Amphenol® Tri-Start

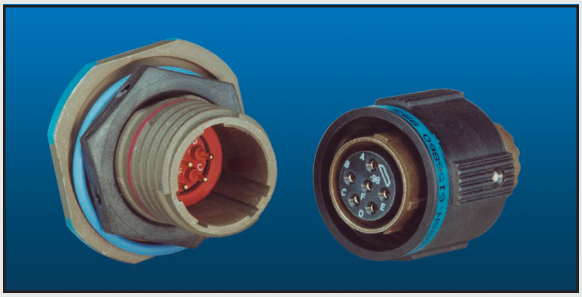
Series III - the highest performance MIL-DTL-38999 connector

Tri-Start™ MIL-DTL-38999 Series III with Metal Shells - Aluminum, Stainless Steel, Class K Firewall

Amphenol® Tri-Start MIL-DTL-38999* Series III Connectors offer the highest performance capabilities for both general duty and severe environment applications. Meeting or exceeding MIL-DTL-38999 Series III requirements, the Tri-Start connector with standard metal shells (aluminum or stainless steel with several finish options) offers these features:

- **EMI Shielding** - solid metal to metal coupling, grounding fingers, electroless nickel plating, and thicker wall sections provide superior EMI shielding capability of 65dB minimum at 10 GHz
- **Contact Protection -** recessed pins in this 100% scoop-proof connector minimize potential contact damage
- **Moisture Resistance -** improved interfacial seal design helps prevent electrolytic erosion of contacts
- **Corrosion Resistance -** shells of stainless steel or cadmium over nickel plating withstand a 500 hour salt spray exposure
- **Vibration/Shock -** operates under severe high temperature vibration, through 200°C
- **Firewall Capability -** available in a stainless steel shell, class RK, RS
- **Lockwiring Eliminated -** unique, self-locking, quick coupling connector eliminates lockwiring
- **Quick Coupling -** completely mates and self-locks in a 360° turn of the coupling nut
- **Inventory Support Commonality -** uses standard MIL-DTL-38999 contacts, application tools, insert arrangements
- **Electrostatic Discharge Protection (ESD) -** protection for sensitive circuitry without diodes, varistors, etc., with the use of the Faraday Cage principal which shunts high voltage, high current discharge events (see page 51)
- **Ground Plane Connectors -** with metallic insert for common grounding of coax, triax or twinax contact outer shield (see page 49)

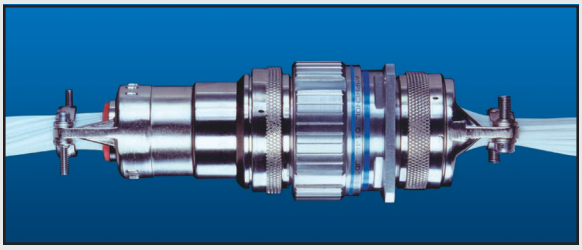
* MIL-DTL-38999 Series III supersedes MIL-C-38999 Series III.



Composite Tri-Start, Qualified to MIL-DTL-38999, Rev. J

MIL-Qualified to MIL-DTL-38999, Rev. K, the Amphenol® Composite Tri-Start Connector offers a lightweight, corrosion resistant connector with the same high performance features as its metal counterpart. The Composite Tri-Start Connector also includes the following features:

- **Lightweight -** 17% – 70% weight savings
  (17–40% weight savings vs. aluminum)
  (60–70% weight savings vs. stainless steel)
  See Composite weight comparison chart, pg. 47.
- **Corrosion Resistance -** available in standard MIL-DTL-38999 olive drab cadmium (175°C) and electroless nickel plating (200°C), both withstanding 2000 hours of salt spray exposure. The base material is able to withstand an indefinite exposure to salt spray.
- **Durability -** 1500 couplings minimum (in reference to connector couplings, not contacts)
- **Extended Life Contact -** Mil-approved plating process which provides 1500 couplings minimum



CLUTCH-LOK™ MIL-DTL-38999 Series III High Vibration Connector

The latest offering from Amphenol in MIL-DTL-38999, the CLUTCH-LOK connector offers:

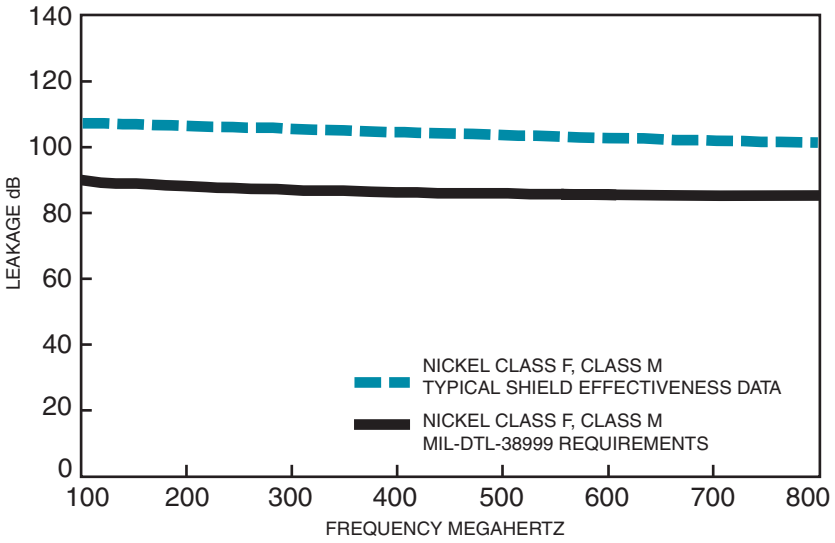
All advantages of stainless steel/Class K firewall Tri-Start connectors plus a unique clutch design that actually tightens itself under vibration.
Features include:

- High degree of differential torque
- No settling back to the next ratchet tooth
- Completely intermateable with all existing MIL-DTL-38999 Series III connectors
- Offers advantage in inaccessible, hard to reach areas where mating torque is difficult to apply and complete coupling is not verifiable by inspection

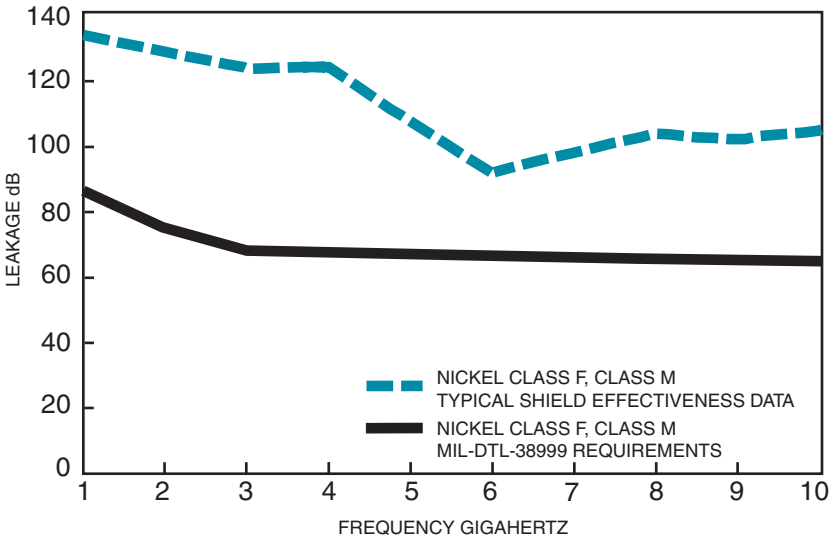
See page 19 for description, 43 and 44 for ordering.

Tri-Start
test data

TRI-START, SERIES III
TYPICAL SHIELDING EFFECTIVENESS TEST DATA
EMI/EMP SHIELDING EFFFECTIVENESS dB
TESTING BY TRIAXIAL METHOD



TRI-START, SERIES III
TYPICAL SHIELDING EFFECTIVENESS TEST DATA
EMI/EMP SHIELDING EFFFECTIVENESS dB
TESTING BY MODE STIRRING METHOD



Test data beyond 2GHz is subject to equipment variation.

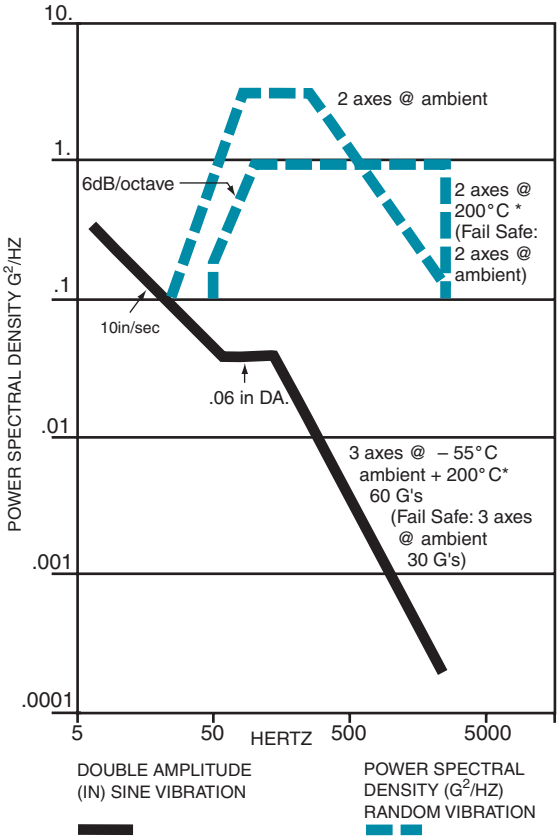
Amphenol® Tri-Start connectors provide EMI/EMP shielding capability which exceeds MIL-DTL-38999 Series III requirements.

The TV and CTV Series III connector with standard solid metal to metal coupling, EMI grounding fingers and conductive finishes has proven to be the ultimate in EMI/EMP shielding effectiveness. The charts illustrate shielding effectiveness data which is typical of Tri-Start connectors tested with the nickel finish (Class F-metal, Class M-composite) over a wide frequency range.

The vibration capability of the Tri-Start Series is shown in the chart below. This illustrates the most severe vibration envelope of *any* qualified connector available today.

These capabilities along with a 200°C temperature rating and superior moisture sealing protection provide the user with a connector that can withstand the most rigorous application.

TRI-START
VIBRATION CRITERIA



* Dependant on shell finish

NOTE: for test data information on the new Clutch-Lok Tri-Start, high vibration connectors, consult Amphenol Aerospace.

Tri-Start
specifications

CONTACT RATING

Contact Size	Test Current		Maximum Millivolt Drop Crimp*	Maximum MIllivolt Drop Hermetic*
	Crimp	Hermetic		
22D	5	3	73	85
20	7.5	5	55	60
16	13	10	49	85
12	23	17	42	85
10 (Power)	33	NA	33	NA
8 (Power)	46	NA	26	NA
4	80	NA	23	NA
0	150	NA	21	NA

* When using silver plated wire.

Contact Size	Crimp Well Data		Hermetic Data	
	Well Diameter	Nominal Well Depth	Well Diameter	Min. Well Depth
22D	.0345 ± .0010	.141	.036 $^{+.004}_{-.000}$	.094
20	.047 ± .001	.209	.044 $^{+.004}_{-.000}$	.125
16	.067 ± .001	.209	.078 $^{+.004}_{-.002}$	.141
12	.100 ± .002	.209	.116 $^{+.004}_{-.002}$	.141
10 (Power)	.137 ± .002	.355	NA	NA
8	.181 ± .002	.490	NA	NA
4	.281 ± .002	.490	NA	NA
0	.453 ± .002	.585	NA	NA

SERVICE RATING

Service Rating	Suggested Oper. Voltage (Sea Level)		Test Voltage (Sea Level)	Test Voltage 50,000 Ft.	Test Voltage 70,000 Ft.	Test Voltage 110,000 Ft.
	AC (RMS)	DC				
M	400	550	1300 VRMS	550 VRMS	350 VRMS	200 VRMS
N	300	450	1000 VRMS	400 VRMS	260 VRMS	200 VRMS
I	600	850	1800 VRMS	600 VRMS	400 VRMS	200 VRMS
II	900	1250	2300 VRMS	800 VRMS	500 VRMS	200 VRMS

Please note that the establishment of electrical safety factors is left entirely in the designer's hands, since he is in the best position to know what peak voltage, switching surges, transients,etc. can be expected in a particular circuit.

FINISH DATA

Non-Hermetic Shell Components		
Finish	Service Class	
	Military	Proprietary
Anodic Coating (Non-Conductive)	C	RX**
Electroless Nickel	F (Metal)	RF
	M (Composite)	
Olive Drab Cadmium Plate Nickel Base	W (Metal)	RW
	J (Composite)	
Stainless Steel with Nickel Plate	S	RS
Stainless Steel	K	RK

** Add Suffix (005) to part number.

Hermetic Shell Components		
Material / Finish	Service Class	
	Military	Proprietary
Stainless Steel	Y	Y
Stainless Steel with Nickel Plate	N	YN

Tri-Start
insert availability and identification

AMPHENOL TRI-START INSERT ARRANGEMENTS

Shell Size/Arrg.	Military Shell	Crimp	Hermetics*	Service Rating	Total Contacts	Contact Size							
						22D	20	16	12	12 (Coax)	10 (Power)	8 (Coax)	8†† (Twinax)
9-5★	A			Grounded	1								1
9-35	A	X	P	M	6	6							
9-94 ■	A	✦		M	2		2						
9-98	A	X	P	I	3		3						
11-2★	B	✦		I	2			2					
11-5	B	✦	P	I	5		5						
11-35	B	X	P	M	13	13							
11-54	B	X		II	4	4							
11-98	B	X	P	I	6		6						
11-99	B	X		I	7		7						
13-4★	C	X	P	I	4			4					
13-8	C	X	P	I	8		8						
13-13	C			I, Fiber Optic	4			2	2				
13-35	C	X	P	M	22	22							
13-98	C	X	P	I	10		10						
15-4 ■	D	✦		I	4				4				
15-5★	D	X	P	II	5			5					
15-15	D	X	P	I	15		14	1					
15-18	D	X	P	I	18		18						
15-19	D	✦	P	I	19		19						
15-35	D	X	P	M	37	37							
15-97	D	X	P	I	12		8	4					
17-2	E	X		M	39	38							1
17-6	E	X	P	I	6				6				
17-8★	E	X	P	II	8			8					
17-22★	E	✦		Coax	4					2		2	
17-26	E	X	P	I	26		26						
17-35	E	X	P	M	55	55							
17-99	E	X		I	23		21	2					
19-11★	F	X	P	II	11			11					
19-18	F	X		M	18	14							4
19-28	F	X		I	28		26	2					
19-31	F	✦		M	15	12			1			2	
19-32	F	X	P	I	32		32						
19-35	F	X	P	M	66	66							
21-11★	G	X		I	11				11				
21-16★	G	X	P	II	16			16					
21-29	G	X		I	27		19	4	4				
21-35	G	X	P	M	79	79							
21-39	G	X	P	I	39		37	2					
21-41	G	X	P	I	41		41						
21-75★ ✧	G	X		M	4							4	(See note)
21-79	G	X		II	19	17						2	
23-6 ★■	H	P		M	6								6
23-14	H	✦		I	14				14				
23-21★	H	X	P	II	21			21					

X Completely tooled.
• Majority of tooling is completed (contact Amphenol Aerospace for availabilty).
✦ Not tooled for 02-R.
P Pin inserts only (contact Amphenol Aerospace for socket availability).
★ Ground plane proprietary option available. Arrg. 9-5 is exclusively ground plane type. See pg. 49 for further information on ground plane connectors.
■ Not Mil-Qualified.
✧ 21-75 is Mil-Qualified with twinax contacts only.
Note: MS connector 21-75 is supplied with size 8 twinax.
Proprietary connector 21-75 is supplied with size 8 coax.

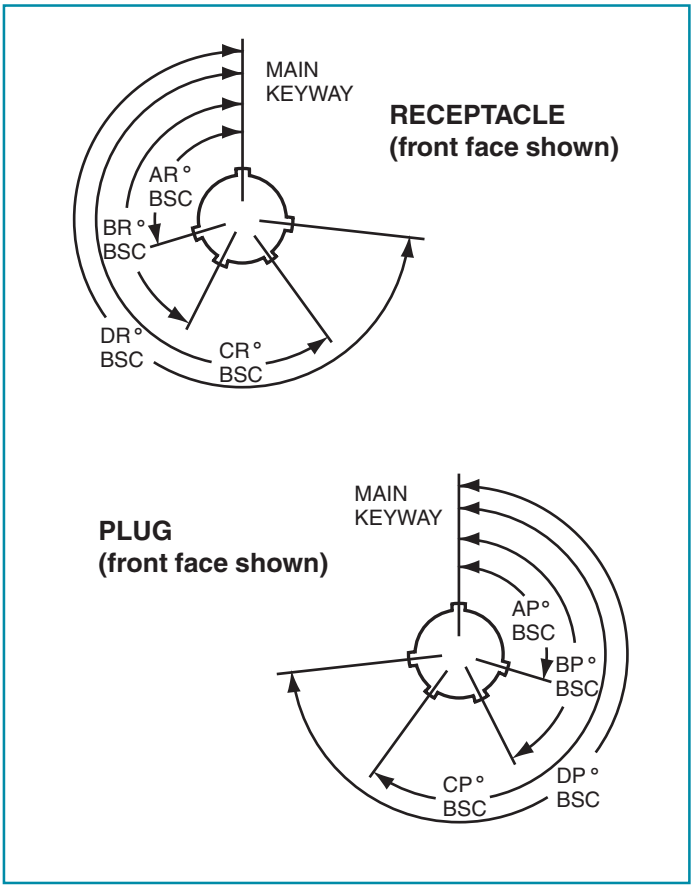
* Hermetic inserts - solder termination standard. (Contact Amphenol Aerospace for optional PCB or eyelet termination).
** Two size 16 contacts dedicated to fiber optics. Consult Amphenol Aerospace catalog 12-352 for fiber optic information.
*** For use in MIL-STD-1760 applications (see pages 31 & 32).
† For RG 180/U and RG 195/U cables only.
†† Size 8 Coax and Twinax are interchangeable.

Tri-Start
alternate positioning

Master Key/Keyway Position

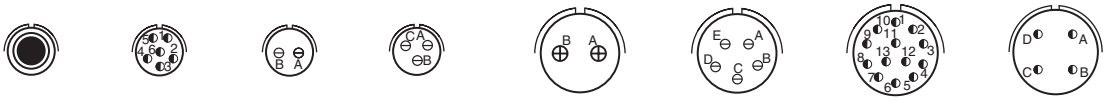
Shell Size	Key & keyway arrangement identification letter	AR° or AP° BSC	BR° or BP° BSC	CR° or CP° BSC	DR° or DP° BSC
9	N	105	140	215	265
	A	102	132	248	320
	B	80	118	230	312
	C	35	140	205	275
	D	64	155	234	304
	E	91	131	197	240
11, 13, and 15	N	95	141	208	236
	A	113	156	182	292
	B	90	145	195	252
	C	53	156	220	255
	D	119	146	176	298
	E	51	141	184	242
17 and 19	N	80	142	196	293
	A	135	170	200	310
	B	49	169	200	244
	C	66	140	200	257
	D	62	145	180	280
	E	79	153	197	272
21, 23 25, 25L 33, 37	N	80	142	196	293
	A	135	170	200	310
	B	49	169	200	244
	C	66	140	200	257
	D	62	145	180	280
	E	79	153	197	272

A plug with a given rotation letter will mate with a receptacle with the same rotation letter. The angles for a given connector are the same whether it contains pins or sockets. Inserts are not rotated in conjunction with the master key/keyway.

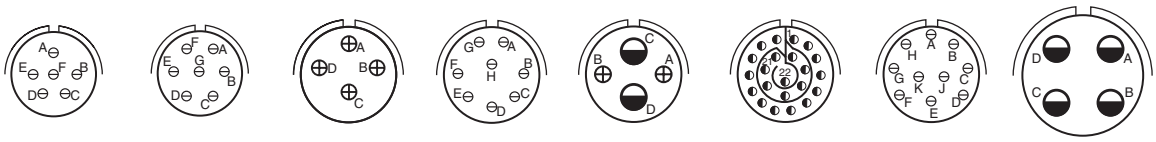


Tri-Start
insert arrangements

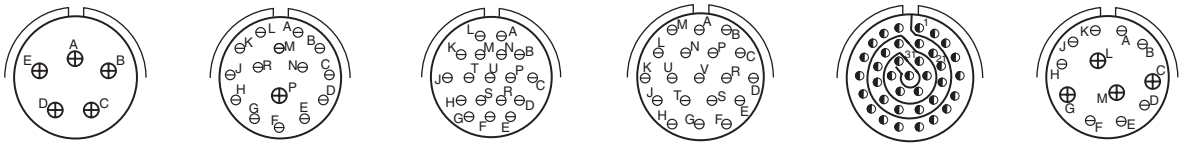
front face of pin inserts illustrated



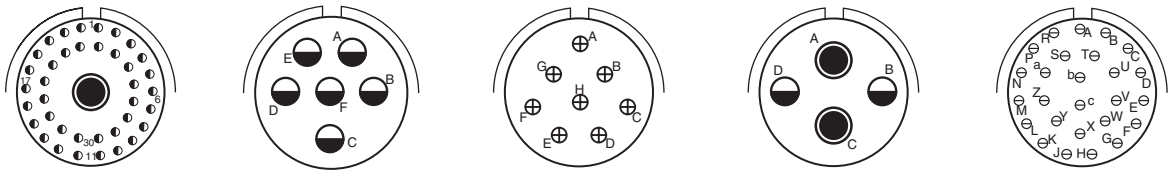
Insert Arrangement	9-5	9-35	9-94	9-98	11-2	11-5	11-35	11-54
Service Rating	Grounded	M	M	I	I	I	M	II
Number of Contacts	1	6	2	3	2	5	13	4
Contact Size	8 Twinax	22D	20	20	16	20	22D	22D



Insert Arrangement	11-98	11-99	13-4	13-8	13-13	13-35	13-98	15-4
Service Rating	I	I	I	I	I, Fiber Optic	M	I	I
Number of Contacts	6	7	4	8	2 2	22	10	4
Contact Size	20	20	16	20	16 12	22D	20	12
					Dedicated to Fiber Optics			



Insert Arrangement	15-5	15-15	15-18	15-19	15-35	15-97
Service Rating	II	I	I	I	M	I
Number of Contacts	5	14 1	18	19	37	8 4
Contact Size	16	20 16	20	20	22D	20 16



Insert Arrangement	17-2	17-6	17-8	17-22	17-26
Service Rating	M	I	II	Coax	I
Number of Contacts	38 1	6	8	2 2	26
Contact Size	22D 8 Twinax	12	16	12 Coax 8 Coax	20

CONTACT LEGEND 8 10 12 16 20 22D

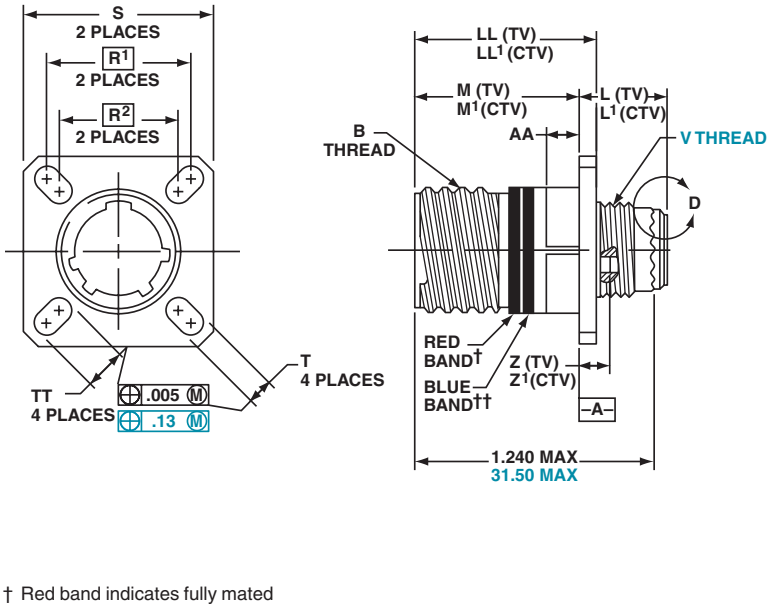
TVP00R (D38999/20) – crimp, metal
CTVP00R (D38999/20) – crimp, composite
wall mounting receptacle

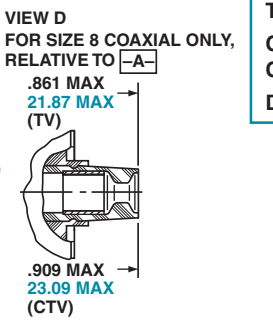
Part number reference.
See how to order, pages 43-46 to complete.

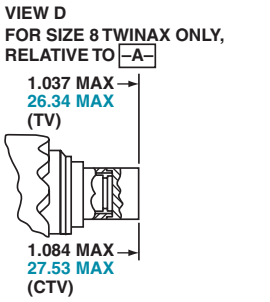
TVP00RW-XX-XXX
TVPS00RK-XX-XXX
TVPS00RF-XX-XXX
TVPS00RS-XX-XXX

CTVP00RW-XX-XXX
CTVPS00RF-XX-XXX

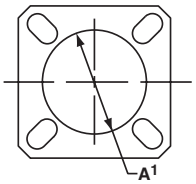
D38999/20



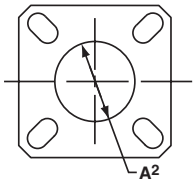




PANEL HOLE DIMENSIONS



BACK PANEL MOUNTING



FRONT PANEL MOUNTING

† Red band indicates fully mated

†† Blue band indicates rear release contact retention system

Inches

Shell Size	MS Shell Size Code	B Thread Class 2A 0.1P-0.3L-TS (Plated)	L Max. (TV)	L1 Max. (CTV)	M +.000 –.005 (TV)	M1 +.000 –.005 (CTV)	R1	R2	S Max.	T +.008 –.006	Z Max. (TV)	Z1 Max (CTV)	A1 Dia. Back Panel Mount	A2 Dia. Front Panel Mount	AA Max. Panel Thickness	LL +.006 –.000 (TV)	LL1 ±.005 (CTV)	TT +.008 –.006
9	A	.6250	.469	.514	.820	.775	.719	.594	.948	.128	.153	.198	.650	.510	.234	.905	.913	.216
11	B	.7500	.469	.514	.820	.775	.812	.719	1.043	.128	.153	.198	.800	.620	.234	.905	.913	.194
13	C	.8750	.469	.514	.820	.775	.906	.812	1.137	.128	.153	.198	.910	.740	.234	.905	.913	.194
15	D	1.0000	.469	.514	.820	.775	.969	.906	1.232	.128	.153	.198	1.040	.900	.234	.905	.913	.173
17	E	1.1875	.469	.514	.820	.775	1.062	.969	1.323	.128	.153	.198	1.210	1.010	.234	.905	.913	.194
19	F	1.2500	.469	.514	.820	.775	1.156	1.062	1.449	.128	.153	.198	1.280	1.130	.234	.905	.913	.194
21	G	1.3750	.500	.545	.790	.745	1.250	1.156	1.575	.128	.183	.228	1.410	1.250	.204	.905	.911	.194
23	H	1.5000	.500	.545	.790	.745	1.375	1.250	1.701	.154	.183	.228	1.530	1.360	.204	.905	.911	.242
25	J	1.6250	.500	.545	.790	.745	1.500	1.375	1.823	.154	.183	.228	1.660	1.470	.204	.905	.911	.242

Millimeters

Shell Size	MS Shell Size Code	L Max. (TV)	L1 Max. (CTV)	M +.00 –.13 (TV)	M1 +.00 –.13 (CTV)	R1	R2	S Max	T +.20 –.13	V Thread Metric	Z Max. (TV)	Z1 Max. (CTV)	A1 Dia. Back Panel Mount	A2 Dia. Front Panel Mount	AA Max.	LL +.15 –.00 (TV)	LL1 ±.13 (CTV)	TT +.20 –.13
9	A	11.91	13.06	20.83	19.69	18.26	15.09	24.1	3.25	M12X1-6g	3.89	5.03	16.66	13.11	5.94	22.99	23.19	5.49
11	B	11.91	13.06	20.83	19.69	20.62	18.26	26.5	3.25	M15X1-6g	3.89	5.03	20.22	15.88	5.94	22.99	23.19	4.93
13	C	11.91	13.06	20.83	19.69	23.01	20.62	28.9	3.25	M18X1-6g	3.89	5.03	23.42	19.05	5.94	22.99	23.19	4.93
15	D	11.91	13.06	20.83	19.69	24.61	23.01	31.3	3.25	M22X1-6g	3.89	5.03	26.59	23.01	5.94	22.99	23.19	4.39
17	E	11.91	13.06	20.83	19.69	26.97	24.61	33.7	3.25	M25X1-6g	3.89	5.03	30.96	25.81	5.94	22.99	23.19	4.93
19	F	11.91	13.06	20.83	19.69	29.36	26.97	36.9	3.25	M28X1-6g	3.89	5.03	32.94	28.98	5.94	22.99	23.19	4.93
21	G	12.70	13.84	20.07	18.92	31.75	29.36	40.1	3.25	M31X1-6g	4.65	5.79	36.12	32.16	5.18	22.99	23.14	4.93
23	H	12.70	13.84	20.07	18.92	34.93	31.75	43.3	3.91	M34X1-6g	4.65	5.79	39.29	34.93	5.18	22.99	23.14	6.15
25	J	12.70	13.84	20.07	18.92	38.10	34.93	46.4	3.91	M37X1-6g	4.65	5.79	42.47	37.69	5.18	22.99	23.14	6.15

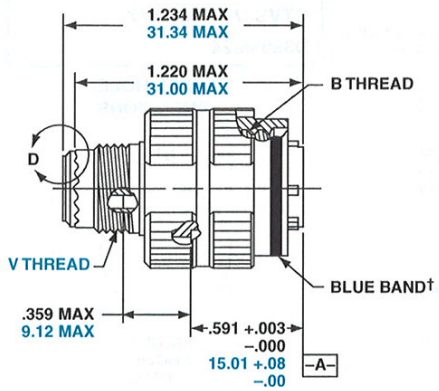
All dimensions for reference only

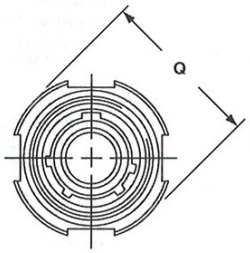
□ Designates true position dimensioning

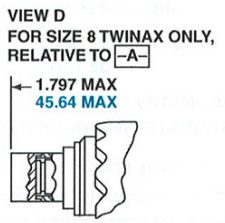
TV06R (D38999/26) – crimp, metal
CTV06R (D38999/26) – crimp, composite
straight plug

Part number reference.
See how to order, pages 43-46 to complete.
TV06RW-XX-XXX
TVS06RK-XX-XXX
TVS06RF-XX-XXX
TVS06RS-XX-XXX
CTV06RW-XX-XXX
CTVS06RF-XX-XXX
D38999/26

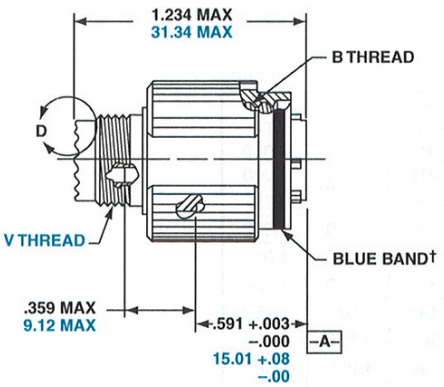
METAL

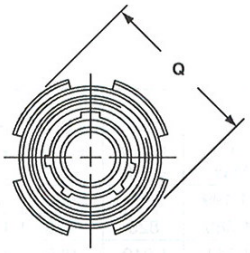






COMPOSITE





† Blue band indicates rear release contact retention system

Inches

Shell Size	MS Shell Size Code	B Thread 0.1P-0.3L-TS-2B (Plated)	Q Dia. Max.
9	A	.6250	.858
11	B	.7500	.984
13	C	.8750	1.157
15	D	1.0000	1.280
17	E	1.1875	1.406
19	F	1.2500	1.516
21	G	1.3750	1.642
23	H	1.5000	1.768
25	J	1.6250	1.890

Millimeters

Shell Size	MS Shell Size Code	Q Max.	V Thread Metric
9	A	21.8	M12X1-6g
11	B	25.0	M15X1-6g
13	C	29.4	M18X1-6g
15	D	32.5	M22X1-6g
17	E	35.7	M25X1-6g
19	F	38.5	M28X1-6g
21	G	41.7	M31X1-6g
23	H	44.9	M34X1-6g
25	J	48.0	M37X1-6g

All dimensions for reference only.

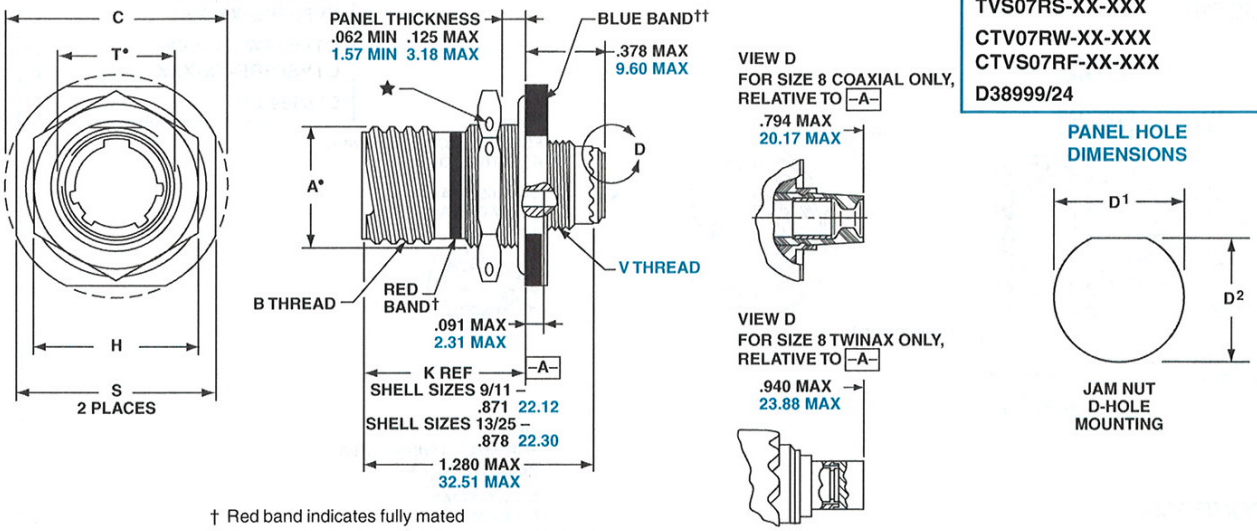
TV07R (D38999/24) – crimp, metal
CTV07R (D38999/24) – crimp, composite
jam nut receptacle

Part number reference.
See how to order, pages 43-46 to complete.

TV07RW-XX-XXX
TVS07RK-XX-XXX
TVS07RF-XX-XXX
TVS07RS-XX-XXX

CTV07RW-XX-XXX
CTVS07RF-XX-XXX

D38999/24



† Red band indicates fully mated

†† Blue band indicates rear release contact retention system

★ .059 dia min.
1.5 dia min. 3 lockwire holes
Formed lockwire hole design (6 holes) is optional

Inches

Shell Size	MS Shell Size Code	A• +.000 –.010	B Thread Class 2A 0.1P-0.3L-TS (Plated)	C Max.	D¹ +.010 –.000	D² +.000 –.010	H Hex +.017 –.016	S ±.010	T• +.010 –.000
9	A	.669	.6250	1.199	.700	.670	.875	1.062	.697
11	B	.769	.7500	1.386	.825	.770	1.000	1.250	.822
13	C	.955	.8750	1.511	1.010	.955	1.188	1.375	1.007
15	D	1.084	1.0000	1.636	1.135	1.085	1.312	1.500	1.134
17	E	1.208	1.1875	1.761	1.260	1.210	1.438	1.625	1.259
19	F	1.333	1.2500	1.949	1.385	1.335	1.562	1.812	1.384
21	G	1.459	1.3750	2.073	1.510	1.460	1.688	1.938	1.507
23	H	1.575	1.5000	2.199	1.635	1.585	1.812	2.062	1.634
25	J	1.709	1.6250	2.323	1.760	1.710	2.000	2.188	1.759

Millimeters

Shell Size	MS Shell Size Code	A• +.00 –.25	C Max.	D¹ +.25 –.00	D² +.00 –.25	H Hex +.43 –.41	S ±.25	T• +.25 –.00	V Thread Metric
9	A	16.99	30.45	17.78	17.02	22.23	26.97	17.70	M12X1-6g
11	B	19.53	35.20	20.96	19.59	25.40	31.75	20.88	M15X1-6g
13	C	24.26	38.38	25.65	24.26	30.18	34.93	25.58	M18X1-6g
15	D	27.53	41.55	28.83	27.56	33.32	38.10	28.80	M22X1-6g
17	E	30.68	44.73	32.01	30.73	36.53	41.28	31.98	M25X1-6g
19	F	33.86	49.50	35.18	33.91	39.67	46.02	35.15	M28X1-6g
21	G	37.06	52.65	38.35	37.08	42.80	49.23	38.28	M31X1-6g
23	H	40.01	55.85	41.53	40.26	46.02	52.37	41.50	M34X1-6g
25	J	43.41	59.00	44.70	43.43	50.80	55.58	44.68	M37X1-6g

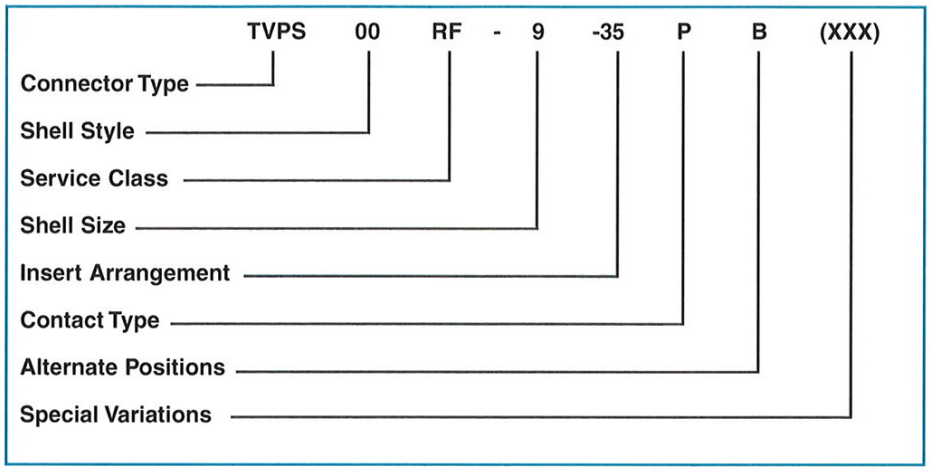
All dimensions for reference only • D shaped panel cut-out dimensions
NOTE: Deep reach receptacles are available for panel thicknesses up to .750 max.

Tri-Start

how to order – (Amphenol® TV, metal)
how to order – (Amphenol® TV26 CLUTCH-LOK®)

Proprietary Part Number

Amphenol® Tri-Start Connectors (metal) can be ordered by coded part number.
Ordering procedure is illustrated by part number TVPS00RF-9-35PB( ) as shown below:



Connector Type

TV	designates Tri-Start Series Connector
TVP	designates back panel mounted receptacle
TVS	designates 200°C rated
TVPS	designates back panel mounted, 200°C rated receptacle

Shell Style

00	designates wall mount receptacle
01	designates line receptacle
02	designates box mount receptacle
06	designates straight plug
26	designates proprietary CLUTCH-LOK high vibration straight plug (available in service classes RK and RS only)
07	designates jam nut receptacle
09	designates flange mounted plug
I	designates solder mounted receptacle, hermetic only
IY	designates weld mounted receptacle, hermetic only

Service Class

RX	alternate finish, requires special variation suffix. Example: non-conductive, anodic coated aluminum is defined by variation suffix 005. Consult Amphenol, Sidney NY for details, options and availability of non-cadmium or nickel finishes.
RF	electroless nickel plated aluminum, optimum EMI shielding effectiveness –65dB @ 10GHz specification min., 48 hour salt spray, 200°C
RGF**	electroless nickel plated ground plane aluminum, 200°C
RGW**	olive drab cadmium plated ground plane aluminum, 175°C
RK*	corrosion resistant stainless steel, firewall capability, plus 500 hour salt spray resistance, EMI –45 dB @ GHz specification min., 200°C
RW	corrosion resistant olive drab cadmium plate aluminum, 500 hour extended salt spray, EMI –50 dB @ 10 GHz specification min., 175°C
RQF	same as RF except with Quadrax contacts
RGQF	same as RGF except with Quadrax contacts
RGQW	same as RGW except with Quadrax contacts
RQK	same as RK except with Quadrax contacts and not firewall capable
RQW	same as RW except with Quadrax contacts
Y	hermetic seal, passivated stainless steel, 200°C
RS*	(non-hermetic connectors), nickel plated stainless steel, optimum EMI shielding effectiveness –65dB @ 10 GHz specification min., 500 hour salt spray, 200°C, firewall barrier
YN	(hermetic connectors), nickel plated stainless steel, 200°C

Shell Size

MIL-DTL-38999, Sizes 9-25.

A	B	C	D	E	F	G	H	J	MIL Shell Size
9	11	13	15	17	19	21	23	25	Amphenol Shell Size

Insert Arrangement

MIL-DTL-38999, see insert arrangement charts, pgs. 6 & 7.

Contact Type

P designates pin contacts
S designates socket contacts

Alternate Positions

Locksmith keying - rotation of minor keys. See page 8.
"N" not required for normal position.

Special Variations

Consult Amphenol Aerospace, Sidney, NY for variations.

* Coaxial arrangements are not available in these classes.
** For more information on Coax/Triax/Twinax Ground Plane Connectors see page 49.