- Olive drab cadmium plating
- Nickel plating
- Passivation (for steel versions)

- 9 shell sizes from 09 to 25
- **Contacts**
  - More than 60 arrangements of contacts, including high density versions
  - Size 8, 10, 12, 16, 20, 22 D contacts
  - Signal, power, twinax, coaxial contacts, MOV, optical termini
- **Contact protection**
  - 100% scoop-proof shell
  - Interfacial seal ensures sealing around each contact and prevents electrolytic erosion
- **EMI/RFI protection**
  - Shell to shell bottoming
  - Grounding fingers on the plug shell
- **Quick coupling**
  completely mates and self locks in a 360° turn of the coupling nut
- Performs sine and random vibration tests by an anti-decoupling device
- Receptacles are intermountable with MIL-DTL-38999 series I standard (same panel drilling)

Additional information

Amphenol Socapex offers a global solution: besides the TV-CTV wide range of connectors, the following products are available (please consult data sheets):

- Contacts
  (please refer to data sheet E114)
- Tooling
  (please refer to data sheet E119)
- Rear accessories
  (please refer to data sheet E121)
- FTV filtered connectors
  (French version only)

- The **composite** connector is a lightweight (17 to 70 % weight savi corrosion resistant (withstanding 2 hours of salt spray exposure) conne
- The **nickel aluminium bronze** conn offers a high corrosion resistance robustness for marine application
- The **stainless steel** connector provides a firewall capability

The Amphenol TV connectors range offers the following specific version

- **Ground Plane version** with a conductive insert for specific use coaxial or triaxial contacts
- **Receptacles** with reinforced seali
- **Hermetic version** in Y and N cla
- **Filtered versions** using tubular o planar technology (please consul

High performance threaded cylindrical connectors

APPLICATIONS

- **Military and aeronautic applications: battlefields, ground vehicles, aircrafts**
- **Advanced industrial applications: high vibration requirements, high density**

Amphenol

Mechanical characteristics

- Thermoplastic insert
- Silicone rubber back insert and interfacial seal
- Durability: - 500 cycles
  - 1500 cycles with composite connector " CTV " fitted with " H " and " J " contact types
- Shocks: half sine wave of 300 G magnitude during 3ms per MIL - STD - 0901
- Sine vibrations: - 60 g from - 55°C to + 175°C (olive drab cadmium finish)
  - 60 g from - 55°C to 200°C (nickel finish and firewall version)
- Random vibrations: - 1 G^2 / Hz at 175°C olive drab cadmium finish
  - $1G^2$ / Hz at 200°C nickel finish and firewall version
  - $5G^2$ / Hz at ambient
- Bending moment

Shell size		Bending moment
Series III MIL-DTL-38999	Amphenol	
A	09	11.3
B	11	33.9
C	13	45.2
D	15	56.5
E	17	67.8
F	19	79.1
G	21	90.4
H	23	101.7
J	25	113.0

- Contact retention force

Contact size	22D	20	16	12	10	8
Maximum load (N)	45	67	110	110	150	150

- Hermetic shells

Shell material	Shell finish	Salt spray exposure per MIL. STD 1344/1009	Class norm	Amphenol	Working temperature	
					mini	maxi
Stainless steel	Nickel	48 H	N	TVS-YN	-65°C	+200°C
	—	500 H	Y	TVS-Y	-65°C	+200°C

- **Humidity:** per MIL-DTL-38999: § 3.29
- **Altitude immersion:** according to MIL-DTL-38999 III standard (exept hermetics)
- **Air leakage** < 1.10^{-7} cm^3/s under 1 bar of pressure differential (hermetics only)

- **Fluid resistance (per MIL-DTL-38999), § 3.33:**
  - MIL-L-7808 (lubricating oil)
  - MIL-L-23699 (lubricating oil)
  - MIL-H-5606 (hydraulic fluid)
  - Hydraulic fluid (Chevron M2V)
  - MIL-A-8243 (defrosting fluid)
  - MIL-C-87936 type I
  - MIL-T-5624 (JP5)
  - MIL-C-47220 or Coolanol 25 or equivalent
  - MIL-G-3056 type I (gasoline)
  - Isopropyl alcohol per TT-I-735 grade A or B mixed with mineral spirit TT-T-291 type I or P-D-680 type I

• Insulation resistance

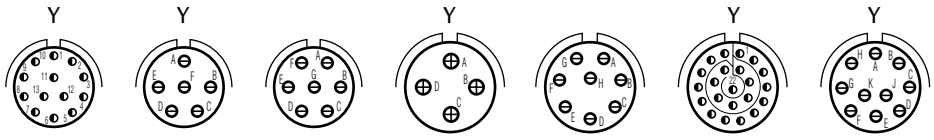
Insulation resistance (500 V)	Crimp	Hermetic
Ambient temperature	$\geq 10^5$ MΩ	$\geq 5 \times 10^3$ MΩ
Maximum temperature	$\geq 10^3$ MΩ	$\geq 5 \times 10^2$ MΩ

• Service rating

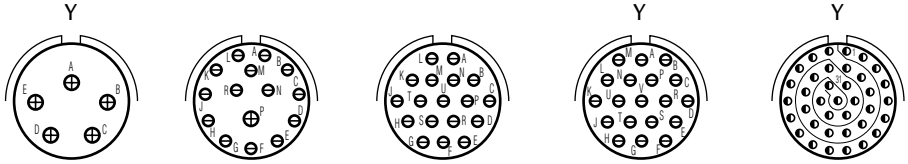
Service	Dielectric withstanding voltage (Vrms)								Working voltage	
	At sea level		15000 meters		21000 meters		34000 meters			
	mated	unmated	mated	unmated	mated	unmated	mated	unmated	Vrms	Vdc
M	1300	1300	800	550	800	350	800	200	400	550
N	1000	1000		400		260		200	300	450
I	1800	1800	1000	600	1000	400	1000	200	600	850
II	2300	2300	1000	800	1000	500	1000	200	900	1250

• Dimensions of acceptable contacts and cables

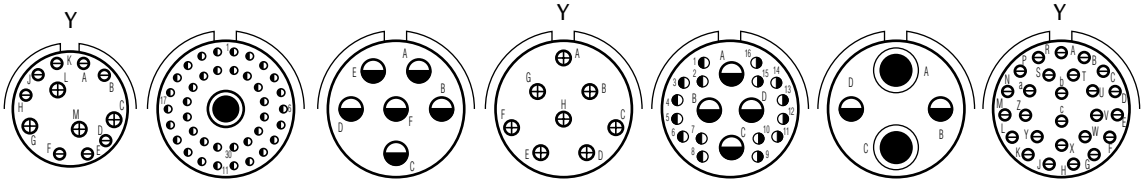
Contact Size	Contact Diameter mm	Crimp barrel Diameter mm	Crimp barrel Depth mm	Acceptable cables Gauge AWG Section mm²				Outside diameter (mm) Min	Average	Max
22D	0.76	0.88+/-0.03	3.58	22	24	26	28	0.76	1.20	1.37
				0.38	0.22	0.15	0.095			
20	1	1.19+/-0.03	5.30	20	22	24		1.02	1.83	2.11
				0.60	0.38	0.22				
16	1.57	1.70+/-0.03	5.30	16	18	20		1.68	2.41	2.77
				1.34	0.93	0.60				
12	2.36	2.54+/-0.06	5.30	12	14			2.46	3.20	3.61
				3.30	1.94					
10	3.17	3.48+/-0.06	9	10	12			2.97		3.88
				5	3					
8 Power	3.60	4.6+0.05/-0	10	8				4.5		5.8
				8.98 Max acceptable: 10mm²						



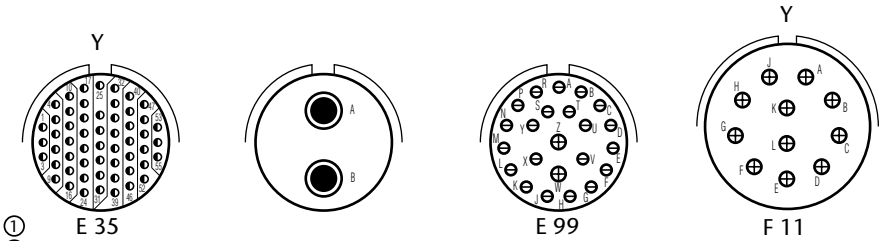
①	B 35	B 98	11-99	C 4	C 8	C 35	C 98
②	11-35	11-98	I	13-4	13-8	13-35	13-98
③	M	I	7	I	I	M	I
④	13	6	20	4	8	22	10
⑤	22D	20		16	20	22D	20



①	D 05	D 15	D 18	D 19	D 35
②	15-5	15-15	15-18	15-19	15-35
③	M	I	I	I	M
④	5	14 1	18	19	37
⑤	16	20 16	20	20	22D

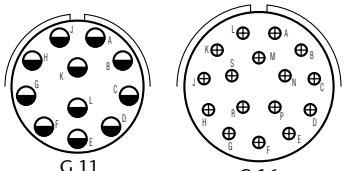


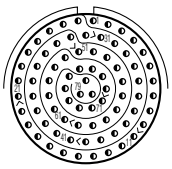
①	D 97		E 6	E 8				E 26
②	15-97	17-2	17-6	17-8	17-20	17-22		17-26
③	I	M	I	II	M			I
④	8 4	38 1	6	8	16 4	2	2	26
⑤	20 16	22D 8 Twinax ○	12	16	22D 12	12 Coax	8 Twinax △	20

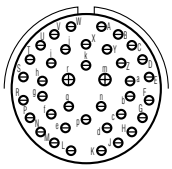


①	E 35	17-75	E 99	F 11
②	17-35		17-99	19-11
③	M		I	II
④	55	2	21 2	11
⑤	22D	8 Twinax ○	20 16	16

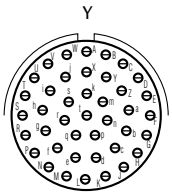
③	M	I	M	I	M
④	10 1 4 2	26 2	29 1	2 1 12	32	66
⑤	22D 20 16 8 Twinax△	20 16	20 16	8 Coax 12 22D	20	22D

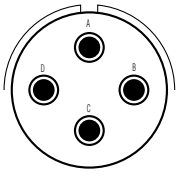


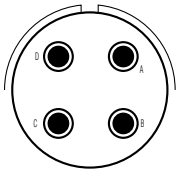


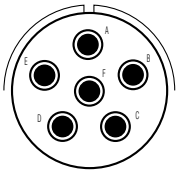


①	G 11	G 16	G 35	G 39
②	21-11	21-16	21-35	21-39
③	I	II	M	I
④	11	16	79	37 2
⑤	12	16	22D	20 16

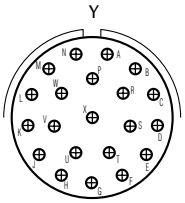


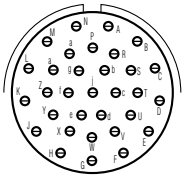


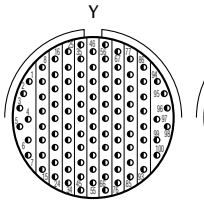


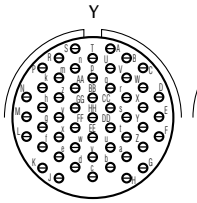


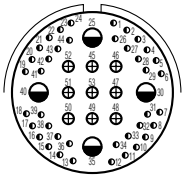
①	G 41	21-48	G 75	23-6
②	21-41	M	21-75	M
③	I	4	M	6
④	41	8 Power	4	8 Twinax○
⑤	20		8 Coax or 8 Twinax*	

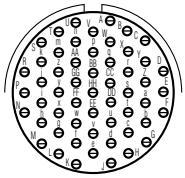




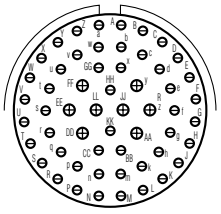


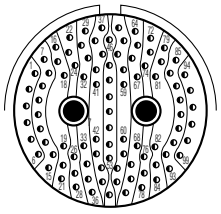


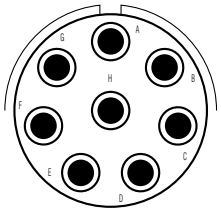


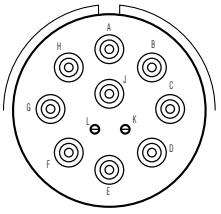


①	H 21	23-32	H 35	H 53	23-54	H 55
②	23-21	I	23-35	23-53	M	23-55
③	II	32	M	I	40 9 4	I
④	21	20	100	53	22D 16 12	55
⑤	16		22D	20		20

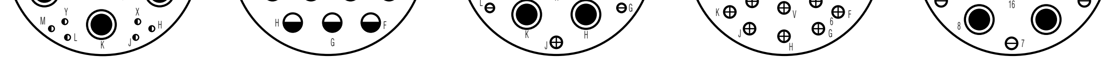




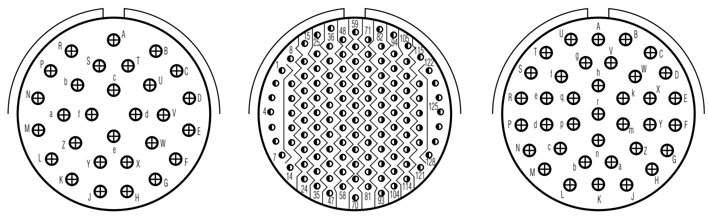




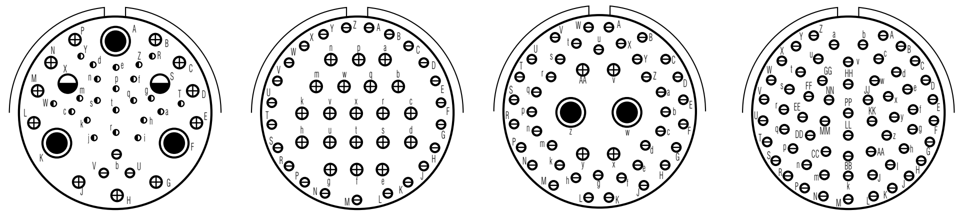
①	J 4	25-7	25-8	J 11
②	25-4	M		25-11***
③	I			N
④	48 8	97 2	8	2 9
⑤	20 16	22D 8 Twinax○	8 Twinax△	20 10 Power



①		J 19	J 20	J 24	
②	25-17	25-19	25-20***	25-24	25-26
③	M	I	N	I	I
④	36 6	19	10 13 3 4	12 12	16 5 4
⑤	22D 8 Twinax○	12	20 16 8 Twinax○ 12 Coax	16 12	20 12 8 Coax



		Y	
①	J 29	J 35	
②	25-29	25-35	25-37
③	I	M	I
④	29	128	37
⑤	16	22D	16



				Y
①		J 43		J 61
②	25-41	25-43	25-46	25-61
③	I	I	I	I
④	22 3 11 2 3	23 20	40 4 2	61
⑤	22D 20 16 12 Coax 8 Twinax○	20 16	20 16 8 Coax	20

*	Military P/N delivered with 8 twinax and proprietary P/N delivered with size 8 coaxial contacts for RG 180 and RG 195 wire
***	For MIL STD 1760 application
Y	Available in hermetic version
△	Delivered with twinax contacts for double braid cable (PAN 6421, AECMA Pr EN 3375 - 004, Raychem 10613, EPD44692, EPD44693).
○	Delivered with twinax contacts for simple braid cable (M17/1760002, AECMA Pr EN 3375 - 003, Raychem 10612, EPD44690, EPD44691).

13-98	13-98	I	10		10											
15-5**	15-5**		5				5								X	
15-5	15-5	II	5			5										
15-15	15-15	I	15		14	1										
15-18	15-18	I	18		18											
15-19	15-19	I	19		19											
15-35	15-35	M	37	37												
15-97	15-97	I	12		8	4										
17-2	17-2	M	39	38									1			
17-6**	17-6**		6							6					X	
17-6	17-6	I	6					6								
17-8**	17-8**		8				8								X	X
17-8	17-8	II	8			8										
17-20	17-20	M	20	16				4								
17-22**	17-22**		4							2				2	X	
17-22	17-22		4						2				2			
17-26	17-26	I	26		26											
17-35	17-35	M	55	55												
17-75	17-75	I	2										2			
17-99	17-99	I	23		21	2										
19-11	19-11	II	11			11										
19-17	19-17	M	17	10	1	4							2			
19-28	19-28	I	28		26	2										
19-30	19-30	I	30		29	1										
19-31	19-31	M	15	12				1					2			
19-32	19-32	I	32		32											
19-35	19-35	M	66	66												
21-11	21-11	I	11					11								
21-16**	21-16**		16				16								X	
21-16	21-16	II	16			16										
21-35	21-35	M	79	79												
21-39	21-39	I	39		37	2										
21-41	21-41	I	41		41											
21-48	21-48		4									4				
21-75	21-75	M	4										4			
21-75**	21-75**		4											4	X	

Legend: ** Grounded version (metallic insert for use with coaxial or twinax contacts, for receptacle only). For details, please refer to page 19
*** 25-11 and 25-20 arrangements used for interconnection per MIL-STD-1760

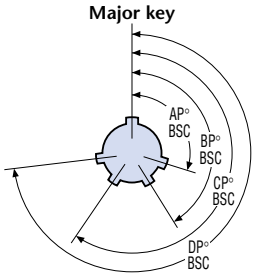
25-19**	25-19**	I	19						19						X	
25-20***	25-20***	N	30		10	13			4*					3			
25-24	25-24	I	24			12		12								
25-26	25-26	I	25		16			5					4			
25-29**	25-29**	I	29				29								X	
25-29	25-29	I	29			29										
25-35	25-35	M	128	128												
25-37	25-37	I	37			37										
25-41	25-41	I	41	22	3	11			2*					3		
25-43	25-43	I	43		23	20										
25-46	25-46	I	46		40	4							2			
25-61	25-61	I	61		61											

Legend: ** Grounded version (metallic insert for use with coaxial or twinax contacts, for receptacle only). For details, please refer to page 19
*** 25-11 and 25-20 arrangements used for interconnection per MIL-STD-1760

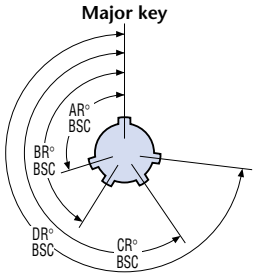
Coding - polarization

To avoid cross-plugging problems in applications requiring the use of more than one MIL-DTL-38999 III connector of the same size, alternate key-rotations are available as indicated in the accompanying chart. As shown in the diagram below, the secondary keys rotate clockwise from the major one.

In the reference system, the polarizationis shown by the letters N, A, B, C, D or E.



PLUG — Front face shown



RECEPTACLE — Front face shown

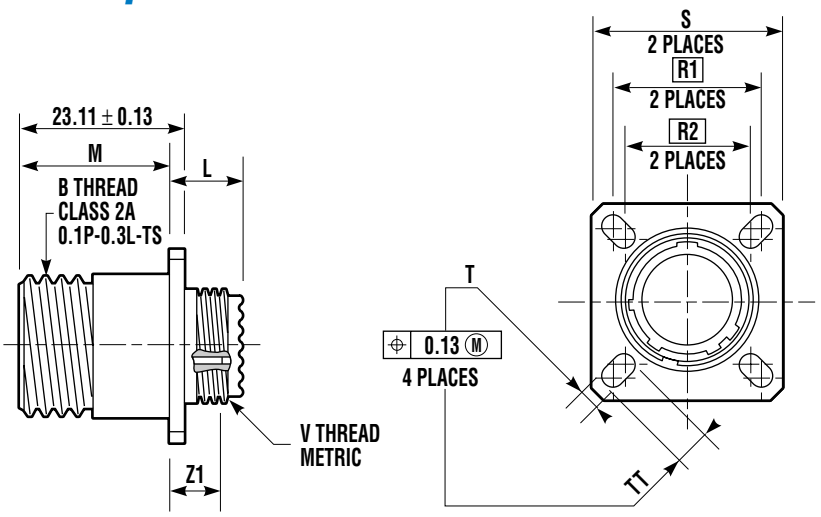
Shell size	Coding identification letter	AR° or AP° BSC	BR° or BP° BSC	CR° or CP° BSC	DR° or DP° BSC
9	N	105	140	215	265
	A	102	132	248	320
	B	80	118	230	312
	C	35	140	205	275
	D	64	155	234	304
	E	91	131	197	240
11 13 and 15	N	95	141	208	236
	A	113	156	182	292
	B	90	145	195	252
	C	53	156	220	255
	D	119	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 and 25	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

- 1500 cycles with "H" type (M 39029) pin contacts and "J" type (M 39029) socket contacts

- Hydrostatic stability: NASA OUTGASSING SP-R 0022 , § 40
- Ozone exposure: § 3.32 MIL-DTL-38999
- Moisture exposure: MIL-STD-810C, method 508-2
- Standard MIL wiring tools

Overall dimensions - Composite versions

CTVP00RW JD38999/20J
CTVPS00RF JD38999/20M
Square flange receptacle



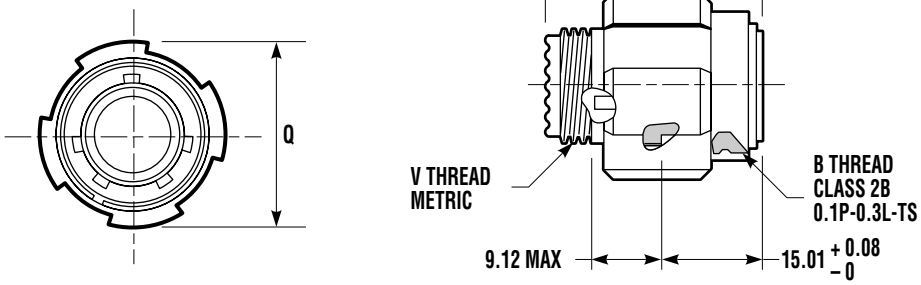
Shell size		B	L	M	R¹	R²	S	T	Z1	TT	V thread
MIL-DTL-38999 Series III	Amphenol Socapex	Thread (inches)	Max (mm)	+0.00 -0.13 (mm)	(mm)	(mm)	±0.25 (mm)	+0.20 -0.13 (mm)	Max (mm)	+0.20 -0.13 (mm)	metric
A	9	.6250	13.055	19.685	18.26	15.09	23.83	3.25	5.03	5.49	M12x1-6g
B	11	.7500	13.055	19.685	20.62	18.26	26.19	3.25	5.03	4.93	M15x1-6g
C	13	.8750	13.055	19.685	23.01	20.62	28.58	3.25	5.03	4.93	M18x1-6g
D	15	1.0000	13.055	19.685	24.61	23.01	30.96	3.25	5.03	4.39	M22x1-6g
E	17	1.1875	13.055	19.685	26.97	24.61	33.32	3.25	5.03	4.93	M25x1-6g
F	19	1.2500	13.055	19.685	29.36	26.97	36.53	3.25	5.03	4.93	M28x1-6g
G	21	1.3750	13.843	18.923	31.75	29.36	39.67	3.25	5.79	4.93	M31x1-6g
H	23	1.5000	13.843	18.923	34.93	31.75	42.88	3.91	5.79	6.15	M34x1-6g
J	25	1.6250	13.843	18.923	38.10	34.93	46.02	3.91	5.79	6.15	M37x1-6g

For panel drilling, please refer to page 15
For PCB contacts stickout, please refer to page 16

Series III	Socapex	(mm)	(inches)	(mm)	(mm)	(mm)	(mm)		
A	9	16.99	.6250	30.45	22.23	26.97	17.70	M12x1-6g	4.1
B	11	19.53	.7500	35.20	25.40	31.75	20.88	M15x1-6g	5.3
C	13	24.26	.8750	38.38	30.17	34.92	25.58	M18x1-6g	6.9
D	15	27.53	1.0000	41.55	33.32	38.10	28.80	M22x1-6g	8.6
E	17	30.68	1.1875	44.73	36.52	41.28	31.98	M25x1-6g	9.8
F	19	33.86	1.2500	49.50	39.67	46.02	35.15	M28x1-6g	10.9
G	21	37.06	1.3750	52.65	42.87	49.22	38.28	M31x1-6g	12.7
H	23	40.00	1.5000	55.85	46.02	52.37	41.50	M34x1-6g	13.8
J	25	43.41	1.6250	59.00	50.80	55.57	44.68	M37x1-6g	15

For panel drilling, please refer to page 15
For PCB contacts stickout, please refer to page 16

CTV06 RW JD38999/26J
CTVS06 RF JD38999/26M
Straight plug



Shell size		B Thread (inches)	Q Max (mm)	V thread metric (mm)
MIL-DTL-38999 Series III	Amphenol Socapex			
A	9	.6250	21.82	M12x1-6g
B	11	.7500	24.99	M15x1-6g
C	13	.8750	29.39	M18x1-6g
D	15	1.0000	32.49	M22x1-6g
E	17	1.1875	35.69	M25x1-6g
F	19	1.2500	38.48	M28x1-6g
G	21	1.3750	41.68	M31x1-6g
H	23	1.5000	44.88	M34x1-6g
J	25	1.6250	47.98	M37x1-6g

TVS-B Marine bronze shells

Presentation

TVS-B bronze shell connectors are not defined in MIL-DTL-38999-III-J standard but they are based on its requirements.

TVS-B connectors conform to the European standard CECC 75.201.002.

This series was initially selected by the British Navy for a new generation of ships. By extension a lot of the NATO Navy choose this series as a standard of interconnection.

TVS-B connector is now the most popular circular connector to be used in marine application.

Main characteristics

- Material shell: Nickel aluminium bronze DGS 1043.
- EMI-RFI shielding: > 65 dB at 100 Mhz to 10 Ghz.
- Standard MIL wiring tools

TVS-K / TVS-S Stainless steel shells

Presentation

Stainless steel shell connectors are used in high temperature environments and in harsh vibration conditions. They provide FIREWALL capabilities.

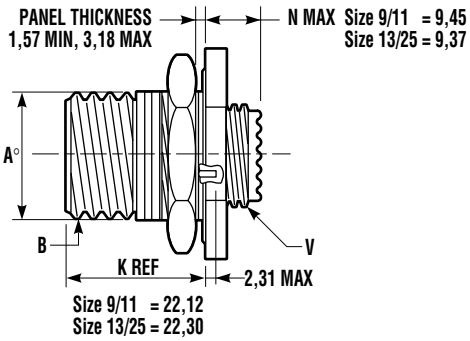
Main characteristics

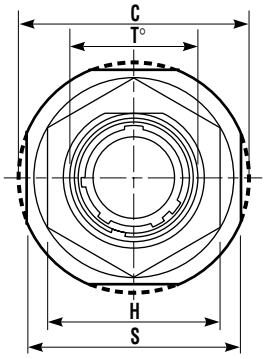
- Thermosetting insert
- Working temperature: - 65°C, + 200°C
  - 1093°C during 20 minutes
- Shell to shell conductivity: - 10 millivolts for K class
  - 1 millivolts for S class
- EMI-RFI shielding: - 45 dB mini at 10 Ghz for K class
  - 65 dB mini at 10 Ghz for S class

A	9	.6250	11.91	20.83	18.26	15.09	23.83	3.25	3.89	5.49	M12x1-6g
B	11	.7500	11.91	20.83	20.62	18.26	26.19	3.25	3.89	4.93	M15x1-6g
C	13	.8750	11.91	20.83	23.01	20.62	28.58	3.25	3.89	4.93	M18x1-6g
D	15	1.0000	11.91	20.83	24.61	23.01	30.96	3.25	3.89	4.39	M22x1-6g
E	17	1.1875	11.91	20.83	26.97	24.61	33.32	3.25	3.89	4.93	M25x1-6g
F	19	1.2500	11.91	20.83	29.36	26.97	36.53	3.25	3.89	4.93	M28x1-6g
G	21	1.3750	12.70	20.07	31.75	29.36	39.67	3.25	4.65	4.93	M31x1-6g
H	23	1.5000	12.70	20.07	34.93	31.75	42.88	3.91	4.65	6.15	M34x1-6g
J	25	1.6250	12.70	20.07	38.10	34.93	46.02	3.91	4.65	6.15	M37x1-6g

For panel drilling, please refer to page 15
For PCB contacts stickout, please refer to page 16

TV07RW JD38999/24W
TVS07RF JD38999/24F
TVS07RB
TVS07RK JD38999/24K
TVS07RS JD38999/24S
Jam nut receptacle





Shell size		B Thread Class 2A 0.1P-0.3L-TS (inches)	A +0.00 -0.025 (mm)	C Max (mm)	H Hex +0.043 -0.041 (mm)	S ±0.25 (mm)	T ±0.025 -0.000 (mm)	V thread metric	Hex nut max torque value N.m
MIL-DTL-38999 Series III	Amphenol Socapex								
A	9	.6250	16.99	30.45	22.23	26.97	17.70	M12x1-6g	4.1
B	11	.7500	19.53	35.20	25.40	31.75	20.88	M15x1-6g	5.3
C	13	.8750	24.26	38.38	30.17	34.93	25.58	M18x1-6g	6.9
D	15	1.0000	27.53	41.55	33.32	38.10	28.80	M22x1-6g	8.6
E	17	1.1875	30.68	44.73	36.52	41.28	31.98	M25x1-6g	9.8
F	19	1.2500	33.86	49.50	39.67	46.02	35.15	M28x1-6g	10.9
G	21	1.3750	37.06	52.65	42.87	49.23	38.28	M31x1-6g	12.7
H	23	1.5000	40.00	55.85	46.02	52.37	41.50	M34x1-6g	13.8
J	25	1.6250	43.41	59.00	50.80	55.58	44.68	M37x1-6g	15

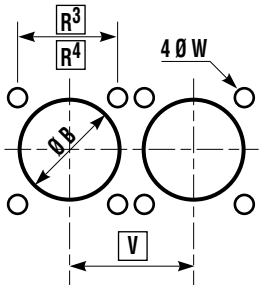
For panel drilling, please refer to page 15
For PCB contacts stickout, please refer to page 16

C	13	.8750	28.98	M18x1-6g	28.2
D	15	1.0000	32.16	M22x1-6g	31.4
E	17	1.1875	35.33	M25x1-6g	36.5
F	19	1.2500	38.10	M28x1-6g	39.3
G	21	1.3750	41.28	M31x1-6g	42.5
H	23	1.5000	44.45	M34x1-6g	45.3
J	25	1.6250	47.63	M37x1-6g	48.4

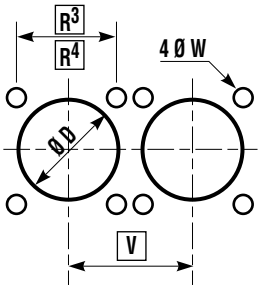
* Conforms to CECC 75.201.002

Panel drilling for composite and metallic receptacles

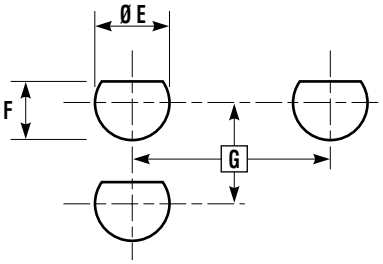
Square flange receptacle rear panel mounting



Square flange receptacle front panel mounting



Jam nut receptacle rear panel mounting



Shell size		R³	R⁴	V	Ø W +0 -0.25	G	Ø E	F +0 -0.25	Ø B	Ø D
MIL-DTL-38999 Series III	Amphenol Socapex	(mm)	(mm)	Mini (mm)	(mm)	Mini (mm)	Mini (mm)	(mm)	Mini (mm)	Mini (mm)
A	9	18.26	15.09	24.60	3.25	27.80	17.70	16.99	16.66	13.11
B	11	20.62	18.26	27.00	3.25	32.60	20.88	19.53	20.22	15.88
C	13	23.01	20.62	31.50	3.25	36.00	25.58	24.26	23.42	19.05
D	15	24.61	23.01	34.50	3.25	39.60	28.80	27.53	26.59	23.01
E	17	26.97	24.61	28.00	3.25	43.30	31.98	30.68	30.96	25.81
F	19	29.36	26.97	40.50	3.25	47.00	35.16	33.86	32.94	28.98
G	21	31.75	29.36	44.00	3.25	50.60	38.28	37.06	36.12	32.16
H	23	34.93	31.75	47.00	3.81	54.20	41.50	40.01	39.29	34.93
J	25	38.10	34.93	50.00	3.81	59.70	44.68	43.41	42.47	37.69

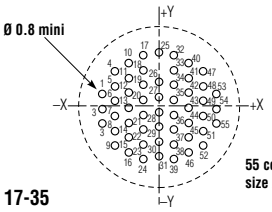
Cavity marking	x (mm)	y (mm)
1	+ 1.14	+ 6.65
2	+ 3.12	+ 5.51
3	+ 5.36	+ 4.06
4	+ 6.45	+ 2.03
5	+ 6.76	- 0.25
6	+ 6.27	- 2.49
7	+ 5.08	- 4.45
8	+ 3.30	- 5.89

Cavity marking	x (mm)	y (mm)
9	+ 1.14	- 6.65
10	- 1.14	- 6.65
11	- 3.30	- 5.89
12	- 5.08	- 4.45
13	- 6.27	- 2.49
14	- 6.76	- 0.25
15	- 6.45	+ 2.03
16	- 5.36	+ 4.06

Cavity marking	x (mm)	y (mm)
17	- 3.30	+ 5.89
18	- 1.14	+ 6.65
19	+ 1.14	+ 6.65
20	+ 3.30	+ 5.89
21	+ 4.32	+ 1.02
22	+ 4.32	- 1.27
23	+ 3.12	- 3.23
24	+ 1.14	- 4.37
25	- 1.14	- 4.37
26	- 3.12	- 3.23
27	- 4.32	- 1.27
28	- 4.32	+ 1.02
29	- 3.12	+ 3.02
30	- 1.14	+ 4.37
31	+ 1.14	+ 1.88
32	+ 2.29	- 0.10
33	+ 1.14	- 2.08
34	- 1.14	- 2.08
35	- 2.29	- 0.10
36	- 1.14	+ 1.88
37	0	- 0.10

Cavity marking	x (mm)	y (mm)
1	- 5.94	- 1.24
2	- 5.94	- 3.53
3	- 5.94	- 5.82
4	- 4.37	+ 7.09
5	- 3.96	+ 4.47
6	- 3.96	+ 2.18
7	- 3.96	- 0.10
8	- 5.94	- 3.53
9	- 5.94	- 5.82
10	- 4.37	+ 7.09
11	- 3.96	+ 4.47
12	- 3.96	+ 2.18
13	- 3.96	- 0.10
14	- 3.96	- 2.39

Cavity marking	x (mm)	y (mm)
15	- 1.98	- 1.24
16	- 1.98	- 3.53
17	- 1.98	- 5.82
18	- 1.98	- 8.10
19	0	+ 8.36
20	0	+ 4.47
21	0	+ 2.18
22	0	- 0.10
23	+ 1.98	- 1.24
24	+ 1.98	- 3.53
25	+ 1.98	- 5.82
26	+ 1.98	- 8.10
27	+ 4.37	+ 7.09
28	+ 3.96	+ 4.47



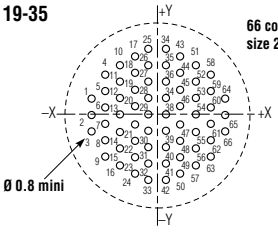
17-35

55 contacts
size 22D

Cavity marking	x (mm)	y (mm)
29	+ 1.98	+ 1.04
30	+ 1.98	- 1.24
31	+ 1.98	- 3.53
32	+ 1.98	- 5.82
33	+ 1.98	- 8.10
34	+ 4.37	+ 7.09
35	+ 3.96	+ 4.47
36	+ 3.96	+ 2.18
37	+ 3.96	- 0.10
38	+ 3.96	- 2.39
39	+ 3.96	- 4.67
40	+ 3.96	- 6.96
41	+ 6.15	+ 5.61
42	+ 5.94	+ 3.33
43	+ 5.94	+ 1.04
44	+ 5.94	- 1.24
45	+ 5.94	- 3.53
46	+ 5.94	- 5.82
47	+ 7.92	+ 2.18
48	+ 7.92	- 0.10
49	+ 7.92	- 2.39

19-35

66 contacts
size 22D



Cavity marking	x (mm)	y (mm)
1	- 9.07	+ 2.29
2	- 9.07	0
3	- 9.07	- 2.29
4	- 7.09	+ 5.72
5	- 7.09	+ 3.43
6	- 7.09	+ 1.14
7	- 7.09	- 1.14
8	- 7.09	- 3.43
9	- 7.09	- 5.72
10	- 5.11	+ 6.86
11	- 5.11	+ 4.57
12	- 5.11	+ 2.29
13	- 5.11	0
14	- 5.11	- 2.29
15	- 5.11	- 4.57
16	- 5.11	- 6.86
17	- 3.12	+ 8.00

Cavity marking	x (mm)	y (mm)
18	- 3.12	+ 5.72
19	- 3.12	+ 3.43
20	- 3.12	+ 1.14
21	- 3.12	- 1.14
22	- 3.12	- 3.43
23	- 3.12	- 5.72
24	- 3.12	- 8.00
25	- 1.14	+ 9.14
26	- 1.14	+ 6.86
27	- 1.14	+ 4.57
28	- 1.14	+ 2.29
29	- 1.14	0
30	- 1.14	- 2.29
31	- 1.14	- 4.57
32	- 1.14	- 6.86
33	- 1.14	- 9.14
34	+ 1.14	+ 9.14

Cavity marking	x (mm)	y (mm)
35	+ 1.14	+ 6.86
36	+ 1.14	+ 4.57
37	+ 1.14	+ 2.29
38	+ 1.14	0
39	+ 1.14	- 2.29
40	+ 1.14	- 4.57
41	+ 1.14	- 6.86
42	+ 1.14	- 9.14
43	+ 3.12	+ 8.00
44	+ 3.12	+ 5.72
45	+ 3.12	+ 3.43
46	+ 3.12	+ 1.14
47	+ 3.12	- 1.14
48	+ 3.12	- 3.43
49	+ 3.12	- 5.72
50	+ 3.12	- 8.00
51	+ 5.11	- 6.86
52	+ 5.11	+ 4.57
53	+ 5.11	+ 2.29
54	+ 5.11	0
55	+ 5.11	- 2.29
56	+ 5.11	- 4.57
57	+ 5.11	- 6.86
58	+ 7.09	+ 5.72
59	+ 7.09	+ 3.43
60	+ 7.09	+ 1.14
61	+ 7.09	- 1.14
62	+ 7.09	- 3.43
63	+ 7.09	- 5.72
64	+ 9.07	+ 2.29
65	+ 9.07	0
66	+ 9.07	- 2.29

Cavity marking	x (mm)	y (mm)
1	- 10.87	+ 6.12
2	- 11.86	+ 3.91
3	- 12.40	+ 1.55
4	- 10.54	0
5	- 12.40	- 1.55
6	- 10.87	- 3.61
7	- 10.87	- 6.02
8	- 8.43	+ 8.46
9	- 8.43	+ 6.05
10	- 8.43	+ 3.63
11	- 8.43	+ 1.22
12	- 8.43	- 1.19
13	- 8.43	- 3.61
14	- 8.43	- 6.02
15	- 8.43	- 8.43
16	- 6.32	+ 9.65
17	- 6.32	+ 7.24
18	- 6.32	+ 4.83
19	- 6.32	+ 2.41
20	- 6.32	0
21	- 6.32	- 2.41
22	- 6.32	- 4.83
23	- 6.32	- 7.24
24	- 6.32	- 9.65
25	- 4.22	+ 10.87
26	- 4.22	+ 8.46
27	- 4.22	+ 6.05
28	- 4.22	+ 3.63
29	- 4.22	+ 1.22
30	- 4.22	- 1.19
31	- 4.22	- 3.61
32	- 4.22	- 6.02
33	- 4.22	- 8.43
34	- 4.22	- 10.85

Cavity marking	x (mm)	y (mm)
35	- 2.11	+ 12.07
36	- 2.11	+ 9.65
37	- 2.11	+ 7.24
38	- 2.11	+ 4.83
39	- 2.11	+ 2.41
40	- 2.11	0
41	- 2.11	- 2.41
42	- 2.11	- 4.83
43	- 2.11	- 7.24
44	- 2.11	- 9.65
45	- 2.11	- 12.07
46	0	+ 10.87
47	0	+ 8.46
48	0	+ 6.05
49	0	+ 3.63
50	0	+ 1.22
51	0	- 1.19
52	0	- 3.61
53	0	- 6.02
54	0	- 8.43
55	0	- 10.85
56	+ 2.11	+ 12.07
57	+ 2.11	+ 9.65
58	+ 2.11	+ 7.24
59	+ 2.11	+ 4.83
60	+ 2.11	+ 2.41
61	+ 2.11	0
62	+ 2.11	- 2.41
63	+ 2.11	- 4.83
64	+ 2.11	- 7.24
65	+ 2.11	- 9.65
66	+ 2.11	- 12.07
67	+ 4.22	+ 10.87
68	+ 4.22	+ 8.46

Cavity marking	x (mm)	y (mm)
69	+ 4.22	+ 6.05
70	+ 4.22	+ 3.63
71	+ 4.22	+ 1.22
72	+ 4.22	- 1.19
73	+ 4.22	- 3.61
74	+ 4.22	- 6.02
75	+ 4.22	- 8.43
76	+ 4.22	- 10.85
77	+ 6.32	+ 9.65
78	+ 6.32	+ 7.24
79	+ 6.32	+ 4.83
80	+ 6.32	+ 2.41
81	+ 6.32	0
82	+ 6.32	- 2.41
83	+ 6.32	- 4.83
84	+ 6.32	- 7.24
85	+ 6.32	- 9.65
86	+ 8.43	- 8.46
87	+ 8.43	+ 6.05
88	+ 8.43	+ 3.63
89	+ 8.43	+ 1.22
90	+ 8.43	- 1.19
91	+ 8.43	- 3.61
92	+ 8.43	- 6.02
93	+ 8.43	- 8.43
94	+ 10.87	+ 6.12
95	+ 11.86	+ 3.91
96	+ 12.40	+ 1.55
97	+ 10.54	0
98	+ 12.40	- 1.55
99	+ 10.87	- 3.61
100	+ 10.87	- 6.02

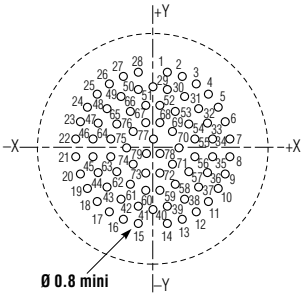
Cavity marking	x (mm)	y (mm)
1	+ 1.35	+ 10.82
2	+ 3.71	+ 10.26
3	+ 5.89	+ 9.19
4	+ 7.77	+ 7.67
5	+ 9.27	+ 5.77
6	+ 10.31	+ 3.58
7	+ 10.85	+ 1.22
8	+ 10.85	- 1.22
9	+ 10.31	- 3.58
10	+ 9.27	- 5.77
11	+ 7.77	- 7.67
12	+ 5.89	- 9.19
13	+ 3.71	- 10.26
14	+ 1.35	- 10.82
15	- 1.35	- 10.82
16	- 3.71	- 10.26
17	- 5.89	- 9.19
18	- 7.77	- 7.67
19	- 9.27	- 5.77
20	- 10.31	- 3.58
21	- 10.85	- 1.22
22	- 10.85	+ 1.22
23	- 10.31	+ 3.58
24	- 9.27	+ 5.77
25	- 7.77	+ 7.67
26	- 5.89	+ 9.19
27	- 3.71	+ 10.26

Cavity marking	x (mm)	y (mm)
28	- 1.35	+ 10.82
29	0	+ 8.20
30	+ 2.49	+ 8.18
31	+ 4.67	+ 7.11
32	+ 6.55	+ 5.59
33	+ 7.90	+ 3.58
34	+ 8.43	+ 1.22
35	+ 8.43	- 1.22
36	+ 7.90	- 3.58
37	+ 6.55	- 5.59
38	+ 4.67	- 7.11
39	+ 2.49	- 8.18
40	0	- 8.84
41	- 2.49	- 8.18
42	- 4.67	- 7.11
43	- 6.55	- 5.59
44	- 7.90	- 3.58
45	- 8.43	- 1.22
46	- 8.43	+ 1.22
47	- 7.90	+ 3.58
48	- 6.55	+ 5.59
49	- 4.67	+ 7.11
50	- 2.49	+ 8.18
51	- 1.22	+ 6.12
52	+ 1.22	+ 6.12
53	+ 3.40	+ 5.05
54	+ 5.28	+ 3.53

Cavity marking	x (mm)	y (mm)
55	+ 6.02	+ 1.22
56	+ 6.02	- 1.22
57	+ 5.28	- 3.53
58	+ 3.40	- 5.05
59	+ 1.22	- 6.12
60	- 1.22	- 6.12
61	- 3.40	- 5.05
62	- 5.28	- 3.53
63	- 6.02	- 1.22
64	- 6.02	+ 1.22
65	- 5.28	+ 3.53
66	- 3.40	+ 5.05
67	- 1.22	+ 3.71
68	- 1.22	+ 3.71
69	+ 3.18	+ 2.29
70	+ 3.94	0
71	+ 3.18	- 2.29
72	+ 1.22	- 3.71
73	- 1.22	- 3.71
74	- 3.18	- 2.29
75	- 3.94	0
76	- 3.18	+ 2.29
77	0	+ 1.35
78	+ 1.22	- 0.74
79	- 1.22	- 0.74

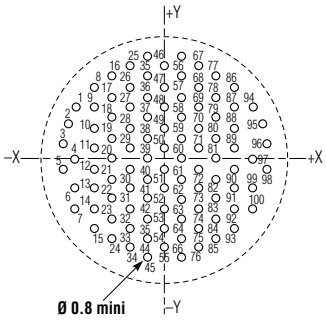
21-35

79 contacts
size 22D



23-35

100 contacts
size 22D



8	- 10.77	+ 9.07
9	- 10.54	+ 4.83
10	- 10.54	+ 2.41
11	- 10.54	0
12	- 10.54	- 2.41
13	- 10.54	- 4.83
14	- 10.77	- 9.07
15	- 8.43	+ 11.28
16	- 8.43	+ 8.43
17	- 8.43	+ 6.02
18	- 8.43	+ 3.61
19	- 8.43	+ 1.19
20	- 8.43	- 1.19
21	- 8.43	- 3.61
22	- 8.43	- 6.02

30	- 6.32	0
31	- 6.32	- 2.41
32	- 6.32	- 4.83
33	- 6.32	- 7.24
34	- 6.32	- 9.65
35	- 6.32	- 12.07
36	- 4.06	+ 13.49
37	- 4.22	+ 10.85
38	- 4.22	+ 8.43
39	- 4.22	+ 6.02
40	- 4.22	+ 3.61
41	- 4.22	+ 1.19
42	- 4.22	- 1.19
43	- 4.22	- 3.61
44	- 4.22	- 6.02

52	- 2.11	+ 2.41
53	- 2.11	0
54	- 2.11	- 2.41
55	- 2.11	- 4.83
56	- 2.11	- 7.24
57	- 2.11	- 9.65
58	- 2.11	- 12.07
59	0	+ 13.26
60	0	+ 10.85
61	0	+ 8.43
62	0	+ 6.02
63	0	+ 3.61
64	0	+ 1.19
65	0	- 1.19
66	0	- 3.61

74	+ 2.11	+ 4.83
75	+ 2.11	+ 2.41
76	+ 2.11	0
77	+ 2.11	- 2.41
78	+ 2.11	- 4.83
79	+ 2.11	- 7.24
80	+ 2.11	- 9.65
81	+ 2.11	- 12.07
82	+ 4.06	+ 13.49
83	+ 4.22	+ 10.85
84	+ 4.22	+ 8.43
85	+ 4.22	+ 6.02
86	+ 4.22	+ 3.61
87	+ 4.22	+ 1.19
88	+ 4.22	- 1.19

96	+ 6.32	+ 7.24
97	+ 6.32	+ 4.83
98	+ 6.32	+ 2.41
99	+ 6.32	0
100	+ 6.32	- 2.41
101	+ 6.32	- 4.83
102	+ 6.32	- 7.24
103	+ 6.32	- 9.65
104	+ 6.32	-12.07
105	+ 8.43	+11.28
106	+ 8.43	+ 8.43
107	+ 8.43	+ 6.02
108	+ 8.43	+ 3.61
109	+ 8.43	+ 1.19
110	+ 8.43	- 1.19

118	+ 10.77	0
119	+ 10.54	- 2.41
120	+ 10.54	- 4.83
121	+ 10.77	- 9.07
122	+ 12.07	+ 7.09
123	+ 13.21	+ 4.83
124	+ 13.87	+ 2.41
125	+ 14.10	0
126	+ 13.87	- 2.41
127	+ 13.21	- 4.83
128	+ 12.17	- 7.09

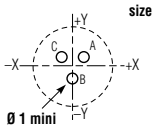
Receptacles equipped with size 20 contacts

The marking of contact cavities is shown on the mating side view of the male receptacle.
The marking on the female plug is symmetrical in relation to the +X/-Y axis.

Cavity marking	x (mm)	y (mm)
A	+ 1.65	+ 0.97
B	0	- 1.91
C	- 1.65	+ 0.97

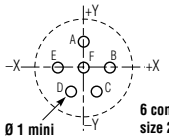
9-98

3 contacts size 20



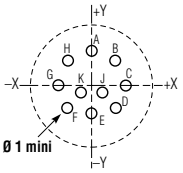
Cavity marking	x (mm)	y (mm)
A	0	+ 3.30
B	+ 3.30	0
C	+ 1.65	- 2.87
D	- 1.65	- 2.87
E	- 3.30	0
F	0	0

11-98



6 contacts size 20

10 contacts size 20

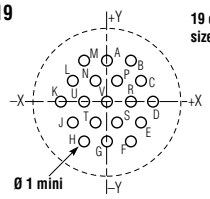


13-98

Cavity marking	x (mm)	y (mm)
A	0	+ 4.95
B	+ 3.18	+ 3.81
C	+ 4.90	+ 0.76
D	+ 4.17	- 2.67
E	0	- 3.43
F	- 4.17	- 2.67
G	- 4.90	+ 0.76
H	- 3.18	+ 3.81
J	+ 1.65	- 0.38
K	- 1.65	- 0.38

15-19

19 contacts size 20



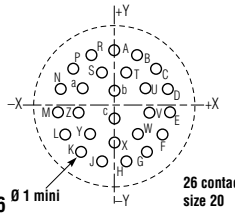
Cavity marking	x (mm)	y (mm)
A	0	+ 5.72
B	+ 3.30	+ 5.72

Cavity marking	x (mm)	y (mm)
C	+ 4.95	+ 2.87
D	+ 6.60	0

Cavity marking	x (mm)	y (mm)
E	+ 4.95	- 2.87
F	+ 3.30	- 5.72
G	0	- 5.72
H	- 3.30	- 5.72
J	- 4.95	- 2.87
K	- 6.60	0
L	- 4.95	+ 2.87
M	- 3.30	+ 5.72
N	- 1.65	+ 2.87
P	+ 1.65	+ 2.87
R	+ 3.30	0
S	+ 1.65	- 2.87
T	- 1.65	- 2.87
U	- 3.30	0
V	0	0

Cavity marking	x (mm)	y (mm)
A	0	+ 8.15
B	+ 3.33	+ 7.44
C	+ 6.07	+ 5.44
D	+ 7.75	+ 2.51

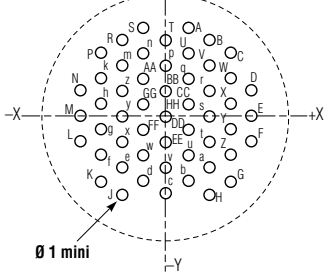
Repère contact	x (mm)	y (mm)
E	+ 8.10	- 0.86
F	+ 7.06	- 4.09
G	+ 4.80	- 6.60
H	+ 1.70	- 7.98

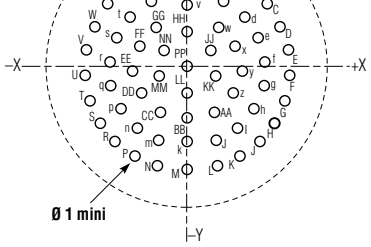


17-26

26 contacts size 20

Cavity marking	x (mm)	y (mm)
J	- 1.70	- 7.98
K	- 4.80	- 6.60
L	- 7.06	- 4.09
M	- 8.10	- 0.86
N	- 7.75	+ 2.51
P	- 6.07	+ 5.44
R	- 3.33	+ 7.44
S	- 1.78	+ 4.50
T	+ 1.78	+ 4.50
U	+ 4.45	+ 2.39
V	+ 4.52	- 0.91
W	+ 3.02	- 3.84
X	0	+ 5.16
Y	- 3.02	- 3.84
Z	- 4.52	- 0.91
a	- 4.45	+ 2.39
b	0	+ 1.65
c	0	- 1.65





Cavity marking	x (mm)	y (mm)
A	+ 2.84	+ 11.56
B	+ 5.72	+ 9.91
C	+ 8.53	+ 8.26
D	+ 11.43	+ 3.30
E	+ 11.43	0
F	+ 11.43	- 3.30
G	+ 8.53	- 8.26
H	+ 5.72	- 10.41
J	- 5.72	- 10.41
K	- 8.53	- 8.26
L	- 11.43	- 3.30
M	- 11.43	0
N	- 11.43	+ 3.30
P	- 8.53	+ 8.26
R	- 5.72	+ 9.91
S	- 2.84	+ 11.56
T	0	+ 9.91
U	+ 2.84	+ 8.26

Cavity marking	x (mm)	y (mm)
V	+ 5.72	+ 6.60
W	+ 8.53	+ 4.95
X	+ 8.53	+ 1.65
Y	+ 8.53	- 1.65
Z	+ 8.53	- 4.95
a	+ 5.72	- 6.60
b	+ 2.84	- 8.26
c	0	- 9.91
d	- 2.84	- 8.26
e	+ 5.72	- 6.60
f	+ 8.53	- 4.95
g	+ 8.53	- 1.65
h	+ 8.53	+ 1.65
k	+ 8.53	+ 4.95
m	- 5.72	+ 6.60
n	- 2.84	+ 8.26
p	0	+ 6.60
q	+ 2.84	+ 4.95

Cavity marking	x (mm)	y (mm)
r	+ 5.72	+ 3.30
s	+ 5.72	0
t	+ 5.72	- 3.30
u	+ 2.84	- 4.95
v	0	- 6.60
w	- 2.84	- 4.95
x	- 5.72	- 3.30
y	- 5.72	0
z	- 5.72	+ 3.30
AA	- 2.84	+ 4.95
BB	0	+ 3.30
CC	+ 2.84	+ 1.65
DD	+ 2.84	- 1.65
EE	0	- 3.30
FF	- 2.84	- 1.65
GG	- 2.84	+ 1.65
HH	0	0

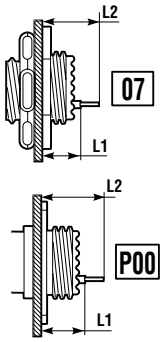
Cavity marking	x (mm)	y (mm)
A	+ 4.98	+ 12.70
B	+ 7.98	+ 11.05
C	+ 10.49	+ 8.71
D	+ 12.32	+ 5.84
E	+ 13.39	+ 2.57
F	+ 13.61	- 0.76
G	+ 12.98	- 4.17
H	+ 11.53	- 7.29
J	+ 9.35	- 9.93
K	+ 6.58	- 11.94
L	+ 3.40	- 13.18
M	0	- 13.64
N	- 3.40	- 13.18
P	- 6.58	- 11.94
R	- 9.35	- 9.93
S	- 11.53	- 7.29
T	- 12.98	- 4.17
U	- 13.61	- 0.76
V	- 13.39	+ 2.57
W	- 12.32	+ 5.84
X	- 10.49	+ 8.71

Cavity marking	x (mm)	y (mm)
Y	- 7.98	+ 11.05
Z	- 4.98	+ 12.70
a	- 1.73	+ 11.53
b	+ 1.73	+ 11.53
c	+ 4.39	+ 9.22
d	+ 7.24	+ 7.19
e	+ 9.19	+ 4.45
f	+ 10.13	+ 1.17
g	+ 9.96	- 2.24
h	+ 8.66	- 5.41
i		- 7.98
j	+ 6.38	- 9.63
k	+ 3.38	- 10.21
m	0	- 9.63
n	- 3.38	- 7.98
p	- 6.38	- 5.41
q	- 8.65	- 2.24
r	- 9.96	+ 1.17
s	- 10.13	+ 4.45
t	- 9.19	+ 7.19
u	- 7.24	+ 9.22

Cavity marking	x (mm)	y (mm)
v	0	+ 8.59
w	+ 3.73	+ 8.66
x	+ 6.02	+ 3.10
y	+ 6.78	- 0.25
z	+ 5.79	- 3.53
AA	+ 3.33	- 5.92
BB	0	- 6.78
CC	- 3.33	- 5.92
DD	- 5.79	- 3.53
EE	- 6.78	- 0.25
FF	- 6.02	+ 3.10
GG	- 3.73	+ 5.66
HH	0	+ 5.08
JJ	+ 2.67	+ 2.39
KK	+ 3.43	- 1.04
LL	0	- 3.35
MM	- 3.43	- 1.04
NN	- 2.67	+ 2.39
PP	0	0

Please consult us for other insert arrangements.

Standard PCB - tail dimensions at the rear of receptacles (in mm)



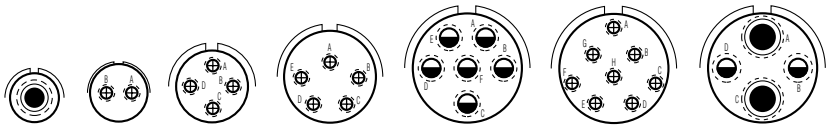
			TV 07 & CTV 07		TVP 00		CTVP 00	
			09 to 11	13 to 25	09 to 19	21 to 25	09 à 19	21 to 25
P	L1	min	10.13	9.95	11.55	12.31	12.71	13.47
		max	11.07	10.89	12.39	13.15	13.52	14.28
	L2	min	15.03	14.85	16.45	17.21	17.61	18.37
		max	16.17	15.99	17.49	18.25	18.62	19.38
S	L1	min	9.93	9.75	11.35	12.11	12.51	13.27
		max	10.87	10.69	12.19	12.95	13.32	14.08
	L2	min	14.83	14.65	16.25	17.01	17.41	18.17
		max	15.97	15.79	17.29	18.05	18.42	19.18

Please refer to data sheet E114 for other PCB-tail versions.

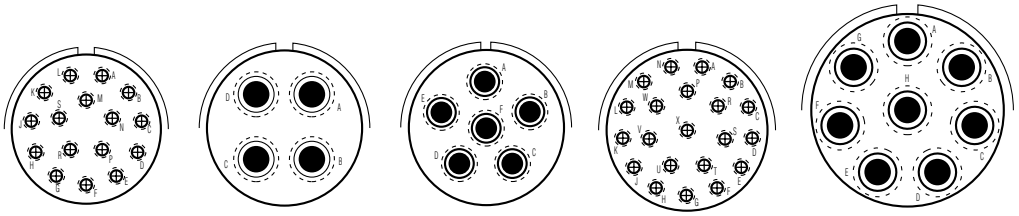
The major keyway is shown in the «normal» position

Contact size	8 G Grounded	12 G Grounded	16 G Grounded
Caption			

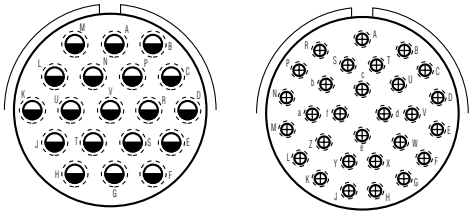
① MIL insert arrangement reference
② TV-CTV insert arrangement reference
③ Service class
④ Number of contacts
⑤ Contact sizes



①	9-05	11-2	13-4	15-5	17-6	17-8	17-22
②		I	I		I	II	
③	1	2	4	5	6	8	2 2
④	8G (TV only)	16G	16G	16G	12G	16G	12G 8G



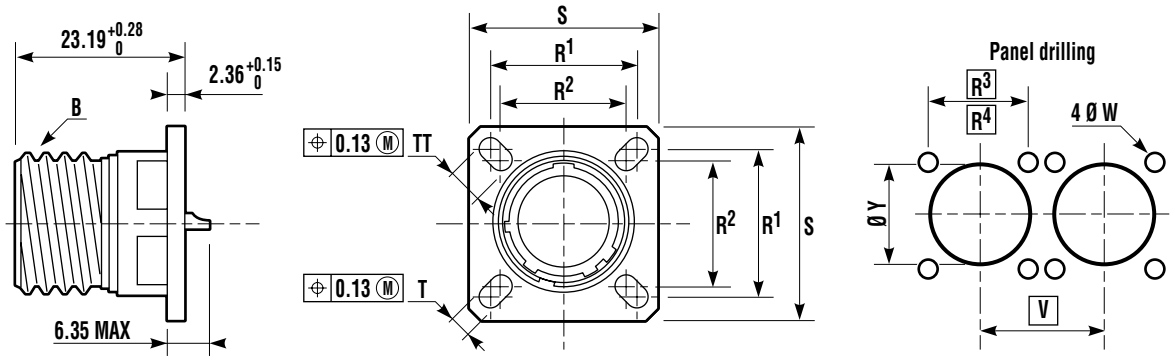
①	21-16	21-75	23-6	23-21	25-8
②			M		
③	16	4	6	21	8
④	16G	8G	8G	16G	8G



①	25-19	25-29
②	I	
③	19	29
④	12G	16G

For insert availability, please refer to pages 9-10.
For panel drilling, please refer to page 15.

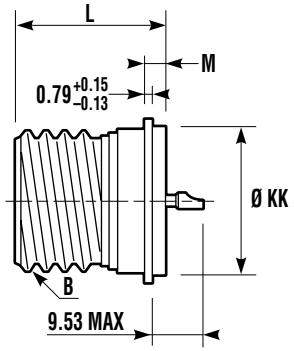
Square flange receptacle

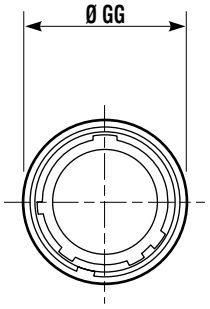


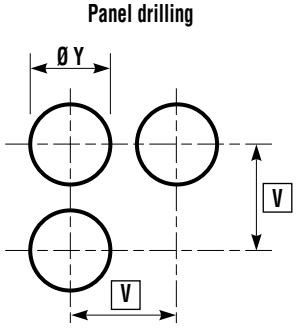
Shell size		B Thread Class 2A 0.1P-0.3L-TS (inches)	R1 (mm)	R2 (mm)	S ±0.25 (mm)	T +0.20 -0.13 (mm)	TT +0.20 -0.13 (mm)	Ø W +0 -0.25 (mm)	R3 (mm)	R4 (mm)	V Mini (mm)	Ø Y Mini (mm)
MIL-DTL-38999 Series III	Amphenol Socapex											
A	9	.6250	18.26	15.09	23.83	3.25	5.49	3.25	18.26	15.09	24.60	16.66
B	11	.7500	20.62	18.26	26.19	3.25	4.93	3.25	20.62	18.26	27.00	20.22
C	13	.8750	23.01	20.62	28.58	3.25	4.93	3.25	23.01	20.62	31.50	23.42
D	15	1.0000	24.61	23.01	30.96	3.25	4.39	3.25	24.61	23.01	34.50	26.59
E	17	1.1875	26.97	24.61	33.32	3.25	4.93	3.25	26.97	24.61	28.00	30.96
F	19	1.2500	29.36	26.97	36.53	3.25	4.93	3.25	29.36	26.97	40.50	32.94
G	21	1.3750	31.75	29.36	39.67	3.25	4.93	3.25	31.75	29.36	44.00	36.12
H	23	1.5000	34.93	31.75	42.88	3.91	6.15	3.81	34.93	31.75	47.00	39.29
J	25	1.6250	38.10	34.93	46.02	3.91	6.15	3.81	38.10	34.93	50.00	42.47

A	9	.6250	30.45	22.23	9.07	16.31	26.97	27.80	17.70	16.99	4.1
B	11	.7500	35.20	25.40	9.07	19.46	31.75	32.60	20.88	19.53	5.3
C	13	.8750	38.38	30.18	9.07	22.66	34.93	36.00	25.58	24.26	6.9
D	15	1.0000	41.55	33.32	9.07	25.86	38.10	39.60	28.80	27.53	8.6
E	17	1.1875	44.73	36.53	9.07	29.01	41.28	43.30	31.98	30.68	9.8
F	19	1.2500	49.50	39.67	9.68	32.21	46.02	47.00	35.16	33.86	10.9
G	21	1.3750	52.65	42.80	9.68	35.36	49.23	50.60	38.28	37.06	12.7
H	23	1.5000	65.85	46.02	9.68	38.56	52.37	54.20	41.50	40.01	13.8
J	25	1.6250	59.00	50.80	9.68	41.71	55.58	59.70	44.68	43.41	15

TVSIY **JD38999/25Y**
TVSIYN **JD38999/25N**
Solder mounting receptacle







Shell size		B Thread Class 2A 0.1P-0.3L-TS (inches)	Ø GG +0.28 -0.25 (mm)	Ø KK +0.03 -0.13 (mm)	L +0.28 -0 (mm)	M +0.15 -0.13 (mm)	V Mini (mm)	Ø Y Mini (mm)
MIL-DTL-38999 Series III	Amphenol Socapex							
A	9	.6250	19.05	17.07	20.47	3.18	24.60	17.60
B	11	.7500	21.44	19.84	20.47	3.18	27.00	20.40
C	13	.8750	24.61	23.01	20.47	3.18	31.50	23.50
D	15	1.0000	27.79	26.19	20.47	3.18	24.50	26.70
E	17	1.1875	30.94	29.36	20.47	3.18	38.00	29.90
F	19	1.2500	33.32	31.75	20.47	3.18	40.50	32.30
G	21	1.3750	36.53	34.93	20.47	3.18	44.00	35.50
H	23	1.5000	39.70	38.10	21.29	3.96	47.00	38.60
J	25	1.6250	42.88	41.28	21.29	3.96	50.00	41.80

Overall dimensions

Lanyard release plugs - MIL-STD-1760

Low profile version (ordering information on page 30)

TVFBRW JD38999/31W

Lanyard release plugs - MIL-STD-1760

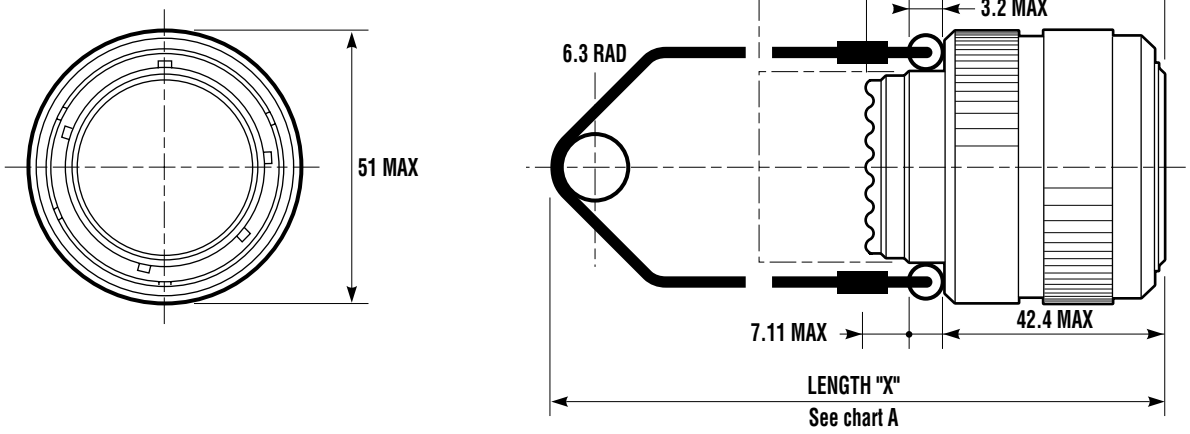


CHART A

Length "X" MIL.STD 1760 coding	mm
D	140
E	153
F	166
G	178
H	191
J	407
K	229
M	254
X	432

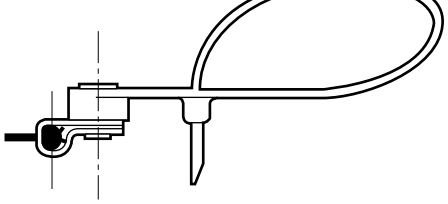
Other lengths are also available under TVFBRW proprietary designation.
Consult us.

04	11-4
06	11-35
07	11-98
10	13-4
11	13-8
13	13-98
14	13-35
18	15-5
19	15-19
20	15-35
27	17-6
28	17-8
29	17-26
30	17-35
31	17-99
37	19-11
38	19-28
39	19-32
40	19-35
47	21-11
48	21-16
49	21-35
50	21-41
51	21-39
57	23-21
58	23-35
59	23-53
66	25-19
67	25-29
68	25-35
69	25-43
70	25-61
71	25-4
72	25-24

Series III			(mm)	(mm)
B	11	M15x1.0-6g	46.89	28.17
C	13	M18x1.0-6g	50.09	31.75
D	15	M22x1.0-6g	52.81	34.93
E	17	M25x1.0-6g	56.01	38.10
F	19	M28x1.0-6g	58.45	41.28
G	21	M31x1.0-6g	62.79	44.45
H	23	M34x1.0-6g	65.89	47.63
J	25	M37x1.0-6g	68.71	50.08

CHART III

Length "X" (mm)	Code MS/Amphenol
102	A
115	B
127	C
140	D
153	E
166	F
178	G
191	H
203	I
216	J
229	K
242	L
254	M
267	N
280	P
293	R
305	S
318	T
331	U
356	V
381	W
407	X
432	Y
458	Z



Termination of the cord
for plugs protection caps
(for shell type: 06)

Cord length for plugs: 160 mm
Cord length for receptacles: 105 mm
Chain length for plugs: 127 mm
Chain length for receptacles: 152 mm

Shell size		A Thread 0.1P-0.3L-TS Class 2B (inches)	B Dia Max (mm)	N Dia Max (mm)
MIL-DTL-38999 Series III	Amphenol Socapex			
A	9	.6250	22.23	22.73
B	11	.7500	25.40	25.40
C	13	.8750	28.58	29.74
D	15	1.0000	31.75	32.99
E	17	1.1875	36.53	36.47
F	19	1.2500	38.10	39.19
G	21	1.3750	41.28	42.42
H	23	1.5000	44.45	45.39
J	25	1.6250	47.63	48.62

Ordering information

CAP Series	B	EC	N	TV	W	15

Protection cap type
EC: For square flange receptacle
ER: For jam nut receptacle
F: For plug

Wire type
N: Nylon cord
Blank: Metallic chain

Connector type

Finish
B: Bronze
F: Electroless nickel plated, aluminium version
W: Olive drab cadmium plated, aluminium version

Corresponding connector shell size:
09/11/13/15/17/19/21/23/25

For composite or stainless steel caps, please consult us

	22	900245-91	-	900256	-

Above part numbers include standard 500 – cycle finish designation – gold plating over suitable underplate in accordance with MIL-C-39029.

* For use with RG180B/U and RG195A/U cable. For other size 8, 12 and 16 coaxial contacts please refer to data sheet E114.

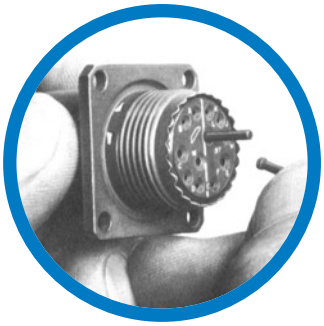
** For arrangement 21-48 only

For other contacts (coaxial, triaxial, optical termini, PCB, thermocouple), please refer to data sheet E114

For details regarding size 8 piggy back grommets range, please refer to data sheet E114

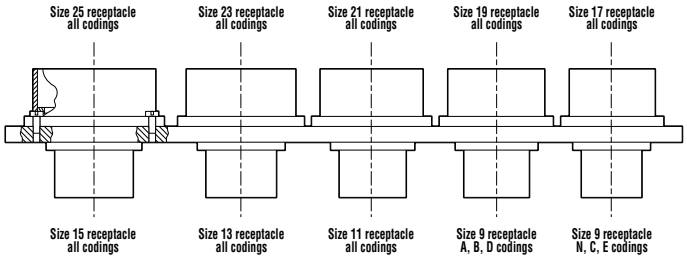
Sealing plugs

Contact Size	Proprietary No	Military No
8 (Coax)	900024	NA
8 (Power)	900029	NA
10 (Power)	10.576225	NA
12	900023	MS27488-12
16	900020	MS27488-16
20	900021	MS27488-20
22D	900022	MS27488-22



Holding support equipped with olive drab cadmium dummy receptacles

Amphenol Socapex reference: **809 931**



Torque value for rear accessories

For metallic accessories on metallic shells only.
For composite, please consult us.

Shell Size	Max. torque value N.m	Shell Size	Max. torque value N.m
9	11.30	19	22.60
11	11.30	21	28.30
13	17.00	23	28.30
15	22.60	25	28.30
17	22.60		

20	900 001	M39029/58-363	809 857	M22520/1-01	809 858	M22520/1-04
			809 801	M22520/2-01	809 826	M22520/2-10
	900 041	M39029/56-351	809 857	M22520/1-01	809 858	M22520/1-04
			809 801	M22520/2-01	809 826	M22520/2-10
22D	900 004	M39029/58-360	809 801	M22520/2-01	809 810	M22520/2-09
	900 044	M39029/56-348	809 801	M22520/2-01	809 835	M22520/2-07

Insertion and removal tools

Plastic tools

Contact Size	Insertion tools		Removal tools	
	Proprietary No	Military No	Proprietary No	Military No
8 power	*	*	-	-
10 power	-	M81969/14-05	-	M81969/14-05
12	809 859	M81969/14-04	809 859	M81969/14-04
16	809 855	M81969/14-03	809 855	M81969/14-03
20	809 854	M81969/14-10	809 854	M81969/14-10
22D	809 856	M81969/14-01	809 856	M81969/14-01

* Manual insertion

Metallic tools

Contact size	Straight type		Angle type			
	Insertion tools	Removal tools	Insertion tools		Removal tools	
	Proprietary No	Proprietary No	Proprietary No	Military No	Proprietary No	Military No
8 power/coax	*	809 961	*	*	809 845	-
10 power	-	-	-	M81969/8-11	-	M81969/8-12
12	-	-	809 838	M81969/8-09	809 839	M81969/8-10
16	809 816	809 846	809 812	M81969/8-07	809 820	M81969/8-08
20	809 817	809 847	809 813	M81969/8-05	809 821	M81969/8-06
22D	809 819	809 849	809 815	M81969/8-01	809 823	M81969/8-02

* Manual insertion

Note: For lanyard release plugs, only use straight removal tools.

WCI: Olive drab cadmium plated 175°C, PCB contacts
WDW: Olive drab cadmium plated 175°C, wire-wrap contacts*
RF: Electroless nickel plated 200°C, crimp contacts
FCI: Electroless nickel plated 200°C, PCB contacts
FDW: Electroless nickel plated 200°C, wire-wrap contacts*

Stainless steel *See pages 13 to 15*
RK: Passivated 200°C, firewall capability, crimp contacts
KCI: Passivated 200°C, firewall capability, PCB contacts
KDW: Passivated 200°C, firewall capability, wire-wrap contacts*
RS: Nickel plated 200°C, firewall capability, crimp contacts
SCI: Nickel plated 200°C, firewall capability, PCB contacts
SDW: Nickel plated 200°C firewall capability, wire-wrap contacts*

Bronze *See pages 13 to 15*
RB: 200°C, crimp contacts
BCI: 200°C, PCB contacts
BDW: 200°C, wire-wrap contacts*

Shell size
09/11/13/15/17/19/21/23/25

Contact arrangement
See pages 6 to 8

Contact type
P: Pin (500 cycles)
S: Socket (500 cycles)
H: Pin (1500 cycles - CTV only)
J: Socket (1500 cycles - CTV only)

Polarization
Blank for normal or A, B, C, D, E. *See coding system on page 10*

Contacts
Blank: Connector delivered with contacts
LC: Connector delivered without contacts

Deviation
F404: Tinned PCB contacts
W88 (for TVS06 RB only): Coupling nut conforms to CECC75 - 201 - 002A
For other deviations (FXXX), please consult us.

* For information on wire wrap contacts, please refer to data sheet E114.

Contact arrangement
See pages 6 to 8

Contact and connector type
A: Without pin contact
B: Without socket contact
P: With pin contacts
S: With socket contacts

Polarization:
N for normal or A, B, C, D, E. *See coding system on page 10*

Amphenol designation - Data bus "Ground Plane" receptacle

Series	CTV	P 00	RG	W	15	05	P	-	LC

CTV: Composite shell
(for TV metallic shell, please consult us)

Shell type
Square flange receptacle: 175°C (O.D. cadmium): **P 00** 200°C (nickel): **PS00**
Jam nut receptacle: 175°C (O.D. cadmium): **07** 200°C (nickel): **S07**

Insert type
RG: conductive insert

Shell finish
W: Olive drab cadmium plated 175°C
F: Electroless nickel plated 200°C

Shell size*
09/11/13/15/17/21/23/25

Contact arrangement
See page 19

Contact type
P: Pin
S: Socket

Polarization
Blank for normal or A,B. *See coding system on page 10*

Contacts
LC: Connector delivered without contact.

For other arrangement, shell, coding or deviation, please consult us
* Shell size 9, available in aluminium (TV version) only.

Polarization
Blank for normal or A, B, C, D, E. *See coding system on page 10.*

Military designation - Hermetic versions

Connector type	**JD38999/**	**25**	**N**	**B**	**35**	**P**	**N**

Shell type
21: Square flange receptacle
23: Jam nut receptacle
25: Solder mounting receptacle

Shell material and finish
Y: Stainless steel passivated
N: Stainless steel nickel plated

Shell size

A	B	C	D	E	F	G	H	J	MIL
09	11	13	15	17	19	21	23	25	Amphenol

Contact arrangement
See pages 6 to 8 (insert arrangements marked with "Y")

Contact type
P: Pin.

Polarization:
N for normal or A, B, C, D, E. *See coding system on page 10*

M: 254 mm
J: 407 mm
X: 432 mm
Other lengths are available upon request

Military designation - MIL-STD-1760 lanyard release plugs

Low profile version

Series	JD38999/	31	W	E	11	N	1

Shell and contact type
31: Plug with pin contacts, per MIL-STD-1760

Shell finish
W: Olive drab cadmium plated 175°C

Lanyard length
D: 140 mm
E: 153 mm
F: 166 mm
G: 178 mm
H: 191 mm
K: 229 mm
M: 254 mm
J: 407 mm
X: 432 mm

Contact arrangement
11: 25-11 arrangement
20: 25-20 arrangement

Polarization:
N for 25-20 arrangement. *See coding on page 10*
A for 25-11 arrangement.

Plug locking ring type
1: Ø 51mm (low profile)
2: Ø 68mm (please consult us)

Polarization

MS code	Socket contact code Amphenol	MS code	Pin contact code Amphenol
SN	S (normal)	PN	P (normal)
SA	H	PA	G
SB	J	PB	I
SC	L	PC	K
SD	N	PD	M
SE	T	PE	R

Military designation - Lanyard release plugs

Standard version

Connector type	JD38999/	29	W	D	35	E	N

Shell and contact type
29: Plug with pin contacts
30: Plug with socket contacts

Shell finish
W: Olive drab cadmium plated
F: Nickel plated

Shell size

A*	B	C	D	E	F	G	H	J	MIL
09*	11	13	15	17	19	21	23	25	Amphenol

* Please consult us

Contact arrangement
See chart I on page 23

Lanyard length
A to Z code *(see chart III on page 23)*

Polarization
N for normal or A, B, C, D, E. *See coding on page 10*

		TV07WDW ☐ ☐ ## P ^ LC
	JD38999/24F X XX A °	TVS07RF ☐ ☐ ## P ^ LC
		TVS07FCI ☐ ☐ ## P ^ LC
		TVS07FDW ☐ ☐ ## P ^ LC
	JD38999/26W X XX A °	TV06RW ☐ ☐ ## P ^ LC
	JD38999/26F X XX A °	TVS06RF ☐ ☐ ## P ^ LC
Stainless steel shell	JD38999/20K X XX A °	TVPS00RK ☐ ☐ ## P ^ LC
		TVPS00KCI ☐ ☐ ## P ^ LC
		TVPS00KDW ☐ ☐ ## P ^ LC
	JD38999/20S X XX A °	TVPS00RS ☐ ☐ ## P ^ LC
		TVPS00SCI ☐ ☐ ## P ^ LC
		TVPS00SDW ☐ ☐ ## P ^ LC
	JD38999/24K X XX A °	TVS07RK ☐ ☐ ## P ^ LC
		TVS07KCI ☐ ☐ ## P ^ LC
		TVS07KDW ☐ ☐ ## P ^ LC
	JD38999/24S X XX A °	TVS07RS ☐ ☐ ## P ^ LC
		TVS07SCI ☐ ☐ ## P ^ LC
		TVS07SDW ☐ ☐ ## P ^ LC
	JD38999/26K X XX A °	TVS06RK ☐ ☐ ## P ^ LC
	JD38999/26S X XX A °	TVS06RS ☐ ☐ ## P ^ LC
Aluminium bronze shell		TVPS00RB ☐ ☐ ## P ^
		TVPS00BCI ☐ ☐ ## P ^
		TVPS00BDW ☐ ☐ ## P ^
		TVS07RB ☐ ☐ ## P ^
		TVS07BCI ☐ ☐ ## P ^
		TVS07BDW ☐ ☐ ## P ^
Hermetic receptacles	JD38999/21Y X XX P °	TVPS02Y ☐ ☐ ## P ^
	JD38999/21N X XX P °	TVPS02YN ☐ ☐ ## P ^
	JD38999/23Y X XX P °	TVS07Y ☐ ☐ ## P ^
	JD38999/23N X XX P °	TVS07YN ☐ ☐ ## P ^
	JD38999/25Y X XX P °	TVSIY ☐ ☐ ## P ^
	JD38999/25N X XX P °	TVSIYN ☐ ☐ ## P ^

As example, male version without contact (except for bronze and hermetic male versions with contacts).

CAPTION	MIL-DTL-38999 Series III P/N	AMPHENOLP/N
Shell size	X	☐ ☐
Insert arrangement	XX	##
Polarization, rotation of secondary keyways	°	^

Do not hesitate to contact us for further information

Amphenol

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