

Amphenol SJT Series



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Amphenol SJT Connectors - Scoop-Proof Design of LJT Series & Standard Mounting Dimensions of JT Series - Meet European Specification Applications

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- Insert Availability and Identification 100

SJT Shell Styles:

- Crimp Wall Mounting Receptacle SJT00RT, Crimp Wall Mounting Receptacle for Back Panel Mounting SJTP00RT 101
- Crimp Box Mounting Receptacle for Back Panel Mounting SJTP02RE, Crimp Jam Nut Receptacle SJT07RT 102
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- Hermetic Solder Mounting Receptacle SJTIY, Hermetic Jam Nut Receptacle SJT07Y 104
- Accessories, Contacts, and Tools see 38999 Accessories section 118, 119
- Accessories continue 122-124



SJT Typical Markets:

- Military & Commercial Aviation (older designs)
- Applications Complaint with European Specifications:
PAN6433-2, LN29729, VG96912
- Military Vehicles



Amphenol® SJT connectors combine unique design features of the scoop-proof LJT series within standard mounting dimensions of JT types. Available in a wide range of shell sizes, finishes, insert arrangements and accessories.



Components

Standard connectors use aluminum shells. Standard plating on shell components is cadmium over nickel with many optional finishes available. A dependable 5-key/keyway shell polarization with bayonet-lock coupling is incorporated to aid and assure positive mating.

The insert material is a high-temperature, rigid dielectric polymer providing excellent electrical characteristics. A fluorinated silicone interfacial seal is featured on the mating face of the pin inserts, assuring complete electrical isolation of the pins when connector halves are mated. Contrasting letter or number designations are used on the insert faces. A main joint gasket is installed in the receptacles for moisture sealing between connector halves.

Serrated and threaded shells, with a moisture sealing pilot for back shells, accept a wide range of accessories.

Hermetic seal receptacles are available in carbon steel or stainless steel shells.

Contacts

Rear insertable/rear release crimp contacts are standard in SJT connectors. Power contacts are available in sizes 10, 12, 16, 20, 22M and 22D. All socket contacts are probe proof. Standard contact plating is 50 μm minimum gold. Coaxial contacts are available in sizes 8, 12 and 16 to accommodate a wide range of coaxial cables; see Coaxial contact information in the High Speed Contact section of this catalog. Size 8 and 12 Twinax contacts are also available; see Concentric Twinax contact information in the High Speed Contact section of this catalog.

Optional Features

Special adaptations of the SJT are available for hermetic and high temperature applications. The SJTS high temperature connector is rated at 392°F. SJT hermetic receptacles are described on page 104.

Specials

Special types are available, such as connectors less contacts and circular rack and panel connectors with solderless wrap contacts. A complete listing of connector types, shell styles and service classes appears on page 99, How to Order.

For further information on special application requirements, contact an Amphenol Sales Person or visit www.amphenol-aerospace.com for more information.

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

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

- SJT features:**
- 100% scoop-proof design – basic MIL-DTL-38999 Series I* lengths
 - Standard mounting dimensions – MIL-DTL-38999, Series II** dimensions
 - Compliance with European Specifications – PAN6433-2, LN29729, VG96912

CONTACT RATING

Contact Size	Test Current		Maximum Millivolt Drop Crimp*	Maximum Millivolt Drop Hermetic
	Standard	Hermetic		
22M	3	2	45	60
22D	5	3	73	85
22	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

Contact Size	Crimp Well Data	
	Well Diameter	Min. Well Depth
22M	.028 ±.001	.141
22D	.0345 ±.0010	.141
22	.0365 ±.0010	.141
20	.047 ±.001	.209
16	.067 ±.001	.209
12	.100 ±.002	.209
10 (Power)	.137 ±.002	.355

* When using silver plated wire

SERVICE RATING**

Service Rating	Suggested Operating 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 possible position to know what peak voltage, switching surges, transients, etc., can be expected in a particular circuit.

38999

III

HD

Dualok

II

I

SJT

Accessories

Aquacon

Herm/Seal

PCB

HIGH SPEED

Fiber Optics

Contacts Connectors Cables

EMI Filter Transient

26482 Matrix 2

83723 III Matrix | Pyle

26500 Pyle

5015 Crimp Rear Release Matrix

22992 Class I

Back-Shells

Options Others

Easy Steps to build a part number... SJT

- 1.
- 2.
- 3.
- 4.
- 5.
- 6.
- 7.

Connector Type SJT	Shell Style	Service Class	Shell Size- Insert Arrangement.	Contact Type	Alternate Keying Position	Finish Variations Suffix
SJT	00	RT	18-66	P	A	(XXX)

Step 1. Select a Connector Type

	Designates
SJT	Standard scoop-proof Junior Tri-Lock Connector
SJTS	High Temperature Connector
SJTG	Plug with Grounding Fingers
SJTP	Back Panel Mounted

Step 6. Select an Alternate Keying Position

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

AB angles shown are viewed from the front face of the connector. A receptacle is shown below. The angles for the plug are exactly the same, except the direction of rotation is opposite of that shown for the receptacle.

Key/Keyway Rotation AB ANGLE OF ROTATION (Degrees)

Shell Size	Normal	A	B	C	D
8	95				
10	95	81	67	123	109
12	95	75	63	127	115
14	95	74	61	129	116
16	95	77	65	125	113
18	95	77	65	125	113
20	95	77	65	125	113
22	95	80	69	121	110
24	95	80	69	121	110

Step 2. Select a Shell Style

	Designates
00	Wall Mount Receptacle
06	Straight Plug
07	Jam Nut Receptacle
I	Solder Mount Receptacle – Hermetic

Step 3. Select a Service Class

	Designates
Y	For hermetic applications. . . Fused compression glass sealed inserts. Leakage rate less than 1.0×10^{-6} cc/sec. at 15 psi differential; with interfacial seal.
RT	For environmental applications – supplied without rear accessories. Design provides serrations on rear threads of shells with moisture sealing pilot for back shells.

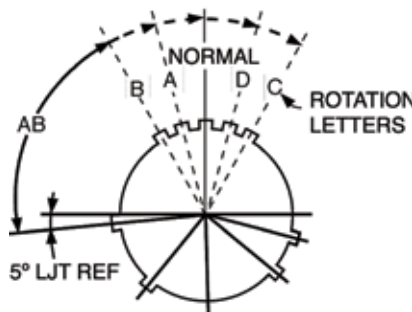
For additional information defining complete description of service class, consult Amphenol.

Step 4. Select a Shell Size & Insert Arrangement from chart on pg. 100. To view Insert Arrangement illustrations see pgs. 10-17.

Shell Size & Insert Arrangements are together in one chart. First number represents Shell Size, second number is the Insert Arrangement. Only selected illustrations are available for SJT on pages 10-17. Please refer to chart on page 100 for select Insert Arrangements.

Step 5. Select a Contact Type

	Designates
P	Pin Contacts
S	Socket Contacts



RELATIVE POSSIBLE POSITION OF ROTATED MASTER KEYWAY (front face of receptacle shown)

Step 7. Select a Finish Variation Suffix

Aluminum Shell Components Non-Hermetic		
Finish	Suffix	Indicated Finish Standard for SJT Types
Bright Cadmium Plated Nickel Base		SJT/SJTG
Anodic Coating (Alumilite)	(005)	
Chromate Treated (Iridite 14-2)	(011)	
Olive Drab Cadmium Plate Nickel Base	(014)	
Electroless Nickel Coating	(023)	
Hermetic Connectors		
Carbon Steel Shell, Tin Plated Shell and Contacts		SJT(Y)
Stainless Steel Shell, Gold Plated Contacts	Consult Amphenol	

38999

III
HD
Dualok
II
I
SJT
Accessories
Aquacon
Herm/Seal
PCB

HIGH SPEED
Fiber Optics
Contacts Connectors Cables

EMI Filter
Transient

26482
Matrix 2

83723 III
Matrix | Pyle

26500
Pyle

5015
Crmp Rear Release Matrix

22992
Class 1

Back-Shell's

Options Others

38999

- III
- HD
- Dualok
- II
- I
- SJT**
- Accessories
- Aquacon
- Herm/Seal
- PCB

- HIGH SPEED**
- Fiber Optics
- Contacts Connectors Cables

- EMI Filter Transient

- 26482 Matrix 2

- 83723 III Matrix | Pyle

- 26500 Pyle

- 5015 Crimp Rear Release Matrix

- 22992 Class I

- Back-Shells

- Options Others

Shell Size	Crimp	Hermetics* Class Y	Service Rating	Total Contacts	Contact Size										
					22D	22M	22	20	16	12	12 (Coax)	10 (Power)	8 (Coax)	8†† (Twinax)	
8-6	X		M	6		6									
8-35	X		M	6	6										
8-44	X		M	4			4								
8-98	X		I	3				3							
10-2	X		I	2						2					
10-4	◆		I	4					4						
10-5	X		I	5					5						
10-13	X		M	13		13									
10-35	X		M	13	13										
10-98	X		I	6					6						
12-4	X		I	4						4					
12-8	X		I	8					8						
12-22	X		M	22		22									
12-35	X		M	22	22										
12-98	X	X	I	10					10						
14-5	X		II	5						5					
14-15	X		I	15					14	1					
14-18	X		I	18					18						
14-19	X	X	I	19					19						
14-35	X	X	M	37	37										
14-37	X	X	M	37		37									
14-97	X		I	12					8	4					
16-2	◆		M	39	38										1**
16-6	X		I	6						6					
16-8	X		II	8						8					
16-13	◆		I	13						13					
16-26	X		I	26					26						
16-35	X		M	55	55										
16-42	X		M	42			42								
16-55	X		M	55		55									
16-99	X	X	I	23					21	2					
18-11	X		II	11						11					
18-32	X		I	32					32						
18-35	X	X	M	66	66										
18-66	X	X	M	66		66									
20-1	X	X	M	79		79									
20-2	X		M	65			65								
20-11	X		I	11						11					
20-16	X		II	16						16					
20-35	X	X	M	79	79										
20-39	X		I	39					37	2					
20-41	X		I	41					41						
20-75	◆		M	4										4††	
20-79	◆		II	19	17									2†	
22-1	X	X	M	100		100									
22-2	X		M	85			85								
22-21	X		II	21						21					
22-35	X	X	M	100	100										
22-53	X		I	53					53						
24-1	X		M	128		128									
24-2	X		M	100			100								
24-4	X		I	56					48	8					
24-7	X		M	99	97										2**
24-11	◆		N	11					2				9		
24-19	X		I	19						19					
24-20	◆		N	30					10	13***	4				3
24-24	X		I	24						12	12				
24-29	X		I	29						29					
24-35	X		M	128	128										
24-37	X		I	37						37					
24-43	◆		I	43					23	20					
24-46	◆		I	46					40	4					2††
24-61	X		I	61					61						

◆ Not tooled for 02-RE

* Pin inserts only (contact Amphenol for socket availability).

** twinax contacts for MIL-C-17/176-00002 cable.

*** Two size 16 contacts dedicated to fiber optics. Consult Amphenol or Fiber Optic Section for more information.

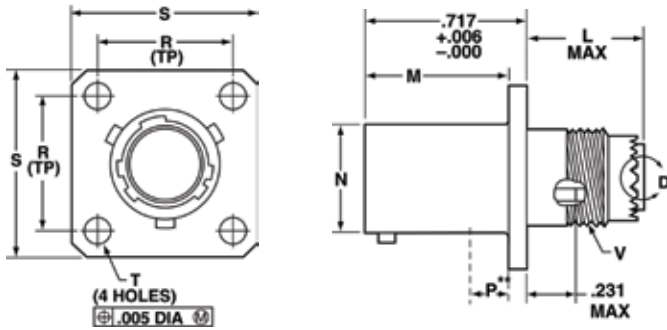
† Must be ordered separately

†† Coax Contacts for RG180 or RG195 cable.

††† Size 8 Coax and Twinax are interchangeable.

For availability of size 12 twinax contacts, consult Amphenol Aerospace.

SJT00RT – Crimp Wall Mounting Receptacle

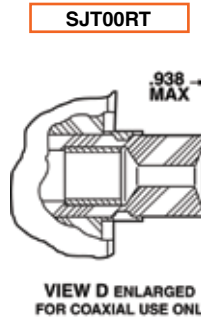


PART # *To complete, see how to order pages 99.

Connector Type	Shell Style	Service Class	Shell Size & Insert Arrg	Contact Type	Alternate Positions	Special Variations
SJT	00	RT	X-X	X	X	(XXX)

Note: Standard wall mount may be back panel mounted where panel thickness does not exceed these dimensions. For thicker panel applications, SJTP00RT should be used.

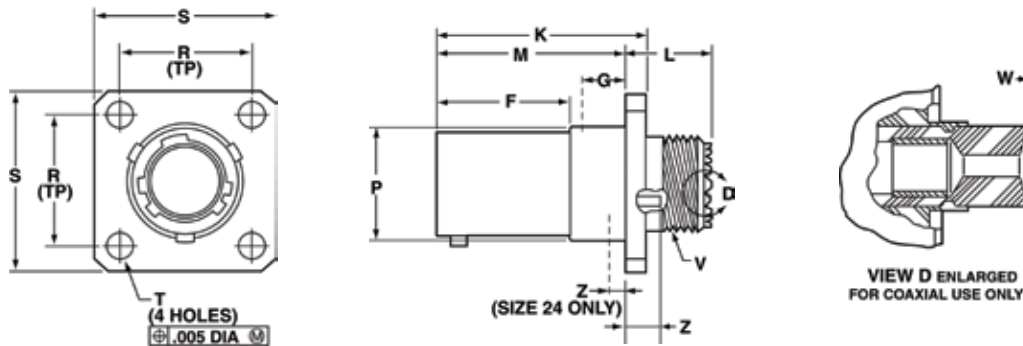
Shell Size	L Max	M +.000 - .005	R (TP)	S ±.016	T ±.005	V Thread Modified		N +.001 - .005	P** Max
						Class 2A UNEF (Plated)	Modified Major Dia.		
8	.500	.632	.594	.812	.120	.4375-28	.421 - .417	.473	.117
10	.500	.632	.719	.938	.120	.5625-24	.542 - .538	.590	.117
12	.500	.632	.812	1.031	.120	.6875-24	.667 - .663	.750	.117
14	.500	.632	.906	1.125	.120	.8125-20	.791 - .787	.875	.117
16	.500	.632	.969	1.219	.120	.9375-20	.916 - .912	1.000	.117
18	.500	.632	1.062	1.312	.120	1.0625-18	1.034 - 1.030	1.125	.117
20	.500	.602	1.156	1.438	.120	1.1875-18	1.158 - 1.154	1.250	.087
22	.500	.602	1.250	1.562	.120	1.3125-18	1.283 - 1.279	1.375	.087
24	.550	.602	1.375	1.688	.147	1.4375-18	1.408 - 1.404	1.500	.055



SJTP00RT – Crimp Wall Mounting Receptacle (Back Panel Mounting)

PART # To complete, see how to order pages 99.

Connector Type	Shell Style	Service Class	Shell Size & Insert Arrg	Contact Type	Alternate Positions	Special Variations
SJTP	00	RT	X-X	X	X	(XXX)



Shell Size	F +.000 - .005	K +.006 - .000	L Max.	M +.000 - .005	R (TP)	S +.011 - .010	T ±.005	Z ±.031	V Thread Class 2A (Plated) UNEF	P Dia. +.001 - .005	W Max.	G Max.
8	.609	.945	.539	.860	.594	.812	.120	.062	.4375-28	.516	.812	.345
10	.609	.945	.539	.860	.719	.938	.120	.062	.5625-24	.633	.812	.345
12	.609	.945	.539	.860	.812	1.031	.120	.062	.6875-24	.802	.812	.345
14	.609	.945	.539	.860	.906	1.125	.120	.062	.8125-20	.927	.812	.345
16	.609	.945	.539	.860	.969	1.219	.120	.062	.9375-20	1.052	.812	.345
18	.609	.945	.539	.860	1.062	1.312	.120	.062	1.0625-18	1.177	.812	.345
20	.609	.945	.539	.860	1.156	1.438	.120	.062	1.1875-18	1.302	.812	.345
22	.609	.945	.539	.860	1.250	1.562	.120	.062	1.3125-18	1.427	.812	.345
24	.750	1.085	.493	1.000	1.375	1.688	.147	.078	1.4375-18	1.552	.781	.452

All dimensions for reference only.

38999

III
HD
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Crimp Rear
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Matrix

22992
Class 1

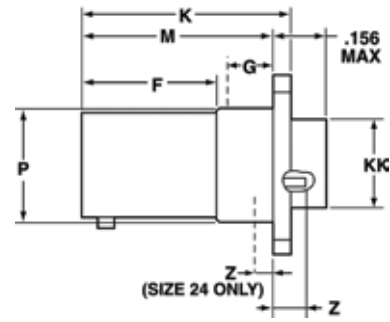
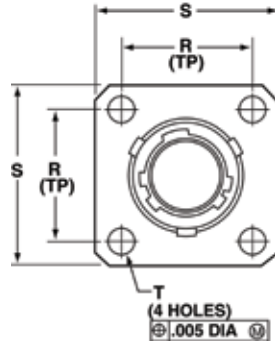
Back-
Shells

Options
Others

38999

PART # To complete, see how to order pages 99.

Connector Type	Shell Style	Service Class	Shell Size & Insert Arrg	Contact Type	Alternate Positions	Special Variations
SJTP	02	RE	X-X	X	X	(XXX)



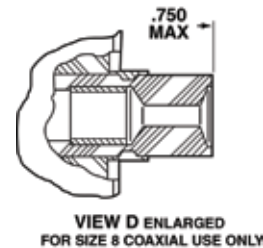
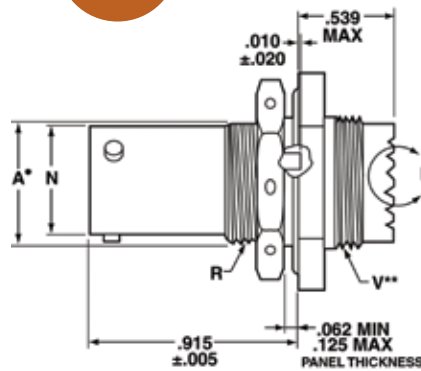
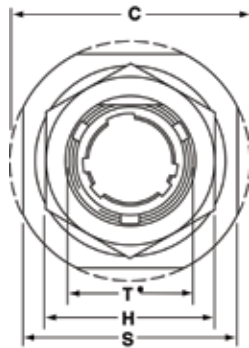
SJTP02RE

Shell Size	F +.000 -.005	K +.006 -.000	M +.000 -.005	R (TP)	S +.011 -.010	T ±.005	Z ±.031	P Dia. +.001 -.005	KK Dia. +.005 -.002	G Max.
8	.609	.945	.860	.594	.812	.120	.062	.516	.417	.345
10	.609	.945	.860	.719	.938	.120	.062	.633	.538	.345
12	.609	.945	.860	.812	1.031	.120	.062	.802	.663	.345
14	.609	.945	.860	.906	1.125	.120	.062	.927	.787	.345
16	.609	.945	.860	.969	1.219	.120	.062	1.052	.912	.345
18	.609	.945	.860	1.062	1.312	.120	.062	1.177	1.030	.345
20	.609	.945	.860	1.156	1.438	.120	.062	1.302	1.154	.345
22	.609	.945	.860	1.250	1.562	.120	.062	1.427	1.279	.345
24	.750	1.085	1.000	1.375	1.688	.147	.078	1.552	1.404	.452

PART # To complete, see how to order pages 99.

Connector Type	Shell Style	Service Class	Shell Size & Insert Arrg	Contact Type	Alternate Positions	Special Variations
SJT	07	RT	X-X	X	X	(XXX)

SJT07RT – Crimp Jam Nut Receptacle



SJT07RT

- "D" shaped panel cut-out dimensions
- ** Oversize threads. Check accessory threads before ordering

Shell Size	A* +.000 -.010	H Hex +.017 -.016	S ±.016	VThread Class 2A UNEF (Plated)	RThread Class 2A UNEF (Plated)	N +.001 -.005	C Max.	T* +.010 -.000
8	.542	.750	.938	.5625-24	.5625-24	.473	1.078	.572
10	.669	.875	1.062	.6875-24	.6875-24	.590	1.203	.697
12	.830	1.062	1.250	.8125-20	.8750-20	.750	1.391	.884
14	.955	1.188	1.375	.9375-20	1.0000-20	.875	1.515	1.007
16	1.084	1.312	1.500	1.0625-18	1.1250-18	1.000	1.641	1.134
18	1.208	1.438	1.625	1.1875-18	1.2500-18	1.125	1.766	1.259
20	1.333	1.562	1.812	1.3125-18	1.3750-18	1.250	1.953	1.384
22	1.459	1.688	1.938	1.4375-18	1.5000-18	1.375	2.078	1.507
24	1.580	1.812	2.062	1.4375-18	1.6250-18	1.500	2.203	1.634

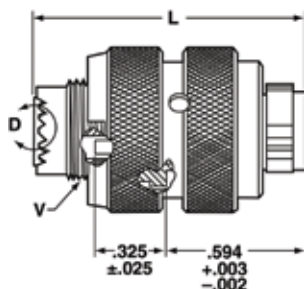
All dimensions for reference only.

SJT06RT/SJTG06RT – Crimp

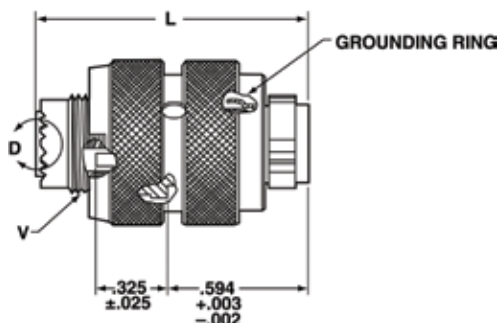
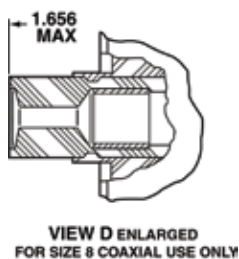
Straight Plug/Straight Plug (with Grounding Fingers)

PART # To complete, see how to order pages 99.

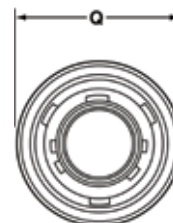
Connector Type	Shell Style	Service Class	Shell Size & Insert Arrg	Contact Type	Alternate Positions	Special Variations
SJT	06	RT	X-X	X	X	(XXX)
SJTG	06	RT	X-X	X	X	(XXX)



SJT06RT



SJTG06RT



Shell Size	L Max	Q Dia. Max.	VThread	
			Class 2A UNEF (Plated)	Modified Major Dia.
8	1.219	.734	.4375-28	.421 – .417
10	1.219	.844	.5625-24	.542 – .538
12	1.219	1.016	.6875-24	.667 – .663
14	1.219	1.141	.8125-20	.791 – .787
16	1.219	1.265	.9375-20	.916 – .912
18	1.219	1.391	1.0625-18	1.034 – 1.030
20	1.219	1.500	1.1875-18	1.158 – 1.154
22	1.219	1.625	1.3125-18	1.283 – 1.279
24	1.258	1.750	1.4375-18	1.408 – 1.404

All dimensions for reference only.

38999

III

HD

Dualok

II

I

SJT

Accessories

Aquacon

Herm/Seal

PCB

HIGH SPEED

Fiber Optics

Contacts
Connectors
Cables

EMI Filter
Transient

26482
Matrix 2

83723 III
Matrix | Pyle

26500
Pyle

5015
Crimp Rear
Release
Matrix

22992
Class 1

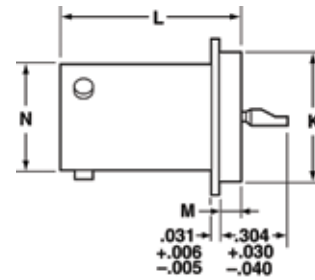
Back-
Shells

Options
Others

38999

PART # To complete, see how to order pages 99.

Connector Type	Shell Style	Service Class	Shell Size & Insert Arrg	Contact Type	Alternate Positions	Special Variations
SJT	I	Y	X-X	X	X	(XXX)



SJTIY

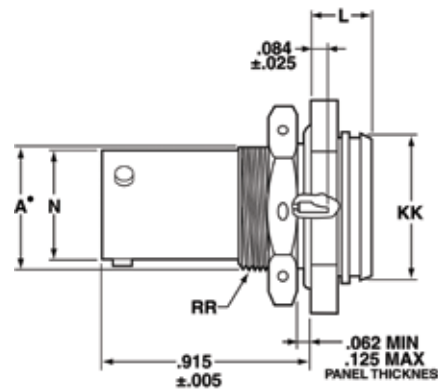
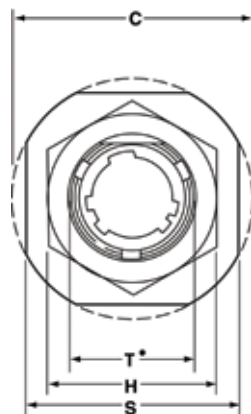
Shell Size	L +.011 -.000	M +.006 -.005	G Dia. +.011 -.010	K Dia. +.001 -.005	N +.001 -.005
8	.789	.125	.687	.562	.473
10	.789	.125	.797	.672	.590
12	.789	.125	.906	.781	.750
14	.789	.125	1.031	.906	.875
16	.789	.125	1.156	1.031	1.000
18	.789	.125	1.281	1.156	1.125
20	.789	.125	1.375	1.250	1.250
22	.821	.156	1.500	1.375	1.375
24	.821	.156	1.625	1.500	1.500

PART # To complete, see how to order pages 99..

Connector Type	Shell Style	Service Class	Shell Size & Insert Arrg	Contact Type	Alternate Positions	Special Variations
SJT	07	Y	X-X	X	X	(XXX)

SJT07Y – Hermetic

Jam Nut Receptacle



SJT07Y

• “D” shaped panel cut-out dimensions

Shell Size	N +.001 -.005	C Max.	A* +.000 -.010	L Max.	H Hex +.017 -.016	S ±.016	KK +.011 -.000	RR Thread Class 2A UNEF (Plated)	T* +.010 -.000
8	.473	1.078	.542	.297	.750	.938	.642	.5625-24	.572
10	.590	1.203	.669	.297	.875	1.062	.766	.6875-24	.697
12	.750	1.391	.830	.297	1.062	1.250	.892	.8750-20	.884
14	.875	1.515	.955	.297	1.188	1.375	1.018	1.0000-20	1.007
16	1.000	1.641	1.084	.297	1.312	1.500	1.142	1.1250-18	1.134
18	1.125	1.766	1.208	.328	1.438	1.625	1.268	1.2500-18	1.259
20	1.250	1.953	1.333	.328	1.562	1.812	1.392	1.3750-18	1.384
22	1.375	2.078	1.459	.328	1.688	1.938	1.518	1.5000-18	1.507
24	1.500	2.203	1.580	.328	1.812	2.062	1.642	1.6250-18	1.634

All dimensions for reference only.