

SJT

Scoop Proof Junior Trilock Type 1.5





TABLE OF CONTENT



Features, Specification	4
How to Order	5
Insert Availability & identification	6

SJT Shell Styles	7
Crimp Wall Mounting Receptacle SJT00RT	7
Crimp Wall Mount Receptacle Back Panel Mount SJTP00RT	7
Crimp Box Mounting Receptacle for Back Panel Mounting SJTP02RE	8
Crimp Jam Nut Receptacle SJT07RT	8
Crimp Straight Plug SJT06RT	9
Crimp Straight Plug with Grounding Fingers	9

THE STANDARD RANGES SERVES VARIOUS MARKETS, INCLUDING:



Commercial Avionics
& Airframe



Military Avionics
& Airframe



Military vehicles



C4ISR



Missiles



Navy



Industrial

SJT - FEATURES, SPECIFICATIONS

Description

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.

Contacts

Rear insertable/rear release crimp contacts are standard in SJT connectors. Power contacts are available in sizes 12, 16, 20 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 are also available.

Main features

- 100% scoop-proof design – basic MIL-DTL-38999 Series I* lengths
- Standard mounting dimensions – MIL-DTL-38999, Series II** dimensions



CONTACT RATING

Contact Size	Test Current	Maximum Millivolt Drop Crimp*
	Standard	
22D	5	73
20	7.5	55
16	13	49
12	23	42

Contact Size	Crimp Well Data	
	Well Diameter mm	Min. Well Depth mm
22D	0,88 ± 0,03	3,58
20	1,20 ± 0,03	5,31
16	1,70 ± 0,03	5,31
12	2,54 ± 0,05	5,31

* 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.

SJT - HOW TO ORDER, ALTERNATE ROTATIONS

1.	2.	3.	4.	5.
Connector Type SJT, Shell Style, Service Class	Shell Size & Insert Arrangement	Contact Type	Alternate Keying Position	Plating
SJT00RT	1866	P	A	014

		SJT SERIES		
		Standard Scoop-Proof Junior Tri-Lock Crimp	Back Panel Mounted Crimp	
CONNECTOR TYPE & STYLE	Receptacle	Wall Mounting Receptacle (without rear accessories)	SJT00RT	SJTP00RT
		Box Mounting Receptacle (with grommet & nut) (can be supplied with strain relief integral)		SJTP02RE
		Jam Nut Receptacle (without rear accessories)	SJT07RT	
Plugs		Straight Plug	SJT06RT	
		Straight Plug with Grounding Fingers	SJTG06RT	

Many PCB contacts dedicated to SJT00 & SJT07 receptacles are available (Y/YS/GS/CI...). For more information please consult us.

2. Shell Size & Insert Arrangement

First number represents Shell Size, second number is the Insert Arrangement.

3. Contact Type

P	Pin Contacts
S	Socket Contacts

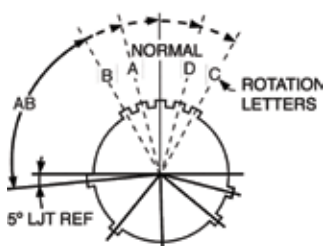
4. Alternate Keying Position

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)

5. FINISH VARIATION SUFFIX

Finish	Suffix
Olive Drab Cadmium Plate Nickel Base	014
Electroless Nickel Coating	023

SJT - INSERT AVAILABILITY & IDENTIFICATION

Shell Size	Crimp	Service Rating	Total Contacts	Contact Size						
				22D	20	16	12	12 (Coax)	8 (Coax)	8†† (Twinax)
8-35	X	M	6	6						
8-98	X	I	3		3					
10-2	X	I	2			2				
10-4		I	4		4					
10-5	X	I	5		5					
10-35	X	M	13	13						
10-98	X	I	6		6					
12-4	X	I	4			4				
12-8	X	I	8		8					
12-35	X	M	22	22						
12-98	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	I	19		19					
14-35	X	M	37	37						
14-97	X	I	12		8	4				
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						
16-99	X	I	23		21	2				
18-11	X	II	11			11				
18-32	X	I	32		32					
18-35	X	M	66	66						
20-11	X	I	11				11			
20-16	X	II	16			16				
20-35	X	M	79	79						
20-39	X	I	39		37	2				
20-41	X	I	41		41					
20-75		M	4						4†	
22-21	X	II	21			21				
22-35	X	M	100	100						
22-53	X	I	53		53					
24-4	X	I	56		48	8				
24-7	X	M	99	97						2**
24-19	X	I	19				19			
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					

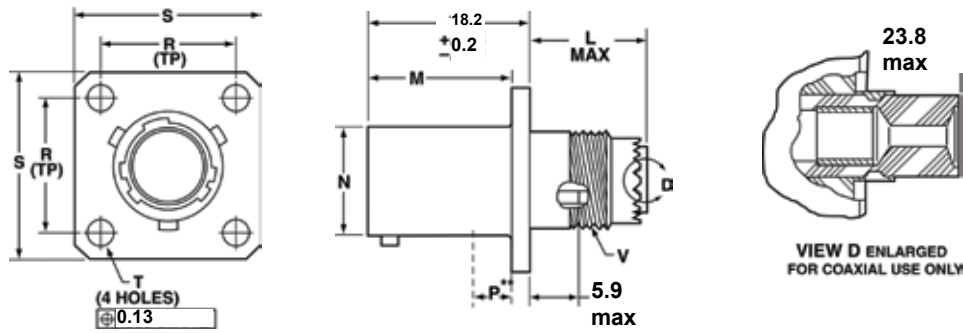
* Pin inserts only (contact Amphenol for socket availability).

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

† Coax Contacts for RG180 or RG195 cable.

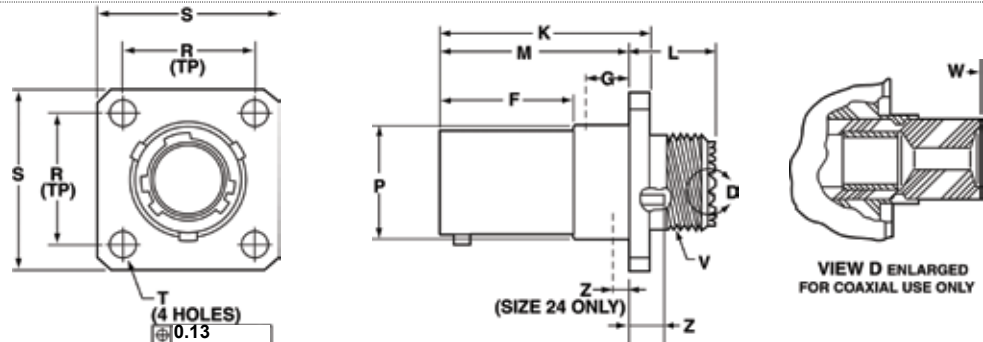
†† Size 8 Coax and Twinax are interchangeable.

For availability of size 12 twinax contacts, consult us.

SJT00RT - CRIMP**Wall Mounting Receptacle****SJT00RT**

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 mm	M ±0.1 mm	R (TP) mm	S ±0.4 mm	T ±0.1 mm	V Thread Modified (in)			N ±0.1 mm	P** Max mm
						Class 2A UNEF (Plated)	Modified Major Dia.			
8	12,70	16,05	15,09	20,62	3,05	.4375-28	.421 –	.417	12,01	2,97
10	12,70	16,05	18,26	23,83	3,05	.5625-24	.542 –	.538	14,99	2,97
12	12,70	16,05	20,62	26,19	3,05	.6875-24	.667 –	.663	19,05	2,97
14	12,70	16,05	23,01	28,58	3,05	.8125-20	.791 –	.787	22,23	2,97
16	12,70	16,05	24,61	30,96	3,05	.9375-20	.916 –	.912	25,40	2,97
18	12,70	16,05	26,97	33,32	3,05	1.0625-18	1.034 –	1.030	28,58	2,97
20	12,70	15,29	29,36	36,52	3,05	1.1875-18	1.158 –	1.154	31,75	2,21
22	12,70	15,29	31,75	39,67	3,05	1.3125-18	1.283 –	1.279	34,93	2,21
24	13.97	15,29	34,93	42,88	3,73	1.4375-18	1.408 –	1.404	38,10	2,21

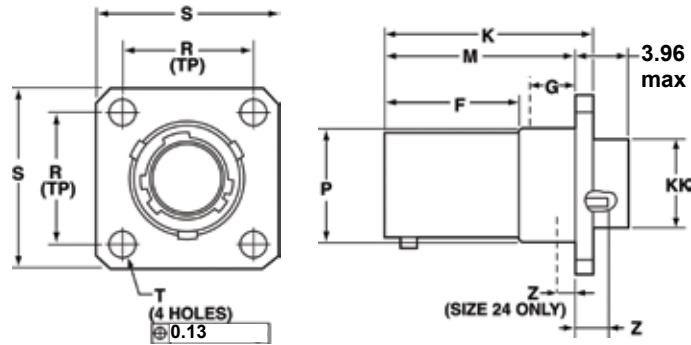
SJTP00RT – CRIMP**Wall Mounting Receptacle (Back Panel Mounting)****SJTP00RT**

Shell Size	F $\pm 0,1$ mm	K $\pm 0,2$ mm	L Max. mm	M $\pm 0,1$ mm	R (TP) mm	S $\pm 0,3$ mm	T $\pm 0,1$ mm	Z $\pm 0,8$ mm	V Thread Class 2A UNEF (Plated) (in)	P Dia. $\pm 0,1$ mm	W Max. mm	G Max. mm
8	15,47	24	13,69	21,84	15,09	20,62	3,05	1,57	.4375-28	13,11	20,62	8,76
10	15,47	24	13,69	21,84	18,26	23,82	3,05	1,57	.5625-24	16,08	20,62	8,76
12	15,47	24	13,69	21,84	20,62	26,19	3,05	1,57	.6875-24	20,37	20,62	8,76
14	15,47	24	13,69	21,84	23,01	28,58	3,05	1,57	.8125-20	23,55	20,62	8,76
16	15,47	24	13,69	21,84	24,61	30,96	3,05	1,57	.9375-20	26,72	20,62	8,76
18	15,47	24	13,69	21,84	26,97	33,32	3,05	1,57	1.0625-18	29,90	20,62	8,76
20	15,47	24	13,69	21,84	29,36	36,52	3,05	1,57	1.1875-18	33,07	20,62	8,76
22	15,47	24	13,69	21,84	31,75	39,67	3,05	1,57	1.3125-18	36,25	20,62	8,76
24	19,05	27,56	12,52	25,40	34,93	42,88	3,73	1,98	1.4375-18	39,42	19,84	11,48

All dimensions for reference only.

SJTP02RE - CRIMP**Box Mounting Receptacle (Back Panel Mounting)**

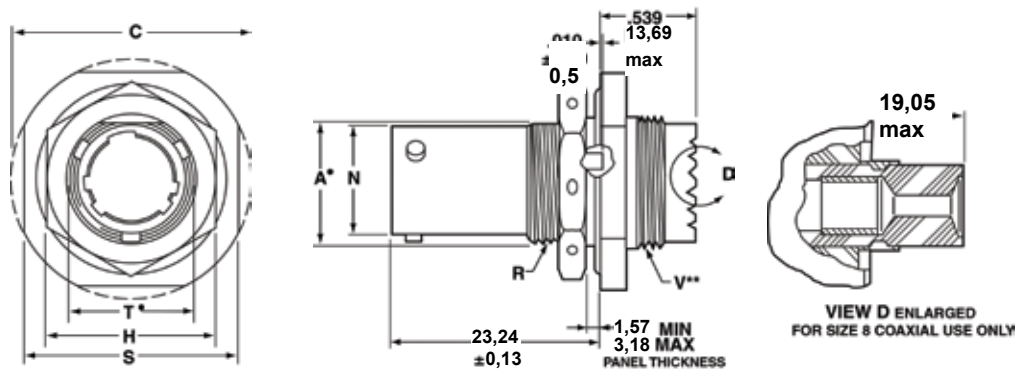
SJTP02RE



Shell Size	F ± 0,1 mm	K ± 0,2 mm	M ± 0,1 mm	R (TP) mm	S ± 0,3 mm	T ± 0,1 mm	Z ± 0,8 mm	P Dia. ± 0,1 mm	KK Dia. ± 0,1 mm	G Max. mm
8	15,47	24	21,84	15,09	20,62	3,05	1,57	13,11	10,59	8,76
10	15,47	24	21,84	18,26	23,82	3,05	1,57	16,08	13,67	8,76
12	15,47	24	21,84	20,62	26,19	3,05	1,57	20,37	16,84	8,76
14	15,47	24	21,84	23,01	28,58	3,05	1,57	23,55	19,99	8,76
16	15,47	24	21,84	24,61	30,96	3,05	1,57	26,72	23,16	8,76
18	15,47	24	21,84	26,97	33,32	3,05	1,57	29,90	26,16	8,76
20	15,47	24	21,84	29,36	36,52	3,05	1,57	33,07	29,31	8,76
22	15,47	24	21,84	31,75	39,67	3,05	1,57	36,25	32,49	8,76
24	19,05	27,56	25,40	34,93	42,88	3,73	1,98	39,42	35,66	11,48

SJT07RT – CRIMP**Jam Nut Receptacle**

SJT07RT



- "D" shaped panel cut-out dimensions

- ** Oversize threads. Check accessory threads before ordering

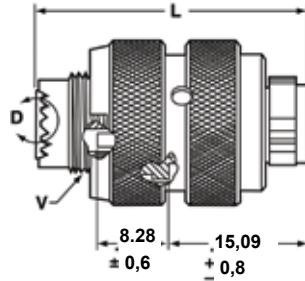
Shell Size	A* ± 0,3 mm	H Hex ± 0,4 mm	S ± 0,4 mm	V Thread Class 2A UNEF (Plated) (in)	R Thread Class 2A UNEF (Plated) (in)	N ± 0,1 mm	C Max. mm	T* ± 0,3 mm
8	13,77	19,05	23,83	.5625-24	.5625-24	12,01	27,38	14,53
10	16,99	22,23	26,97	.6875-24	.6875-24	14,99	30,56	17,70
12	21,08	26,97	31,75	.8125-20	.8750-20	19,05	35,33	22,45
14	24,26	30,18	34,93	.9375-20	1.0000-20	22,23	38,48	25,58
16	27,53	33,32	38,10	1.0625-18	1.1250-18	25,40	41,68	28,80
18	30,68	36,53	41,28	1.1875-18	1.2500-18	28,58	44,86	31,98
20	33,86	39,67	46,02	1.3125-18	1.3750-18	31,75	49,61	35,15
22	37,06	42,88	49,23	1.4375-18	1.5000-18	34,93	52,78	38,28
24	40,13	46,02	52,37	1.4375-18	1.6250-18	38,10	55,96	41,50

All dimensions for reference only.

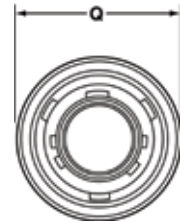
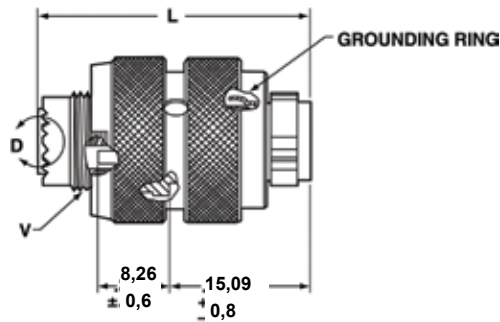
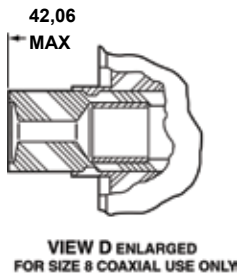
SJT06RT/SJTG06RT – CRIMP

Straight Plug/Straight Plug (with Grounding Fingers)

SJT06RT
SJTG06RT



SJT06RT



SJTG06RT

Shell Size	L Max mm	Q Dia. Max. mm	V Thread (in)		
			Class 2A UNEF (Plated)		Modified Major Dia.
8	30,96	18,64	.4375-28	.421 –	.417
10	30,96	21,44	.5625-24	.542 –	.538
12	30,96	25,81	.6875-24	.667 –	.663
14	30,96	28,98	.8125-20	.791 –	.787
16	30,96	32,13	.9375-20	.916 –	.912
18	30,96	35,33	1.0625-18	1.034 –	1.030
20	30,96	38,10	1.1875-18	1.158 –	1.154
22	30,96	41,28	1.3125-18	1.283 –	1.279
24	31,95	44,45	1.4375-18	1.408 –	1.404

All dimensions for reference only.

SJT - ACCESSORIES

FOR PROTECTION CAPS AND BACKSHELLS PLEASE CONSULT **AMPHENOL INDIA**



www.amphenol-in.com

38999, SERIES I LJT, II JT, III TV, & SJT - APPLICATION TOOLS

The following data includes information pertaining to the application tools which have been established for crimping, inserting, and removing contacts incorporated in the TV, CTV and MIL-DTL-38999 Series III connectors. For additional information on coax, twinax and triax contact tools, see High Speed Contact section of this catalog.

All crimping tools included are the "full cycling" type and when used as specified in the installation instructions L-624 covering the TV, CTV and MS series connectors, will provide reliable crimped wire to contact terminations. There is a possibility of additional crimping tools other than those included being available at present or in the future for this specific application.

CRIMPING TOOLS

Contact Size/Type	Crimping Tool	Turret Die or Positioner
12 Pin and Socket	M22520/1-01	M22520/1-04
16 Pin and Socket	M22520/1-01 M22520/7-01	M22520/1-04 M22520/7-04
20 Pin and Socket	M22520/1-01 M22520/2-01 M22520/7-01	M22520/1-04 M22520/2-10 M22520/7-08
22D Pin	M22520/2-01 M22520/7-01	M22520/2-09 M22520/7-07
22D Socket Series I, III	M22520/2-01 M22520/7-01	M22520/2-07 M22520/7-05
22D Socket Series II	M22520/2-01 M22520/7-01	M22520/2-06 M22520/7-06
8 Twinax Center Pin and Socket	M22520/2-01	M22520/2-37
8 Twinax Intermediate Outer Pin & Socket	M22520/5-01	M22520/5-200

Contact Size/Type	Crimping Tool	Turret Die or Positioner
8 Coaxial Inner Pin and Socket	M22520/2-01	M22520/2-31
8 Coaxial Outer Pin and Socket	M22520/5-01	M22520/5-05 Die Closure B
	M22520/5-01	M22520/5-41 Die Closure B
	M22520/10-01	M22520/10-07 Die Closure B
16 Coaxial Inner Pin and Socket	M22520/2-01	M22520/2-35
16 Coaxial Outer Pin and Socket	M22520/4-01	M22520/4-02
12 Coaxial Inner Pin and Socket	M22520/2-01	M22520/2-34
12 Coaxial Outer Pin and Socket	M22520/31-01	M22520/31-02

Where 2 or 3 tools are listed for a contact size, only one tool and its die or positioner are required to crimp the contact. The above crimping tools and positioners are available from the approved tool manufacturer.

INSERTION TOOLS

Use with Contact Size	Plastic Tools		Metal Tools			
	MS Part Number	Color	Angle Type		Straight Type Commercial Part No.	Color
			MS Part No.	Commercial Part No.		
12	M81969/14-04*	Yellow / (White)	M81969/8-09	11-8674-12††	11-8794-12††	Yellow
16	M81969/14-03*	Blue / (White)	M81969/8-07	11-8674-16††	11-8794-16††	Blue
20	M81969/14-10*	Red / (Orange)	M81969/8-05	11-8674-20††	11-8794-20††	Red
22D	M81969/14-01*	Green / (White)	M81969/8-01	11-8674-24††	11-8794-24††	Black
8 Coaxial	None Required					
8 Twinax	None		None	None	None	Red

REMOVAL TOOLS

Use with Contact Size	Plastic Tools		Metal Tools				
	MS Part Number	Color	For Unwired Contacts Commercial Part No.	Angle Type		Straight Type Commercial Part No.	Color
				MS Part No.	Commercial Part No.		
12	M81969/14-04*	(Yellow) / White	11-10050-11††	M81969/8-10	11-8675-12††	11-8795-12††	Yellow / White
16	M81969/14-03*	(Blue) / White	11-10050-10††	M81969/8-08	11-8675-16††	11-8795-16††	Blue / White
20	M81969/14-10*	(Orange) / Red	11-10050-9††	M81969/8-06	11-8675-20††	11-8795-20††	Red / Orange
22D	M81969/14-01*	(Green) / White	11-10050-7††	M81969/8-02	11-8675-24††	11-8795-24††	Green / White
8 Coaxial	M81969/14-12	Green	None	None	11-9170††	DRK264-8†††	N/A
8 Twinax	M81969/14-12	Green	None	None	11-9170††	N/A	N/A

For information about contacts see page 29. The M81969/8, 11-8674, 11-8675, and 11-8794 metal contact insertion and removal tools will accommodate wires having the maximum outside diameter as follows: Contact size 12: dia. is .155, size 16: dia. is .109, size 20: dia. is .077, size 22D: dia. is .050. When wire diameters exceed those specified, the plastic tools must be used.

* Double end insertion/removal tool.

** Twinax insertion tools are available only in a straight type, metal version.

† To be determined.

†† Contact Daniels Manufacturing Co. or Astro Tool Corp. for availability.

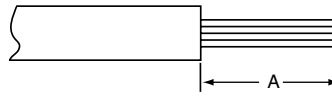
††† Daniels Manufacturing Co. part number

38999, SERIES I LJT, II JT, III TV, & SJT - ASSEMBLY INSTRUCTIONS

WIRE STRIPPING

1. Strip wire to required length. (See Figure at right). When using hot wire stripping, do not wipe melted insulation material on wire strands; with mechanical strippers do not cut or nick strands.
 2. See Table 1 for proper finished outside wire dimensions.
 3. Twist strands together to form a firm bundle.
 4. Insert stripped wire into contact applying slight pressure until wire insulation butts against wire well. Check inspection hole to see that wire strands are visible. If there are strayed wire strands, entire wire end should be re-twisted.
- When wire is stripped and properly installed into contact, the next step is to crimp the wire inside the contact by using the proper crimping tool.

STRIPPING DIMENSIONS



Wire Size	A
22D	3.18
20	4.77
16	4.77
12	4.77

Table 1

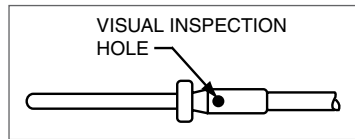
Contact Size	Wire Dimension (mm)**	
	Min.	Max.
12	2,46	3,61
16	1.65	2,77
20	1.02	1,96
22D	0,76	1,27

** Min. diameters to insure moisture proof assembly; max. diameters to permit use of metal removal tools.

CRIMPING

See table on preceding page for recommended M22520 series crimping tools, turret head or positioner selection settings according to contact size, part number and wire gauge size.

1. Insert stripped wire into contact crimp pot. Wire must be visible through inspection hole.
2. Using correct crimp tool and locator, cycle the tool once to be sure the indentors are open, insert contact and wire into locator. Squeeze tool handles firmly and completely to insure a proper crimp. The tool will not release unless the crimp indentors in the tool head have been fully actuated.
3. Release crimped contact and wire from tool. Be certain the wire is visible through inspection hole in contact.

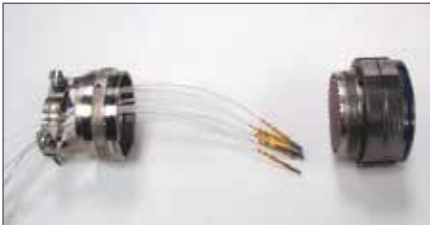


Examples of M22520 Series Crimping Tools:
Shown top: tool used for small size 22D and contacts.

Shown bottom: tool used for size 20, 16 or 12 contacts and has a positioner that can be dialed for each contact size.

CONTACT INSERTION

1. First remove hardware from the plug and receptacle and slide the hardware over wires in proper sequence.



Note: All plastic tools are double-ended. The colored side is the insertion tool and the white side is the removal tool.

2. Use proper plastic or metal insertion tool for corresponding contact. (Consult Insertion Tool table on preceding page). Slide correct tool (with plastic tool use colored end) over wire insulation and slide forward until tool bottoms against rear contact shoulder.



Plastic tool with contact in proper position.



Metal tool with contact.

3. Next align the tool and contact up to the properly identified cavity at rear of connector plug. Use firm, even pressure; do not use excessive pressure. It is recommended to start at the center cavity. Contact must be aligned with grommet hole and not inserted at an angle. Push forward until contact is felt to snap into position within insert.



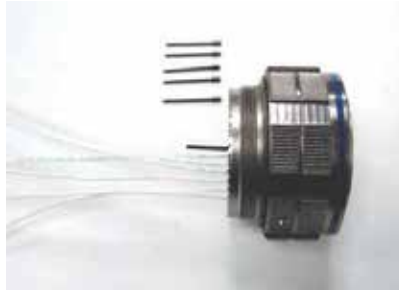
Continued on next page.

38999, SERIES I LJT, II JT, III TV, & SJT - INSTALLATION INSTRUCTIONS, CONT.**CONTACT INSERTION, CONT.**

4. Remove tool and pull back lightly on wire, making sure contact stays properly seated and isn't dragged back with the tool. Repeat operation with remainder of contacts to be inserted, beginning with the center cavity and working outward in alternating rows.



5. After all contacts are inserted, fill any empty cavities with wire sealing plugs.



6. Reassemble plug or receptacle hardware - slide forward and tighten using connector pliers. Connector holding tools are recommended while tightening back accessories. When using strain relief, center wires at bar clamp. Slide clamp grommet into position and tighten clamp bar screws. When tightening screws, pressure should be applied in the same direction that clamp is threaded to rear threads of connector. When not using clamp grommet, build up wire bundle with vinyl tape so clamp bar will maintain pressure on wires.



CAUTION, when inserting or removing contacts, do not spread or rotate tool tips.

CONTACT REMOVAL

1. Remove hardware from plug or receptacle and slide hardware back along wire bundle.



2. Use proper plastic or metal removal tool for corresponding contact. (Consult Removal Tool table). Slide correct size tool over wire insulation.



Use white end of plastic tool for removal of contacts.

3. Insert plastic or metal removal tool into contact cavity until tool tips enter rear grommet and come to a positive stop. Hold tool tip firmly against positive stop on contact shoulder. Grip wire and simultaneously remove tool and contact. (On occasion, it may be necessary to remove tool, rotate 90° and reinsert.)



Removal of contacts with metal tool.

NOTES

Amphenol SOCAPEX



Amphenol Socapex

948, promenade de l'Arve BP29
74311 Thyez Cedex - France
+33 (0)4 50 89 28 00
contact@amphenol-socapex.fr
www.amphenol-socapex.com



For Technical Support

+33 (0)4 50 89 28 49
technicalsupport@amphenol-socapex.fr



To buy our products

+33 (0)4 50 90 28 00
contact@amphenol-socapex.fr
www.amphenol-socapex.com/amphenol/sales
Request a quote online at www.amphenol-socapex.com/quotation_request



Documentation

www.amphenol-socapex.com/documentation
To order a paper version of our catalogs, send an e-mail to communication@amphenol-socapex.fr

Check our product inventory



Product Selectors & 3D Files



NEW

GICAT
MEMBER



www.amphenol-socapex.com
Follow Amphenol Socapex on social media :



This catalog uses paper from managed forests, PEFC & FSC labels, and is printed by a printer certified "Imprim'Vert®"

We reserve the right to modify our products in any way we deem necessary.
Any duplication is prohibited, unless approved in writing.
Only PDF version - May 2024
Designed by **Amphenol Socapex**