Amphenol Aerospace

HIGH DENSITY INTERCONNECTS

HD38999

PDS-208-26



A CONNECTOR THAT STARTS AT 9 GOES TO 187 CONTACTS

The HD38999 family of connectors has 30% more contact density than the highest density Mil Spec 38999 connectors of its size. This series of connectors was designed to utilize mil-specified 38999 components with the exception of the contacts and inserts arrangement. Utilizing existing mil-qualified 39029 size 23 contacts and 38999 insert materials, these connectors are essentially a drop-in replacement for the standard 38999 connector.

This connector design benefits users in a couple of different ways. For those users who need to increase the amount of contacts in their application, the HD38999 series allows them to do so without increasing the size of their connector. For users who are looking to decrease the overall size of their system, they can do so by using smaller shell sizes without decreasing the number of contacts.

Amphenol has qualified this series of connectors to the requirements of MIL-DTL-38999. Amphenol also manufacturers this high density series in Filter, Hermetic and customized versions to fit our customer's needs. Please contact us if additional information is required.

HD38999 High Density

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HIGH DENSITY INTERCONNECTS

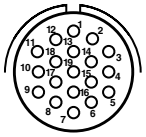
INSERT

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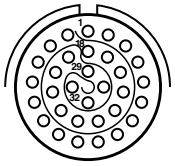
High Density Shell Sizes (Front of Pin Insert Shown)
(all contacts are size 23)



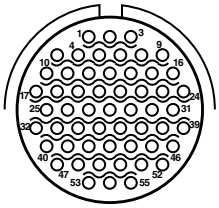
9-9
3



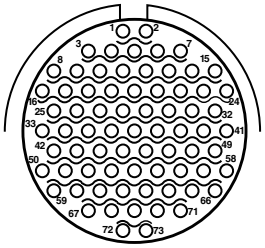
11-19
6



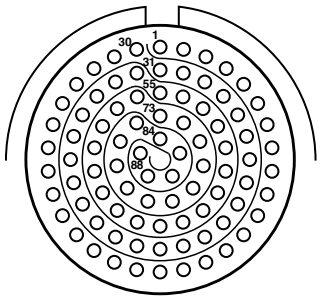
13-32
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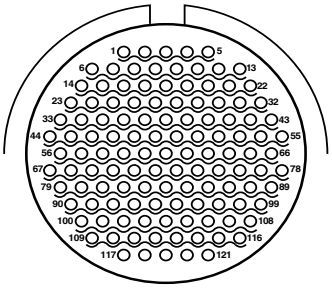
15-55
18



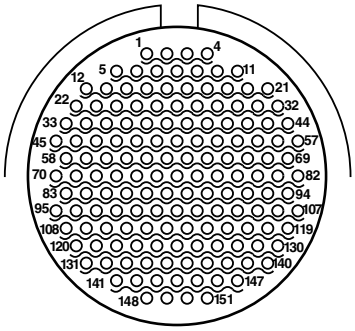
17-73
18



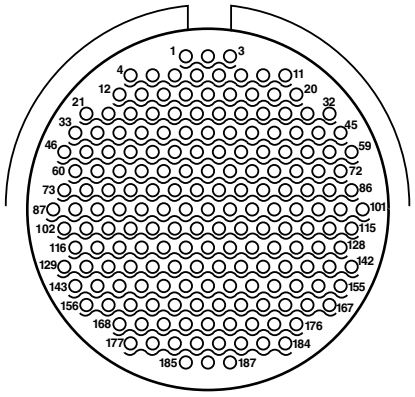
19-88
22



21-121
42



23-151
51



25-187
59

Increased number of contacts in HD38999 insert pattern
compared to Standard 38999*contact density of same shell size.

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HIGH DENSITY INTERCONNECTS

Amphenol Aerospace

1.	2.	3.	4.	5.	6.	7.
Connector Type	Shell Style	Service Class	Shell Size - Insert Arrangement	Contact Type	Alternate Positions	PCB Options
TV or PTV (Potted version)	06	RW	23-151	P	B	(P25)

1. CONNECTOR TYPE

TV	Tri-Start Series Connector
TVP	Back panel mounted receptacle
MTV	CLUTCH-LOK high vibration plug connector (Note: remove dashes in how to order part number when ordering CLUTCH-LOK)
CTV	Tri-Start Composite Series connector
CTVP	Panel mounted composite receptacle

P (prefix forPotted)

2. SHELL STYLE

00	Wall mount receptacle
40	Wall mount double flange receptacle
01	Line receptacle
02	Box mount receptacle - contact Amphenol for availability
06	Straight plug
07	Jam nut receptacle
47	Jam nut double flange receptacle
26	Proprietary CLUTCH-LOK high vibration straight plug (service Class RK only)
97	Reduced flange jam nut receptacle (not available in composite)
96	Straight plug with integral backshell (not available in composite)

3. SERVICE CLASS

RF	Electroless nickel plated aluminum, optimum EMI shielding effectiveness -65dB @ 10GHz specification min., 48 hour salt spray, 175°C	
RW	Corrosion resistant olive drab cadmium plate aluminum, 500 hour extended salt spray, EMI -50dB @ 10GHz specification min.,175°C	
RL	Corrosion resistant stainless steel, electro-deposited nickel, 48 hours salt spray, 175°C, non-firewall	
RK	Corrosion resistant stainless steel, firewall capability, plus 500 hour salt spray resistance, EMI –45 dB @ 10 GHz specification min., 175°C	
DT	Durmalon plated, alternative to cadmium. Corrosion resistant, 500 hour extended salt spray EMI -50dB @ 10GHz specification min. without CR6	
DZ	Zinc-Nickel alternative to cadmium. Corrosion resistant, 500 hour salt spray, conductive, –65°C to +175°C	

Shell Sizes are MIL-DTL-38999, Series III, with the newer High Density insert arrangements shown on page 1.

4. SELECT A SHELL SIZE – INSERT ARRANGEMENT

Shell Size	Insert Arrangement Number
9-	9
11-	19
13-	32
15-	55
17-	73
19-	88
21-	121
23-	151
25-	187

5. CONTACT TYPE

P	Pin Contacts
S	Socket Contacts

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HIGH DENSITY INTERCONNECTS

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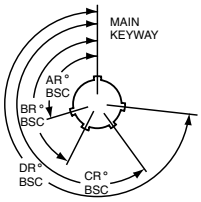
1.	2.	3.	4.	5.	6.	7.
Connector Type	Shell Style	Service Class	Shell Size - Insert Arrangement	Contact Type	Alternate Positions	PCB Options
TV or PTV (Potted version)	06	RW	23-151	P	B	(P25)

6. ALTERNATE POSITION

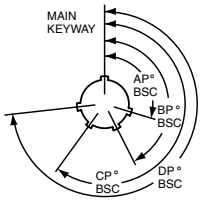
Shell size	Key & keyway arrangement identification letter	AR° or AP° BSC	BR° or BP° BSC	CR° or CP° BSC	DR° or DP° BSC
9	N	105	140	215	265
	A	102	132	248	320
	B	80	118	230	312
	C	35	140	205	275
	D	64	155	234	304
	E	91	131	197	240
11, 13, and 15	N	95	141	208	236
	A	113	156	182	292
	B	90	145	195	252
	C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

A, B, C, D, E or blank for normal.

RECEPTACLE
(front face shown)



PLUG
(front face shown)



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.

7. PCB CONTACT OPTION

Pin Contacts	Pin Contacts with Alignment Disc*	Socket Contacts	Socket Contacts with Alignment Disc*	PCB tail stickout +/- .040 inch
P1*	P1AD	S1	S1AD	.100* normal
P15*	P15AD	S15	S1AD	.150* normal
P2	P2AD	S2	S2AD	.200* normal
P25*	MP25AD	S25	S25AD	.250* normal
P3*	P3AD	S3	S3AD	.300* normal
P35	P35AD	S35	S35AD	.350* normal

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CONTACTS & TOOLS

Amphenol Aerospace

CONTACT PART NUMBERS:

Size 23 Sockets 10-597330-735 (M39029/17-172)
Size 23 Pins 10-597331-735 (M39029/18-177)
Sealing Plugs 10-405996-222 (MS27488-22-2)

CRIMP BARREL DIA.:

(Inches) .034-.036

CRIMP BARREL DEPTH:

(Inches) .151-.155

TOOLS:

Crimp Tool: Daniels M22520/2-01
Positioner: Daniels M22520/2-16 Socket
Daniels M22520/2-13 Pin
Insertion Tool: Daniels DAK225-22
Removal Tool: Daniels DRK225-22
Insertion/Removal Tool: M81969/16-04 (Plastic)

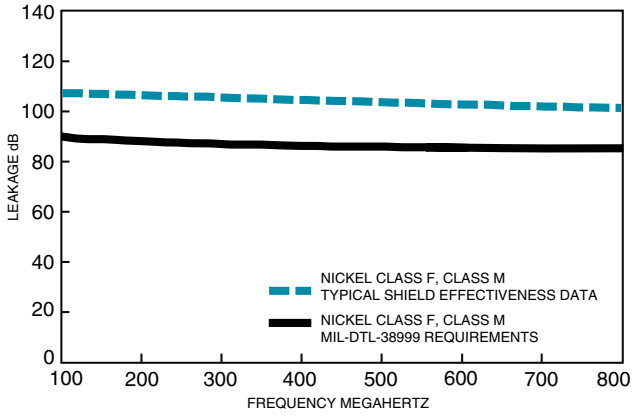
Note: Wire insulation diameter greater than 0.045 is too large for the extraction tool to work properly. Connector damage is possible.

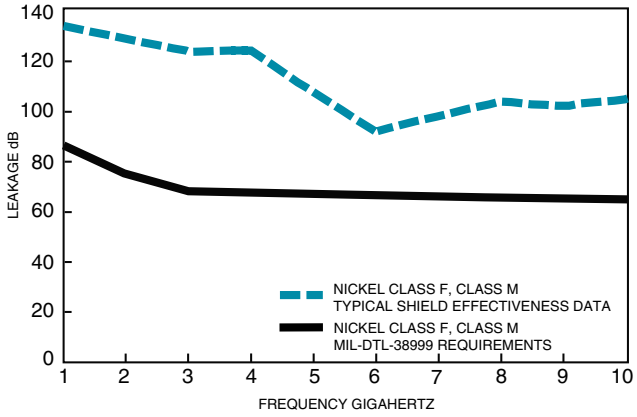
TECHNICAL DATA

HD38999 series was designed to meet and/or exceed the specifications of MIL-DTL-38999. The connector series has been tested to all the requirements of 38999 with the use of AS39029 size 23 contacts. Test reports are available upon request. The following is a summary of some of the performance requirements.

EMI SHIELDING EFFECTIVENESS:

Solid metal to metal coupling, EMI grounding fingers and conductive finishes have proven to be the ultimate in EMI/EMP shielding effectiveness. The following chart illustrated shielding effectiveness data which is typical in HD38999 connectors.





ELECTRICAL:

22 AWG: 5.0 AMPS
24 AWG: 3.0 AMPS
26 AWG: 2.0 AMPS
28 AWG: 1.5 AMPS

Insulation Resistance: 5000 megohms min.@500 VDC 25C

Dielectric Withstanding Voltage: 1000 VRMS@sea level

MECHANICAL:

Metallic Shells:
Material: Aluminum alloy, Stainless Steel
Protection: Electroless Nickel, O.D. Cadmium, Durmalon (Nickel PTFE), Zinc Nickel

Composite Shells:
Material: Thermoplastic Protection: Electroless Nickel, O.D. Cadmium, Durmalon (Nickel PTFE), Zinc Nickel

Contacts: Material: Copper Alloy
Protection: Gold over Nickel

Insert Retention to Shell: 100 psi in axial load

Durability: 500 full mating and unmating cycles

Vibration: 60G sine per MIL-DTL-38999L Para 4.5.23.2.1
5G2 Random per EIA-364-28E, Test condition A
1G2 Random per EIA-364-28E, Test condition I

Shock: Per EIA-364-27B, 300g

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TECHNICAL DATA

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ENVIRONMENTAL:

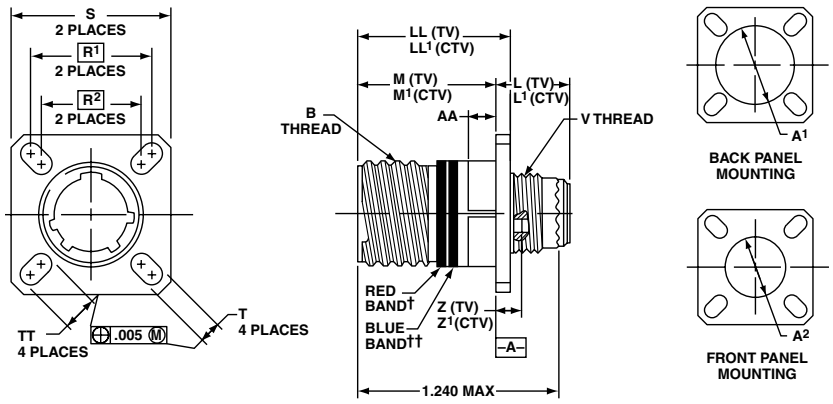
Operating Temperature: –65°C to +175°C

Salt Spray:
Metallized: Electroless Nickel: 48 hours
Anodic Coating, O. D. Cadmium, Durmalon,
Zinc Nickel: 500 hours

Salt Spray Composite: Electroless Nickel: 1000 hours
O. D. Cadmium, Durmalon, Zinc Nickel: 500 hours

WALL MOUNTING RECEPTACLE

TVP00( ) - CRIMP, METAL
CTVP00( ) - CRIMP, COMPOSITE



See how to build a part number on pages 2

† 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	Z. Max. (TV)	Z1 Max. (CTV)	A1 Back Panel Mount	A2 Front Panel Mount	AA Max. Panel Thickness	LL +.006 –.000 (TV)	LL1 ±.005 (CTV)	TT ±.008
9	A	.6250	.469	.520	.820	.773	.719	.594	.948	.128	.153	.198	.650	.510	.234	.905	.908	.216
11	B	.7500	.469	.520	.820	.773	.812	.719	1.043	.128	.153	.198	.800	.620	.234	.905	.908	.194
13	C	.8750	.469	.520	.820	.773	.906	.812	1.137	.128	.153	.198	.910	.740	.234	.905	.908	.194
15	D	1.0000	.469	.520	.820	.773	.969	.906	1.232	.128	.153	.198	1.040	.900	.234	.905	.908	.173
17	E	1.1875	.469	.520	.820	.773	1.062	.969	1.323	.128	.153	.198	1.210	1.010	.234	.905	.908	.194
19	F	1.2500	.469	.520	.820	.773	1.156	1.062	1.449	.128	.153	.198	1.280	1.130	.234	.905	.908	.194
21	G	1.3750	.500	.552	.790	.741	1.250	1.156	1.575	.128	.183	.228	1.410	1.250	.204	.905	.904	.194
23	H	1.5000	.500	.552	.790	.741	1.375	1.250	1.701	.154	.183	.228	1.530	1.360	.204	.905	.904	.242
25	J	1.6250	.500	.552	.790	.741	1.500	1.375	1.823	.154	.183	.228	1.660	1.470	.204	.905	.904	.242

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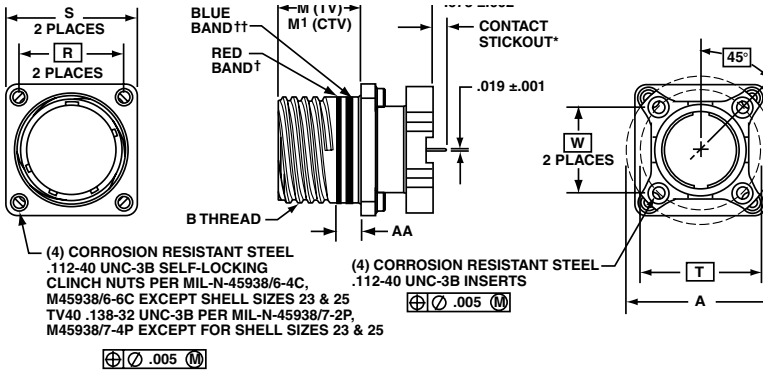
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WALL MOUNTING DOUBLE FLANGE

(PRINTED CIRCUIT BOARD MOUNT)

TVP40( ) - CRIMP, METAL

CTVP40( ) - CRIMP, COMPOSITE



See how to build a part number on pages 2

* Contact stickout dimension: see Step 7 of how to order on page 2.

† Red band indicates fully mated

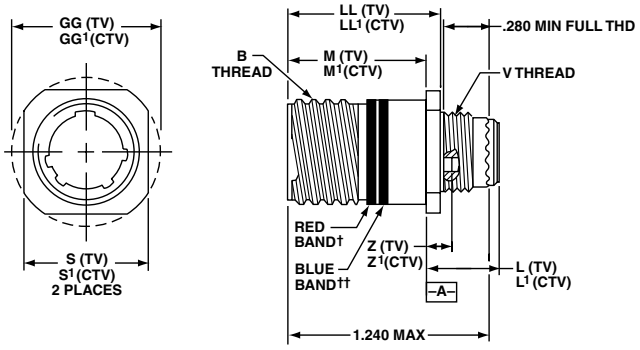
†† Blue band indicates rear release contact retention system.

Shell Size	MS Shell Size Code	A Dia. ±.005 (TV)	A Dia. ±.005 (CTV)	B Thread Class 2A 0.1P-0.3L-TS (Plated)	M +.000 −.005 (TV)	M¹ ±.003 (CTV)	R (Panel Mount) (CTV)	R (Panel Mount (TV)	S Max. (TV)	S Max. (CTV)	AA Max. Panel Thickness	PCB Mounting Dimensions	
												T Dia. (TV) TP	W (CTV) TP
9	A	1.016	1.016	.6250	.820	.770	.719	NA	1.094	.949	.234	.752	.532
11	B	1.062	1.148	.7500	.820	.770	.812	.766	1.187	1.042	.234	.850	.601
13	C	1.250	1.250	.8750	.820	.770	.906	.859	1.281	1.136	.234	.994	.703
15	D	1.375	1.375	1.0000	.820	.770	.969	.938	1.344	1.230	.234	1.119	.791
17	E	1.500	1.500	1.1875	.820	.770	1.062	1.016	1.437	1.323	.234	1.237	.875
19	F	1.625	1.625	1.2500	.820	.770	1.156	1.110	1.531	1.449	.234	1.379	.975
21	G	1.750	1.750	1.3750	.820	.738	1.250	1.206	1.625	1.573	.204	1.489	1.053
23	H	1.875	1.875	1.5000	.820	.738	1.375	1.312	1.750	1.699	.204	1.619	1.195
25	J	2.000	2.000	1.6250	.820	.738	1.500	1.438	1.875	1.823	.204	1.744	1.233

LINE RECEPTACLE

TV01( ) - CRIMP, METAL

CTV01( ) - CRIMP, COMPOSITE



See how to build a part number on pages 2 & 3

† Red band indicates fully mated

†† Blue band indicates rear release contact retention system.

Shell Size	MS Shell Size Code	B Thread 0.1P-0.3L-TS-2A (Plated)	M +.000 −.005 (TV)	M¹ +.000 −.005 (CTV)	L Max. (TV)	L¹ Max. (CTV)	S ±.010 (TV)	S¹ ±.010 (CTV)	Z Max (TV)	Z¹ Max (CTV)	GG ±.010 (TV)	GG¹ ±.010 (CTV)	LL +.006 −.000 (TV)	LL¹ ±.005 (CTV)
9	A	.6250	.820	.773	.469	.520	.675	.635	.153	.198	.812	.699	.905	.908
11	B	.7500	.820	.773	.469	.520	.800	.765	.153	.198	.905	.875	.905	.908
13	C	.8750	.820	.773	.469	.520	.925	.885	.153	.198	1.093	1.007	.905	.908
15	D	1.0000	.820	.773	.469	.520	1.050	1.100	.153	.198	1.219	1.140	.905	.908
17	E	1.1875	.820	.773	.469	.520	1.238	1.197	.153	.198	1.375	1.229	.905	.908
19	F	1.2500	.820	.773	.469	.520	1.300	1.260	.153	.198	1.469	1.380	.905	.908
21	G	1.3750	.790	.741	.500	.552	1.425	1.385	.183	.228	1.625	1.493	.905	.904
23	H	1.5000	.790	.741	.500	.552	1.550	1.510	.183	.228	1.750	1.626	.905	.904
25	J	1.6250	.790	.741	.500	.552	1.675	1.635	.183	.228	1.875	1.777	.905	.904

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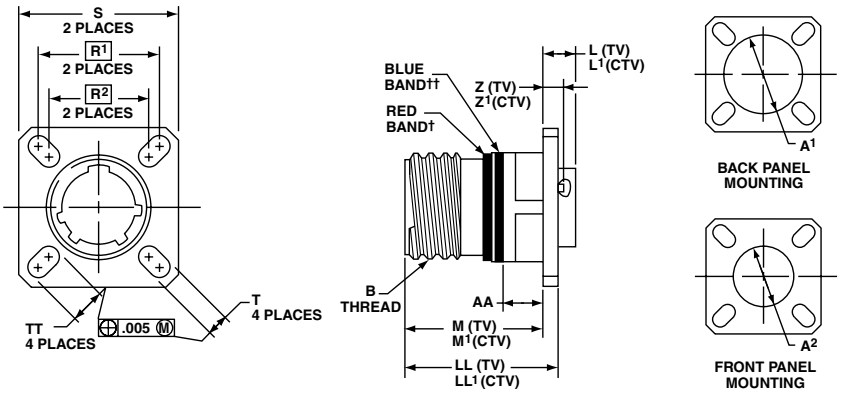
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BOX MOUNT RECEPTACLE

Amphenol Aerospace

TVP02( ) - CRIMP, METAL
CTVP02( )- CRIMP, COMPOSITE



See how to build a part number on pages 2 & 3

† Red band indicates fully mated

†† Blue band indicates rear release contact retention system.

**Consult Amphenol Aerospace for availability for box mount receptacles.

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	Z. Max. (TV)	Z1 Max. (CTV)	A1 Back Panel Mount	A2 Front Panel Mount	AA Max. Panel Thickness	LL +.006 –.000 (TV)	LL1 ±.005 (CTV)	TT ±.008
9	A	.6250	.205	.250	.820	.773	.719	.594	.948	.128	.153	.198	.650	.510	.234	.905	.908	.216
11	B	.7500	.205	.250	.820	.773	.812	.719	1.043	.128	.153	.198	.800	.620	.234	.905	.908	.194
13	C	.8750	.205	.250	.820	.773	.906	.812	1.137	.128	.153	.198	.910	.740	.234	.905	.908	.194
15	D	1.0000	.205	.250	.820	.773	.969	.906	1.232	.128	.153	.198	1.040	.900	.234	.905	.908	.173
17	E	1.1875	.205	.250	.820	.773	1.062	.969	1.323	.128	.153	.198	1.210	1.010	.234	.905	.908	.194
19	F	1.2500	.205	.250	.820	.773	1.156	1.062	1.449	.128	.153	.198	1.280	1.130	.234	.905	.908	.194
21	G	1.3750	.235	.280	.790	.741	1.250	1.156	1.575	.128	.183	.228	1.410	1.250	.204	.905	.904	.194
23	H	1.5000	.235	.280	.790	.741	1.375	1.250	1.701	.154	.183	.228	1.530	1.360	.204	.905	.904	.242
25	J	1.6250	.235	.280	.790	.741	1.500	1.375	1.823	.154	.183	.228	1.660	1.470	.204	.905	.904	.242

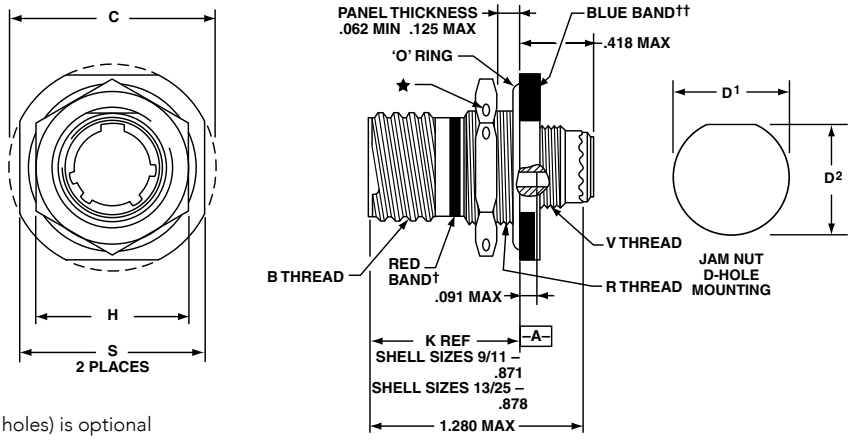
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JAM NUT RECEPTACLE

TV07( ) - CRIMP, METAL

CTV07( ) - CRIMP, COMPOSITE



See how to build a part number on pages 2

† Red band indicates fully mated

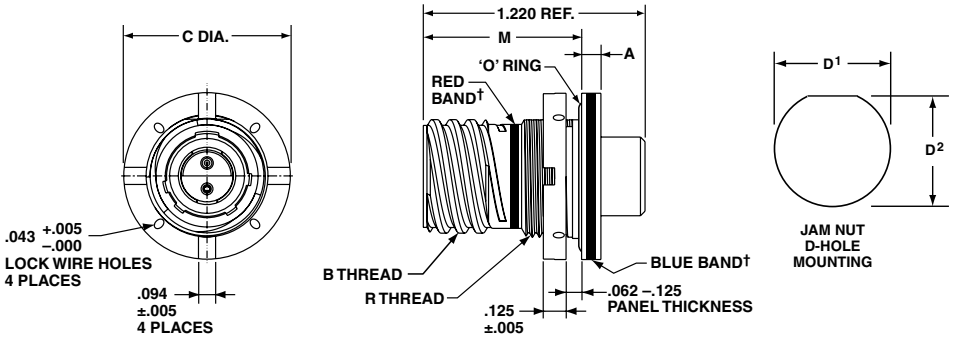
†† Blue band indicates rear release contact retention system.

H .059 dia. min., 3 lockwire holes. Formed lockwire hole design (6 holes) is optional

Shell Size	MS Shell Size Code	B Thread Class 2A 0.1P-0.3L-TS (Plated)	C Max.	D[1] +.010 –.000	D[2] +.000 –.010	H Hex +.017 –.016	S ±.010	V Thread Metric	R Thread (Plated) 9-7543
9	A	.6250	1.199	.693	.657	.875	1.062	M12X1-6g	M17X1-6g
11	B	.7500	1.386	.825	.770	1.000	1.250	M15X1-6g	M20X1-6g
13	C	.8750	1.511	1.010	.955	1.188	1.375	M18X1-6g	M25X1-6g
15	D	1.0000	1.636	1.135	1.085	1.312	1.500	M22X1-6g	M28X1-6g
17	E	1.1875	1.761	1.260	1.210	1.438	1.625	M25X1-6g	M32X1-6g
19	F	1.2500	1.949	1.385	1.335	1.562	1.812	M28X1-6g	M35X1-6g
21	G	1.3750	2.073	1.510	1.460	1.688	1.938	M31X1-6g	M38X1-6g
23	H	1.5000	2.199	1.635	1.585	1.812	2.062	M34X1-6g	M41X1-6g
25	J	1.6250	2.323	1.760	1.710	2.000	2.188	M37X1-6g	M44X1-6g

REDUCED FLANGE JAM NUT RECEPTACLE

TV97( ) - CRIMP, METAL



Shell Size	MS Shell Size Code	B Thread Class 2A 0.1P-0.3L-TS (Plated)	A +.010 –.005	C Dia. Max.	D[1] +.010 –.000	D[2] +.000 –.010	M	R Thread (Plated) 9-7543
9	A	.6250	.104	.915	.693	.657	.871	M17X1-6g
11	B	.7500	.104	1.042	.825	.770	.871	M20X1-6g
13	C	.8750	.104	1.240	1.010	.955	.878	M25X1-6g
15	D	1.0000	.104	1.357	1.135	1.085	.878	M28X1-6g
17	E	1.1875	.104	1.630	1.260	1.210	.878	M32X1-6g
19	F	1.2500	.135	1.816	1.385	1.335	.878	M35X1-6g
21	G	1.3750	.135	1.942	1.510	1.460	.878	M38X1-6g
23	H	1.5000	.135	2.067	1.635	1.585	.878	M41X1-6g
25	J	1.6250	.135	2.190	1.760	1.710	.878	M44X1-6g

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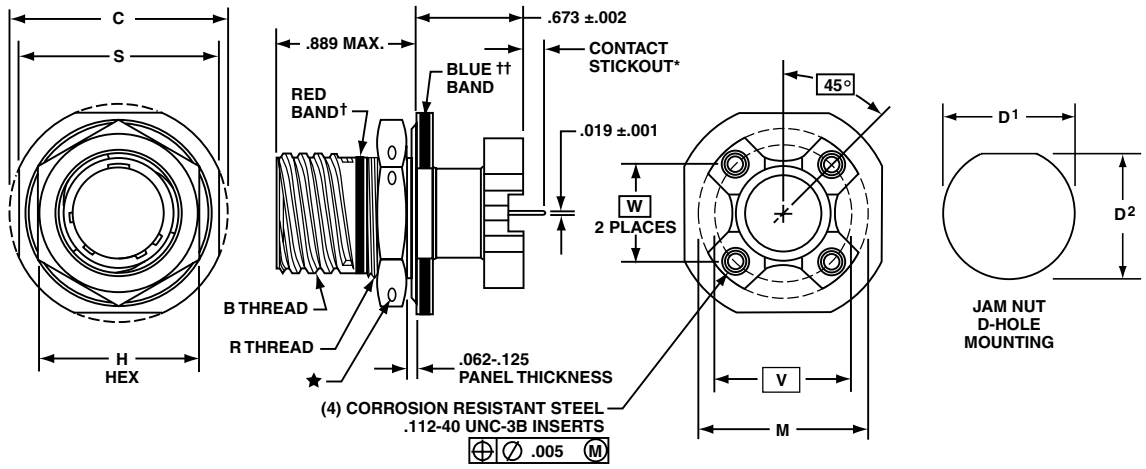
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JAM NUT DOUBLE FLANGE RECEPTACLE

(PRINTED CIRCUIT BOARD MOUNT)

TV47( ) - CRIMP, METAL

CTV47( ) - CRIMP, COMPOSITE



See how to build a part number on pages 2

* Contact stickout dimension: see Step 7 of how to order on page 2.

† Red band indicates fully mated

†† Blue band indicates rear release contact retention system.

H .059 dia. min., 3 lockwire holes. Formed lockwire hole design (6 holes) is optional

Shell Size	MS Shell Size Code	B Thread Class 2A 0.1P-0.3L-TS (Plated)	C ±.005 (Jam Nut Flange Dia.	D^1 +.010 −.000	D^2 +.000 −.010	H Hex +.017 −.016	M Dia. ±.005	R Thread Metric (Plated)	S +.011 −.010	PCB Mounting Dimensions	
										V Dia. (TV) TP	W (CTV) TP
9	A	.6250	1.188	.700	.670	.875	1.016	M17X1-6g0.100R	1.062	.753	.532
11	B	.7500	1.375	.825	.770	1.000	1.148	M20X1-6g0.100R	1.250	.850	.601
13	C	.8750	1.500	1.010	.955	1.188	1.250	M25X1-6g0.100R	1.375	.994	.703
15	D	1.0000	1.625	1.135	1.085	1.312	1.375	M28X1-6g0.100R	1.500	1.119	.791
17	E	1.1875	1.750	1.260	1.210	1.438	1.500	M32X1-6g0.100R	1.625	1.237	.875
19	F	1.2500	1.937	1.385	1.335	1.562	1.625	M35X1-6g0.100R	1.812	1.379	.975
21	G	1.3750	2.062	1.510	1.460	1.688	1.750	M38X1-6g0.100R	1.937	1.489	1.053
23	H	1.5000	2.188	1.635	1.585	1.812	1.875	M41X1-6g0.100R	2.062	1.644	1.145
25	J	1.6250	2.312	1.760	1.710	2.000	2.000	M44X1-6g0.100R	2.188	1.744	1.233

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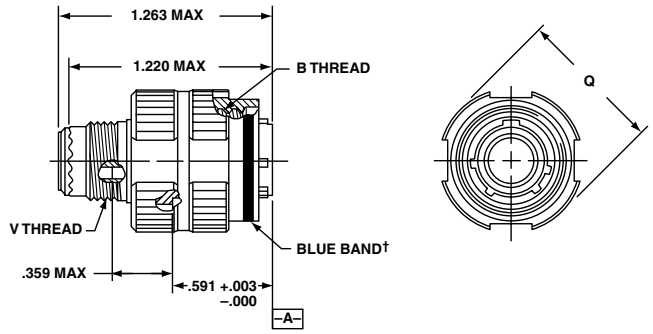
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STRAIGHT PLUG

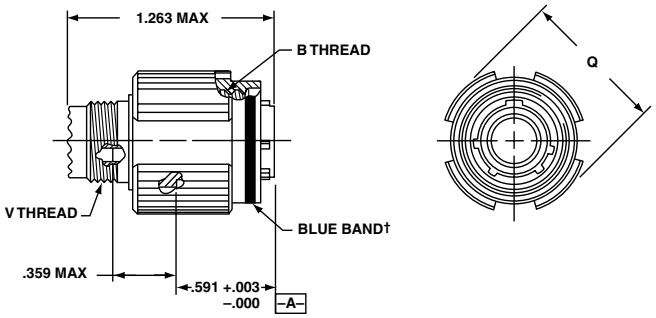
TV06( ) - CRIMP, METAL
CTV06( ) - CRIMP, COMPOSITE

Amphenol Aerospace

METAL



COMPOSITE



† Blue band indicates rear release contact retention system

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

STRAIGHT PLUG WITH INTEGRAL BACKSHELL

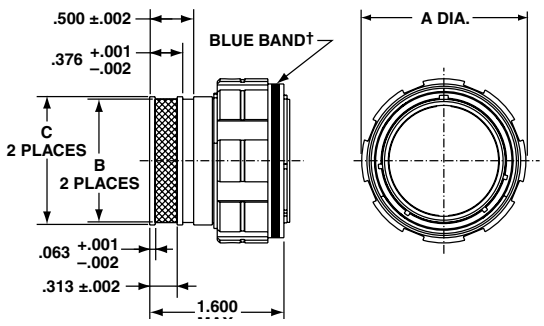
TV96( ) (TV TYPE) - CRIMP, METAL

This MIL-DTL-38999 Series III style connector features an integral backshell design that eliminates the need for costly backshell accessories. The backshell feature is incorporated into the rear of the connector shell, allowing the user to attach the shield of their cable directly to the connector. This provides superior EMI shielding and ease for overmold applications. The straight plug with integral backshell is available in aluminum shells with OD Cad or Electroless Nickel plating.



See how to build a part number on pages 2
† Blue band indicates rear release contact retention system.

Shell Size	MS Shell Size Code	A Max.	B +.005 −.000	C +.003 −.002
9	A	.859	.416	.472
11	B	.969	.524	.580
13	C	1.141	.652	.708
15	D	1.266	.810	.866
17	E	1.391	.928	.984
19	F	1.500	1.046	1.102
21	G	1.625	1.164	1.220
23	H	1.750	1.282	1.338
25	J	1.875	1.400	1.456



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NEW CUSTOM DESIGNED HD38999 CONNECTORS -

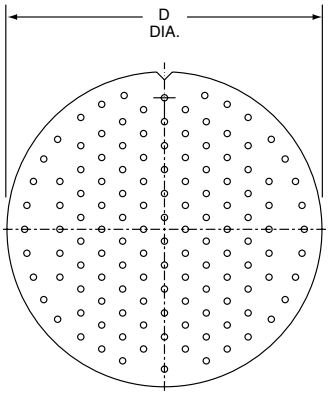
PROVIDE MORE INTERCONNECT SOLUTIONS

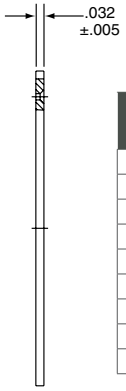
Amphenol Aerospace

ALIGNMENT DISKS

Alignment disks keep contacts aligned for easier insertion into circuit boards. These are typically ordered with the connector - see step 7 of How to Order on page 2.



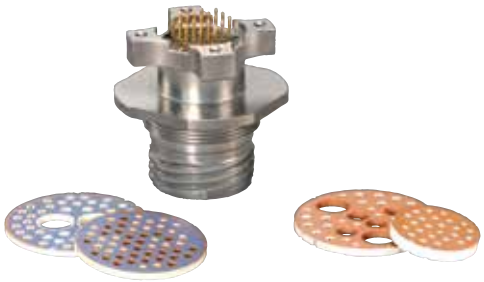




Shell Size	D Dia. ±.010
9	.234
11	.350
13	.500
15	.725
17	.750
19	.850
21	.953
23	1.147
25	1.250

FILTERED HD38999 CONNECTORS - FOR EMI/EMP PROTECTION

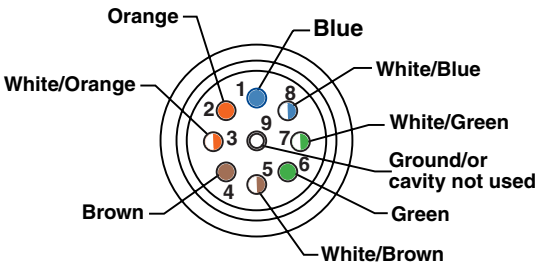
High density patterns are available in filter 38999 connectors - consult Amphenol Aerospace for ordering.



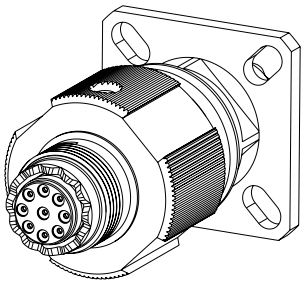
HD38999 FOR GIGABIT ETHERNET APPLICATIONS

The HD38999 is available for high speed (Gigabit Ethernet) data transmission in the size 9-9 insert pattern. Data transmission performance of this connector insert: 10 Base T, 100 Base TX, and 1000 Base T networks using Cat 5e per TIA/EIA568B and Class D per ISO/IEC 11801. (Test report available - consult Amphenol Aerospace for more information)

SIGNAL-GROUND PIN CONFIGURATION WIRING RECOMMENDATIONS



VIEW REAR OF CONNECTOR



HD38999 CONNECTOR WITH 9-9 INSERT PATTERN (REAR VIEW)

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