

Amphenol SJT Series



TABLE OF CONTENTS

Amphenol SJT Connectors -

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

• Table of Contents	81
• Features, Specifications	82
• How to Order, Alternate Rotations	83
• Insert Availability and Identification	84

SJT Shell Styles:

• Crimp Wall Mounting Receptacle SJT00RT, Crimp Wall Mounting Receptacle for Back Panel Mounting SJTP00RT	85
• Crimp Box Mounting Receptacle for Back Panel Mounting SJTP02RE, Crimp Jam Nut Receptacle SJT07RT	86
• Crimp Straight Plug SJT06RT, Crimp Straight Plug with Grounding Fingers SJTG06RT	87
• Hermetic Solder Mounting Receptacle SJTIY, Hermetic Jam Nut Receptacle SJT07Y	88
• Accessories, Contacts, and Tools see pages	89-108



SJT Typical Markets:

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



Amphenol SJT

Features, Specifications

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, the SJT features:



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

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 mμ 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 88.

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 83, How to Order. For further information on special application requirements, contact an Powell Electronics Sales Person or visit www.powell.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.

CONTACT RATING

Contact Size	Test Current		Maximum Millivolt Drop Crimp*	Maximum Millivolt Drop Hermetic	Contact Size	Crimp Well Data	
	Standard	Hermetic				Well Diameter	Min. Well Depth
22M	3	2	45	60	22M	.028 ±.001	.141
22D	5	3	73	85	22D	.0345 ±.0010	.141
22	5	3	73	85	22	.0365 ±.0010	.141
20	7.5	5	55	60	20	.047 ±.001	.209
16	13	10	49	85	16	.067 ±.001	.209
12	23	17	42	85	12	.100 ±.002	.209
10 Power	33	NA	33	NA	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
SJT

26482
Matrix 2

83723 III
Matrix Pyle

5015
Crimp Rear Release Matrix

26500 Pyle

Printed
Circuit Board

EMI Filter
Transient

Fiber Optics

High Speed
Contacts

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 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 Powell Electronics.

Step 4. Select a Shell Size & Insert Arrangement from chart on pg. 84. To view Insert Arrangement illustrations see pgs. 8-12.

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 8-12. Please refer to chart on page 84 for select Insert Arrangements.

Step 5. Select a Contact Type

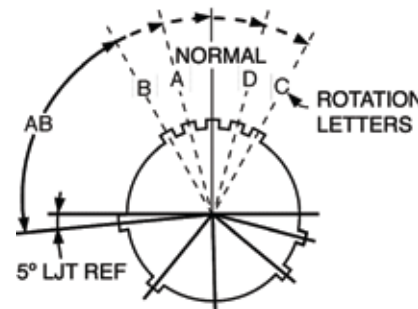
	Designates
P	Pin Contacts
S	Socket Contacts

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



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

Step 7. Select a Finish Variation Suffix

FINISH DATA

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 Powell	

- III 38999
- II SJT
- I Matrix 2 26482
- Matrix 83723 III
- Pyle 5015 Crimp Rear Release Matrix
- 26500 Pyle
- Printed Circuit Board
- EM1 Filter Transient
- Fiber Optics
- High Speed Contacts
- Options Others



SJT

Insert Availability and Identification

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 Powell Electronics for socket availability).

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

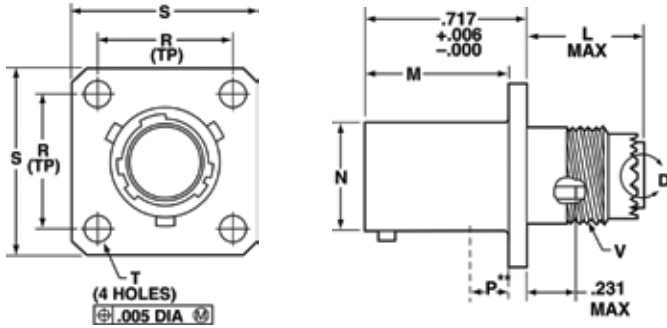
*** Two size 16 contacts dedicated to fiber optics. Consult Powell Electronics or Fiber Optic Section for more information.

† 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 Powell Electronics

SJT00RT – Crimp Wall Mounting Receptacle



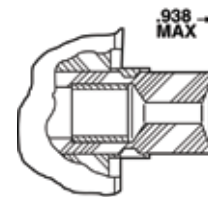
PART # *To complete, see how to order pages 83-84.

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 -0.005	R (TP)	S ±.016	T ±.005	V Thread Modified			N +.001 -0.005	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

SJT00RT

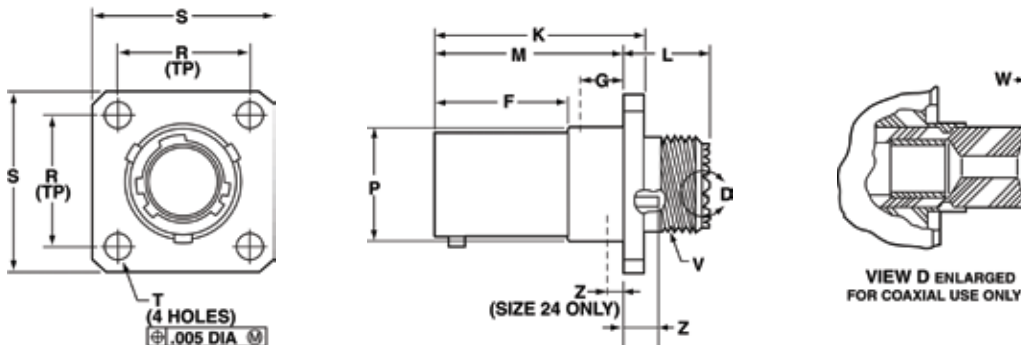


VIEW D ENLARGED FOR COAXIAL USE ONLY

SJTP00RT – Crimp Wall Mounting Receptacle (Back Panel Mounting)

PART # To complete, see how to order pages 83-84.

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



SJTP00RT

VIEW D ENLARGED FOR COAXIAL USE ONLY

Shell Size	F +.000 -0.005	K +.006 -0.000	L Max.	M +.000 -0.005	R (TP)	S +.011 -0.010	T ±.005	Z ±.031	V Thread Class 2A (Plated) UNEF	P Dia. +.001 -0.005	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
SJT

26482
Matrix 2

83723 III
Matrix Pyle

5015
Crimp Rear Release Matrix

26500 Pyle

Printed
Circuit Board

EMI Filter
Transient

Fiber Optics

High Speed
Contacts

Options
Others



SJTP02RE – Crimp Box Mounting Receptacle (Back Panel Mounting)

38999

SJT

26482
Matrix 2

83723 III
Matrix Pyle

5015
Crimp Rear
Release Matrix

26500 Pyle

Printed
Circuit Board

EMI Filter
Transient

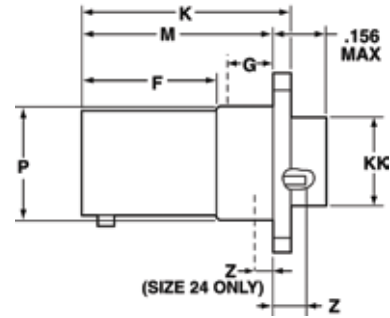
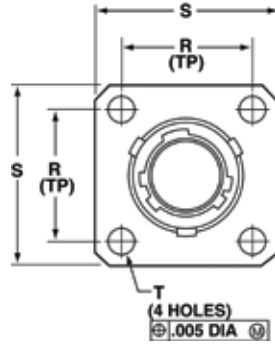
Fiber Optics

High Speed
Contacts

Options
Others

PART # To complete, see how to order pages 83-84.

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

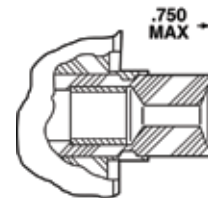
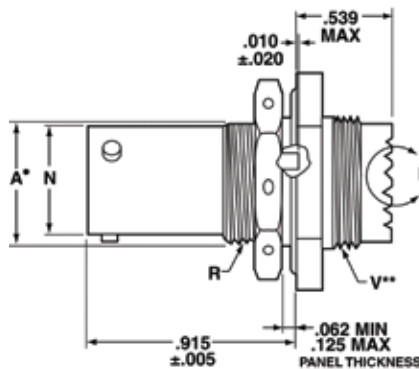
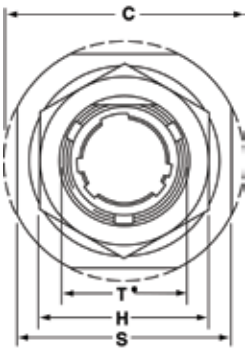


SJTP02RE

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 83-84.

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



VIEW D ENLARGED FOR SIZE 8 COAXIAL USE ONLY

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.

For information and ordering visit www.powell.com or email info@powell.com
Toll Free: 800-235-7880 Phone: 856-241-8000 Fax: 888-467-6935

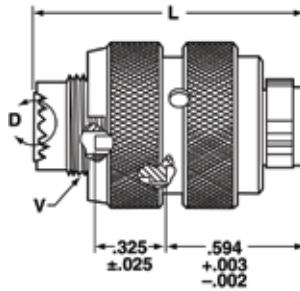
SJT06RT/SJTG06RT – Crimp

Straight Plug/Straight Plug (with Grounding Fingers)

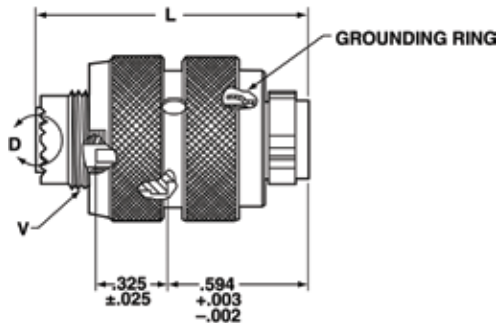
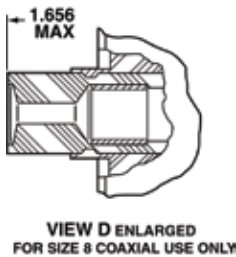


PART # To complete, see how to order pages 83-84.

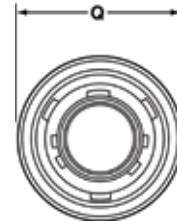
Connector Type	Shell Style	Service Class	Shell Size & Insert Arrg	Contact Type	Alternate Positions	Special Variations
SJT	06	RT	X-X	X	X	(XXX)
SJTG	06	RT	X-X	X	X	(XXX)



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.

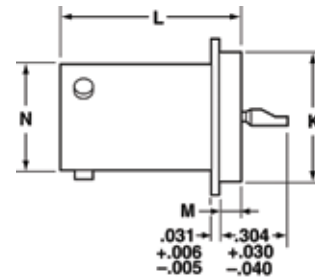
- III 38999
- II
- I
- SJT
- Matrix 2 26482
- Matrix Pyle 83723 III
- Crimp Rear Release Matrix 5015
- 26500 Pyle
- Printed Circuit Board
- EMI Filter Transient
- Fiber Optics
- High Speed Contacts
- Options Others



SJTIY – Hermetic Solder Mounting Receptacle

PART # To complete, see how to order pages 83-84.

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



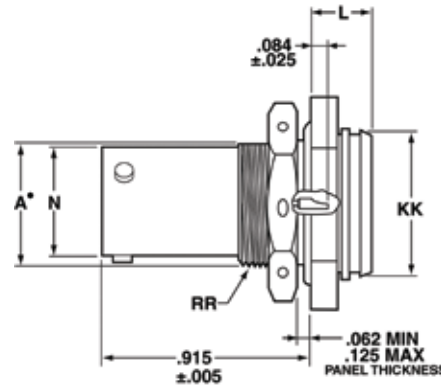
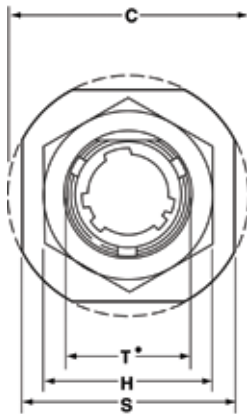
SJTIY

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 83-84.

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.

For information and ordering visit www.powell.com or email info@powell.com
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- 38999 SJT
- 26482 Matrix 2
- 83723 III Pyle Matrix
- 5015 Crimp Rear Release Matrix
- 26500 Pyle
- Printed Circuit Board
- EMI Filter Transient
- Fiber Optics
- High Speed Contacts
- Options Others