	27.4	0.63	16.0			465	KTH-2001
E-1	KA-59-292		M39012:26-0503	4	Crimp & Captive Contact, Crimp Contact	1.11	28.2	0.63	16.0			465	KTH-2001
P	KA-59-267			5	K-Grip Construction, Crimp Contact	1.69	42.9	0.75	19.1	0.63	16.0	230A	KTH-2004
BELDEN AWM 1478 & 3880		KA-59-400-M06		3	Crimp & Captive Contact, Crimp Contact	1.65	41.9	0.59	15.0			480	KTH-2004
N-1	KA-59-131			6	K-Grip Construction, Crimp Contact	1.69	42.9	0.75	19.1	0.59	15.0	209A	KTH-2004
D		KA-59-103		3	Crimp Contact	1.10	27.9	0.59	15.0			401	KTH-2001
B-1	125-10-5		M39012:26-0022	7	Pre-Assembled K-Grip, Captive Contact	1.46	37.1	0.63	16.0			465	KTH-2011

ANGLE PLUGS

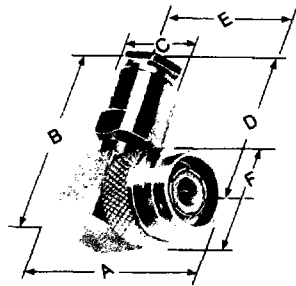


FIGURE 8

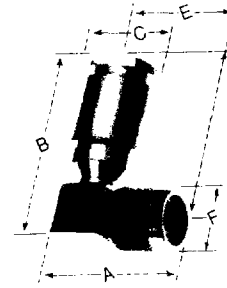


FIGURE 9

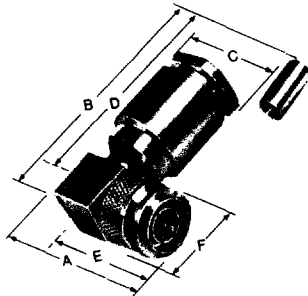


FIGURE 10

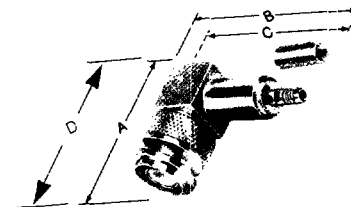


FIGURE 11

ANGLE PLUGS – CONVENTIONAL CONSTRUCTION

CABLE GROUP	KINGS PART NO.	MILITARY NUMBER (SILVER ONLY)	FIG. NO.	NOTES	DIMENSIONS						CABLING							
	SILVER FINISH				A		B		C		D		E		CBL. TRIM CODE	CRIMP DIE		
					in	mm	in	mm	in	mm	in	mm	in	mm				
DE	KA-59-343	M39012/30-0101	8	Captive Contact	1.13	28.7	1.58	39.8	0.50	12.7	1.25	31.8	0.88	22.4	0.83	18.0	1050	
MN	KA-51-23		9		1.25	31.8	1.75	45.2	0.75	19.1	1.49	37.9	0.88	22.4	0.59	15.0	1005	

ANGLE PLUGS – K-GRIP CONSTRUCTION

CABLE GROUP	KINGS PART NO.	MILITARY NUMBER (SILVER ONLY)	FIG. NO.	NOTES	DIMENSIONS						CABLING							
	SILVER FINISH				A		B		C		D		E		CBL. TRIM CODE	CRIMP DIE		
					in	mm	in	mm	in	mm	in	mm	in	mm				
N-1-.3, P	KA-59-318		10	K-Grip Construction	1.25	31.8	1.81	46.0	0.75	19.1	1.49	37.9	0.88	22.4	0.83	18.0	209A	KTH-2004

ANGLE PLUGS – K-GRIP, JR. CONSTRUCTION

CABLE GROUP	KINGS PART NUMBER		MILITARY NUMBER (SILVER ONLY)	FIG. NO.	NOTES	DIMENSIONS						CABLING			
	SILVER FINISH	TR-5 FINISH				A		B		C		D		CBL. TRIM CODE	CRIMP DIE
						in	mm	in	mm	in	mm	in	mm		
D	KA-59-235		M39012/30-0010	11	Crimp & Captive Contact	1.12	28.5	1.40	35.6	1.08	27.4	0.87	22.1	465	KTH-2001
D	KA-59-297		M39012/30-0504	11	Crimp & Captive Contact	1.13	28.7	1.75	45.5	1.42	36.1	0.88	22.6	465	KTH-2001
E-1	KA-59-236		M39012/30-0011	11	Crimp & Captive Contact	1.12	28.5	1.40	35.6	1.08	27.4	0.87	22.1	465	KTH-2001
E-1	KA-59-296		M39012/30-0503	11	Crimp & Captive Contact	1.13	28.7	1.75	45.5	1.42	36.1	0.88	22.6	465	KTH-2001

JACKS / BULKHEAD JACKS / PANEL JACKS

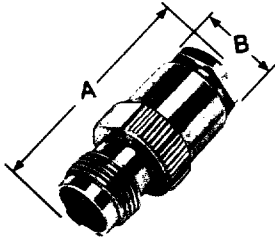


FIGURE 12

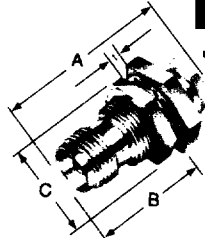


FIGURE 13

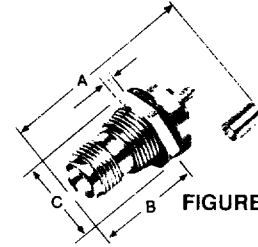


FIGURE 14

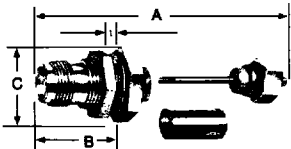


FIGURE 15

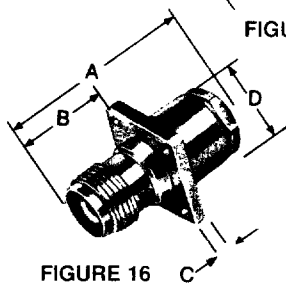
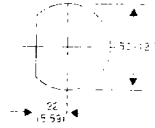
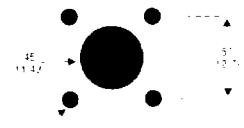


FIGURE 16



MTG. HOLE A



MTG. HOLE B

JACKS – CONVENTIONAL CONSTRUCTION

CABLE GROUP	KINGS PART NUMBER		MILITARY NUMBER (SILVER ONLY)	FIG. NO.	NOTES	DIMENSIONS				CABLING	
	SILVER FINISH	TR-5 FINISH				A	B		CABLE TRIM CODE	CRIMP DIE	
						in	mm	in	mm		
DE	KA-30-07		M39012/27-0101	12	Captive Contact	1.15	29.2	0.50	12.7	1004	
DE	KA-31-02			12		1.15	29.2	0.50	12.7	1004	

BULKHEAD JACKS – CONVENTIONAL CONSTRUCTION

CABLE GROUP	KINGS PART NUMBER		MILITARY NUMBER (SILVER ONLY)	FIG. NO.	NOTES	DIMENSIONS								CABLING	
	SILVER FINISH	TR-5 FINISH				A	B		C		t		MTG. HOLE	CBL TRIM CODE	CRIMP DIE
						in	mm	in	mm	in	mm	in	mm		
B	KA-19-171		M39012/28-0018	13	Captive Contact, Rear Mtg	1.15	29.2	0.61	20.6	0.69	17.5	0.241	6.1	A	105C
DE	KA-19-19		M39012/28-0101	13	Captive Contact, Rear Mtg	1.15	29.2	0.61	20.6	0.69	17.5	0.242	6.2	A	1004

BULKHEAD JACKS – K-GRIP, JR. CONSTRUCTION

CABLE GROUP	KINGS PART NUMBER		MILITARY NUMBER (SILVER ONLY)	FIG. NO.	NOTES	DIMENSIONS								CABLING	
	SILVER FINISH	TR-5 FINISH				A	B		C		t		MTG. HOLE	CBL TRIM CODE	CRIMP DIE
						in	mm	in	mm	in	mm	in	mm		
B	KA-19-42	KA-19-60		14	Rear Mtg., Crimp & Captive Cont	1.39	35.3	0.60	20.3	0.69	17.5	0.242	6.2	A	541E KTH-2032
C-2	KA-19-151		M39012/28-0502	14	Rear Mtg., Crimp & Captive Cont	1.40	35.6	0.61	20.6	0.69	17.5	0.241	6.1	A	465 KTH-2007
D	KA-19-153		M39012/28-0504	14	Rear Mtg., Crimp & Captive Cont.	1.40	35.6	0.61	20.6	0.69	17.5	0.241	6.1	A	465 KTH-2001
E-1	KA-19-162		M39012/28-0011	14	Rear Mtg., Crimp & Captive Cont.	1.55	39.4	0.61	20.6	0.69	17.5	0.241	6.1	A	465 KTH-2001
E-1	KA-19-162		M39012/28-0503	14	Rear Mtg., Crimp & Captive Cont	1.40	35.6	0.61	20.6	0.69	17.5	0.241	6.1	A	465 KTH-2001
B-1	122-3-6		M39012/28-0022	15	Pre-Assembled K-Grip Construction	1.62	41.2	0.61	20.6	0.69	17.5	0.241	6.1	A	465 KTH-2011

PANEL JACKS, CONVENTIONAL CONSTRUCTION

CABLE GROUP	KINGS PART NUMBER		MILITARY NUMBER (SILVER ONLY)	FIG. NO.	NOTES	DIMENSIONS				CABLING					
	SILVER FINISH	TR-5 FINISH				A	B		C	D	MTG. HOLE	CBL TRIM CODE	CRIMP DIE		
						in	mm	in	mm	in	mm				
DE	KA-19-176		M39012/29-0101	16	Captive Contact	1.15	29.2	0.65	14.0	0.09	2.3	0.50	12.7	A	1050

TNC

BULKHEAD RECEPTACLES

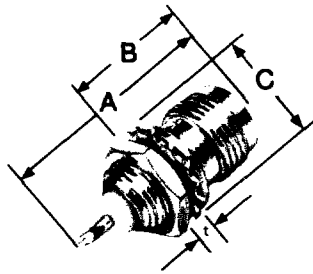


FIGURE 17

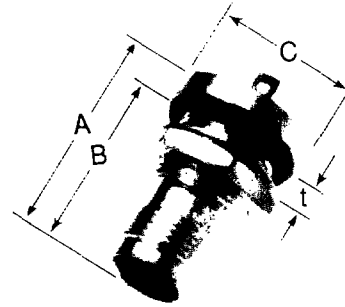


FIGURE 18

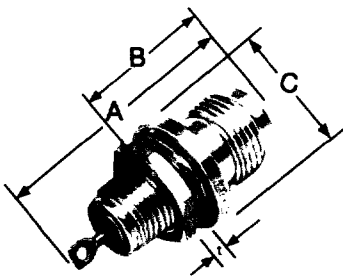


FIGURE 19

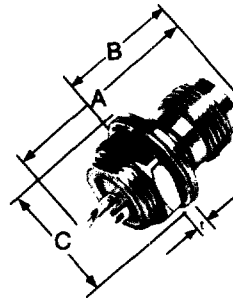


FIGURE 20

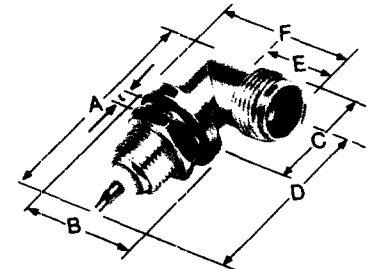
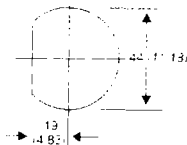
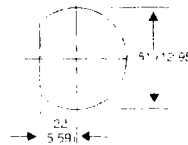


FIGURE 21



MTG. HOLE A



MTG. HOLE B



MTG. HOLE C

STRAIGHT BULKHEAD RECEPTACLES

CABLE GROUP	KINGS PART NUMBER		MILITARY NUMBER (SILVER ONLY)	FIG. NO.	NOTES	DIMENSIONS								
	SILVER FINISH	TR-5 FINISH				A		B		C		t		MTG. HOLE
						in	mm	in	mm	in	mm	in	mm	
	KA-71-02		M39012/31-0001	17	Front Mount	1.05	26.7	0.48	12.2	0.50	12.7	0.135	3.4	A
	KA-71-03		M39012/34-0001	18	Hermetic Seal, Rear Mount	1.21	30.7	0.83	21.1	0.60	17.3	0.163	4.1	B
	KA-71-04		M39012/34-0002	19	Hermetic Seal, Front Mount	1.21	30.7	0.52	13.2	0.59	15.0	0.273	6.9	C
	KA-71-08		M39012/31-0002	17	Front Mount	1.19	30.2	0.47	11.9	0.50	12.7	0.260	6.6	C
	KA-79-13	KA-79-28		17	Front Mount	1.05	26.7	0.47	11.9	0.50	12.7	0.132	3.4	C
		KA-79-59		20	Isolated Ground, Front Mount	1.05	26.9	0.52	13.2	0.56	14.2	0.174	4.4	B

ANGLE BULKHEAD RECEPTACLES

KINGS PART NUMBER				FIG. NO.	NOTES	DIMENSIONS														
SILVER FINISH	TR-5 FINISH	MILITARY NUMBER (SILVER ONLY)				A		B		C		D		E		F		t		MTG. HOLE
						in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	
KA-79-77		M39012/33-0001	21	Front Mounting	1.35	34.3	0.59	15.0	0.59	15.0	1.15	29.2	0.61	15.5	0.91	23.1	0.294	7.5	C	

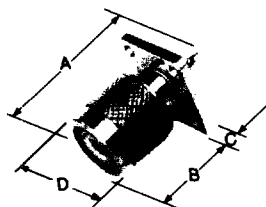


FIGURE 22

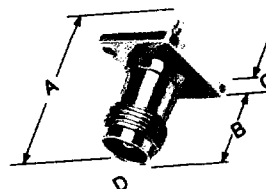
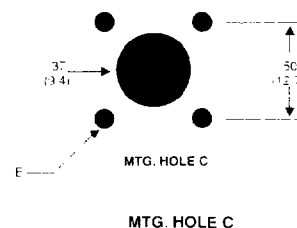
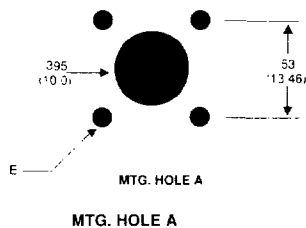


FIGURE 23



PANEL RECEPTACLES																	
KINGS PART NUMBER		MILITARY NUMBER (SILVER ONLY)	FIG. NO.	NOTES	DIMENSIONS												
SILVER FINISH	TR-5 FINISH				A	B	C	D	E	F	t	MTG. HOLE					
				in		mm		in		mm		in		mm			
KA-71-00			22	Male	1.17	29.7	0.75	19.1	0.09	2.3	0.50	12.7	0.125	3.2			A
KA-73-00		M39012/32-0001	23		1.06	26.9	0.82	20.8	0.09	2.3	0.44	11.2	0.120	3.1			C

TNC

ADAPTERS WITHIN SERIES

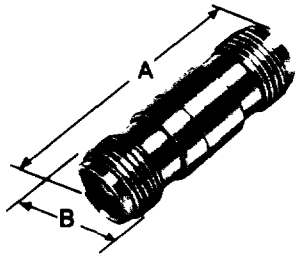


FIGURE 24

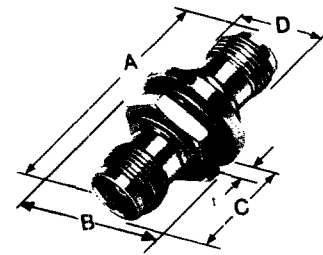


FIGURE 26

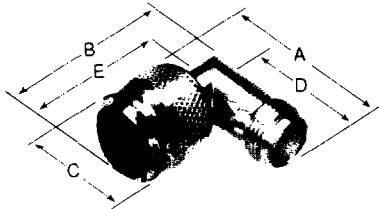


FIGURE 27

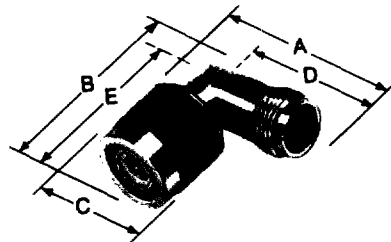


FIGURE 28

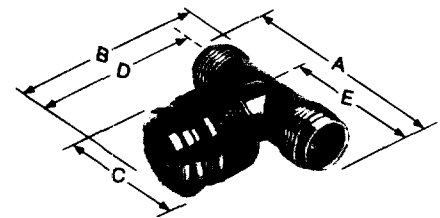


FIGURE 29

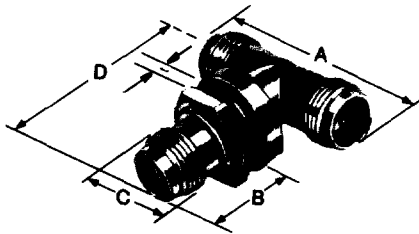
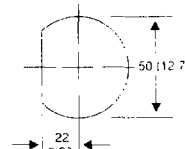


FIGURE 30



MTG. HOLE A

MTG. HOLE A

ADAPTERS WITHIN SERIES

KINGS PART NUMBER		MILITARY NUMBER (SILVER ONLY)	FIG. NO.	ADAPTER ENDS	NOTES	DIMENSIONS											
SILVER FINISH	TR-5 FINISH					A	B	C	D	E	t	MTG. HOLE					
						In	mm	In	mm	In	mm	In	mm	In	mm	In	mm
KA-91-01			24	Jck-Jck		1.28	32.5	0.44	11.2								
KA-91-02	KA-99-56		26	Jck-Jck	Pressurized (Hermetic Seal)	1.39	35.3	0.73	18.5	0.79	16.5	0.44	11.2		0.16	4.1	A
KA-91-05			27	Plg-Jck	Right Angle	1.04	26.4	1.06	26.9	0.63	16.0	0.73	18.5	0.64	16.3		
KA-91-15			28	Plg-Jck	Right Angle	1.02	25.9	1.06	26.9	0.60	15.0	0.73	18.5	0.64	16.3		
KA-91-16			29	Jck-Plg-Jck		1.26	32.2	1.11	28.2	0.60	15.0	0.89	22.6	0.64	16.3		
KA-99-79			26	Jck-Jck	Isolated Ground	1.28	32.2	0.43	10.9	0.63	16.0	0.44	11.2		0.177	4.5	A
129-B		M55339/50-00001	30	Jck-Jck-Jck		1.28	32.2	0.71	18.0	0.44	11.2	1.14	29.0		0.138	3.5	A

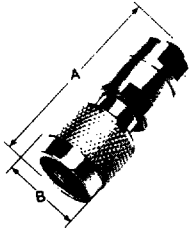


FIGURE 31

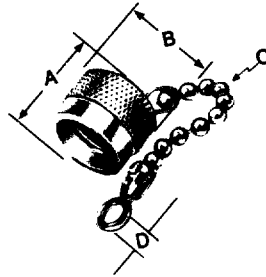


FIGURE 32

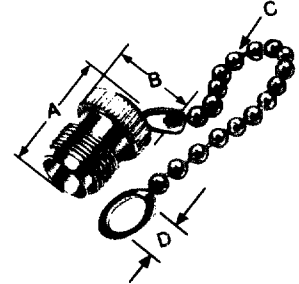


FIGURE 33

TNC

TERMINATIONS										
KINGS PART NUMBER		MILITARY NUMBER (SILVER ONLY)	FIG. NO.	DESCRIPTION	NOTES	DIMENSIONS				
SILVER FINISH	TR-5 FINISH					A	B	C	D	
						in	mm	in	mm	
	KA-89-15		31	Male without Chain	50 ohm, 1%, 1/2 watt, Non-Inductive	1.42	36.1	0.50	12.7	

ACCESSORIES													
KINGS PART NUMBER		MILITARY NUMBER (SILVER ONLY)	FIG. NO.	DESCRIPTION	NOTES	DIMENSIONS							
SILVER FINISH	TR-5 FINISH					A	B	C	D	E	F		
						in	mm	in	mm	in	mm	in	mm
KA-81-01			32	Cap - Male with Bead Chain		0.50	12.7	0.63	16.0	2.25	57.2	0.14	3.6
KA-81-02			33	Cap-Female with Bead Chain		0.60	15.2	0.50	12.7	3.00	76.2	0.28	7.1