

JT/LJT

specifications

CONTACT RATING

Contact Size	Test Current		Maximum Millivolt Drop Crimp*	Maximum Millivolt Drop	
	Solder & Crimp	Hermetic		Solder*	Hermetic*
22M	3	2	45	20	60
22D	5	3	73		85
22	5	3	73	20	85
20	7.5	5	55	20	60
16	13	10	49	20	85
12	23	17	42	20	85
10 (Power)	33	NA	33	NA	NA

Contact Size	Crimp Well Data		Solder Well Data	
	Well Diameter	Nominal Well Depth	Well Diameter	Nominal Well Depth
22M	.028 ±.001	.141	.029 $\begin{smallmatrix} +.004 \\ -.000 \end{smallmatrix}$	
22D	.0345 ±.0010	.141		
22	.0365 ±.0010	.141	.036 $\begin{smallmatrix} +.004 \\ -.000 \end{smallmatrix}$	.094
20	.047 ±.001	.209	.044 $\begin{smallmatrix} +.004 \\ -.004 \end{smallmatrix}$	.125
16	.067 ±.001	.209	.078 $\begin{smallmatrix} +.000 \\ -.004 \end{smallmatrix}$	.141
12	.100 ±.002	.209	.116 $\begin{smallmatrix} +.004 \\ -.002 \end{smallmatrix}$	.141
10 (Power)	.137 ±.002	.355	NA	NA

* When tested 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	500	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 position to know what peak voltage, switching surges, transients, etc. can be expected in a particular circuit.

FINISH DATA

Aluminum Shell Components Non-Hermetic				
Finish	Suffix		Indicated Finish Standard for JT Types Listed Below	Indicated Finish Standard for LJT Types Listed Below
	Military	Proprietary		
Cadmium Plated Nickel Base	MS (A)	—	JT/JTG/JTL/JTP	LJT/LJTP
Anodic Coating (Alumilite)	MS (C)	(005)	JTS/JTPS/JTLS	LJTPS/LJTS
Chromate Treated (Iridite 14-2)		(011)	JTN/JTPN/JTLN	LJTN/LJTPN
Olive Drab Cadmium Plate Nickel Base	MS (B)	(014)		
Electroless Nickel	MS (F)	(023)		

Hermetic Connectors				
Material/Finish	Suffix		Indicated Finish Standard for JT Types Listed Below	Indicated Finish Standard for LJT Types Listed Below
	Military	Proprietary		
Carbon Steel Shell Tin Plated Shell and Contacts			JT()H/JT()Y JTL()H/JTL()Y	LJT()Y/LJT()H
Carbon Steel Shell Tin Plated Shell and Gold Plated Contacts	MS (D)			
Stainless Steel Shell Gold Plated Contacts	MS (E)	(162)	JTS()Y JTLS()Y	LJTS()Y

insert availability and identification, alternate positioning

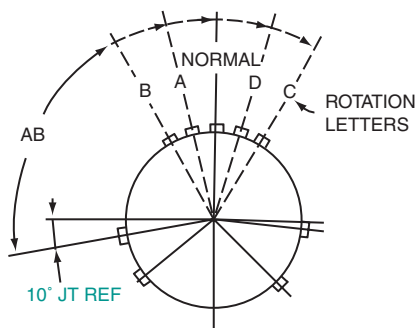
JT	LJT	Solder	Crimp	Hermetics		Service Rating	Total Con- tacts	Contact Size						
				Class H	Class Y*			22D	22M	22	20	16	12	8 (Coax)
8-2		P				M	2				2			
8-3		X	N/A	P	P	M	3				3			
	9-3	X												
8-6		X	X	P	P	M	6		6					
	9-6	X	X	P	P									
	9-7	X				M	7		7					
	9-22	X				I	2				2			
8-35			X	P	P	M	6	6						
	9-35		X	P	P									
8-44			X	P	P	M	4			4				
	9-44		X											
8-97		X				M	4		2		2			
8-98		S	X	P	P	I	3				3			
	9-98	X	X	P	P									
	11-2★		2	P**		I	2					2		
10-4			3			I	4				4			
	11-4	X	2											
10-5		X	X	P	P	I	5				5			
	11-5	X	2											
	11-6	S				I	6				6			
10-13		X	X	P	P	M	13		13					
	11-13	X	X	P	P									
10-35			X	P	P	M	13	13						
	11-35		X	P	P									
10-98		X	X	P/S	P	I	6				6			
	11-98	X	X	P	P									
10-99			X	P	P	I	7				7			
	11-99		P											
12-3		X	X	P	P	II	3					3		
	13-3		P											
12-4		X	X	P	P	I	4					4		
	13-4★	X	X	P/S	P									
12-8		X	X	P	P/S	I	8				8			
	13-8	X	X	P	P									
12-22			X	P	P	M	22		22					
	13-22	X	X	P/S	P									
12-35			X	P	P	M	22	22						
	13-35		X	P	P									
12-98		X	X	P/S	P	I	10				10			
	13-98	X	X	P/S	P									
14-4			2			I	4						4	
	15-4		3											
14-5		X	X	P	P	II	5					5		
	15-5★	X	X											
14-15		X	X	P/S	P	I	15				14	1		
	15-15	X	X	P/S	P									
14-18		X	X	P/S	P	I	18				18			
	15-18	X	X	P/S	P									
14-19		X	3			I	19				19			
	15-19		2											
14-35			X	P	P	M	37	37						
	15-35		X	P	P									
14-37		X	X	P	P	M	37		37					
	15-37	X	X	P	P									
14-68			2			1	8					8		
	15-68	X	3											
14-97			2	P	P	I	12				8	4		
	15-97	X	2	P	P									

JT MASTER KEY/KEYWAY ROTATION

AB ANGLE OF ROTATION (Degrees)					
Shell Size	Normal	A	B	C	D
8	100°	82°	—	—	118°
10	100°	86°	72°	128°	114°
12	100°	80°	68°	132°	120°
14	100°	79°	66°	134°	121°
16	100°	82°	70°	130°	118°
18	100°	82°	70°	130°	118°
20	100°	82°	70°	130°	118°
22	100°	85°	74°	126°	115°
24	100°	85°	74°	126°	115°

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. Only the master key/keyway rotates in the shell, and the insert always remains in the same position relative to the minor keys.

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.



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

- (P) Pin inserts only (consult Amphenol, Sidney, NY for socket availability)
- (S) Socket inserts only (consult Amphenol, Sidney, NY for pin availability)
- (2) Not tooled for RP or 02RE
- (3) Pin inserts only, not tooled for RP or 02RE (consult Amphenol, Sidney, NY for availability)
- * Same as H with interfacial seal
- ** Tooled with special terminal only (consult Amphenol, Sidney, NY for availability of standard terminal)
- ★ Ground plane proprietary option available. See page 51 for further information on ground plane connectors.

insert availability and identification, alternate positioning

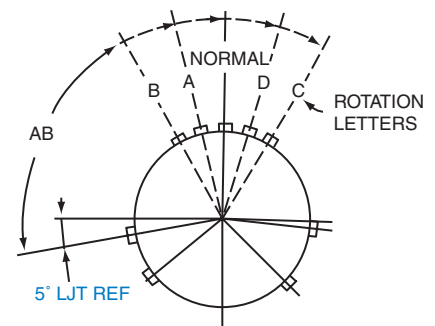
JT	LJT	Solder	Crimp	Hermetics		Service Rating	Total Con- tacts	Contact Size							
				Class H	Class Y*			22D	22M	22	20	16	12	8 (Coax)	8 (Twinax)
	17-2		X			M	39	38							1
16-6	17-6		X	P	P	I	6						6		
16-8	17-8★	X	X	P	P	II	8					8			
16-13			2			I	13					13			
	17-13		2			Coax	4						2 Coax	2	
	17-22														
	17-25		2			M	24	22						2	
16-26	17-26	X	X	P/S	P	I	26				26				
16-35		X	X	P/S	P										
16-35	17-35	X	X	P	P	M	55	55							
16-42			X												
16-42	17-42		P			M	42			42					
16-55		X	X	P/S	P										
16-55	17-55	X	X	P		M	55		55						
16-99		X	X	P	P										
16-99	17-99	X	X	S		I	23				21	2			
18-11		X	X	P	P										
18-11★	19-11★	X	X	P	P	II	11					11			
	19-18		2			M	18	14							4
18-28		X	X	P	P	I	28				26	2			
18-28	19-28	X	P												
18-30		X	X			I	30				29	1			
18-30	19-30	X	P												
18-32		X	X	P/S	P	I	32				32				
18-32	19-32	X	X	P/S	P										
18-35		X	X	P	P										
18-35	19-35		X	P	P	M	66	66							
18-53		X	X												
18-53	19-53		P			M	53			53					
18-66		X	X	P	P										
18-66	19-66	X	X	P	P	M	66		66						
	19-67	X	3	S		M	67		67						
18-68			2			I	18					18			
18-68	19-68		3												
18-96			2			I	9						9		
20-1			X	P											
20-1	21-1		X	S		M	79		79						
20-2			X												
20-2	21-2		2			M	65			65					
20-11			3												
20-11	21-11★		2			I	11					11			
20-16		X	X	P	P										
20-16	21-16★	X	X	P	P	II	16					16			
	21-24	X				I	24				24				
	21-25	X				I	25				25				
	21-27	X				I	27				27				
20-35			X												
20-35	21-35		X			M	79	79							
20-39		X	X	P	P										
20-39	21-39	X	X			I	39				37	2			
20-41		X	X	P	P										
20-41	21-41	X	X	S		I	41				41				

LJT MASTER KEY/KEYWAY ROTATION

AB ANGLE OF ROTATION (Degrees)					
Shell Size	Normal	A	B	C	D
9	95°	77°	—	—	113°
11	95°	81°	67°	123°	109°
13	95°	75°	63°	127°	115°
15	95°	74°	61°	129°	116°
17	95°	77°	65°	125°	113°
19	95°	77°	65°	125°	113°
21	95°	77°	65°	125°	113°
23	95°	80°	69°	121°	110°
25	95°	80°	69°	121°	110°

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. Only the master key/keyway rotates in the shell, and the insert always remains in the same position relative to the minor keys.

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.



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

- (P) Pin inserts only (consult Amphenol, Sidney, NY for socket availability)
- (S) Socket inserts only (consult Amphenol, Sidney, NY for pin availability)
- (2) Not tooled for RP or 02RE
- (3) Pin inserts only, not tooled for RP or 02RE (consult Amphenol, Sidney, NY for availability)
- * Same as H with interfacial seal
- ★ Ground plane proprietary option available. See page 51 for further information on ground plane connectors.

insert availability and identification

JT	LJT	Solder	Crimp	Hermetics		Service Rating	Total Contacts	Contact Size								10 (Power)	12 Coax
				Class H	Class Y*			22D	22M	22	20	16	12	8 (Coax)	8†† (Twinax)		
	21-75★		2			N	4							(See Note 4)			
	21-79		2			II	19	17						(See Note 5)			
22-1			X			M	100		100								
	23-1		X														
22-2		X	X	P	P	M	85			85							
	23-2	X	X	P	P												
	23-5		X			M	5								5		
	23-6★		P			M	6								6		
22-14			2			I	14						14				
	23-14		2														
22-21		X	X	P	P	II	21					21					
	23-21★	X	X	P	P												
22-32		X	X	P		I	32				32						
	23-32	X	P														
	23-34	X				I	34				34						
22-35			X			M	100	100									
	23-35		X														
	23-36					I	36				36						
22-53			P			I	53				53						
	23-53	X	X	P/S													
22-55		X	X	P	P	I	55				55						
	23-55		3														
	23-97	X				II	16					16					
	23-99	X				II	11					11					
24-1			X			M	128		128								
	25-1		X														
24-2			X			M	100			100							
	25-2		X														
24-4			X	P	P	I	56				48	8					
	25-4		X														
	25-7		2			M	99	97							2		
	25-11		2			N	11				2					9	
24-19			2			I	19						19				
	25-19★		2														
	25-20		2			N	30				10	13**			3		4
24-24			X	P	P	I	24					12	12				
	25-24★		X														
24-29			X			I	29					29					
	25-29★	X	X														
24-35			X			M	128	128									
	25-35		X														
24-37			2			I	37					37					
	25-37★		2														
24-43			3			I	43				23	20					
	25-43	X	2	P	P												
	25-46		2			I	46				40	4		2†			
24-61		X	X	P	P	I	61				61						
	25-61	X	X	P	P												

(P) Pin inserts only (consult Amphenol, Sidney, NY for socket availability)

(S) Socket inserts only (consult Amphenol, Sidney, NY for pin availability)

(2) Not tooled for RP or 02RE

(3) Pin inserts only, not tooled for RP or 02RE (consult Amphenol, Sidney, NY for availability)

* Same as H with interfacial seal

** Two size 16 contacts dedicated to fiber optics. Consult Amphenol, Sidney, NY or catalog section 12-352 for fiber optic contact information.

† For RG180/U and RG195/U cables only (consult Amphenol, Sidney, NY for other cable applications)

†† Size 8 Coax and Twinax are interchangeable

(4) MS connector 21-75 is supplied with four size 8 twinax contacts.

Proprietary connector 21-75 is supplied with four size 8 coax contacts.

(5) MS connector 21-79 has provision for two size 8 coax contacts. Coax contacts are not supplied unless specified by customer.

★ Ground plane proprietary option available. See page 51 for further information on ground plane connectors.

insert arrangements

black arrangements – JT or LJT
green arrangements – JT only
blue arrangements – LJT only

front face of pin inserts illustrated

Insert Arrangement (JT)	8-2	8-3	8-6			8-35	8-44	8-97	8-98
Insert Arrangement (LJT)		9-3	9-6	9-7	9-22	9-35	9-44		9-98
Service Rating	M	M	M	M	I	M	M	M	I
Number of Contacts	2	3	6	7	2	6	4	2 2	3
Contact Size	20	20	22M	22M	20	22D	22	22M 20	20

Insert Arrangement (JT)		10-4	10-5		10-13	10-35	10-98	10-99
Insert Arrangement (LJT)	11-2	11-4	11-5	11-6	11-13	11-35	11-98	11-99
Service Rating	I	I	I	I	M	M	I	I
Number of Contacts	2	4	5	6	13	13	6	7
Contact Size	16	20	20	20	22M	22D	20	20

Insert Arrangement (JT)	12-3	12-4	12-8	12-22	12-35	12-98	14-4	14-5
Insert Arrangement (LJT)	13-3	13-4	13-8	13-22	13-35	13-98	15-4	15-5
Service Rating	II	I	I	M	M	I	I	II
Number of Contacts	3	4	8	22	22	10	4	5
Contact Size	16	16	20	22M	22D	20	12	16

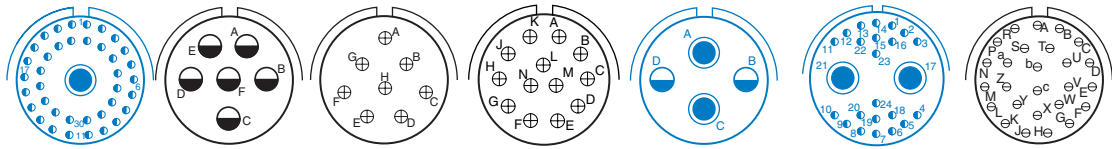
Insert Arrangement (JT)	14-15	14-18	14-19	14-35	14-37	14-68	14-97
Insert Arrangement (LJT)	15-15	15-18	15-19	15-35	15-37	15-68	15-97
Service Rating	I	I	I	M	M	I	I
Number of Contacts	14 1	18	19	37	37	8	8 4
Contact Size	20 16	20	20	22D	22M	16	20 16

JT/LJT

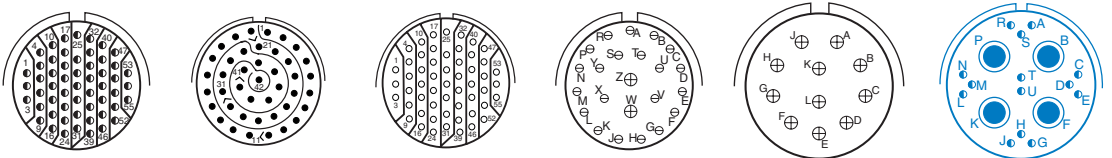
insert arrangements

black arrangements – JT or LJT
green arrangements – JT only
blue arrangements – LJT only

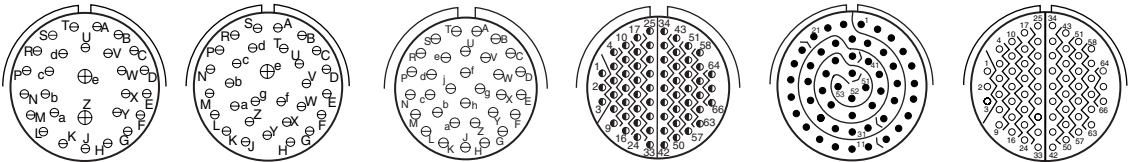
front face of pin inserts illustrated



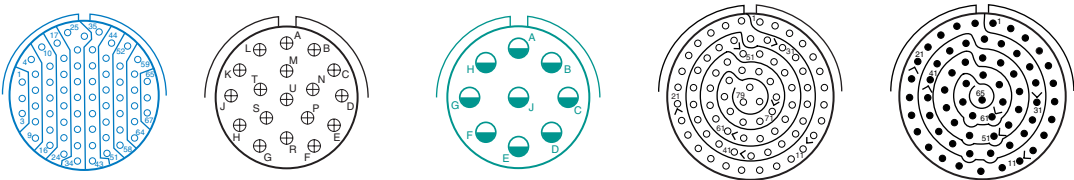
Insert Arrangement (JT)	17-2		16-6	16-8	16-13	17-22		17-25	16-26
Insert Arrangement (LJT)	17-2		17-6	17-8	17-13	17-22		17-25	17-26
Service Rating	M		I	II	I	Coax		M	I
Number of Contacts	38	1	6	8	13	2	2	22	26
Contact Size	22D	8 Twinax	12	16	16	12 Coax	8 Coax	22D 8 Coax	20



Insert Arrangement (JT)	16-35	16-42	16-55	16-99	18-11	19-18	
Insert Arrangement (LJT)	17-35	17-42	17-55	17-99	19-11	19-18	
Service Rating	M	M	M	I	II	M	
Number of Contacts	55	42	55	21 2	11	14	4
Contact Size	22D	22	22M	20 16	16	22D	8 Twinax



Insert Arrangement (JT)	18-28	18-30	18-32	18-35	18-53	18-66
Insert Arrangement (LJT)	19-28	19-30	19-32	19-35	19-53	19-66
Service Rating	I	I	I	M	M	M
Number of Contacts	26 2	29 1	32	66	53	66
Contact Size	20 16	20 16	20	22D	22	22M



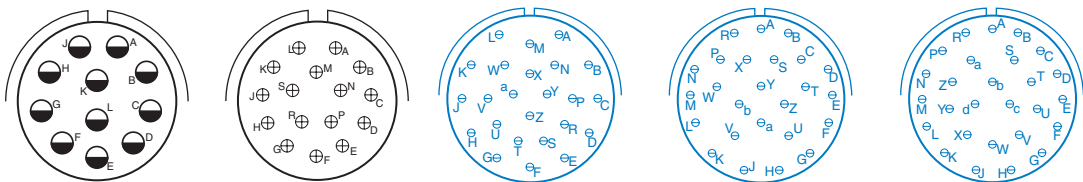
Insert Arrangement (JT)	19-67	18-68	18-96	20-1	20-2
Insert Arrangement (LJT)	19-67	19-68		21-1	21-2
Service Rating	M	I	I	M	M
Number of Contacts	67	18	9	79	65
Contact Size	22M	16	12	22M	22



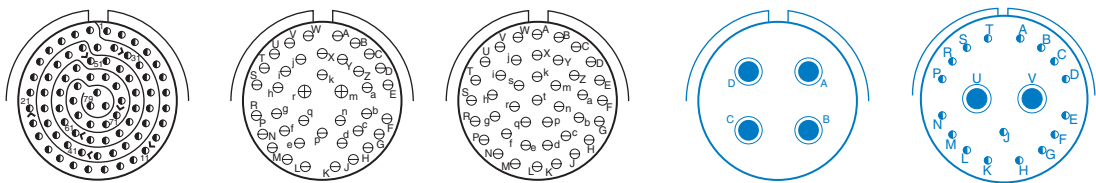
insert arrangements

black arrangements – JT or LJT
green arrangements – JT only
blue arrangements – LJT only

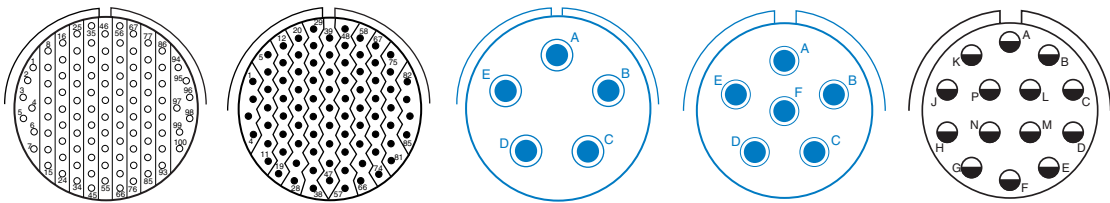
front face of pin inserts illustrated



Insert Arrangement (JT)	20-11	20-16			
Insert Arrangement (LJT)	21-11	21-16	21-24	21-25	21-27
Service Rating	I	II	I	I	I
Number of Contacts	11	16	24	25	27
Contact Size	12	16	20	20	20



Insert Arrangement (JT)	20-35	20-39	20-41		
Insert Arrangement (LJT)	21-35	21-39	21-41	21-75	21-79
Service Rating	M	I	I	N	II
Number of Contacts	79	37 2	41	4	17 (See Note)
Contact Size	22D	20 16	20	(See Note)	22D



Insert Arrangement (JT)	22-1	22-2			22-14
Insert Arrangement (LJT)	23-1	23-2	23-5	23-6	23-14
Service Rating	M	M	M	M	I
Number of Contacts	100	85	5	6	14
Contact Size	22M	22	8 Twinax	8 Twinax	12

Note: MS connector 21-75 is supplied with four size 8 twinax contacts.
Proprietary connector 21-75 is supplied with four size 8 coax contacts.
MS connector 21-79 has provision for two size 8 coax contacts.
Coax contacts are not supplied unless specified by customer.

JT/LJT

insert arrangements

black arrangements – JT or LJT
green arrangements – JT only
blue arrangements – LJT only

front face of pin inserts illustrated

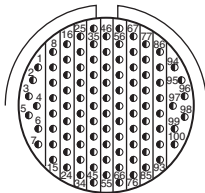
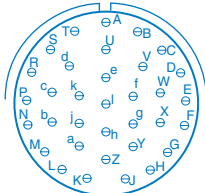
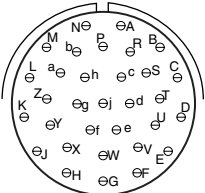
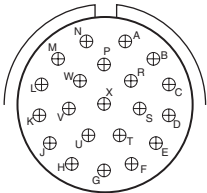
Insert Arrangement (JT)
Insert Arrangement (LJT)
Service Rating
Number of Contacts
Contact Size

22-21
23-21
II
21
16

22-32
23-32
I
32
20

23-34
23-34
I
34
20

22-35
23-35
M
100
22D



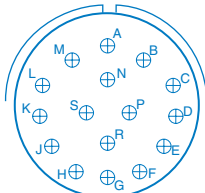
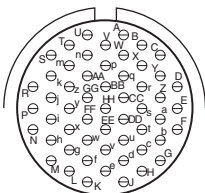
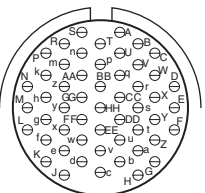
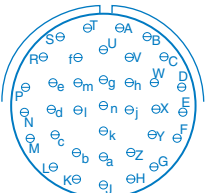
Insert Arrangement (JT)
Insert Arrangement (LJT)
Service Rating
Number of Contacts
Contact Size

23-36
I
36
20

22-53
23-53
I
53
20

22-55
23-55
I
55
20

23-97
II
16
16



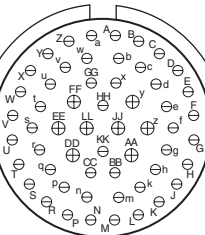
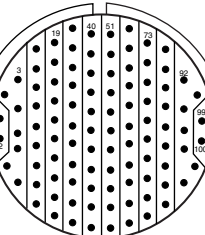
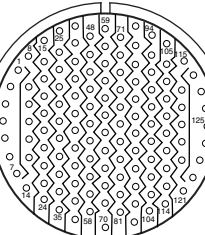
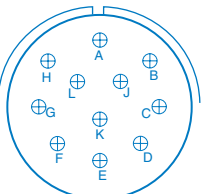
Insert Arrangement (JT)
Insert Arrangement (LJT)
Service Rating
Number of Contacts
Contact Size

23-99
II
11
16

24-1
25-1
M
128
22M

24-2
25-2
M
100
22

24-4
25-4
I
48 8
20 16



JT/LJT

insert arrangements

black arrangements – JT or LJT
green arrangements – JT only
blue arrangements – LJT only

front face of pin inserts illustrated

Insert Arrangement (JT)	25-7		25-11		24-19	25-20			
Insert Arrangement (LJT)					25-19				
Service Rating	M		N		I	N			
Number of Contacts	97	2	2	9	19	10	13	3	4
Contact Size	22D	8 Twinax	20	10	12	20	16	8 Twinax	12 Coax
						(Locations U and Y - Dedicated to Fiber Optics)			

Insert Arrangement (JT)	24-24		24-29		24-35	24-37			
Insert Arrangement (LJT)	25-24		25-29		25-35	25-37			
Service Rating	I		I		M	I			
Number of Contacts	12	12	29	16	128	37			
Contact Size	16	12	16		22D	16			

Insert Arrangement (JT)	24-43		25-46		24-61	25-61			
Insert Arrangement (LJT)	25-43								
Service Rating	I		I		I	I			
Number of Contacts	23	20	40	4	61	61			
Contact Size	20	16	20	16	20	8 Coax†			

† Coax contacts for RG180 or RG195 cable.

CONTACT LEGEND

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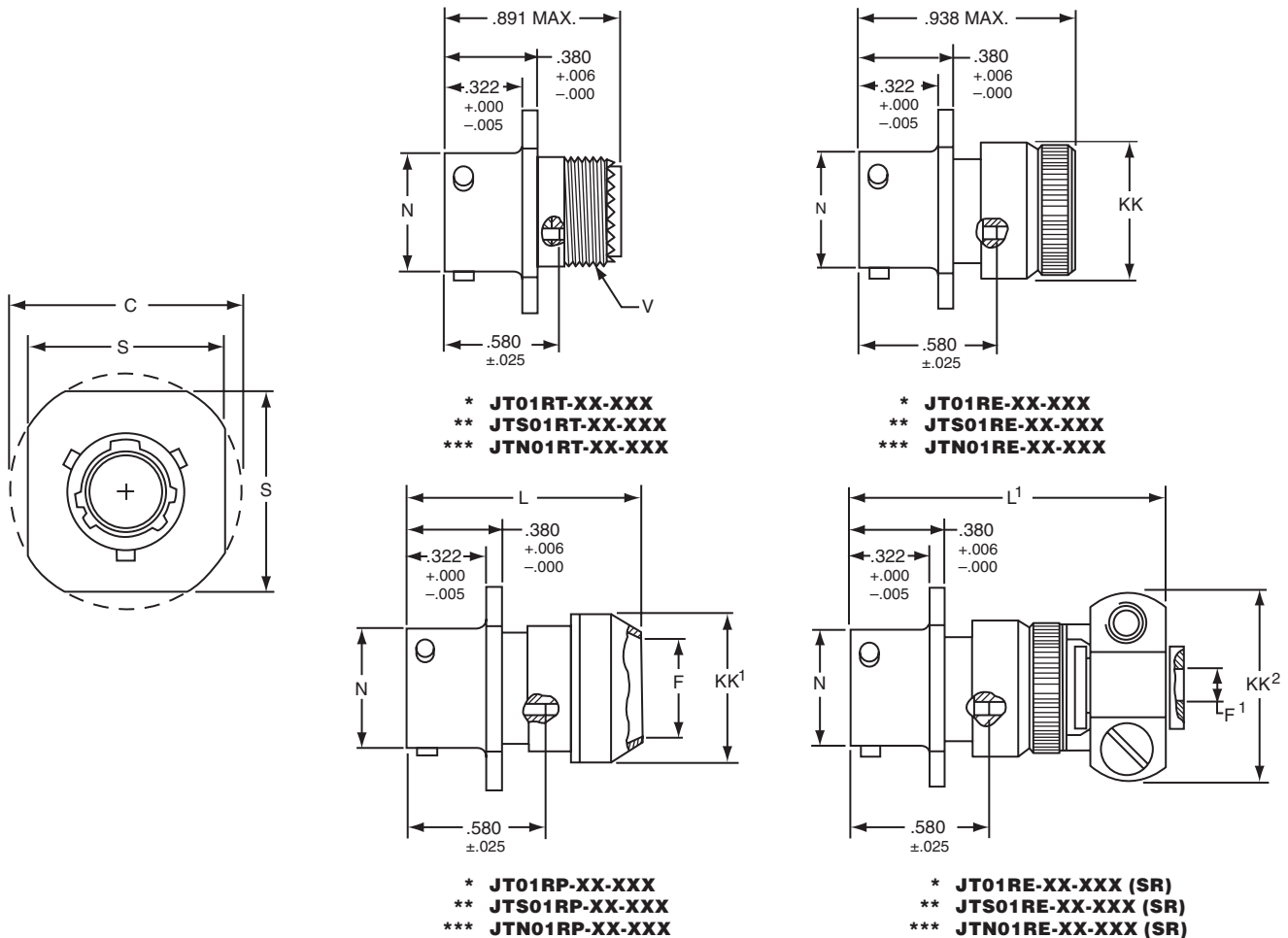
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○

○

8
10
12
16
20
22
22M
22D

JT01R — crimp line receptacle



* To complete order number see page 49.

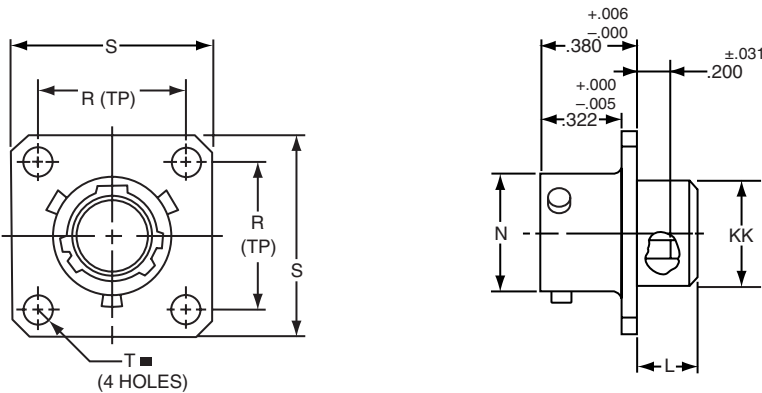
** High temperature version; to complete order number see page 49.

*** Clear iridite finish (gold color), N₂O₄ resistant; to complete order number see page 49.

Shell Size	C Max.	F Dia. ±.010	F ¹ Dia. +.010 - .025	L Max.	L ¹ Max.	N Dia. +.001 - .005	S +.017 - .016	V Thread UNEF Class 2A (Plated)	KK Dia. Max.	KK ¹ Dia. Max.	KK ² Max.
8	.965	.444	.125	1.031	1.562	.473	.812	.4375-28	.578	.625	.812
10	1.089	.558	.188	1.031	1.562	.590	.938	.5625-24	.703	.750	.875
12	1.183	.683	.312	1.031	1.562	.750	1.031	.6875-24	.828	.875	1.000
14	1.277	.808	.375	1.031	1.812	.875	1.125	.8125-20	.953	1.000	1.125
16	1.371	.909	.500	1.031	1.812	1.000	1.219	.9375-20	1.078	1.125	1.188
18	1.465	1.034	.625	1.031	1.812	1.125	1.312	1.0625-18	1.203	1.250	1.438
20	1.589	1.159	.625	1.031	1.812	1.250	1.438	1.1875-18	1.328	1.375	1.438
22	1.715	1.284	.750	1.031	1.938	1.375	1.562	1.3125-18	1.453	1.500	1.625
24	1.838	1.409	.800	1.109	1.938	1.500	1.688	1.4375-18	1.578	1.625	1.719

All dimensions for reference only.

JT02R (MS27499) — crimp box mounting receptacle



- * JT02RE-XX-XXX (MS27499E)
- ** JTS02RE-XX-XXX
- *** JTN02RE-XX-XXX

■ $\oplus$.005 DIA (M)

- * To complete order number see page 49.
- ** High temperature version; to complete order number see page 49.
- *** Clear iridite finish (gold color), N₂O₄ resistant; to complete order number see page 49.

Shell Size	L Max.	N +.001 -.005	R (TP)	S ±.016	T ±.005	KK Dia. Max.
8	.286	.473	.594	.812	.120	.438
10	.286	.590	.719	.938	.120	.563
12	.286	.750	.812	1.031	.120	.688
14	.286	.875	.906	1.125	.120	.813
16	.286	1.000	.969	1.219	.120	.938
18	.286	1.125	1.062	1.312	.120	1.047
20	.286	1.250	1.156	1.438	.120	1.172
22	.286	1.375	1.250	1.562	.120	1.297
24	.286	1.500	1.375	1.688	.147	1.422

All dimensions for reference only.
 NOTE: For applications requiring an environmental seal, please refer to JT00R, page 12.

application tools

The following data includes information pertaining to the application tools which have been established for crimping, inserting, and removing the size 12, 16, 20, 22, 22D and 22M contacts incorporated in the JT-R, LJT-R and MIL-DTL-38999 (MS) series connectors as applicable.

All crimping tools included are the “full cycling” type and when used as specified in the installation instructions (L-624 and

L-844 covering the JT-R, LJT-R 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.

For additional information on coaxial contacts, consult Amphe-nol catalog section 12-130.

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
22, 22D, 22M Pin	M22520/2-01 M22520/7-01	M22520/2-09 M22520/7-07
22, 22D, 22M Socket (LJT-R)	M22520/2-01 M22520/7-01	M22520/2-07 M22520/7-05
22D Socket (JT-R)	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
10 (Power)	††	††

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			
	Part Number	Color Code	Angle Type		Straight Type Proprietary Part Number	Color Code
			MS Part Number	Proprietary Part Number		
10 (Power)	M81969/14-05*	Gray/White	M81969/8-11	†	†	Green
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
22	M81969/14-09	Brown/White	M81969/8-03	11-8674-22	11-8794-22	Brown
22D, 22M	M81969/14-01*	Green/White	M81969/8-01	11-8674-24	11-8794-24	Black
8 Coaxial	None Required					
8 Twinax	None		M81969/46-06**	None		Red

REMOVAL TOOLS

Use with Contact Size	Plastic Tools		Metal Tools				
	Part Number	Color Code	For Unwired Contacts Proprietary Part Number	Angle Type		Straight Type Proprietary Part Number	Color Code
				MS Part Number	Proprietary Part Number		
10 (Power)	M81969/14-05*	(Green)/White	†	M81969/8-12	†	†	Green/White
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*	(Red) Orange	11-10050-9	M81969/8-06	11-8675-20	11-8795-20	Red/White
22	M81969/14-09*	(Brown)/White	11-10050-8	M81969/8-04	11-8675-22	11-8795-22	Brown/White
22D, 22M	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	M81969/46-12**	11-9170	N/A	N/A

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–.155, 16–.109, 20–.077, 22, 22D, 22M–.050. When wire diameters exceed those specified, the plastic tools must be used.

* Double ended insertion/removal tool.

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

† To be determined

†† Contact Daniels Manufacturing Co. for availability.