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III
II
I
SJT
38999

26482
Matrix 2

83723 III
Matrix Pyle

5015
Crimp Reel
Release Matrix

26500 Pyle

Printed
Circuit Board

EMI Filter
Transient

Fiber Optics

High Speed
Contacts

Options
Others

Powell Electronics, Inc.

Who We Are

Powell Electronics is among the largest distributors of electronic components and value-added services. Our focus and expertise includes electronic connectors, switches, sensors, and related electro-mechanical products. For close to 60 years, we have brought a unique sense of purpose and vision to electronics distribution.

Our company was founded in 1946 by Harold H. Powell, who was a Navy electronics technician during World War II. After the war, Harold started selling components from his garage in response to the burgeoning post-war demand for electronics parts. Since then, the company has established an unbroken record of success as a specialty components distributor.

Today, we are a national company with a global reach, representing the most respected manufacturers. We employ a staff of over 200 people at 11 U.S. locations, and utilize state-of-the-art technology. We supply all industries, especially companies servicing key market sectors, including:

- Military/Aerospace
- Telecommunications
- Transportation
- Medical Imaging and Instrumentation
- The United States Government

Still a family-owned company, **Powell Electronics** continues to be guided by our founding principles of honesty, integrity, ethical dealings, plus a sense of urgency for meeting our customers' needs.



Amphenol Aerospace Quick Reference

38999
SJT I II III

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Matrix 2

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Matrix Pyle

5015
Crimp Rear Release Matrix

26500
Pyle

Printed
Circuit Board

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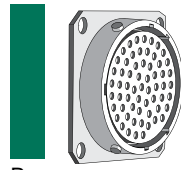
Options
Others

MIL-DTL-38999 Series III, TV Tri-Start



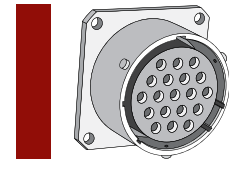
Pages
4-7 Shell & Insert Chart
8-14 Insert Arrangements
17-44 TV Section
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MIL-DTL-38999 Series II, JT



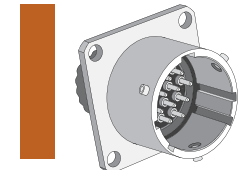
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MIL-DTL-38999 Series I, LJT



Pages
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SJT



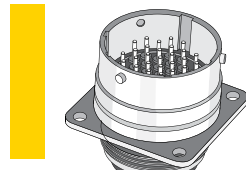
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81-88 SJT Section
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MIL-DTL-26482 Matrix 2



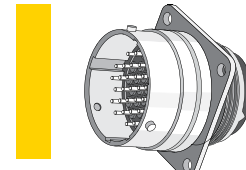
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111 Shell & Insert Chart
112, 113 Insert Arrangements
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MIL-DTL-83723 Matrix



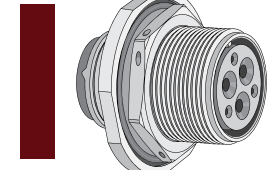
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124 Shell & Insert Chart
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MIL-DTL-83723 Pyle



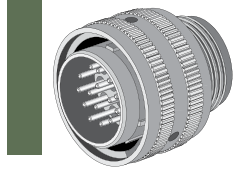
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157-165 Shell Styles
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MIL-DTL-5015 Crimp Rear Release Matrix



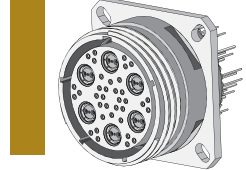
Pages
172-173 Shell & Insert Chart
174-182 Insert Patterns
186-192 Shell Styles
194-197 Accessories, Contacts,
and Tools

MIL-DTL-26500 Pyle



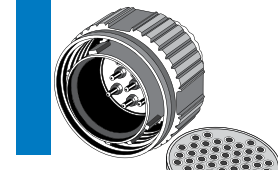
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203,204 Insert Patterns
209-223 Shell Styles
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and Tools

Printed Circuit Board



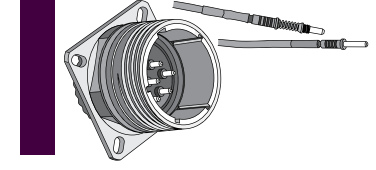
Pages
239 Shell & Insert Chart
241-255 Insert Arrangements
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EMI Filter Transient



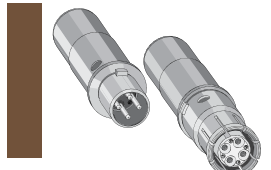
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282-285 Filter Data
288,289 How to Order
290-331 Shell Styles
332-338 Adapters, MOV,
Diode, ESA and Specials

Fiber Optics



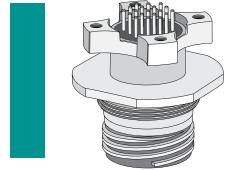
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High Speed Contacts



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376 Overview
377-406 MIL-DTL-38999 Contacts
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Options Others



Pages
415-431 Additional Circulars
432-435 Additional Rectangular



Amphenol has become the leader in interconnection products through its long history of engineering expertise for product solution solving. New and innovative solutions are under development every day within our highly skilled engineering departments who are teamed with marketing product managers and production specialists. They are always striving to meet new customer requirements in ever changing markets. The teams have a customer-driven approach to produce the end result: quality interconnect products that meet or exceed customer demands.



New/Featured
Breakaway Hybrid, Low Profile Lanyard Release Plug
 Page 42

New Hybrid Lanyard Breakaway Fail Safe Connector with a composite thermoplastic outer operating sleeve for greater durability.

Solution: Navy F-18 program needed a break away plug that would have greater durability in weapons release application.



New/Featured
New HD38999 (High Density, Crimp) Plugs and receptacles
 Page 43, 44

The HD38999 family of connectors was designed to work with existing Mil-specified 38999 shells. The HD38999 has 30% more contacts, it still performs to minimum electrical requirements of standard 38999 connectors.

Solution: 30% more contact density in 38999 Series III Shells



New/Featured
Matrix MIL-DTL-5015 with RADSOK® Contacts
 Page 193

A special design of the Matrix MIL-DTL-5015, Series II connectors has added high amperage with the RADSOK® contacts in the plug instead of standard rear release crimp contacts.

Solution: Higher amperage capability in Matrix MIL-DTL-5015



New/Featured
Filter Connector with High Density Patterns
 Page 289

New High Density Patterns are available in Filter 38999 connectors in standard Mil-Spec or filter length shells. They provide 30% more contact than standard insert arrangement patterns. See page 43 for ordering information.

Solution: Higher contact density and custom stand-off shell designs



New/Featured
ARINC 801 Connectors
 Page 356

Designed for use in Amphenol ARINC 801 fiber optic connectors - manufactured to comply with ARINC 801. Genderless terminus allows for use on both sides of a connector.

Solution: Fiber Optic Termini & Connector that meet ARINC specifications



New/Featured
MT Ferrule Connectors
 Page 359

Amphenol offers a multi-channel circular connector with high density MT fiber optics. High fiber density in a relatively small circular connector package with all the advantages of the MIL-DTL-38999 series III connector.

Solution: Higher Density Fiber Optics in MIL-DTL-38999

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MIL-DTL-38999, Series I LJT, II JT, III TV Insert Availability and Identification Chart

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Contacts

Options
Others

Series	Series	Series	Military	JT/LJT		Hermetics			Service Rating	Total Contacts	Contact Size									
				Solder	Crimp	Class H	Class Y	TV*			22D	22M	22	20	16	12	12 (Coax)	10 (Power)	8 (Coax)	8†† (Twinax)
8-2■				P					M	2				2						
8-3■				X	NA	P	P		M	3				3						
9-3■				X																
		9-5★■							Grounded	1										1
8-6				X	X	P	P		M	6		6								
9-6				X	X	P	P		M	7		7								
9-7■				X					M	7										
9-22■				X					I	2				2						
8-35					X	P	P		M	6	6									
9-35	9-35		A35		X	P	P	P	M	6										
8-44					X	P	P		M	4			4							
9-44					X				M	4										
		9-94 ■			◆				M	2										
8-97■				X					M	4		2		2						
8-98				S	X	P	P		I	3				3						
9-98	9-98		A98	X	X	P	P	P	I	3										
11-2★	11-2★		B2		X	P**			I	2				2						
10-4					3				I	4				4						
11-4	11-4			X	S/2				I	4				4						
10-5				X	X	P	P		I	5				5						
11-5	11-5		B5	X	X			P	I	5				5						
11-6■				S					I	6				6						
10-13				X	X	P/S	P/S		M	13		13								
11-13				X	X	P/S	P/S		M	13		13								
10-35					X	P/S	P/S		M	13	13									
11-35	11-35		B35		X	P/S	P/S	P	M	13										
		11-54 ■			X	◆			II	4	4									
10-98				X	X	P/S	P/S		I	6				6						
11-98	11-98		B98	X	X	P/S	P/S	P	I	6				6						
10-99					X	P	P		I	7				7						
11-99	11-99		B99		P	X		P	I	7				7						
12-3				X	X	◆	P	P	II	3					3					
13-3■					P				II	3					3					
12-4				X	X	P	P		I	4				4						
13-4★	13-4★		C4	X	X	P	P	P	I	4				4						
12-8				X	X	P	P		I	8				8						
13-8	13-8		C8	X	X	P	P	P	I	8				8						
		13-13■							I, Fiber Optic	4				2**	2					
12-22					X	P/S	P/S		M	22		22								
13-22				X	X	P/S	P/S		M	22		22								
12-35					X	P/S	P/S		M	22	22									
13-35	13-35		C35		X	P/S	P/S	P	M	22										
		13-63■			◆				I	4				2	2					
12-98				X	X	P/S	P/S		I	10			10							
13-98	13-98		C98	X	X	P/S	P/S	P	I	10			10							
14-4■					2				I	4					4					
15-4■	15-4■				2	◆			I	4					4					
14-5				X	X	P	P		II	5				5						
15-5★	15-5★		D5	X	X	P	P	P	II	5				5						
14-15				X	X	P	P		I	15			14	1						
15-15	15-15		D15	X	X	P/S	P/S	P	I	15			14	1						

X Completely tooled.
 • Majority of tooling is completed (contact Powell Electronics for availability).
 ◆ Not tooled for 02-R.
 P Available with Pin contacts only
 S Available with Socket contacts only
 P/S Available with Pin contacts or Socket contacts
 ★ Ground plane proprietary option available. Arrg. 9-5 is exclusively ground plane type.
 ■ Not Mil-Qualified.
 ◆ 21-75 is Mil-Qualified with twinax contacts only.
 Note: MS connector 21-75 is supplied with size 8 twinax.
 Commercial connector 21-75 is supplied with size 8 coax.

* Hermetic inserts - solder termination standard. (Contact Powell Electronics for optional PCB or eyelet termination).
 ** Two size 16 contacts dedicated to fiber optics. See the Fiber Optic section for more information.
 *** For use in MIL-STD-1760 applications (see pages 40 & 41).
 † For RG 180/U and RG 195/U cables only.
 †† Size 8 Coax and Twinax are interchangeable.
 (2) Not Tooled for RP or 02RE
 (3) Pin inserts only, not tooled for RP or 02RE (Consult Powell for avail.)
 (5) MS Connector 21-79 has provision for two size 8 coax contacts. Coax contacts are not supplied unless specified by customer.

MIL-DTL-38999, Series I LJT, II JT, III TV

Insert Availability and Identification Chart



Series	Series	Series	Military	JT/LJT		Hermetics			Service Rating	Total Contacts	Contact Size													
				Solder	Crimp	Class H	Class Y	TV*			22D	22M	22	20	16	12	12 (Coax)	10 (Power)	8 (Coax)	8†† (Twinax)				
14-18				X	X	P/S	P/S		I	18														
	15-18	15-18	D18	X	X	P/S	P/S	P	I	18														
14-19				X	X				I	19														
	15-19	15-19	D19		X	P	P	P	I	19														
14-35					X	P	P		M	37	37													
	15-35	15-35	D35		X	P/S	P/S	P	M	37	37													
14-37				X	X	P	P		M	37		37												
	15-37			X	X	P	P		M	37		37												
14-68					2	P	P		1	8												8		
	15-68			X	3				1	8												8		
14-97					X	P	P		I	12														
	15-97	15-97	D97	X	X	P	P	P	I	12														
	17-2	17-2	E2		X	+			M	39	38													1
16-6					X	P	P		I	6														
	17-6	17-6	E6		X	P	P	P	I	6														
16-8				X	X	P	P		II	8														
	17-8★	17-8★	E8	X	X	P/S	P/S	P	II	8														
16-13					2				I	13														
	17-13				2				I	13														
	17-22	17-22★			+				Coax	4														
	17-25				2				M	24	22													
16-26				X	X	P/S	P/S		I	26														
	17-26	17-26	E26	X	X	P/S	P/S	P	I	26														
16-35					X	P	P		M	55	55													
	17-35	17-35	E35	X	X	P	P	P	M	55	55													
16-42					X				M	42														
	17-42				P				M	42														
		17-52			X	+			M	2														2
16-55				X	X	P/S	P/S		M	55		55												
	17-55			X	X	P/S	P/S		M	55		55												
		17-60			X				I/Coax	10	8													2
16-99				X	X	P	P		I	23														
	17-99	17-99	E99	X	X	P	P		I	23														
		19-AD			X	+			Inst.	17														1
18-11				X	X	P	P		II	11														
	19-11★	19-11★	F11	X	X	P	P	P	II	11														
	19-18	19-18	F18		2	X			M	18	14													4
18-28				X	X				I	28														
	19-28	19-28	F28	X	P	X			I	28														
18-30				X	X				I	30														
	19-30			X	P				I	30														
		19-31			X				M	15	12													2
18-32				X	X	P/S	P/S		I	32														
	19-32	19-32	F32	X	X	P/S	P/S	P	I	32														
18-35					X	P	P		M	66	66													
	19-35	19-35	F35		X	P	P	P	M	66	66													
18-53				X	X				M	53														
	19-53				P				M	53														53
18-66				X	X	P	P		M	66		66												
	19-66				X	P	P		M	66		66												
	19-67			X	3	S	S		M	67		67												
18-68					2				I	18														
	19-68				3				I	18														
18-96					2				I	9														9
20-1					X	P	P		M	79		79												
	21-1				X	P/S	P/S		M	79		79												
20-2					X				M	65														
	21-2				X				M	65														
20-11					3				I	11														
	21-11★	21-11★	G11		X				I	11														11

- 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



MIL-DTL-38999, Series I LJT, II JT, III TV Insert Availability and Identification Chart

38999 SJT	Series	Series	Series	Military	JT/LJT		Hermetics			Service Rating	Total Contacts	Contact Size										
					Solder	Crimp	H	Y	TV*			22D	22M	22	20	16	12	12 (Coax)	10 (Power)	8 (Coax)	8†† (Twinax)	
38999 SJT	20-16				X	X	P/S	P/S		II	16								16			
		21-16★	21-16★	G16	X	X	P	P	P	I	25								25			
		21-25■			X					I	27								27			
		21-27■			X					I	27								19	4	4	
26482 Matrix 2	20-35					X	P	P		M	79	79										
		21-35	21-35	G35		X	P/S	P/S	P	I	39								37	2		
	20-39				X	X	P	P		I	39								37	2		
		21-39	21-39	G39	X	X	P	P	P	I	39								37	2		
83723 III Matrix Pyle	20-41				X	X	P	P		I	41								41			
		21-41	21-41	G41	X	X	P/S	P/S	P	I	41								41			
		21-75★	21-75★◇	G75		2	X			N	M	4									4	(4)
		21-79■	21-79■			2	X			II	19	17									2	(5)
5015 Crimp Rear Release Matrix	22-1					X	P/S	P/S		M	100		100									
		23-1				X	P	P		M	100		100									
	22-2				X	X	P	P		M	85			85								
		23-2			X	X	P	P		M	85			85								
26500 Pyle		23-6★■	23-6★■			P				M	6											6
	22-14■					2	◆			I	14									14		
		23-14■	23-14■			2	◆			I	14									14		
	22-21				X	X	P	P		II	21								21			
Printed Circuit Board		23-21★	23-21★	H21	X	X	P	P	P	II	21								21			
	22-32				X	X	P	P		I	32								32			
		23-32■			X	P				I	32								32			
		23-34■			X					I	34								34			
EMI Filter Transient	22-35					X	P/S	P/S		M	100	100										
		23-35	23-35	H35		X	P	P	P	M	100	100										
	22-53■					P				I	53								53			
		23-53	23-53	H53	X	X	P/S	P/S	P	I	53								53			
Fiber Optics		23-54■				X				M	53	40							9	4		
	22-55				X	X	P	P		I	55								55			
		23-55	23-55	H55		X			P	I	55								55			
		23-97■			X					II	16								16			
High Speed Contacts		23-99■			X					II	11								11			
	24-1					X	P	P		M	128		128									
		25-1				X	P	P		M	128		128									
	24-2					X				M	100			100								
Options Others		25-2				X				M	100			100								
	24-4					X	P	P		I	56								48	8		
		25-4	25-4	J4		X			P	I	56								48	8		
		25-7■	25-7	J7		X				M	Twinax	99	97								2	
Options Others		25-8★	J8			◆				Twinax	8											8
		25-11***	J11			2	◆			N	11								2			9
		25-17■				◆				M	42								36			6
	24-19■					X	P	P		I	19										19	
Options Others		25-19★	25-19★	J19		X			P	I	19										19	
		25-20■	25-20***	J20		2	◆			N	30								10	13		4
	24-24					X	P	P		I	24								12	12		
		25-24★	25-24★	J24		X	P	P		I	24								12	12		
Options Others		25-26■				◆				I	25								16	5		4
	24-29					X				I	29								29			
	25-29★	25-29★	J29	X	X					I	29								29			

- X Completely tooled.
- ◆ Majority of tooling is completed (contact Powell Electronics for availability).
- ◆ Not tooled for 02-R.
- P Available with Pin contacts only
- S Available with Socket contacts only
- P/S Available with Pin contacts or Socket contacts
- ★ Ground plane proprietary option available. Arrg. 9-5 is exclusively ground plane type.
- Not Mil-Qualified.
- ◇ 21-75 is Mil-Qualified with twinax contacts only.
- * Hermetic inserts - solder termination standard. (Contact Powell Electronics for optional PCB or eyelet termination).

- ** Two size 16 contacts dedicated to fiber optics. See the Fiber Optic Section for more information.
- *** For use in MIL-STD-1760 applications (see pages 40 & 41).
- † For RG 180/U and RG 195/U cables only.
- †† Size 8 Coax and Twinax are interchangeable.
- (2) Not Tooled for RP or 02RE
- (3) Pin inserts only, not tooled for RP or 02RE (Consult Powell for avail.)
- (4) MS connector 21-75 is supplied with size 8 twinax. Commercial connector 21-75 is supplied with size 8 coax.
- (5) MS Connector 21-79 has provision for two size 8 coax contacts. Coax contacts are not supplied unless specified by customer.

MIL-DTL-38999, Series I LJT, II JT, III TV Insert Availability and Identification Chart



Series	Series	Series	Military	JT/LJT	Hermetics					Contact Size											
JT II	LJT I	TV III	TV III	Solder	Crimp	H	Y	TV*	Service Rating	Total Contacts	22D	22M	22	20	16	12	12 (Coax)	10 (Power)	8 (Coax)	8†† (Twinax)	8 Quadrax
24-35					X	P	P		New	128	128										
	25-35	25-35	J35		X	P	P	P	M												
24-37					X				I	37					37						
	25-37★	25-37★	J37		X				N/Inst.	41	22			3	11		2			3	
		25-41 ■			X																
24-43■					3				I	43					23	20					
	25-43	25-43	J43	X	2	♦			I	46				40	4		2				
	25-46	25-46	J46		2	♦			I	61											
24-61					X	X	P	P		61					61						
	25-61	25-61	J61	X	X	P	P	P	I												
		25-62■			X	♦			I	12					8						4
		25-90■			♦				I	46					40	4				2	
		25-F4 ■			X				M/I	66	49				13	4					

- X Completely tooled.
- ♦ Not tooled for 02-R.
- P Pin inserts only (contact Powell Electronics for socket availability).
- ★ Ground plane proprietary option available. Arrg. 9-5 is exclusively ground plane type.
- Not Mil-Qualified.

TV Series III

Select Shell Size - Special Insert Arrangement

(Not Mil-Spec Qualified)

Shell Size-Insert Arrg.	Crimp	Hermetics*	Service Rating	Total Contacts	Comments	Contact Size				
						22D	20	16	12	8†† (Twinax)
9-2	X		I	2	Formerly Pyle		2			
15-4	X		II	4	Formerly Pyle			4		
15-25	X		M	25	Formerly Pyle	22		3		
17-20	X		M	20	Formerly Pyle		16	4		
21-12	X		I	12	Formerly Pyle		3		9	
21-21	X		M/Inst.	41	Improved sealing	32			9	
21-99	X		M	16	Formerly Pyle	5			11	
25-92	X		M	101	Formerly Pyle	92		9		
25-97	X		M	42	Formerly Pyle	26		3	13	

Select Non-Standard Shell Size

- Special Insert Arrangement

Shell Size-Insert Arrg.	Crimp	Hermetics*	Service Rating	Total Contacts	Contact Size				
					22D	20	8	4	0
25-16	X		M	8		6		2	
25L-3	X		II	3			1	2	
25L-7	X		II	7			7		
33-3	X		II	3				1	2
33-5	X		II	5				5	
33-6	X		II	6			2	4	
37-5	X		II	4					4

(Insert arrangements requiring non-standard shells or larger contacts)

- X Completely tooled.
 - Majority of tooling is completed (contact Powell Electronics for availability).
 - ♦ Not tooled for 02-R.
 - P Pin inserts only (contact Powell Electronics for socket availability).
 - ★ Ground plane proprietary option available. Arrangement 9-5 is exclusively ground plane type.
 - Not Mil-Qualified.
 - * Hermetic inserts - solder termination standard. (Contact Powell Electronics for optional PCB or eyelet termination).
 - ** Two size 16 contacts dedicated to fiber optics. See the Fiber Optic section for more information.
 - *** For use in MIL-STD-1760 applications (pgs. 40 & 41).
 - † For RG 180/U and RG 195/U cables only.
 - †† Size 8 Coax and Twinax are interchangeable.
- Note: 25L-3 and 25L-7 require longer shells.

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



MIL-DTL-38999, Series I LJT, II JT, III TV Insert Arrangements

Front face of pin inserts illustrated

38999
SJT

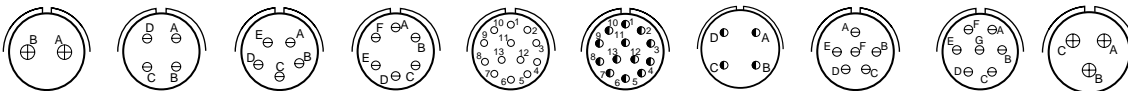
Shell Size &
Insert Arrg. for:



Series II JT	8-2	8-3		8-6			8-35	8-44		8-97	8-98
Series I LJT		9-3		9-6	9-7	9-22	9-35	9-44			9-98
Series III TV			9-5				9-35		9-94		9-98
Service Rating	M	M	Grounded	M	M	I	M	M	M	M	I
Number of Contacts	2	3	1	6	7	2	6	4	2	2	3
Contact Size	20	20	8 Twinax	22M	22M	20	22D	22	20	22M	20

26482
Matrix 2

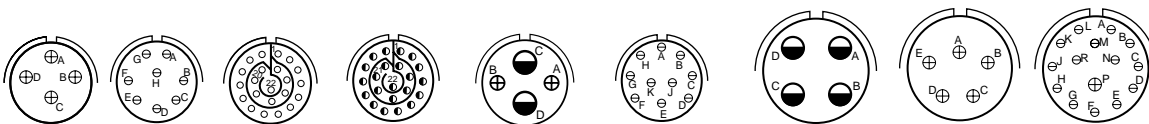
Shell Size &
Insert Arrg. for:



Series II JT		10-4	10-5		10-13	10-35		10-98	10-99	12-3
Series I LJT	11-2	11-4	11-5	11-6	11-13	11-35		11-98	11-99	13-3
Series III TV	11-2	11-4	11-5			11-35	11-54	11-98	11-99	
Service Rating	I	I	I	I	M	M	II	I	I	II
Number of Contacts	2	4	5	6	13	13	4	6	7	3
Contact Size	16	20	20	20	22M	22D	22D	20	20	16

5015
Crimp Rear
Release Matrix

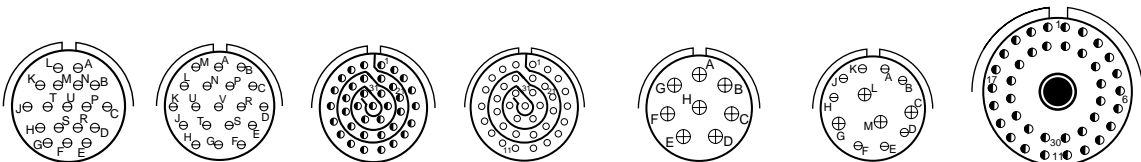
Shell Size &
Insert Arrg. for:



Series II JT	12-4	12-8	12-22	12-35		12-98	14-4	14-5	14-15
Series I LJT	13-4	13-8	13-22	13-35		13-98	15-4	15-5	15-15
Series III TV	13-4	13-8	13-35	13-63	13-98	15-4	15-5	15-15	
Service Rating	I	I	M	M	I	I	I	II	I
Number of Contacts	4	8	22	22	2	10	4	5	14
Contact Size	16	20	22M	22D	16	12	20	12	16

Printed
Circuit Board

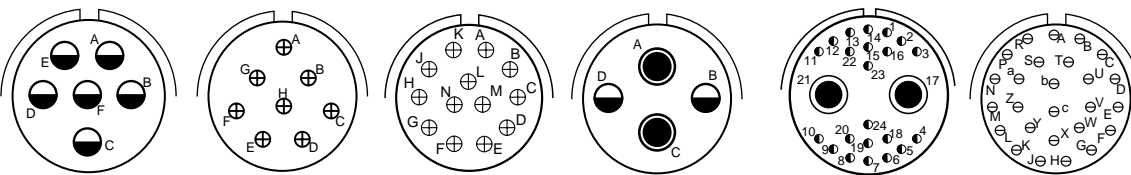
Shell Size &
Insert Arrg. for:



Series II JT	14-18	14-19	14-35	14-37	14-68	14-97			
Series I LJT	15-18	15-19	15-35	15-37	15-68	15-97	17-2		
Series III TV	15-18	15-19	15-35			15-97	17-2		
Service Rating	I	I	M	M	I	I	M		
Number of Contacts	18	19	37	37	8	8	4	38	1
Contact Size	20	20	22D	22M	16	20	16	22D	8 Twinax

EMI Filter
Transient

Shell Size &
Insert Arrg. for:



Series II JT	16-6	16-8	16-13			16-26
Series I LJT	17-6	17-8	17-13	17-22	17-25	17-26
Series III TV	17-6	17-8	17-22			17-26
Service Rating	I	II	I	Coax	M	I
Number of Contacts	6	8	13	2	2	26
Contact Size	12	16	16	12 Coax	8 Coax	22D

High Speed
Contacts

Options
Others



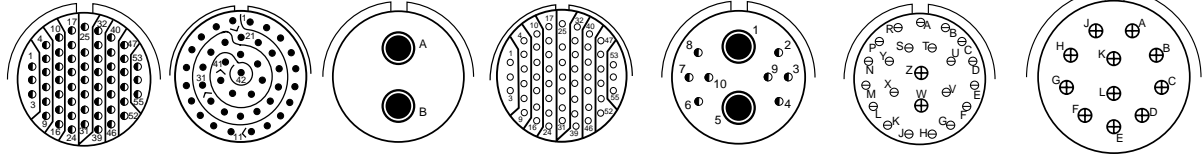
CONTACT LEGEND 8 10 12 16 20 22 22M 22D

MIL-DTL-38999, Series I LJT, II JT, III TV

Insert Arrangements

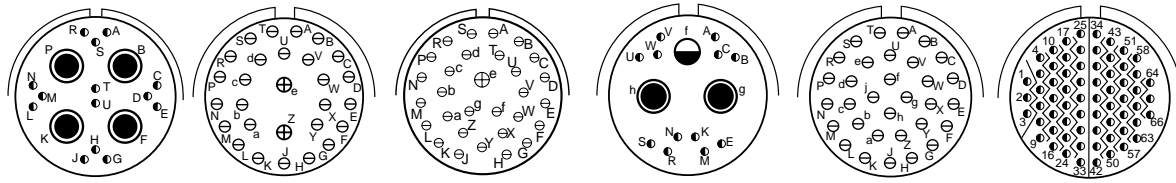


Front face of pin inserts illustrated



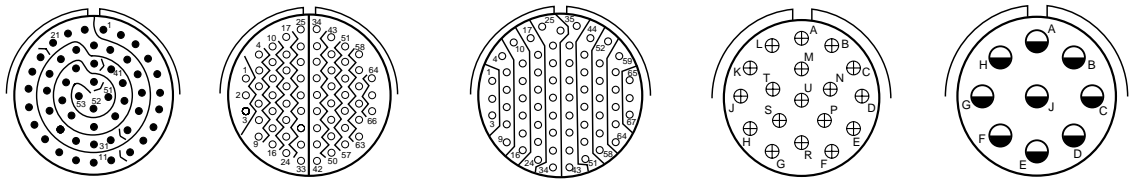
Shell Size & Insert Arrg. for:

Series II JT	16-35	16-42	16-55	16-99	18-11
Series I LJT	17-35	17-42	17-55	17-99	19-11
Series III TV	17-35		17-52	17-60	17-99
Service Rating	M	M	M	I/Coax	I
Number of Contacts	55	42	55	8	2
Contact Size	22D	22	8 Twinax	22D	8 Coax



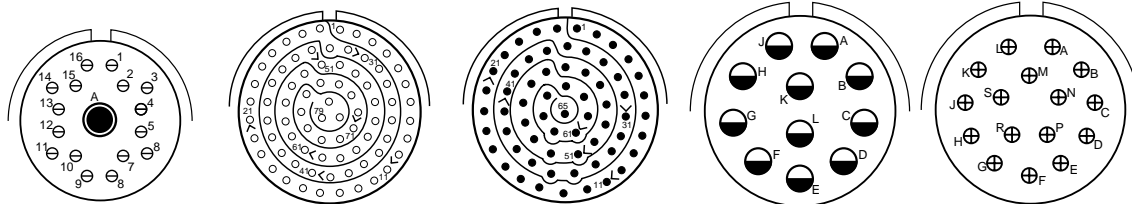
Shell Size & Insert Arrg. for:

Series II JT		18-28	18-30	18-32	18-35
Series I LJT	19-18	19-28	19-30	19-32	19-35
Series III TV	19-18	18-28		19-31	19-35
Service Rating	M	M	I	M	M
Number of Contacts	14	4	26	2	1
Contact Size	22D	8 Twinax	20	18	20



Shell Size & Insert Arrg. for:

Series II JT	18-53	18-66		18-68	18-96
Series I LJT	19-53	19-66	19-67	19-68	
Series III TV					
Service Rating	M	M	M	I	I
Number of Contacts	53	66	67	18	9
Contact Size	22	22M	22M	16	12



Shell Size & Insert Arrg. for:

Series II JT		20-1	20-2	20-11	20-16
Series I LJT		21-1	21-2	21-11	21-16
Series III TV	19-AD			21-11	21-16
Service Rating	Inst.	M	M	I	II
Number of Contacts	16	1	79	65	11
Contact Size	20	8 Twinax	22M	22	12

CONTACT LEGEND

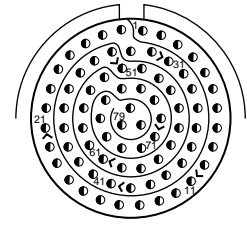
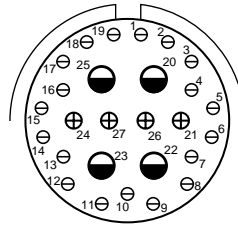
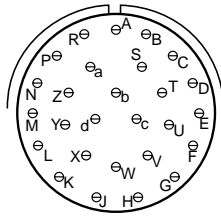
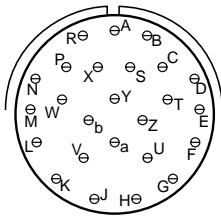
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- 38999 SJT
- 26482 Matrix 2
- 83723 III Matrix Pyle
- 5015 Crimp Rear Release Matrix
- 26500 Pyle
- Printed Circuit Board
- EMI Filter Transient
- Fiber Optics
- High Speed Contacts
- Options Others



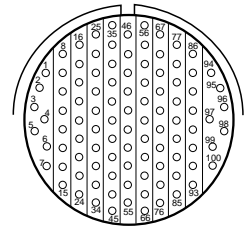
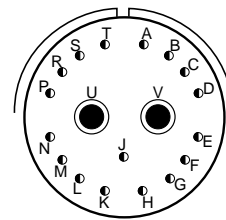
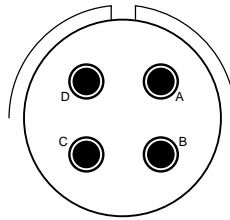
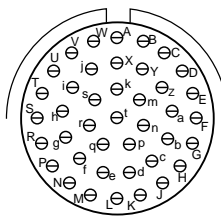
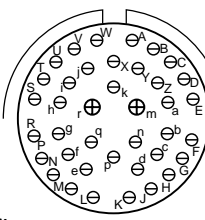
MIL-DTL-38999, Series I LJT, II JT, III TV Insert Arrangements

Front face of pin inserts illustrated



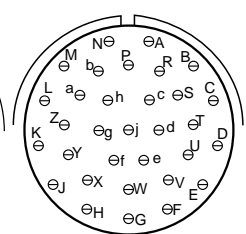
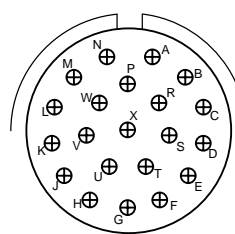
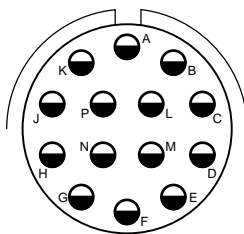
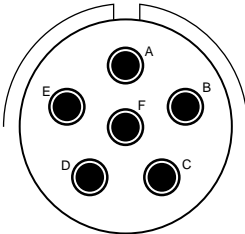
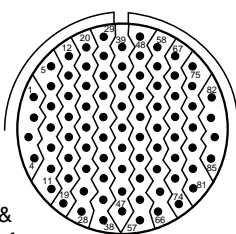
Shell Size &
Insert Arrg. for:

	Series II JT		Series I LJT			Series III TV		
Service Rating	I	I	I	I	I	M	M	
Number of Contacts	25	27	19	4	4	79	79	
Contact Size	20	20	20	16	12	22D	22D	



Shell Size &
Insert Arrg. for:

	Series II JT		Series I LJT		Series III TV	
Service Rating	I	I	N	II	M	M
Number of Contacts	37	2	41	4	17 (See Note)	100
Contact Size	20	16	20	(See Note)	22D	22M



Shell Size &
Insert Arrg. for:

	Series II JT		Series I LJT		Series III TV	
Service Rating	M	M	I	II	I	I
Number of Contacts	85	6	14	21	32	32
Contact Size	22	8 Twinax	12	16	20	20

Note: MS connector 21-75 is supplied with four size 8 twinax contacts.
Commercial 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 customers.

CONTACT LEGEND

8	10	12	16	20	22D

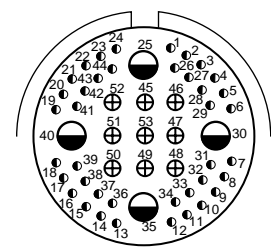
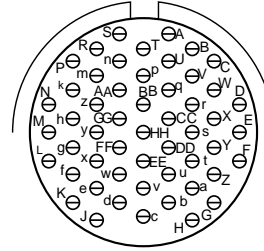
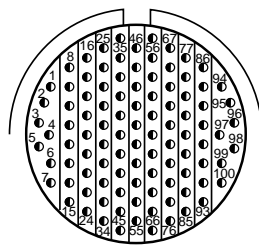
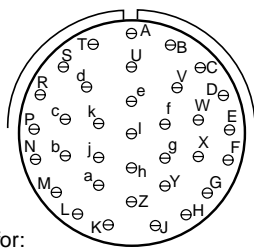
- 38999 SJT I II III
- 26482 Matrix 2
- 83723 III Pyle Matrix
- 5015 Crimp Rear Release Matrix
- 26500 Pyle
- Printed Circuit Board
- EMI Filter Transient
- Fiber Optics
- High Speed Contacts
- Options Others

MIL-DTL-38999, Series I LJT, II JT, III TV

Insert Arrangements

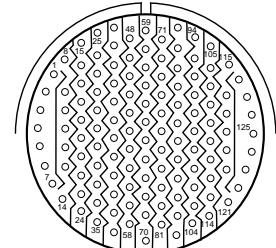
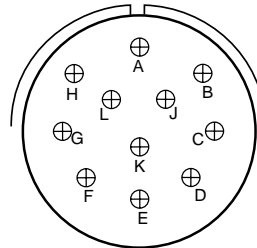
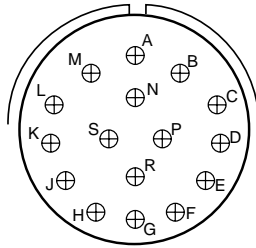
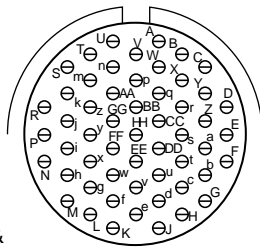


Front face of pin inserts illustrated



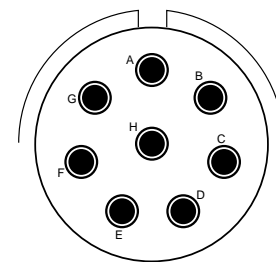
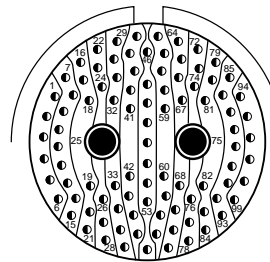
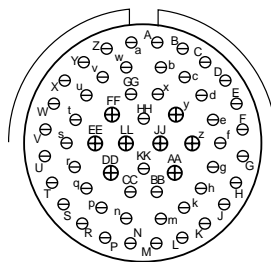
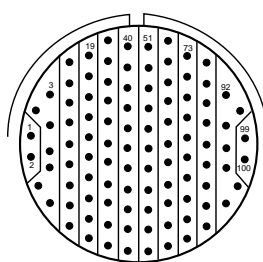
Shell Size & Insert Arrg. for:

Series II JT		22-35		22-53	
Series I LJT	23-34	23-35		23-53	
Series III TV		23-35		23-53	23-54
Service Rating	I	M		I	M
Number of Contacts	34	100		53	40 9 4
Contact Size	20	22D		20	22D 16 12



Shell Size & Insert Arrg. for:

Series II JT	22-55			24-1
Series I LJT	23-55	23-97		25-1
Series III TV	23-55			
Service Rating	I	II		M
Number of Contacts	55	16		128
Contact Size	20	16		22M



Shell Size & Insert Arrg. for:

Series II JT	24-2	24-4		
Series I LJT	25-2	25-4		25-7
Series III TV		25-4		25-7
Service Rating	M	I		M
Number of Contacts	100	48 8		97 2
Contact Size	22	20 16		22D 8 Twinax
				25-8
				Twinax
				8
				8 Twinax

*** For use in MIL-STD-1760 applications (see pages 40 and 41).



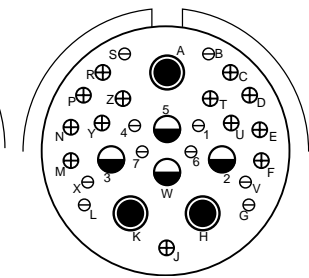
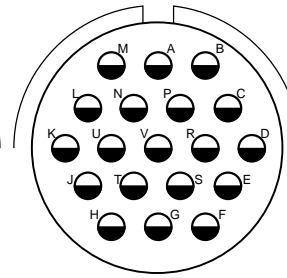
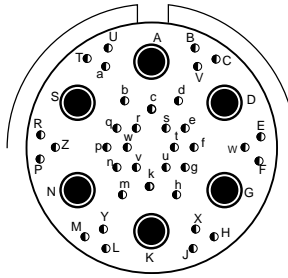
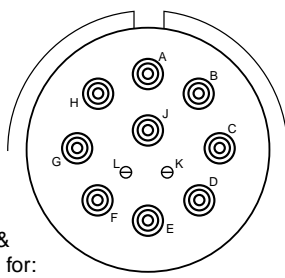
CONTACT LEGEND 8 10 12 16 20 22D

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



MIL-DTL-38999, Series I LJT, II JT, III TV Insert Arrangements

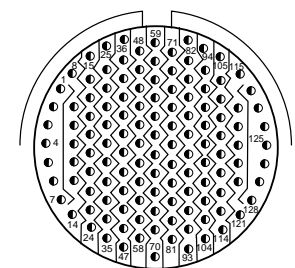
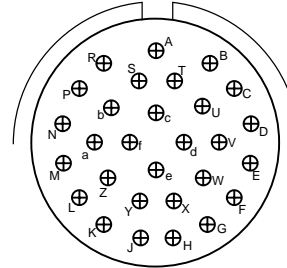
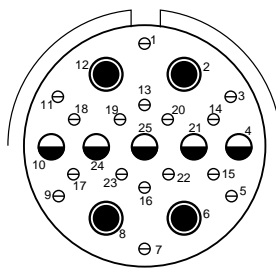
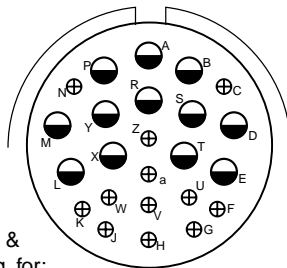
Front face of pin inserts illustrated



Shell Size & Insert Arrg. for:

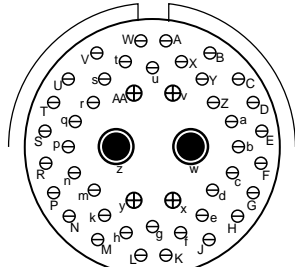
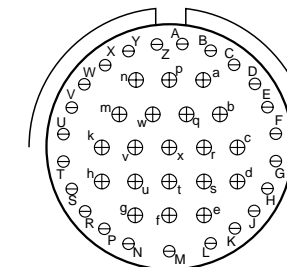
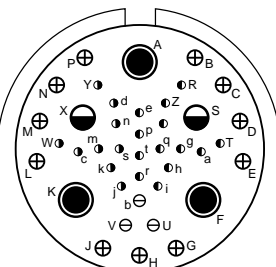
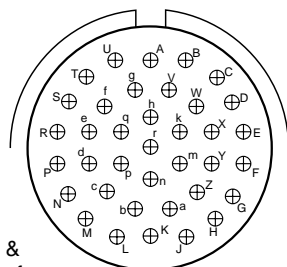
Series II JT	24-19	24-19	25-20
Series I LJT	25-11	25-19	25-20
Series III TV	25-11***	25-17	25-20***
Service Rating	N	M	N
Number of Contacts	2 9	36 6	10 13 3 4
Contact Size	20 10	22D 8 Twinax	12 20 16 8 Twinax 12 Coax

(With Matched Impedance)



Shell Size & Insert Arrg. for:

Series II JT	24-24	24-29	24-35
Series I LJT	25-24	25-29	25-35
Series III TV	25-24	25-26	25-35
Service Rating	I	I	M
Number of Contacts	12 12	16 5 4	128
Contact Size	16 12	20 12 8 Coax	22D



Shell Size & Insert Arrg. for:

Series II JT	24-37	25-43	25-46
Series I LJT	25-37	25-43	25-46
Series III TV	25-37	25-41	25-46
Service Rating	I	N/Inst.	I
Number of Contacts	37	22 3 11 2 3	40 4 2
Contact Size	16	22D 20 16 12 Coax 8 Twinax	20 16 8 Coax

† Coax contacts for RG180/U or RG195/U cable.

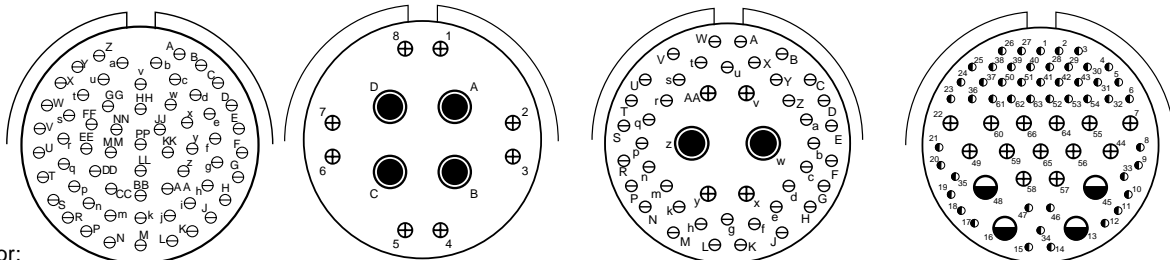


MIL-DTL-38999, Series I LJT, II JT, III TV

Insert Arrangements



Front face of pin inserts illustrated



Shell Size & Insert Arrg. for:

Series II JT 24-61

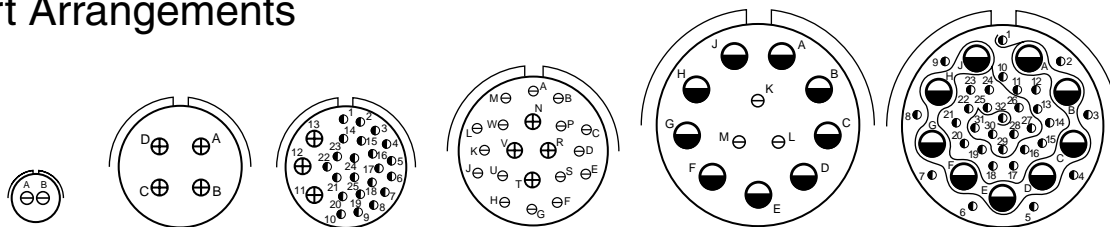
Series I LJT 25-61

Series III TV 25-61

	25-62		25-90			25-F4		
Service Rating	I	I	I	I	I	Size 22D=M, Balance =I		
Number of Contacts	61	8 4	40	4 2	49	13	4	
Contact Size	20	16 8	20	16 8 Twinax	22D	16	12	

MIL-DTL-38999, Series III TV

Special Insert Arrangements



Shell Size & Insert Arrg. for:

Series III TV 9-2

Series III TV 15-4*

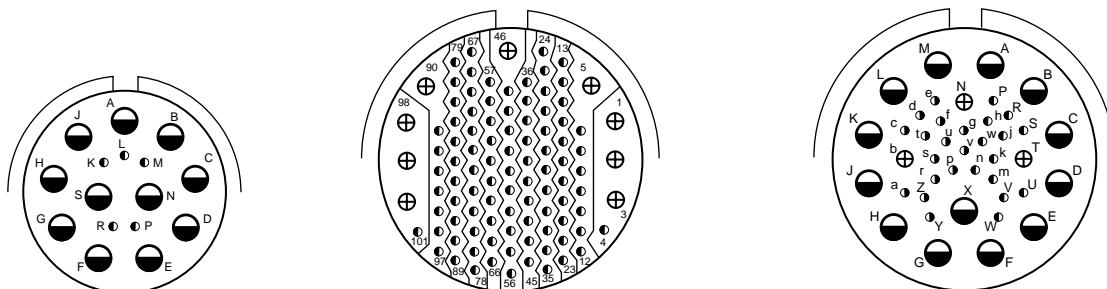
Series III TV 15-25

Series III TV 17-20

Series III TV 21-12

Series III TV 21-21

	15-4*		15-25		17-20		21-12		21-21	
Service Rating	I	II	M		M		I		M/Inst.	
Number of Contacts	2	4	22	3	16	4	3	9	32	9
Contact Size	20	16	22D	16	20	16	20	12	22D	12



Shell Size & Insert Arrg. for:

Series III TV 21-99

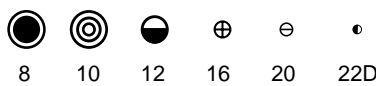
Series III TV 25-92

Series III TV 25-97

	21-99		25-92		25-97		
Service Rating	M		M		M		
Number of Contacts	5	11	92	9	26	3	13
Contact Size	22D	12	22D	16	22D	16	12

NOTE: Some specials shown here were formerly known as Pyle arrangements. Consult Powell Electronics for how to order information for connectors with these inserts. For further information on special arrangements consult Powell Electronics.

* Pyle 15-4 does not mate with Amphenol Tri-Start 15-4 insert.



CONTACT LEGEND

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

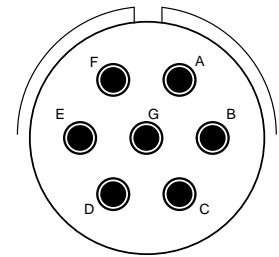
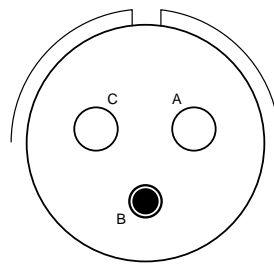
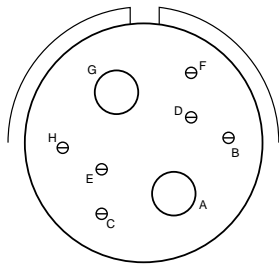


MIL-DTL-38999, Series III TV

Special Insert Arrangements

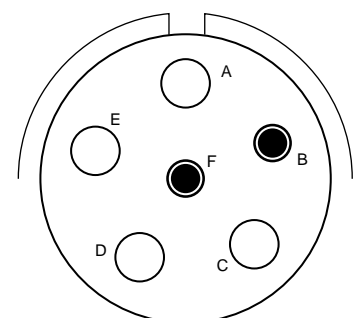
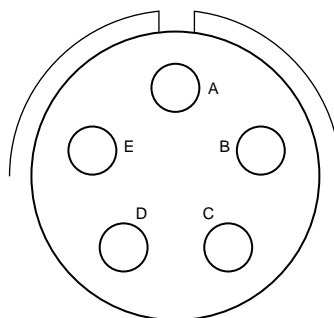
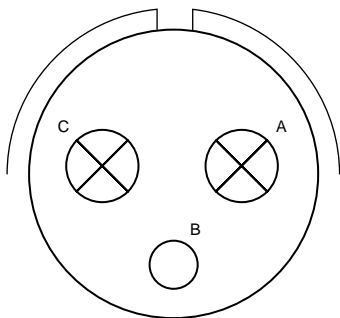
Non-Standard Shells or Large Contacts

Front face of pin inserts illustrated



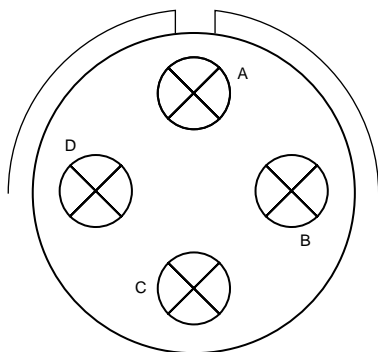
Shell Size &
Insert Arr. for:

Series III TV	25-16		25L-3		25L-7
Service Rating	M		II		II
Number of Contacts	6	2	1	2	7
Contact Size	20	4	8	4	8



Shell Size &
Insert Arr. for:

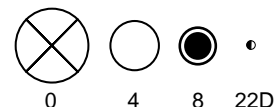
Series III TV	33-3		33-5	33-6	
Service Rating	II		II	II	
Number of Contacts	1	2	5	2	4
Contact Size	4	0	4	8	4



Shell Size &
Insert Arr. for:

Series III TV	37-5
Service Rating	II
Number of Contacts	4
Contact Size	0

NOTE: Some specials shown here were formerly known as Pyle arrangements. Consult Powell Electronics for how to order information for connectors with these inserts. Consult Powell Electronics for longer shell drawings.



CONTACT LEGEND

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

MIL-DTL-38999, Series I LJT, II JT, III TV Specifications/ Contacts



CONTACT RATING

Contact Size	Test Current (Amps)		Maximum Millivolt Drop Crimp*	Maximum Millivolt Drop		Contact Size	Crimp Well Data		Solder Well Data	
	Crimp	Hermetic		Solder*	Hermetic*		Well Diameter	Normal Well Depth	Well Diameter	Nominal Well Depth
22M	3	2	45	20	60	22M	.028 ± .001	.141	.029 +.004 - .000	
22D	5	3	73		85	22D	.0345 ± .0010	.141	.036 +.004 - .000	.094
22	5	3	73	20	85	22	.0365 ± .0010	.141	.036 +.004 - .000	.094
20	7.5	5	55	20	60	20	.047 ± .001	.209	.044 +.004 - .004	.125
16	13	10	49	20	85	16	.067 ± .001	.209	.078 +.000 - .004	.141
12	23	17	42	20	85	12	.100 ± .002	.209	.116 +.004 - .002	.141
10 (Power)	33	NA	33	NA	NA	10 (Power)	.137 ± .002	.355	NA	NA
8 (Power)	46	NA	26	NA	NA	8	.181 ± .002	.490	NA	NA
4	80	NA	23	NA	NA	4	.281 ± .002	.490	NA	NA
0	150	NA	21	NA	NA	0	.453 ± .002	.585	NA	NA

*When tested using silver plated wire.

SERVICE RATING**

Service Rating	Suggested Oper. 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.

MIL-DTL-38999 Series III STANDARD 500 CYCLE CONTACTS FOR TV AND CTV, P & S

Contact Size	TV/CTV Pins		TV/CTV Sockets	
	Military No.	Supersedes	Military No.	Supersedes
8 (Coax)*	M39029/60-367	MS27536	M39029/59-366	MS27535
8 (Power)	Contact Factory	"	"	"
8 (Twinax)	M39029/90-529**	N/A	M39029/91-530	N/A
10 (Power)	M39029/58-528	N/A	M39029/56-527	N/A
12	M39029/58-365	MS27493-12	M39029/56-353	MS27490-12
16	M39029/58-364	MS27493-16	M39029/56-352	MS27490-16
20	M39029/58-363	MS27493-20	M39029/56-351	MS27490-20
22D	M39029/58-360	MS27493-22D	M39029/56-348	MS27490-22D
4	N/A	N/A	N/A	N/A
0	N/A	N/A	N/A	N/A

** For use with M17/M176-00002 cable.

† Optional design - see slash sheet MS39029.

For other contact options available for use in Tri-Start connectors, (wire wrap, thermocouple, fiber optic) consult Powell Electronics. Wire wrap data given on next page.

Above part numbers include standard 500 cycle finish designation - gold plating over suitable underplate in accordance with SAE AS39029. For other finish variations consult Powell.

*For use with RG180B/U and RG195A/U cable. For other size 8 coax or optional sizes 12 and 16 coax contacts available for use in Tri-Start connectors, see High Speed Contact section of this catalog or consult Powell Electronics.

MIL-DTL-38999 Series III 1500 CYCLE CONTACTS FOR CTV, CLASSES H & J

Contact Size	CTV Pins			CTV Sockets		
	Commercial No.	Military No.	Supersedes	Commercial No.	Military No.	Supersedes
12	10-597072-2X	M39029/107-623	-	10-597073-2X	M39029/106-617	-
16	10-597068-2X	M39029/107-622	-	10-597069-2X	M39029/106-616	-
20	10-597064-2X	M39029/107-621	-	10-597065-2X	M39029/106-615	-
22D	10-597058-3X	M39029/107-620	-	10-597061-2X	M39029/106-614	-

MIL-DTL-38999 Series II JT/ Series I LJT CRIMP CONTACTS

Contact Size	JT/LJT Pins	JT Socket	LJT Sockets	Contact Size	JT/LJT Pins	JT Socket	LJT Sockets
	MS No.	MS No.	MS No.		MS No.	MS No.	MS No.
8 (Coax)*	M39029/60-367	NA	M39029/59-366	20	M39029/58-363	M39029/57-357	M39029/56-351
8 (Twinax)	M39029/90-529**	NA	M39029/91-530	22	M39029/58-362	M39029/57-356	M39029/56-350
10 (Power)	M39029/58-528	NA	M39029/56-527	22M	M39029/58-361	M39029/57-355	M39029/56-349
12	M39029/58-365	M39029/57-359	M39029/56-353	22D	M39029/58-360	M39029/57-354	M39029/56-348
16	M39029/58-364	M39029/57-358	M39029/56-352				

III
II
I
SJT
38999

Matrix 2
26482

Matrix
Pyle
83723 III

Crimp Rear
Release Matrix
5015

Pyle
26500

Printed
Circuit Board

EMI Filter
Transient

Fiber Optics

High Speed
Contacts

Options
Others



MIL-DTL-38999, Series I LJT, II JT, III TV Specifications

FINISH DATA MIL-DTL-38999, Tri-Start Series III TV

Aluminum Shell Components Non-Hermetic		
Finish	Service Class	
	Military	Commercial
Anodic Coating (Non-Conductive)	C	RX**
Electroless Nickel	F (Metal)	RF
	M (Composite)	
Olive Drab Cadmium Plate Nickel Base	W (Metal)	RW
	J (Composite)	
Stainless Steel with Nickel Plate	S	RS
Stainless Steel	K	RK
Durmalon plated	T	DT
Zinc-Nickel Plated	Z	ZN

Hermetic Shell Components		
Material/Finish	Service Class	
	Military	Commercial
Stainless Steel	Y	Y
Stainless Steel with Nickel Plate	N	YN

**Add Suffix (005) to part number.

FINISH DATA MIL-DTL-38999, Series I LJT, II JT

Aluminum Shell Components Non-Hermetic					
Finish	Suffix			Indicated Finish Standard for JT Types Listed Below	Indicated Finish Standard for LJT Types Listed Below
	Military	Commercial	Finish Plus "SR" Suffix		
Cadmium Plated Nickel Base	MS (A)	-	(SR)	JT/JTG/JTL/JTP	LJT/LJTP
Anodic Coating (Alumilite)	MS (C)	(005)	(300)	JTS/JTPS/JTLS	LJTPS/LJTS
Chromate Treated (Iridite 14-2)		(011)	(344)	JTN/JTPN/JTLN	LJTN/LJTPN
Olive Drab Cadmium Plate Nickel Base	MS (B)	(014)	(386)		
Electroless Nickel	MS (F)	(023)	(424)		
Nickel-PTFE		(038)			

Hermetic Connectors				
Finish	Suffix		Indicated Finish Standard for JT Types Listed Below	Indicated Finish Standard for LJT Types Listed Below
	Military	Commercial		
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

38999
SJT I II III

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

Amphenol MIL-DTL-38999, Series III, TV



**New
Featured**



**New
Featured**



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MIL-DTL-38999, Series III TV

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Shell Styles:

• Crimp Wall Mounting Receptacle TVP00R (D389999/20) /CTVP00R (D38999/20)	26
• Crimp Box Mounting Receptacle TVP02R / CTVP02R	27
• Crimp Straight Plug TV06R (D38999/26) / CTV06R (D38999/26)	28
• Crimp CLUTCH-LOK™ Straight Plug for High Vibration TV26/MTV26	29
• Crimp Jam Nut Receptacle TV07R (D38999/24) / CTV07R (D38999/24)	30
• Crimp Line Receptacle TV01R / CTV01R	31
• Crimp Flange Mounting Plug TV09R	32
• Hermetic Box Mounting Receptacle TVPS02Y (D38999/21)	33
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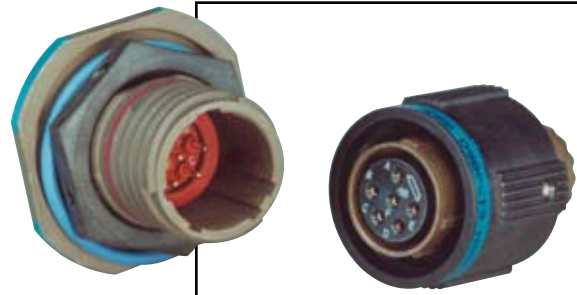


MIL-DTL-38999 Series III Typical Markets:

- Military & Commercial Aviation
- Military Vehicles
- Missiles & Ordnance
- C4ISR
- Space Applications



MIL-DTL-38999, Series III TV Performance



Tri-Start™ MIL-DTL-38999 Series III with Metal Shells - Aluminum, Stainless Steel, Class K Firewall
Amphenol® Tri-Start MIL-DTL-38999* Series III Connectors offer the highest performance capabilities for both general duty and severe environment applications. Meeting or exceeding MIL-DTL-38999 Series III requirements, the Tri-Start connector with standard metal shells (aluminum or stainless steel with several finish options) offers these features:

- **EMI Shielding** - solid metal to metal coupling, grounding fingers, electroless nickel plating, and thicker wall sections provide superior EMI shielding capability of 65dB minimum at 10 GHz
- **Contact Protection** - recessed pins in this 100% scoop-proof connector minimize potential contact damage
- **Moisture Resistance** - improved interfacial seal design helps prevent electrolytic erosion of contacts
- **Corrosion Resistance** - shells of stainless steel or cadmium over nickel plating withstand a 500 hour salt spray exposure
- **Vibration/Shock** - operates under severe high temperature vibration, through 200°C
- **Firewall Capability** - available in a stainless steel shell, class RK, RS
- **Lockwiring Eliminated** - unique, self-locking, quick coupling connector eliminates lockwiring
- **Quick Coupling** - completely mates and self-locks in a 360° turn of the coupling nut
- **Inventory Support Commonality** - uses standard MIL-DTL-38999 contacts, application tools, insert arrangements
- **Electrostatic Discharge Protection (ESD)** - protection for sensitive circuitry without diodes, varistors, etc., with the use of the Faraday Cage principle which shunts high voltage, high current discharge events (see page 422)
- **Hermetic**- air leakage limited to $1 \times 10^{-7} \text{ cm}^3$ per second optional
- **Qualified Specifications** - Stainless Steel qualified to BACC63DB and BACC63DC specifications

Optional Shell Geometries
Amphenol offers a number of different shell configurations to fit your needs.

- Deep Reach Shells - For increased panel thickness
- Stand-off Flange Shells - For attachments to Printed Circuit boards.
- Connector with Integral Strain Reliefs

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

Applicable Patents:
 Tri-Start™ Connector Patent 4,109,990.
 Composite Connector Patents:
 4,268,103; 4,648,670; 4,682,832; 4,703,987.
 Clutch-Lok® Patent 6,152,753.



Series III

Composite Tri-Start, Qualified to MIL-DTL-38999, Rev. J

MIL-Qualified to MIL-DTL-38999, Rev. K, the Amphenol® Composite Tri-Start Connector offers a lightweight, corrosion resistant connector with the same high performance features as its metal counterpart. The Composite Tri-Start Connector also includes the following features:

- **Lightweight** - 17% – 70% weight savings (17–40% weight savings vs. Aluminum) (60–70% weight savings vs. Stainless steel) See Composite weight comparison chart on page 20.
- **Corrosion Resistance** - available in standard MIL-DTL-38999 olive drab cadmium (-65°C to 175°C) and electroless nickel plating (-65°C to 200°C), both with standing 2000 hours of salt spray exposure. The base material is able to withstand an indefinite exposure to salt spray.
- **Durability** - 1500 couplings minimum (in reference to connector couplings, not contacts)
- **Extended Life Contact** - Mil-approved plating process which provides 1500 couplings minimum
- Qualified to BACC63CT and BACC63CU specifications



CLUTCH-LOK™ MIL-DTL-38999 Series III High Vibration Connector

The Tri-Start option CLUTCH-LOK offers all advantages of stainless steel/Class K firewall for MIL-DTL-38999 Series III connectors, plus a unique clutch design that actually tightens itself under vibration.

Features include:

- High degree of differential torque
 - No settling back to the next ratchet tooth
 - Completely intermateable with all existing MIL-DTL-38999 Series III connectors
 - Offers advantage in inaccessible, hard to reach areas where mating torque is difficult to apply and complete coupling is not verifiable by inspection
- See page 29 for description, 22 – 24 for ordering.

38999
SJT I II III

26482
Matrix 2

83723 III
Matrix Pyle

5015
Crimp Rear Release Matrix

26500 Pyle

Printed
Circuit Board

EMI Filter
Transient

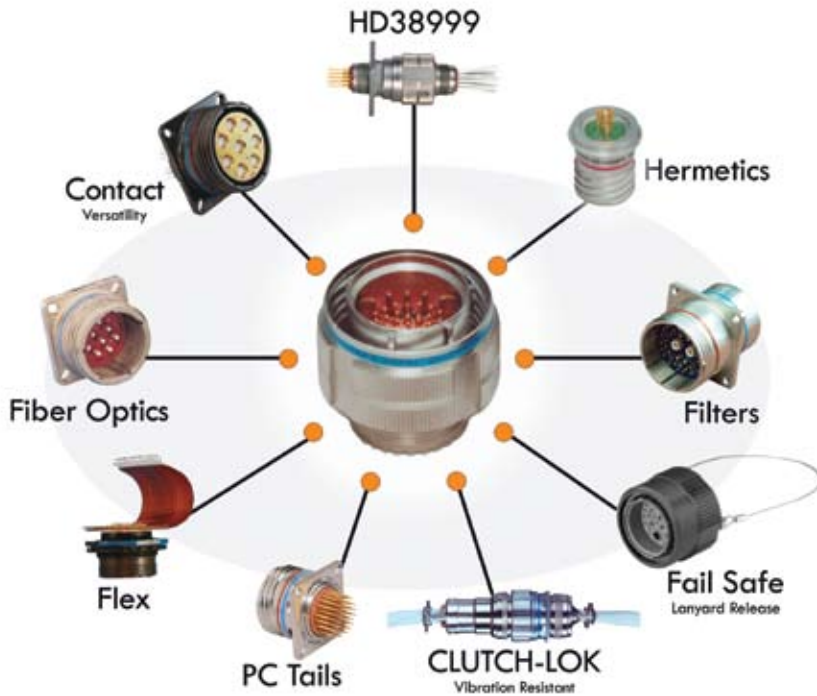
Fiber Optics

High Speed
Contacts

Options
Others



Series III, TV Tri-Start Connectors, offer more versatility & options than any other interconnection family!



High reliability and increased versatility best describe Amphenol MIL-DTL-38999, Series III circular connectors. Originally designed for the harshest of environments and most demanding of applications, Amphenol MIL-DTL-38999 Series III, Tri-Start connectors continue to evolve in pace with the needs of an ever-changing market.

Amphenol Tri-Start connectors can be configured with a number of application specific technologies like Filters, Hermetics, PC Tails, Fiber Optics, Flex, CLUTCH-LOK, Fail Safe, and contacts. Flexibility aids in design optimization through the combination of different technologies within a common, time-tested, harsh environment connector body.

For more information about options please call 800-678-0141 or visit www.Powell.com.

Performance

Designed for Performance

Numerous advantages in performance capability are designed into the Amphenol Tri-Start Connector. A positive metal to metal coupling design, grounding fingers, and electroless nickel plating provide superior EMI shielding capability of 65 dB minimum at 10 GHz.

Acme threads provide coupling durability. Thicker wall sections and a greater coupling surface area improve strength and shock resistance. Blunting of the thread on both the coupling nut and receptacle eliminates cross coupling. The connector quickly mates and self locks in a 360° turn of the coupling nut.

Elongated mounting holes permit the Tri-Start Connector to intermount with various existing MIL-Spec box or wall mount receptacles, giving it a design replacement advantage.

Shells of stainless steel, or cadmium over nickel plating prevent severe corrosion. Resistance is tested through exposure to a 500 hour salt spray. Composite versions provide protection from salt spray exposure for 2000 hours. Other finish options are available; see how to order Tri-Start metal and Tri-Start Composite.

Recessed pins minimize potential contact damage in this 100% scoop-proof connector. In a blind mating application, mating shells cannot "scoop" the pins and cause a shorting or bending of contacts.

The design of the Amphenol Tri-Start interfacial seal meets the MIL-DTL-38999 Series III requirements for electrolytic erosion resistance.

A rigid dielectric insert with excellent electrical characteristics provides durable protection to the contacts. The socket contacts are probe proof, and all contacts are rear removable. They are plated in the standard 50 micro inches minimum gold, with 100 micro inches as an option, and are available in standard Tri-Start insert arrangements and special Pyle® insert arrangements in sizes 10 power, 12, 16, 20 and 22D contacts. Special insert patterns are also available with larger contacts in sizes 4 and 0.

III
38999
II
I
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



MIL-DTL-38999, Series III TV

Weight Comparisons (Composite vs. Metal)

Depending on the shell style, shell size and contact count, weight savings can range from 17% to 40% compared to standard aluminum product

Tri-Start Weight in Ounces (includes contacts)

Weight

	Wall Mount Receptacle (00 • Military D38999/20)						Jam Nut Receptacle (07) • Military D38999/24						Plug (06) • Military D38999/26					
	Stainless Steel		Aluminum		Composite		Stainless Steel		Aluminum		Composite		Stainless Steel		Aluminum		Composite	
	Pin	Socket	Pin	Socket	Pin	Socket	Pin	Socket	Pin	Socket	Pin	Socket	Pin	Socket	Pin	Socket	Pin	Socket
9-35	.7216	.7840	.3248	.3777	.2588	.3121	1.1472	1.2096	.4416	.5040	.3489	.4413	1.0736	1.1360	.4236	.4625	.2606	.2994
9-98	.7216	.7776	.2496	.3056	.1664	.2224	1.1472	1.2032	.4416	.4976	.3744	.4640	1.0736	1.1296	.3968	.4624	.2991	.2337
11-35	.9488	1.0800	.3632	.4960	.2753	.4081	1.4304	1.5632	.5936	.7264	.4679	.6007	1.2480	1.3808	.5312	.6389	.3450	.4582
11-98	.9488	1.0620	.3632	.4768	.2753	.3889	1.4304	1.5440	.5936	.7072	.4679	.5815	1.2480	1.3616	.5330	.6283	.3468	.4457
13-8	1.2096	1.3888	.4800	.6592	.3696	.5488	1.9104	2.0896	.7664	.9456	.6560	.8352	1.8048	1.9840	.7936	.9728	.5237	.5952
13-35	1.2160	1.4320	.4864	.7024	.3762	.5922	1.9168	2.1328	.7728	.9888	.6136	.8296	1.8112	2.0272	.8000	.8472	.5301	.6531
13-98	1.2160	1.4016	.4864	.6720	.3762	.5618	1.9168	2.1024	.7728	.9584	.6136	.7992	1.8112	1.9968	.7978	.9856	.5244	.7157
15-5	1.5312	1.7904	.6352	.8944	.5027	.7619	2.3792	2.6384	.9728	1.2320	.7749	1.0341	2.2704	2.5456	.9632	1.1719	.6450	.8467
15-18	1.5456	1.8416	.7760	.9456	.6432	.8128	2.3936	2.6896	.9872	1.2832	.8544	1.1504	2.2848	2.5808	.9776	1.2736	.6594	.8208
15-35	1.5424	1.8768	.6464	.9808	.5139	.8483	2.3904	2.7344	.9840	1.3280	.7861	1.1301	2.2816	2.6256	1.2179	1.3184	.8961	1.0002
17-6	2.1488	2.5904	.9360	1.3776	.7812	1.2228	2.9152	3.3568	1.2336	1.6752	.9940	1.4356	2.5008	3.1024	1.1408	1.7424	.8160	1.4176
17-26	2.1344	2.5600	.9216	1.3472	.7668	1.1924	2.9008	3.3264	1.2192	1.6448	.9796	1.4052	2.4864	2.9120	1.1264	1.3343	.8017	.8062
17-35	2.1360	2.6640	.9232	1.4512	.7684	1.2964	2.9024	3.4304	1.2208	1.7488	.9812	1.5092	2.4880	3.0160	1.1280	1.5497	.8033	1.2144
19-11	2.2592	2.6656	.9696	1.4528	.7925	1.2757	3.4352	3.9184	1.4720	1.9552	1.2033	1.6865	2.9808	3.4640	1.3472	1.8304	.9632	1.4464
19-32	2.1888	2.7264	.9760	1.5136	.7989	1.3365	3.4416	3.9792	1.4784	2.0160	1.2097	1.7473	2.9872	3.5248	1.3536	1.8912	.9696	1.5072
19-35	2.1920	2.8432	.9792	1.6304	.8021	1.4533	3.4448	4.0960	1.4816	2.1328	1.2129	1.8641	2.9904	3.6416	1.3568	2.0080	.9728	1.6240
21-11	2.7456	3.4640	1.3088	2.0272	1.1088	1.8272	3.9712	4.6896	1.8128	2.5312	1.6128	2.3312	3.4448	4.1632	1.7344	2.5312	1.3039	1.8710
21-16	2.6784	3.3168	1.2416	1.8800	1.0422	1.6806	3.9040	4.5424	1.7456	2.3840	1.4505	2.0889	3.3776	4.0160	1.6672	2.3168	1.2352	1.8736
21-35	2.6672	3.4992	1.2304	2.0624	1.0310	1.8630	3.8928	4.7248	1.7344	2.5664	1.4393	2.2713	3.3664	4.1984	1.6560	2.2309	1.2255	1.8003
21-41	2.6768	3.3600	1.2400	1.9232	1.0406	1.7238	3.9024	4.5856	1.7440	2.4272	1.4489	2.1321	3.3760	3.5792	1.6656	1.8688	1.2336	1.4368
23-21	3.0352	3.8624	1.4496	2.2768	1.2279	2.0551	4.2368	5.0640	1.9440	2.7712	1.6368	2.4640	3.7920	4.6192	1.9216	2.7488	1.4637	2.2896
23-35	3.0240	4.0448	1.4384	2.4592	1.2167	2.2375	4.2256	5.2464	1.9328	2.9536	1.6256	2.6464	3.7808	4.8016	1.9104	2.6087	1.4525	2.1507
23-53	2.8992	3.9072	1.4560	2.4816	1.2343	2.2599	4.2432	5.1088	1.9504	2.8160	1.6432	2.5088	3.7984	4.6640	1.9280	2.7936	1.4672	2.2384
25-4	3.4512	4.4800	1.7312	2.8816	1.4864	2.1904	4.8048	5.8272	2.2016	3.2480	1.9568	2.8720	4.2224	5.2496	2.2128	3.2560	1.7133	2.4163
25-19	3.5312	4.7264	1.8112	3.0064	1.5664	2.7616	4.8848	6.0816	2.2816	3.4784	2.0368	3.2336	4.3024	5.4992	2.2928	3.4896	1.7933	2.7058
25-20	3.8190	4.7150	2.0173	3.1125	1.7733	2.8512	5.1430	6.0380	2.4877	3.5421	2.1872	3.2416	4.4350	5.3300	2.2580	3.0182	1.8288	2.8928
25-35	3.4416	4.6656	1.7216	2.9456	1.4776	2.7016	4.7952	6.0192	2.1920	3.4160	1.8915	3.1155	4.2128	5.4368	2.2032	3.4272	1.7037	2.9277
25-61	3.4304	4.4848	1.7282	2.7648	1.4841	2.5208	4.7840	5.8384	2.1808	3.2352	1.8803	2.9347	4.2016	5.2560	2.1920	3.2464	1.6912	2.7456

All weight measurements are for reference only.

38999
SJT I II III

26482
Matrix 2

83723 III
Matrix Pyle

5015
Crimp Rear Release Matrix

26500 Pyle

Printed
Circuit Board

EMI Filter
Transient

Fiber Optics

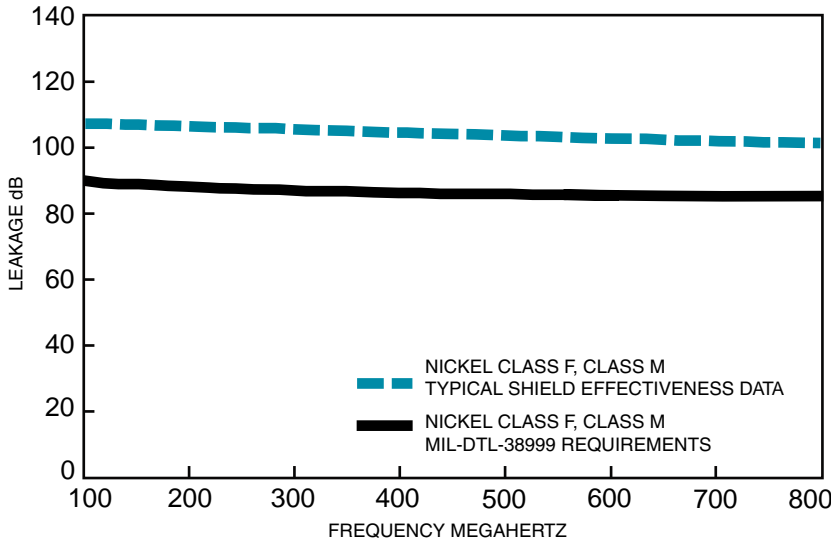
High Speed
Contacts

Options
Others



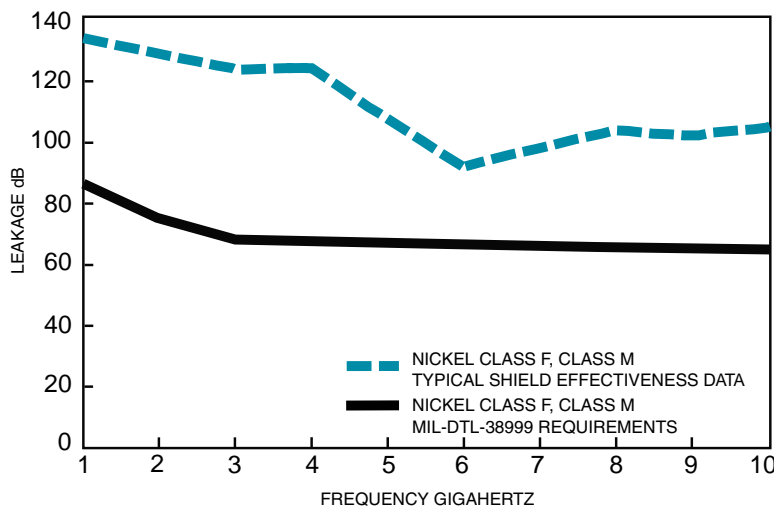
TRI-START, SERIES III TYPICAL SHIELDING EFFECTIVENESS TEST DATA

EMI/EMP SHIELDING EFFECTIVENESS dB
TESTING BY TRIAXIAL METHOD

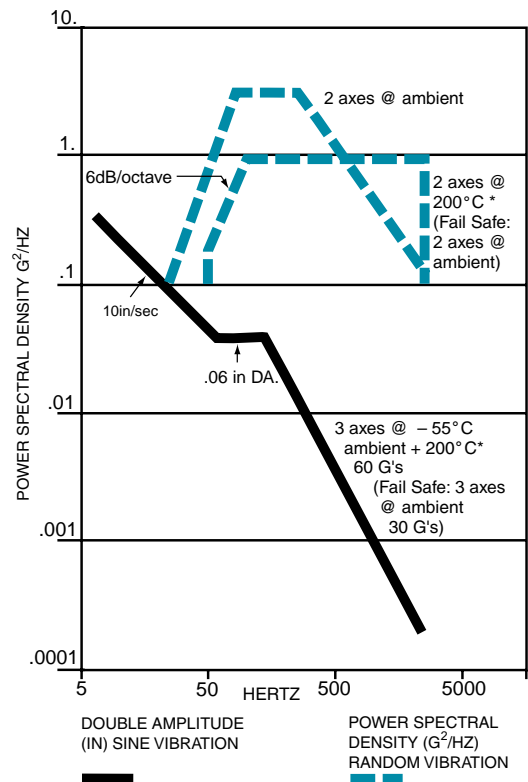


TRI-START, SERIES III TYPICAL SHIELDING EFFECTIVENESS TEST DATA

EMI/EMP SHIELDING EFFECTIVENESS dB
TESTING BY MODE STIRRING METHOD



TRI-START VIBRATION CRITERIA



* Dependant on shell finish

Amphenol® Tri-Start connectors provide EMI/EMP shielding capability which exceeds MIL-DTL-38999 Series III requirements.

The TV and CTV Series III connector with standard solid metal to metal coupling, EMI grounding fingers and conductive finishes has proven to be the ultimate in EMI/EMP shielding effectiveness. The charts illustrate shielding effectiveness data which is typical of Tri-Start connectors tested with the nickel finish (Class F-metal, Class M-composite) over a wide frequency range.

The vibration capability of the Tri-Start Series is shown in the chart below. This illustrates the most severe vibration envelope of any qualified connector available today.

These capabilities along with a +200°C, -65°C temperature rating and superior moisture sealing protection provide the user with a connector that can withstand the most rigorous application.

Test data beyond 2GHz is subject to equipment variation.

NOTE: For test data information on the new Clutch-Lok Tri-Start, high vibration connectors, consult Powell Electronics.

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



MIL-DTL-38999, Series III TV

How to Order (Military and Commercial)

Easy Steps to build a part number... Tri-Start Series III TV

1.	2.	3.	4.	5.	6.	7.
Commercial	Shell Style	Service Class	Shell Size— Insert Arrangement	Contact Type	Alternate Keying Position	Special Variations
TVPS	00	RF	9-35	P	B	(XXX)
Military	Shell Style	Service Class	Shell Size— Insert Arrangement	Contact Type	Alternate Keying Position	
D38999/	20	J	G35	P	N	

Step 1. Select a Connector Type

	Designates
TV	Tri-Start Series Connector
TVP	Back panel mounted receptacle
TVS	200° C rated
TVPS	Panel mounted, 200°C rated receptacle
MTV	CLUTCH-LOK connector with "MS" stamping (Note: remove dashes in how to order part number when ordering CLUTCH-LOK)
CTV	Composite MIL-DTL-38999 Series III Connector
CTVP	Panel mounted composite receptacle
CTVS	200° C rated, composite
CTVPS	Composite Panel mounted, 200° rated receptacle
D38999	Military MIL-DTL-38999 Series III Connector

Step 2. Select a Shell Style

Tri-Start (TV, Metal) (TV26 CLUTCH-LOK)	D38999 TV Military, Metal (MTV26 CLUTCH-LOK)	Commercial CTV, Composite	Military D38999, CTV Composite	Designates
00	20	00	20	Wall Mount Receptacle
01		01		Line Receptacle
02		02		Box Mount Receptacle
	21			Box Mount Receptacle, Hermetic
	23			Jam Nut Receptacle, Hermetic
I	25			Solder Mount Receptacle, (Hermetic)
06	26	06	26	Straight Plug
07	24	07	24	Jam Nut Receptacle
09				Flange Mounted Plug
HI	27			Weld Mounted Receptacle, (Hermetic) Only
26				Proprietary CLUTCH-LOK high vibration straight plug (service Classes RK & RS only)
	29			Lanyard release plug with pin contacts
	30			Lanyard release plug with socket contacts
	31			Lanyard release plug for MIL-STD-1760 with pin contacts
	32			Plug protection cap
	33			Receptacle protection cap



Wall Mount Receptacle



Line Receptacle



Box Mount Receptacle



Straight Plug



Jam Nut Receptacle



Flange Mounting Plug



Deep Reach Receptacle



Solder Mount Hermetic Receptacle



Lanyard Release Plug

38999 III
SJT I II

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

MIL-DTL-38999, Series III TV

How to Order (Military and Commercial)



Step 3. Select a Service Class

1.	2.	3.	4.	5.	6.	7.
Connector Type	Shell Style	Service Class	Shell Size-Insert Arrg.	Contact Type	Alternate Position	Special Variations
		RX				

Commercial	Military	Finish	Description
RX	C	Anodic Coating	Alternate finish, Non-conductive, anodic coated aluminum, 500 hour salt spray, 200°C. Consult Powell Electronics for details, options and availability of non-cadmium or nickel finishes.
RF-Composite/Metal	F-Metal M-Composite	Electroless Nickel	Electroless nickel plated aluminum (composite) optimum EMI shielding effectiveness—65dB @ 10GHz specification min., 48 hour salt spray, 200°C (Composite-2000 hours dynamic salt spray).
RGF-Composite/Metal		Electroless Nickel	electroless nickel plated ground plane aluminum (composite), 200°C
	G		Space grade, electroless nickel, 48 hour salt spray, 200°C
RGW-Composite/Metal		Olive Drab Cadmium	Olive drab cadmium plated ground plane aluminum (composite), 175°C
RK**	K	Stainless Steel	Corrosion resistant stainless steel, firewall capability, plus 500 hour salt spray resistance, EMI -45 dB @ 10 GHz specification min., 200°C
RL	L	Stainless Steel w/ Nickel Plate	Corrosion resistant steel, electro deposited nickel, 500 hour salt spray, 200°C, non firewall
RW-Composite/Metal	W-Metal J-Composite	Olive Drab Cadmium	Corrosion resistant olive drab cadmium plate aluminum (composite), 500 hour salt spray, EMI -50 dB @ 10 GHz specification min., 175°C (Composite-2000 hours dynamic salt spray).
Y	Y	Stainless Steel	Hermetic seal, passivated stainless steel, 200°C
RS*	S	Stainless Steel w/ Nickel Plate	(Non-hermetic connectors), Nickel plated, corrosion resistant steel, firewall capability, 500 hour salt spray, 200°
YN	N	Stainless Steel w/ Nickel Plate	(Hermetic connectors), Nickel plated corrosion resistant steel, 200°C
DT	T	Durmalon plated	Nickel-PTFE alternative to Cadmium. Corrosion resistant, 500 hour salt spray, EMI-50dB at 10GHz specification min., 175°C
ZN	Z	Zinc-Nickel Plated	Zinc-Nickel Alternative to Cadmium corrosion resistant, 500 hour salt spray, Conductive, -65°C to +175°C

* Consult Powell Electronics, for availability. **Coaxial arrangements are not available in these classes.

Quadrax or Differential Twinax:

The incorporation of Quadrax or Differential Twinax contacts requires a modified connector to accommodate keyed contacts.

* D38999/26KJ20PN, is a series III stainless steel plug with twin axial and coaxial contacts that may not meet the firewall requirement of the specification. D38999/26KJ61HN, is a series III stainless steel plug with high durability contacts. However, the connector will be limited to 500 cycles of durability. Insert arrangements using multi-axial (i.e. coax, twinax, triax shielded) contacts should not be used in firewall applications.

Step 4. Select a Shell Size & Insert Arrangement see pg. 4-7

Shell Size & Insert Arrangement are on pages 4-7.
First number represents Shell Size, second number is the Insert Arrangement.

1.	2.	3.	4.	5.	6.	7.
Connector Type	Shell Style	Service Class	Shell Size-Insert Arrg.	Contact Type	Alternate Position	Special Variations
			22-2	P		

Step 5. Select a Contact Type

	Designates
P	Pin Contacts
S	Socket Contacts
H	1500 Cycle Pin Contacts
J	1500 Cycle Socket Contacts
A	Same as "P" except supplied less pin Contacts
B	Same as "S" except supplied less socket contacts (A & B designate nonstandard contact applications)
X	Eyelet contacts, hermetics only

III
38999
II
I
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



MIL-DTL-38999, Series III TV

How to Order (Military and Commercial)

38999 III
SJT I II

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

Step 6. Select an Alternate Keying Position

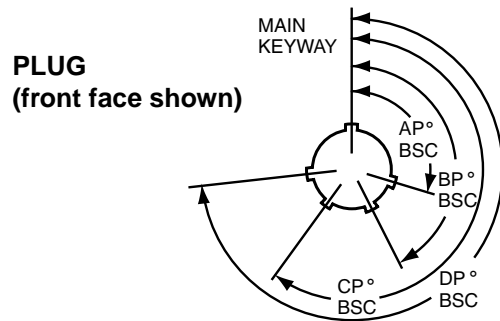
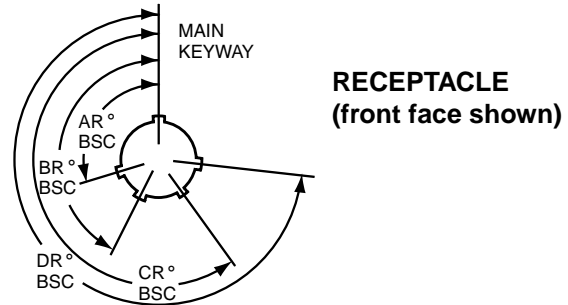
Key/Keyway Position

Shell Size	Key & Keyway Arrangement Identification Letter	AR° or AP° BSC	BR° or BP° BSC	CR° or CP° BSC	DR° or DP° BSC
9	N*	105	140	215	265
	A	102	132	248	320
	B	80	118	230	312
	C	35	140	205	275
	D	64	155	234	304
11, 13, and 15	N*	95	141	208	236
	A	113	156	182	292
	B	90	145	195	252
	C	53	156	220	255
	D	119	146	176	298
17 and 19	N*	51	141	184	242
	A	80	142	196	293
	B	135	170	200	310
	C	49	169	200	244
	D	66	140	200	257
21, 23, and 25	N*	62	145	180	280
	A	79	153	197	272
	B	80	142	196	293
	C	135	170	200	310
	D	49	169	200	244
25L, 33, and 37	N*	66	140	188	257
	A	62	145	188	280
	B	79	153	197	272
	C	80	142	188	293
	D	135	170	188	310
	N*	49	169	188	244
	A	66	140	188	257
	B	62	145	188	280
	C	79	153	197	272
	D	80	142	188	293

* An "N" designation is used on D38999 military part number but not on the commercial versions

1.	2.	3.	4.	5.	6.	7.
Connector Type	Shell Style	Service Class	Shell Size-Insert Arrg.	Contact Type	Alternate Position	Special Variations
					B	

A plug with a given rotation letter will mate with a receptacle with the same rotation letter. The angles for a given connector are the same whether it contains pins or sockets. Master key stay fixed, minor keys rotate. Inserts are not rotated in conjunction with the master key/keyway.



Step 7. Special Variations

Consult Powell Electronics for variations.

1.	2.	3.	4.	5.	6.	7.
Connector Type	Shell Style	Service Class	Shell Size-Insert Arrg.	Contact Type	Alternate Position	Special Variations
						(xxx)



Easy Steps to build a part number... Boeing BACC63 CT & CU

1. 2. 3. 4. 5. 6. 7. 8.

Boeing Basic Number	Style	Shell Size	Shell Finish & Contact	Insert Arrangement	Contact Type	Alternate Keying Position	Ordering Option
BACC63	CT	15	—	19	P	N	H

Composite

Step 1. Boeing Number BACC63

Step 2. Select a Style

	Designates
CT	Composite Plug
CU	Composite Receptacle

Step 3. Shell Size 15

	Designates
15	One Shell Size

Step 4. Select a Shell Finish & Contact

	Designates
C	CT Style Only. Cadmium Plated, Grounded
D	Cadmium Plated, ungrounded
G	Nickel Plated, Grounded
—	Nickel Plated, Ungrounded

Step 5. Insert Arrangements-
Consult Powell Electronics for Insert Arrangements available.

Step 6. Select a Contact Type

	Designates
P	Pin
S	Socket

Step 7. Select an Alternate Keying Position

	Designates
N	Normal
A-E	Alternates

Step 8. Ordering Option

	Designates
H	Without Contacts & Seal Plugs
Blank	With contacts and seal plugs

Easy Steps to build a part number... Boeing BACC63 DB & DC

1. 2. 3. 4. 5. 6. 7. 8.

Boeing Basic Number	Style	Shell Size	Separator	Insert Arrangement	Contact Type	Alternate Keying Position	Ordering Option
BACC63	DB	15	—	19	P	N	H
BACC63	DC	17	—	8	P	N	H

Stainless Steel

Step 1. Boeing Number BACC63

Step 2. Select a Style

	Designates
DB	Stainless Steel Plug
DC	Stainless Steel Receptacle

Step 3. Select a Shell Size

	Designates
9-25	Shell Size

Step 4. Separator

	Designates
—	Separator

Step 5. Insert Arrangements-
Consult Powell Electronics for Insert Arrangements available.

Step 6. Select a Contact Type

	Designates
P	Pin
S	Socket

Step 7. Select an Alternate Keying Position

	Designates
N	Normal
A-E	Alternates

Step 8. Ordering Option

	Designates
H	Without Contacts & Seal Plugs
Blank	With contacts and seal plugs

III
38999
II
I
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



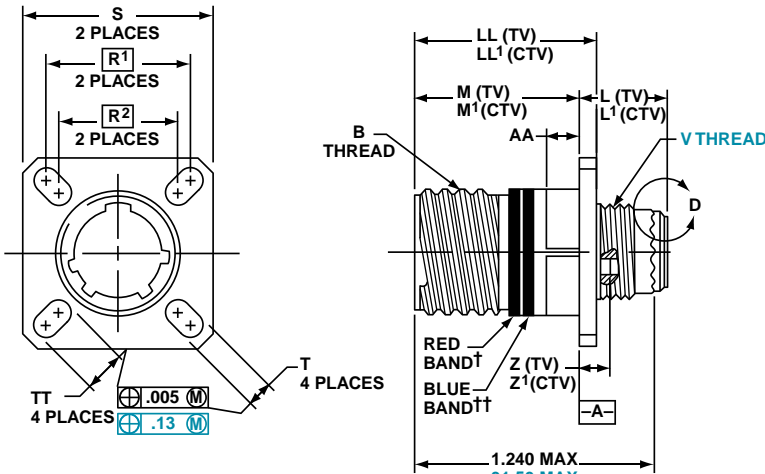
TVP00R (D38999/20) - Crimp, Metal CTVP00R (D38999/20) - Crimp, Composite Wall Mounting Receptacle

- 38999 III
- SJT I II
- 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

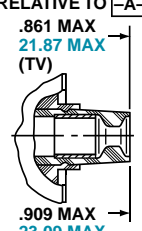
PART

To complete, see how to order pages 22-24.

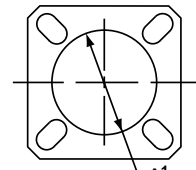
Connector Type	Shell Style	Service Class	Shell Size & Insert Arrg	Contact Type	Alternate Position	Special Variations
TVP	00	RW	9-35	P	B	(453)
TVPS	00	RK	X-X	X	X	(XXX)
TVPS	00	RF	X-X	X	X	(XXX)
TVPS	00	RS	X-X	X	X	(XXX)
CTVP	00	RW	X-X	X	X	(XXX)
CTVPS	00	RF	X-X	X	X	(XXX)
D38999/	20	X	X-X	X	X	NA



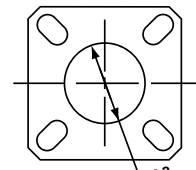
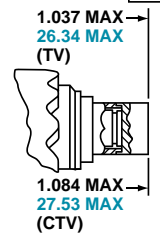
VIEW D FOR SIZE 8 COAXIAL ONLY, RELATIVE TO -A-



PANEL HOLE DIMENSIONS



VIEW D FOR SIZE 8 TWINAX ONLY, RELATIVE TO -A-



† Red band indicates fully mated

†† Blue band indicates rear release contact retention system

Shell Size	MS Shell Size Code	B Thread Class 2A 0.1P=0.3L-TS (Plated)	L Max. (TV)	L' Max. (CTV)	M +.000 - .005 (TV)	M' +.000 - .005 (CTV)	R ¹	R ²	S Max.	T ±.008	Z Max. (TV)	Z' Max. (CTV)	A ¹ Back Panel Mount	A ² Front Panel Mount	AA Max. Panel Thickness	LL +.006 - .000 (TV)	LL1 ±.005 (CTV)	TT ±.008
9	A	.6250	.469	.514	.820	.773	.719	.594	.948	.128	.153	.198	.650	.510	.234	.905	.908	.216
11	B	.7500	.469	.514	.820	.773	.812	.719	1.043	.128	.153	.198	.800	.620	.234	.905	.908	.194
13	C	.8750	.469	.514	.820	.773	.906	.812	1.137	.128	.153	.198	.910	.740	.234	.905	.908	.194
15	D	1.0000	.469	.514	.820	.773	.969	.906	1.232	.128	.153	.198	1.040	.900	.234	.905	.908	.173
17	E	1.1875	.469	.514	.820	.773	1.062	.969	1.323	.128	.153	.198	1.210	1.010	.234	.905	.908	.194
19	F	1.2500	.469	.514	.820	.773	1.156	1.062	1.449	.128	.153	.198	1.280	1.130	.234	.905	.908	.194
21	G	1.3750	.500	.545	.790	.741	1.250	1.156	1.575	.128	.183	.228	1.410	1.250	.204	.905	.904	.194
23	H	1.5000	.500	.545	.790	.741	1.375	1.250	1.701	.154	.183	.228	1.530	1.360	.204	.905	.904	.242
25	J	1.6250	.500	.545	.790	.741	1.500	1.375	1.823	.154	.183	.228	1.660	1.470	.204	.905	.904	.242

Inches

Shell Size	MS Shell Size Code	L Max. (TV)	L' Max. (CTV)	M +.00 - .13 (TV)	M' +.00 - .13 (CTV)	R ¹	R ²	S Max.	T ±.20	V Thread Metric	Z Max. (TV)	Z' Max. (CTV)	A ¹ Back Panel Mount	A ² Front Panel Mount	AA Max.	LL +.15 - .00 (TV)	LL1 ±.13 (CTV)	TT ±.20
9	A	11.91	13.06	20.83	19.63	18.26	15.09	24.1	3.25	M12X1-6g	3.89	5.03	16.66	13.11	5.94	22.99	23.06	5.49
11	B	11.91	13.06	20.83	19.63	20.62	18.26	26.5	3.25	M15X1-6g	3.89	5.03	20.22	15.88	5.94	22.99	23.06	4.93
13	C	11.91	13.06	20.83	19.63	23.01	20.62	28.9	3.25	M18X1-6g	3.89	5.03	23.42	19.05	5.94	22.99	23.06	4.93
15	D	11.91	13.06	20.83	19.63	24.61	23.01	31.3	3.25	M22X1-6g	3.89	5.03	26.59	23.01	5.94	22.99	23.06	4.39
17	E	11.91	13.06	20.83	19.63	26.97	24.61	33.7	3.25	M25X1-6g	3.89	5.03	30.96	25.81	5.94	22.99	23.06	4.93
19	F	11.91	13.06	20.83	19.63	29.36	26.97	36.9	3.25	M28X1-6g	3.89	5.03	32.94	28.98	5.94	22.99	23.06	4.93
21	G	12.70	13.84	20.07	18.82	31.75	29.36	40.1	3.25	M31X1-6g	4.65	5.79	36.12	32.16	5.18	22.99	22.96	4.93
23	H	12.70	13.84	20.07	18.82	34.93	31.75	43.3	3.91	M34X1-6g	4.65	5.79	39.29	34.93	5.18	22.99	22.96	6.15
25	J	12.70	13.84	20.07	18.82	38.10	34.93	46.4	3.91	M37X1-6g	4.65	5.79	42.47	37.69	5.18	22.99	22.96	6.15

All dimensions for reference only

□ Designates true position dimensioning

For information and ordering visit www.powell.com or email info@powell.com
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TVP02R – Crimp, Metal CTVP02R – Crimp, Composite

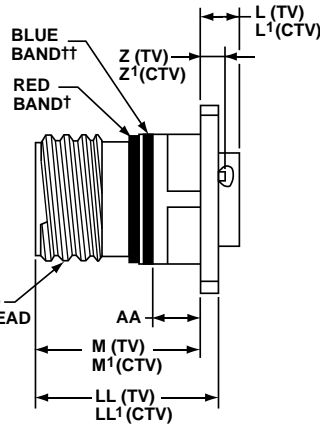
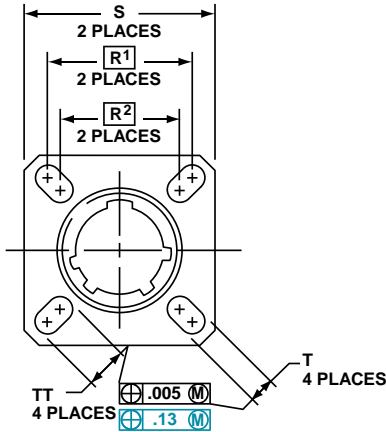
Box Mounting Receptacle



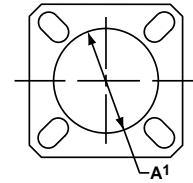
PART

To complete, see how to order pages 22-24.

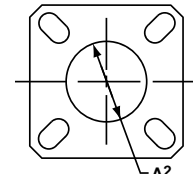
Connector Type	Shell Style	Service Class	Shell Size & Insert Arrg	Contact Type	Alternate Position	Special Variations
TVP	02	RW	9-35	P	B	(453)
TVPS	02	RK	X-X	X	X	(XXX)
TVPS	02	RF	X-X	X	X	(XXX)
TVPS	02	RS	X-X	X	X	(XXX)
CTVP	02	RW	X-X	X	X	(XXX)
CTVPS	02	RF	X-X	X	X	(XXX)



PANEL HOLE DIMENSIONS



BACK PANEL MOUNTING



FRONT PANEL MOUNTING

† Red band indicates fully mated

†† Blue band indicates rear release contact retention system

Consult Powell Electronics for availability of composite box mount receptacles.

Shell Size	MS Shell Size Code	B Thread Class 2A 0.1P=0.3L-TS (Plated)	L Max. (TV)	L' Max. (CTV)	M +.000 - .005 (TV)	M' +.000 - .005 (CTV)	R ¹	R ²	S Max.	T ±.008	Z Max. (TV)	Z' Max. (CTV)	A ¹ Back Panel Mount	A ² Front Panel Mount	AA Max. Panel Thickness	LL +.006 - .000 (TV)	LL1 ±.005 (CTV)	TT ±.008
9	A	.6250	.205	.250	.820	.773	.719	.594	.948	.128	.153	.198	.650	.510	.234	.905	.908	.216
11	B	.7500	.205	.250	.820	.773	.812	.719	1.043	.128	.153	.198	.800	.620	.234	.905	.908	.194
13	C	.8750	.205	.250	.820	.773	.906	.812	1.137	.128	.153	.198	.910	.740	.234	.905	.908	.194
15	D	1.0000	.205	.250	.820	.773	.969	.906	1.232	.128	.153	.198	1.040	.900	.234	.905	.908	.173
17	E	1.1875	.205	.250	.820	.773	1.062	.969	1.323	.128	.153	.198	1.210	1.010	.234	.905	.908	.194
19	F	1.2500	.205	.250	.820	.773	1.156	1.062	1.449	.128	.153	.198	1.280	1.130	.234	.905	.908	.194
21	G	1.3750	.235	.280	.790	.741	1.250	1.156	1.575	.128	.183	.228	1.410	1.250	.204	.905	.904	.194
23	H	1.5000	.235	.280	.790	.741	1.375	1.250	1.701	.154	.183	.228	1.530	1.360	.204	.905	.904	.242
25	J	1.6250	.235	.280	.790	.741	1.500	1.375	1.823	.154	.183	.228	1.660	1.470	.204	.905	.904	.242

Inches

Shell Size	MS Shell Size Code	L Max. (TV)	L' Max. (CTV)	M +.00 - .13 (TV)	M' +.00 - .13 (CTV)	R ¹	R ²	S Max.	T ±.20	Z Max. (TV)	Z' Max. (CTV)	A ¹ Back Panel Mount	A ² Front Panel Mount	AA Max.	LL +.15 - .00 (TV)	LL1 ±.13 (CTV)	TT ±.20
9	A	5.21	6.35	20.83	19.63	18.26	15.09	24.1	3.25	3.89	5.03	16.66	13.11	5.94	22.99	23.06	5.49
11	B	5.21	6.35	20.83	19.63	20.62	18.26	26.5	3.25	3.89	5.03	20.22	15.88	5.94	22.99	23.06	4.93
13	C	5.21	6.35	20.83	19.63	23.01	20.62	28.9	3.25	3.89	5.03	23.42	19.05	5.94	22.99	23.06	4.93
15	D	5.21	6.35	20.83	19.63	24.61	23.01	31.3	3.25	3.89	5.03	26.59	23.01	5.94	22.99	23.06	4.39
17	E	5.21	6.35	20.83	19.63	26.97	24.61	33.7	3.25	3.89	5.03	30.96	25.81	5.94	22.99	23.06	4.93
19	F	5.21	6.35	20.83	19.63	29.36	26.97	36.9	3.25	3.89	5.03	32.94	28.98	5.94	22.99	23.06	4.93
21	G	5.97	7.11	20.07	18.82	31.75	29.36	40.1	3.25	4.65	5.79	36.12	32.16	5.18	22.99	22.96	4.93
23	H	5.97	7.11	20.07	18.82	34.92	31.75	43.3	3.91	4.65	5.79	39.29	34.93	5.18	22.99	22.96	6.15
25	J	5.97	7.11	20.07	18.82	38.10	34.92	46.4	3.91	4.65	5.79	42.47	37.69	5.18	22.99	22.96	6.15

Millimeters

All dimensions for reference only

Designates true position dimensioning

III 38999

II

I

SJT

Matrix 2 26482

Matrix Pyle 83723 III

Release Matrix 5015 Crimp Rear

26500 Pyle

Printed Circuit Board

EM1 Filter Transient

Fiber Optics

High Speed Contacts

Options Others



TV06R (D38999/26) – Crimp, Metal CTV06R (D38999/26) – Crimp, Composite

Straight Plug

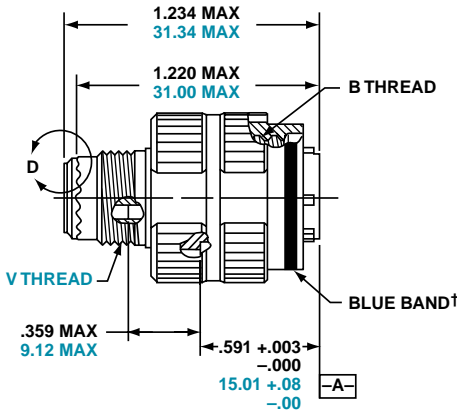
- 38999 III
- SJT I II
- 26482 Matrix 2
- 83723 III Pyle Matrix
- 5015 Crimp Rear Release Matrix
- 26500 Pyle
- Printed Circuit Board
- EMI Filter Transient
- Fiber Optics
- High Speed Contacts
- Options Others

PART

To complete, see how to order pages 22-24.

Connector Type	Shell Style	Service Class	Shell Size & Insert Arrg	Contact Type	Alternate Position	Special Variations
TV	06	RW	9-35	P	B	(453)
TVS	06	RK	X-X	X	X	(XXX)
TVS	06	RF	X-X	X	X	(XXX)
TVS	06	RS	X-X	X	X	(XXX)
CTV	06	RW	X-X	X	X	(XXX)
CTVS	06	RF	X-X	X	X	(XXX)
D38999/	26	X	X-X	X	X	NA

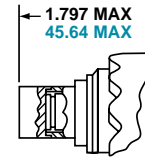
METAL



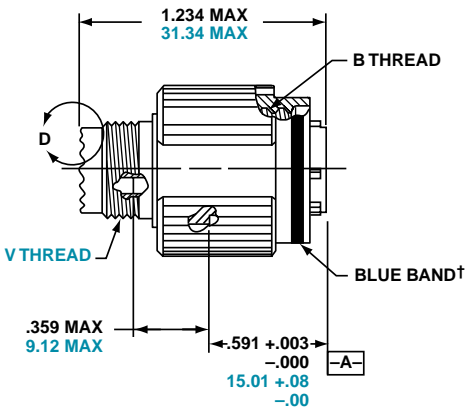
VIEW D FOR SIZE 8 COAXIAL ONLY, RELATIVE TO -A-



VIEW D FOR SIZE 8 TWINAX ONLY, RELATIVE TO -A-



COMPOSITE



† Blue band indicates rear release contact retention system

Inches

Shell Size	MS Shell Size Code	B Thread 0.1P-0.3L-TS-2B (Plated)	Q Dia. Max.
9	A	.6250	.858
11	B	.7500	.984
13	C	.8750	1.157
15	D	1.0000	1.280
17	E	1.1875	1.406
19	F	1.2500	1.516
21	G	1.3750	1.642
23	H	1.5000	1.768
25	J	1.6250	1.890

Millimeters

Shell Size	MS Shell Size Code	Q Max.	V Thread Metric
9	A	21.8	M12X1-6g
11	B	25.0	M15X1-6g
13	C	29.4	M18X1-6g
15	D	32.5	M22X1-6g
17	E	35.7	M25X1-6g
19	F	38.5	M28X1-6g
21	G	41.7	M31X1-6g
23	H	44.9	M34X1-6g
25	J	48.0	M37X1-6g

All dimensions for reference only.

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TV26/MTV26 – Crimp, Metal CLUTCH-LOK™ Plug



For High Vibration Applications

PART

To complete, see how to order pages 22-24.

Connector Type	Shell Style	Service Class	Shell Size & Insert Arrg	Contact Type	Alternate Position	Special Variations
TV	26	RK	9-35	P	N	(453)
TV	26	RS	X-X	X	N	(XXX)
MTV	26	RK	X-X	X	N	(XXX)
MTV	26	RS	X-X	X	N	(XXX)

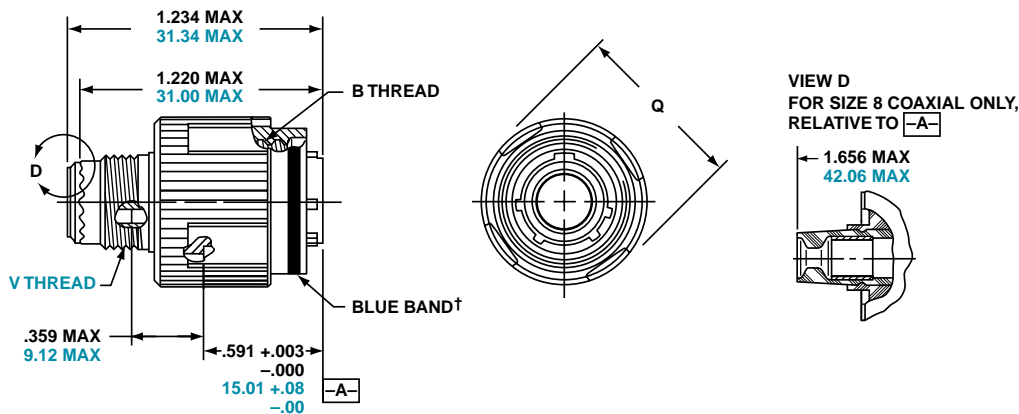
For parts with MS Stamping use MTV26() part number as shown above.

Designed for high vibration and harsh environments such as aircraft gas turbine engines, the CLUTCH-LOK is also an ideal choice for demanding applications such as aircraft, space and military ground vehicles. The unique clutch design of the Amphenol CLUTCH-LOK means that you don't have to compromise the need for quick, smooth mating of plugs and receptacles in order to get increased uncoupling torque.

The CLUTCH-LOK has proven to not only remain mated and pass all the Series III specification requirements, it also has proven to actually tighten itself under vibration. This is a powerful advantage over the traditionally high vibration application connectors. The CLUTCH-LOK is also a tremendous advantage in inaccessible, hard to reach areas where mating torque is difficult to apply and complete coupling is not verifiable by inspection.

CLUTCH-LOK features and benefits:

- High degree of differential torque
- Infinite free coupling and positive metal-to-metal bottoming with each mating
- No settling back to the next ratchet tooth
- Available with stainless steel shells and Class K firewall inserts
- All the advantages of MIL-DTL-38999 Series III including EMI/RFI shielding, electrolytic erosion resistance and contact protection with recessed pins
- Enhanced connector performance at affordable prices
- Completely intermateable with all existing MIL-DTL-38999 Series III connectors
- Fully QPL'd



† Blue band indicates rear release contact retention system

Shell Size	MS Shell Size Code	B Thread 0.1P-0.3L-TS-2B (Plated)	Q Dia. Max.
9	A	.6250	.858
11	B	.7500	.984
13	C	.8750	1.157
15	D	1.0000	1.280
17	E	1.1875	1.406
19	F	1.2500	1.516
21	G	1.3750	1.642
23	H	1.5000	1.768
25	J	1.6250	1.890

Shell Size	MS Shell Size Code	Q Max.	V Thread Metric
9	A	21.8	M12X1-6g
11	B	25.0	M15X1-6g
13	C	29.4	M18X1-6g
15	D	32.5	M22X1-6g
17	E	35.7	M25X1-6g
19	F	38.5	M28X1-6g
21	G	41.7	M31X1-6g
23	H	44.9	M34X1-6g
25	J	48.0	M37X1-6g

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



TV07R (D38999/24) – Crimp, Metal CTV07R (D38999/24) – Crimp, Composite Jam Nut Receptacle

38999

SJT

26482 Matrix 2

83723 III Matrix Pyle

5015 Crimp Rear Release Matrix

26500 Pyle

Printed Circuit Board

EMI Filter Transient

Fiber Optics

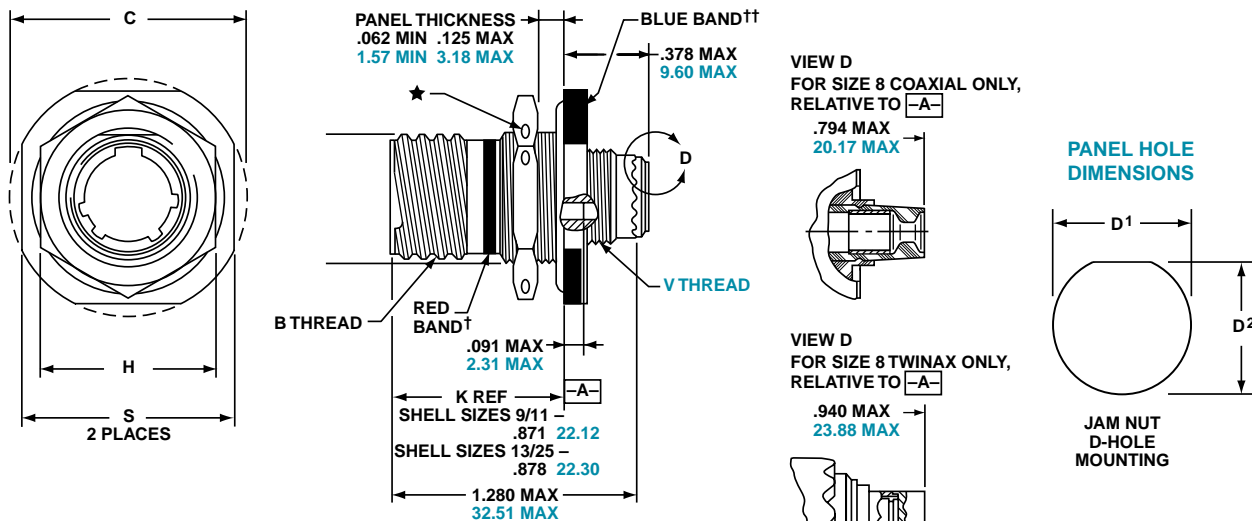
High Speed Contacts

Options Others

PART

To complete, see how to order pages 22-24.

Connector Type	Shell Style	Service Class	Shell Size & Insert Arrg	Contact Type	Alternate Position	Special Variations
TV	07	RW	9-35	P	B	(453)
TVS	07	RK	X-X	X	X	(XXX)
TVS	07	RF	X-X	X	X	(XXX)
TVS	07	RS	X-X	X	X	(XXX)
CTV	07	RW	X-X	X	X	(XXX)
CTVS	07	RF	X-X	X	X	(XXX)
D38999/	24	X	X-X	X	X	NA



† Red band indicates fully mated

†† Blue band indicates rear release contact retention system

★ .059 dia min.

1.5 dia min., 3 lockwire holes Formed lockwire hole design (6 holes) is optional Inches

Shell Size	MS Shell Size Code	B Thread Class 2A 0.1P-0.3L-TS (Plated)	C Max.	D ¹ +.010 - .000	D ² +.000 - .010	H Hex +.017 - .016	S ±.010
9	A	.6250	1.199	.700	.670	.875	1.062
11	B	.7500	1.386	.825	.770	1.000	1.250
13	C	.8750	1.511	1.010	.955	1.188	1.375
15	D	1.0000	1.636	1.135	1.085	1.312	1.500
17	E	1.1875	1.761	1.260	1.210	1.438	1.625
19	F	1.2500	1.949	1.385	1.335	1.562	1.812
21	G	1.3750	2.073	1.510	1.460	1.688	1.938
23	H	1.5000	2.199	1.635	1.585	1.812	2.062
25	J	1.6250	2.323	1.760	1.710	2.000	2.188

Millimeters

Shell Size	MS Shell Size Code	C Max.	D ¹ +.25 - .00	D ² +.00 - .25	H Hex +.43 - .41	S ±.25	V Thread Metric
9	A	30.45	17.78	17.02	22.23	26.97	M12X1-6g
11	B	35.20	20.96	19.59	25.40	31.75	M15X1-6g
13	C	38.38	25.65	24.26	30.18	34.93	M18X1-6g
15	D	41.55	28.83	27.56	33.32	38.10	M22X1-6g
17	E	44.73	32.01	30.73	36.53	41.28	M25X1-6g
19	F	49.50	35.18	33.91	39.67	46.02	M28X1-6g
21	G	52.65	38.35	37.08	42.80	49.23	M31X1-6g
23	H	55.85	41.53	40.26	46.02	52.37	M34X1-6g
25	J	59.00	44.70	43.43	50.80	55.58	M37X1-6g

All dimensions for reference only NOTE: Deep reach receptacles are available for panel thicknesses up to .750 max.

TV01R – Crimp, Metal CTV01R – Crimp, Composite

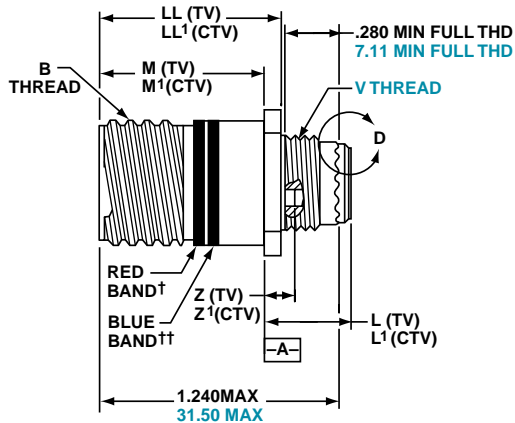
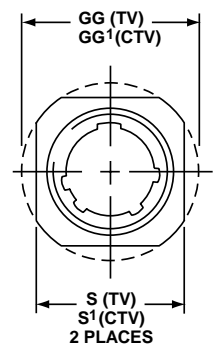


Line Receptacle

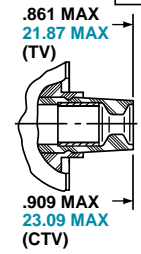
PART

To complete, see how to order pages 22-24.

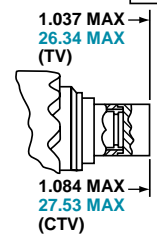
Connector Type	Shell Style	Service Class	Shell Size & Insert Arrg	Contact Type	Alternate Position	Special Variations
TV	01	RW	9-35	P	B	(453)
TVS	01	RF	X-X	X	X	(XXX)
CTV	01	RW	X-X	X	X	(XXX)
CTVS	01	RF	X-X	X	X	(XXX)



VIEW D FOR SIZE 8 COAXIAL ONLY, RELATIVE TO -A-



VIEW D FOR SIZE 8 TWINAX ONLY, RELATIVE TO -A-



† Red band indicates fully mated
†† Blue band indicates rear release contact retention system

Inches

Shell Size	MS Shell Size Code	B Thread 0.1P-0.3L-TS-2A (Plated)	M +.000 - .005 (TV)	M' +.000 - .005 (CTV)	L Max. (TV)	L' Max. (CTV)	S ±.010 (TV)	S' ±.010 (CTV)	Z Max (TV)	Z' Max (CTV)	GG ±.010 (TV)	GG' ±.010 (CTV)	LL +.006 - .000 (TV)	LL' ±.005 (CTV)
9	A	.6250	.820	.773	.469	.514	.675	.635	.153	.198	.812	.699	.905	.908
11	B	.7500	.820	.773	.469	.514	.800	.765	.153	.198	.905	.875	.905	.908
13	C	.8750	.820	.773	.469	.514	.925	.885	.153	.198	1.093	1.007	.905	.908
15	D	1.0000	.820	.773	.469	.514	1.050	1.100	.153	.198	1.219	1.140	.905	.908
17	E	1.1875	.820	.773	.469	.514	1.238	1.197	.153	.198	1.375	1.229	.905	.908
19	F	1.2500	.820	.773	.469	.514	1.300	1.260	.153	.198	1.469	1.380	.905	.908
21	G	1.3750	.790	.741	.500	.545	1.425	1.385	.183	.228	1.625	1.493	.905	.904
23	H	1.5000	.790	.741	.500	.545	1.550	1.510	.183	.228	1.750	1.626	.905	.904
25	J	1.6250	.790	.741	.500	.545	1.675	1.635	.183	.228	1.875	1.777	.905	.904

Millimeters

Shell Size	MS Shell Size Code	M +.00 - .013 (TV)	M' +.00 - .13 (CTV)	L Max. (TV)	L' Max. (CTV)	S ±.25 (TV)	S' ±.010 (CTV)	V Thread Metric	Z Max (TV)	Z' Max (CTV)	GG ±.25 (TV)	GG' ±.25 (CTV)	LL +.15 - .00 (TV)	LL' ±.13 (CTV)
9	A	20.83	19.63	11.91	13.06	17.15	16.13	M12X1-6g	3.89	5.03	20.62	17.75	22.99	23.06
11	B	20.83	19.63	11.91	13.06	20.32	19.43	M15X1-6g	3.89	5.03	22.99	22.22	22.99	23.06
13	C	20.83	19.63	11.91	13.06	23.50	22.47	M18X1-6g	3.89	5.03	27.76	25.57	22.99	23.06
15	D	20.83	19.63	11.91	13.06	26.67	27.94	M22X1-6g	3.89	5.03	30.96	28.95	22.99	23.06
17	E	20.83	19.63	11.91	13.06	31.45	30.40	M25X1-6g	3.89	5.03	34.93	31.21	22.99	23.06
19	F	20.83	19.63	11.91	13.06	33.02	32.00	M28X1-6g	3.89	5.03	37.31	35.05	22.99	23.06
21	G	20.07	18.82	12.70	13.84	36.20	35.18	M31X1-6g	4.65	5.79	41.28	37.92	22.99	22.96
23	H	20.07	18.82	12.70	13.84	39.37	38.35	M34X1-6g	4.65	5.79	44.45	41.30	22.99	22.96
25	J	20.07	18.82	12.70	13.84	42.55	41.53	M37X1-6g	4.65	5.79	47.63	45.13	22.99	22.96

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

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



TV09R – Crimp, Metal Flange Mounting Plug

38999

SJT

26482
Matrix 2

83723 III
Matrix Pyle

5015
Crimp Rear
Release Matrix

26500 Pyle

Printed
Circuit Board

EMI Filter
Transient

Fiber Optics

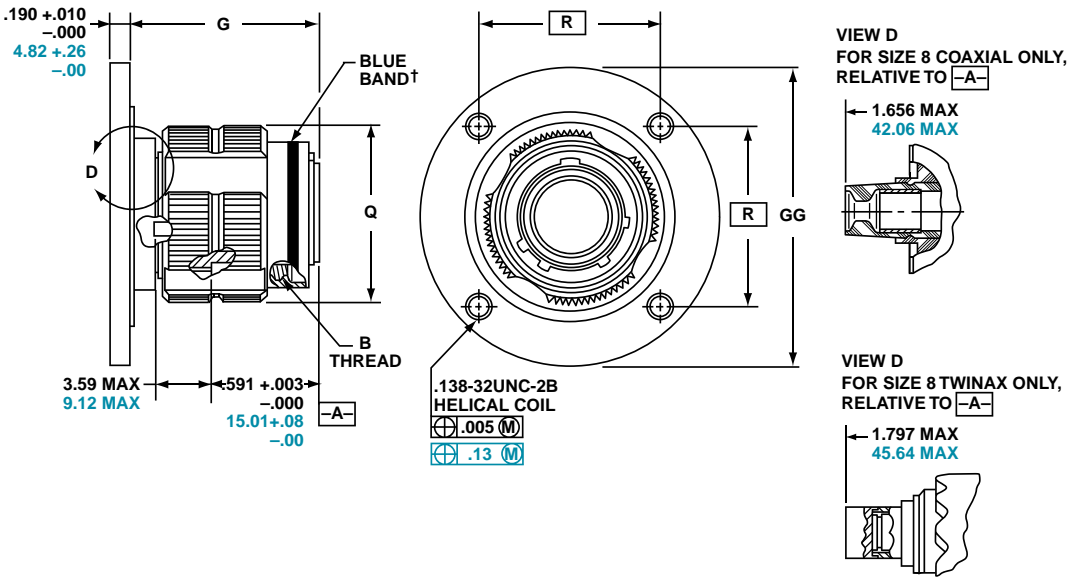
High Speed
Contacts

Options
Others

PART

To complete, see how to
order pages 22-24.

Connector Type	Shell Style	Service Class	Shell Size & Insert Arrg	Contact Type	Alternate Position	Special Variations
TV	09	RW	9-35	P	B	(453)
TVS	09	RF	X-X	X	X	(000X)



† Blue band indicates rear release contact retention system

Inches

Shell Size	MS Shell Size Coded	B Thread 0.1P-0.3L-TS-2A (Plated)	G ±.060	Q Dia. Max	R	GG Dia ±.005
9**	A	.6250	1.106	.859	1.038	1.838
11	B	.7500	1.106	.969	1.115	1.948
13**	C	.8750	1.106	1.141	1.240	2.124
15	D	1.0000	1.106	1.266	1.327	2.248
17	E	1.1875	1.106	1.391	1.417	2.375
19	F	1.2500	1.356	1.500	1.557	2.495
21	G	1.3750	1.356	1.625	1.624	2.568
23	H	1.5000	1.356	1.750	1.713	2.723
25	J	1.6250	1.356	1.875	1.801	2.848

Millimeters

Shell Size	MS Shell Size Coded	G ±.152	Q Dia. Max	R	GG Dia ±.13
9**	A	28.09	21.82	26.37	46.69
11	B	28.09	24.62	28.32	49.48
13**	C	28.09	28.98	31.50	53.95
15	D	28.09	32.16	33.71	57.10
17	E	28.09	35.33	35.99	60.33
19	F	34.44	38.10	39.55	63.37
21	G	34.44	41.28	41.25	65.23
23	H	34.44	44.45	43.51	69.16
25	J	34.44	47.63	45.75	72.34

All dimensions for reference only

** Partially tooled. Consult Powell Electronics for availability

□ Designates true position dimensioning

TVPS02Y (D38999/21) – Hermetic

Stainless Steel

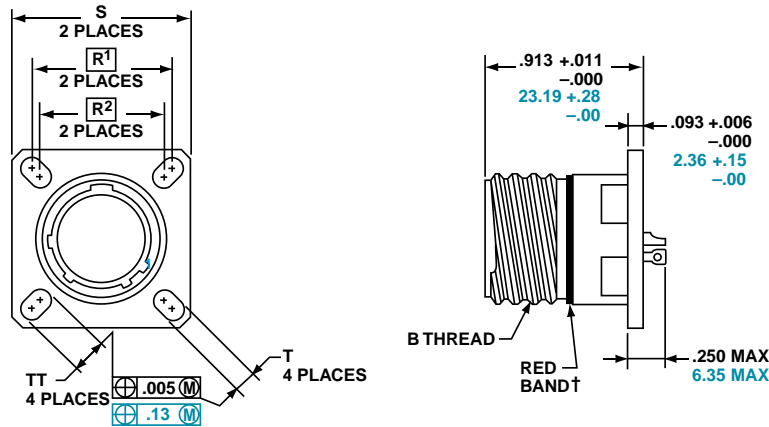
Box Mounting Receptacle



PART

To complete, see how to order pages 22-24.

Connector Type	Shell Style	Service Class	Shell Size & Insert Arrg	Contact Type	Alternate Position	Special Variations
TVPS	02	Y	9-35	P	B	(453)
TVPS	02	YN	X-X	X	X	(XXX)
D38999/	21	X	X-X	X	X	NA



† Red band indicates fully mated

NOTE: Consult Powell Electronics for availability of non-glass-sealed versions with printed circuit tail contacts.

Inches

Shell Size	MS Shell Size Coded	B Thread 0.1P-0.3L-TS (Plated)	R1	R2	S ±.010	T ±.008	TT ±.008
9	A	.6250	.719	.594	.938	.128	.216
11	B	.7500	.812	.719	1.031	.128	.194
13	C	.8750	.906	.812	1.125	.128	.194
15	D	1.0000	.969	.906	1.219	.128	.173
17	E	1.1875	1.062	.969	1.312	.128	.194
19	F	1.2500	1.156	1.062	1.438	.128	.194
21	G	1.3750	1.250	1.156	1.562	.128	.194
23	H	1.5000	1.375	1.250	1.688	.154	.242
25	J	1.6250	1.500	1.375	1.812	.154	.242

Millimeters

Shell Size	MS Shell Size Coded	R1	R2	S ±.25	T ±.20	TT ±.20
9	A	18.26	15.09	23.83	3.25	5.49
11	B	20.62	18.26	26.19	3.25	4.93
13	C	23.01	20.62	28.58	3.25	4.93
15	D	24.61	23.01	30.96	3.25	4.39
17	E	26.97	24.61	33.32	3.25	4.93
19	F	29.36	26.97	36.53	3.25	4.93
21	G	31.75	29.36	39.67	3.25	4.93
23	H	34.93	31.75	42.88	3.91	6.15
25	J	38.10	34.93	46.02	3.91	6.15

All dimensions for reference only

Designates true position dimensioning

- III 38999
- II
- I
- 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



TVS07Y (D38999/23) – Hermetic Stainless Steel Jam Nut Receptacle

38999

III
II
I
SJT

26482

Matrix 2

83723 III

Matrix Pyle

5015

Crimp Rear
Release Matrix

26500 Pyle

Printed
Circuit Board

EMI Filter
Transient

Fiber Optics

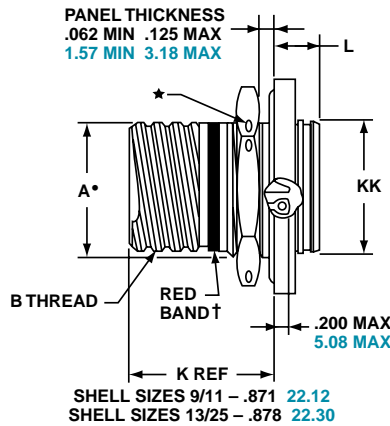
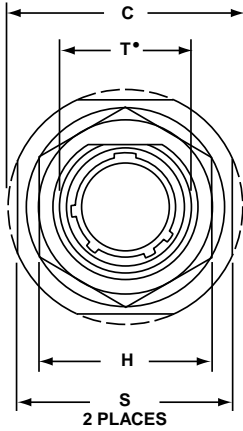
High Speed
Contacts

Options
Others

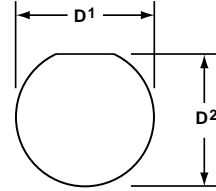
PART

To complete,
see how to order
pages 22-24.

Connector Type	Shell Style	Service Class	Shell Size & Insert Arrg	Contact Type	Alternate Position	Special Variations
TVS	07	Y	9-35	P	B	(453)
TVS	07	YN	X-X	X	X	(XXX)
D38999/	23	X	X-X	X	X	NA



PANEL HOLE DIMENSIONS



JAM NUT D-HOLE MOUNTING

† Red band indicates fully mated

★ .059 dia min.

1.5 dia min. 3 lockwire holes

Formed lockwire hole design (6 holes) is optional.

Inches

Shell Size	MS Shell Size code	A* +.000 -.010	B Thread Class 2A 0.1P- 0.3L-TS (Plated)	C Max	D' +.010 -.000	D' +.000 -.010	H Hex +.017 -.016	L Max	S ±.010	T* +.010 -.000	KK +.011 -.000
9	A	.669	.6250	1.199	.700	.670	.875	.357	1.062	.697	.642
11	B	.769	.7500	1.386	.825	.770	1.000	.357	1.250	.822	.766
13	C	.955	.8750	1.511	1.010	.955	1.188	.357	1.375	1.007	.892
15	D	1.084	1.0000	1.636	1.135	1.085	1.312	.357	1.500	1.134	1.018
17	E	1.208	1.1875	1.761	1.260	1.210	1.438	.357	1.625	1.259	1.142
19	F	1.333	1.2500	1.949	1.385	1.335	1.562	.381	1.812	1.384	1.268
21	G	1.459	1.3750	2.073	1.510	1.460	1.688	.381	1.938	1.507	1.392
23	H	1.575	1.5000	2.199	1.635	1.585	1.812	.381	2.062	1.634	1.518
25	J	1.709	1.6250	2.323	1.760	1.710	2.000	.381	2.188	1.759	1.642

Millimeters

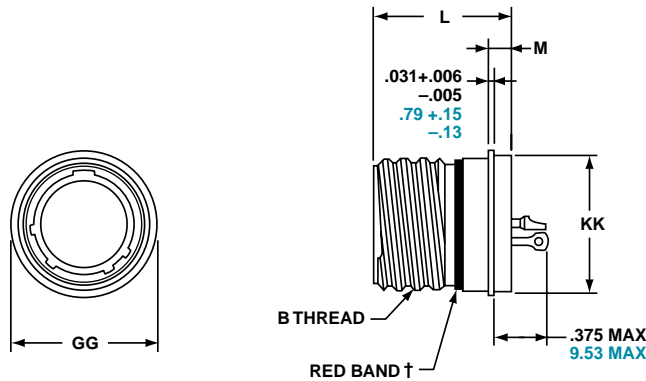
Shell Size	MS Shell Size code	A* +.00 -.25	C Max	D' +.25 -.00	D' +.00 -.25	H Hex +.43 -.41	L Max	S ±.25	T* +.25 -.00	KK +.28 -.00
9	A	16.99	30.45	17.78	17.02	22.23	9.07	26.97	17.70	16.31
11	B	19.53	35.20	20.96	19.59	25.40	9.07	31.75	20.88	19.46
13	C	24.26	38.38	25.65	24.26	30.18	9.07	34.93	25.58	22.66
15	D	27.53	41.55	28.83	27.56	33.32	9.07	38.10	28.80	25.86
17	E	30.68	44.73	32.01	30.73	36.53	9.07	41.28	31.98	29.01
19	F	33.86	49.50	35.18	33.91	39.67	9.68	46.02	35.15	32.21
21	G	37.06	52.65	38.35	37.08	42.80	9.68	49.23	38.28	35.36
23	H	40.01	55.85	41.53	40.26	46.02	9.68	52.37	41.50	38.56
25	J	43.41	59.00	44.70	43.43	50.80	9.68	55.58	44.68	41.71

All dimensions for reference only

• D shaped panel cut-out dimensions

TVSIY (D38999/25) – Hermetic Stainless Steel

Solder Mounting Receptacle



† Red band indicates fully mated

Inches

Shell Size	MS Shell Size Code	B Thread Class 2A 0.1P-0.3L-TS (Plated)	L +.011 - .005	M +.006 - .005	GG Dia. +.011 - .010	KK Dia +.011 - .005
9	A	.6250	.806	.125	.750	.672
11	B	.7500	.806	.125	.844	.781
13	C	.8750	.806	.125	.969	.906
15	D	1.0000	.806	.125	1.094	1.031
17	E	1.1875	.806	.125	1.218	1.156
19	F	1.2500	.806	.125	1.312	1.250
21	G	1.3750	.806	.125	1.438	1.375
23	H	1.5000	.838	.156	1.563	1.500
25	J	1.6250	.838	.156	1.688	1.625

Millimeters

Shell Size	MS Shell Size Code	L +.28 - .00	M +.15 - .13	GG Dia. +.28 - .25	KK Dia +.03 - .13
9	A	20.47	3.18	19.05	17.07
11	B	20.47	3.18	21.44	19.84
13	C	20.47	3.18	24.61	23.01
15	D	20.47	3.18	27.79	26.19
17	E	20.47	3.18	30.94	29.36
19	F	20.47	3.18	33.32	31.75
21	G	20.47	3.18	36.53	34.93
23	H	21.29	3.96	39.70	38.10
25	J	21.29	3.96	42.88	41.28

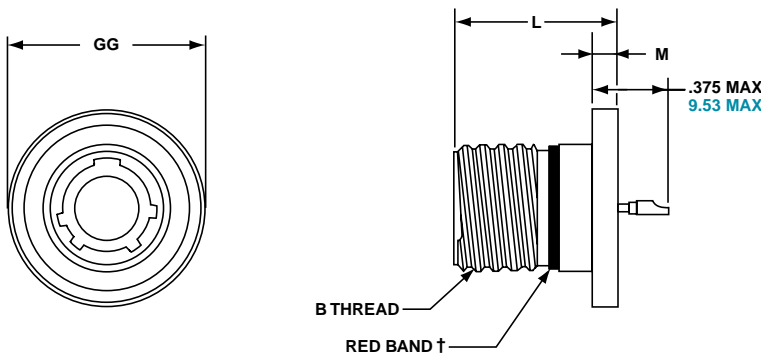
PART

To complete, see how to order pages 22-24.

Connector Type	Shell Style	Service Class	Shell Size & Insert Arrg	Contact Type	Alternate Position	Special Variations
TVS	I	Y	9-35	P	B	(453)
TVS	I	YN	X-X	X	X	(XXX)
D38999/	25	X	X-X	X	X	NA

TVSHIY (D38999/27) – Hermetic, Stainless Steel

Weld Mounting Receptacle



† Red band indicates fully mated

Inches

Shell Size	MS Shell Size Code	B Thread Class 2A 0.1P-0.3L-TS (Plated)	L +.011 - .000	M +.006 - .005	GG Dia. +.011 - .010
9	A	.6250	.806	.125	.973
11	B	.7500	.806	.125	1.095
13	C	.8750	.806	.125	1.221
15	D	1.0000	.806	.125	1.347
17	E	1.1875	.806	.125	1.434
19	F	1.2500	.806	.125	1.579
21	G	1.3750	.806	.125	1.721
23	H	1.5000	.838	.156	1.886
25	J	1.6250	.838	.156	1.973

Millimeters

Shell Size	MS Shell Size Code	L +.28 - .00	M +.15 - .13	GG Dia. +.25 - .00
9	A	20.47	3.18	24.71
11	B	20.47	3.18	27.81
13	C	20.47	3.18	31.01
15	D	20.47	3.18	34.21
17	E	20.47	3.18	36.42
19	F	20.47	3.18	40.11
21	G	20.47	3.18	43.71
23	H	21.29	3.96	47.90
25	J	21.29	3.96	50.11

PART

To complete, see how to order pages 22-24.

Connector Type	Shell Style	Service Class	Shell Size & Insert Arrg	Contact Type	Alternate Position	Special Variations
TVS	HI	Y	9-35	P	B	(453)
TVS	HI	YN	X-X	X	X	(XXX)
D38999/	27	X	X-X	X	X	NA

All dimensions for reference only



III
II
I
SJT
38999

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



Series III, TV Breakaway Fail Safe Connectors Quick-Disconnect with an Axial Pull of Lanyard

38999
SJT I II III

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

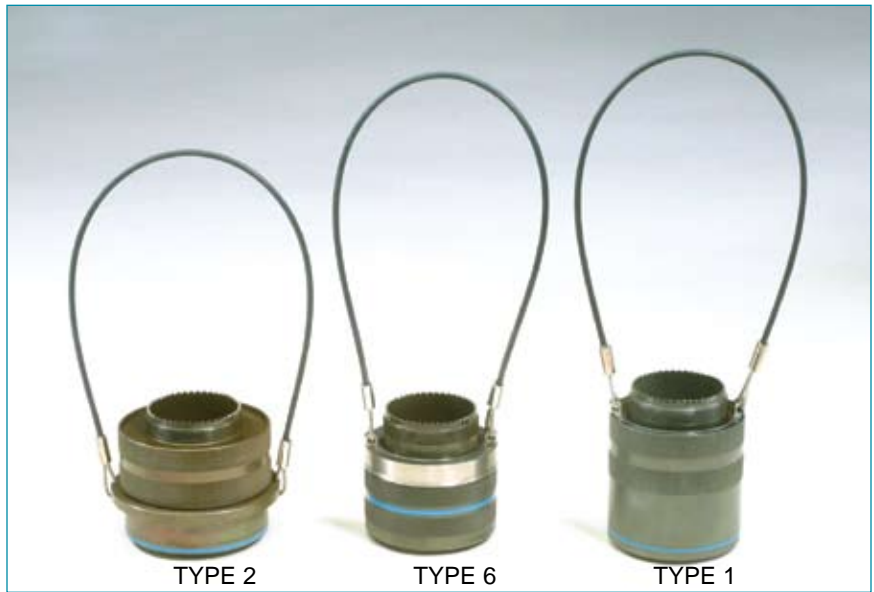
Options
Others

Amphenol® Tri-Start Breakaway Fail Safe Connectors provide unequalled performance in environments requiring instant disengagement.

Designed to provide quick disconnect of a connector plug and receptacle with an axial pull on the lanyard, the "Breakaway" Fail Safe connector family offers a wide range of electrical and mechanical features:

- Instant decoupling and damage free separation
- Completely intermateable with standard receptacles (D38999/20 and /24)
- Inventory support commonality through the use of standard insert arrangements and contacts

Breakaway un-mating is initiated by applying a pull force to the lanyard which causes the operating sleeve on the plug to move away from the receptacle. Coupling segments on the plug then move away from the mating receptacle while expanding, thus releasing the receptacle. After completion of the un-mating sequence, spring compression returns the sleeve and segments to their original positions. Un-mating of the plug may also be accomplished by normal rotation of the coupling ring without affecting the breakaway capability.



Amphenol offers a variety of lanyard plug styles including MIL-STD-1760 types 1, 2 and 6 for Stores Management applications.

The Tri-Start Breakaway Fail Safe connector exceeds the MIL-Spec Series III requirements for EMI/EMP shielding and features include:

- Solid metal-to-metal coupling
- EMI grounding fingers
- Conductive finishes

Amphenol Breakaway Fail Safe connectors are qualified to MIL-DTL-38999/29, /30 and /31 (for MIL-STD-1760 Stores Management applications). In fact, Amphenol offers more qualified Breakaway shell size and insert combinations than any other QPL supplier.

In addition to standard Breakaway connectors, Amphenol also manufactures custom breakaway connectors including those with:

- Highly durable non-metallic operating sleeves in a variety of lengths and diameters
- Increased pull-force capability
- Low-profile designs
- Custom lanyard lengths and backshells
- Low force separation capabilities
- Low insertion/separation force contacts
- Non-cadmium finishes

Whether you need a standard Breakaway, one of our custom Breakaways or, a unique Breakaway design, please contact your local Powell Electronics representative.

Contact Powell Electronics for more information on breakaway, quick-disconnect connectors. Other Amphenol circular families (MIL-DTL-26482, MIL-DTL-83723) also offer breakaway quick-disconnect connectors.

See accessories for breakaway connectors on page 90.



Breakaway with Coax Contacts



Special configuration Fail Safe used on space telescope application. Lanyard is replaced by a swivel ring for remote disconnect and "wing arms" have been added for manual actuation accessibility by gloved astronauts.

D38999/29 & D38999/30 – Series III

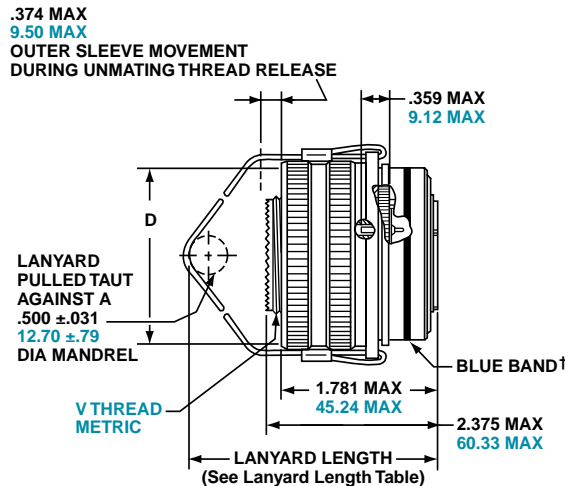
TV Breakaway Fail Safe-Crimp, Metal

Lanyard Release Plug



PART #	Connector Type	Shell Style	Shell Size & Insert Arrg	Lanyard Length Code	Contact Type/ Alternate Insert Rotation	
To complete, see how to order pages 38-39.	D38999	29	29	E	P	(Pins Only)
	D38999	30	X-X	X	X	(Sockets Only)
	88	5565	X-X	X	X	
	91	5565	X-X	X	X	

METAL



† Blue band indicates rear release contact retention system

Inches

Shell Size	MS Shell Size Code	B Max	D Max Accessory Dia.
11	B	1.846	1.109
13	C	1.972	1.250
15	D	2.079	1.375
17	E	2.205	1.500
19	F	2.301	1.625
21	G	2.472	1.750
23	H	2.594	1.875
25	J	2.705	2.000

Millimeters

Shell Size	MS Shell Size Code	B Max	D Max Accessory Dia.	V Thread Metric
11	B	46.89	28.17	M15X1.0-6g
13	C	50.09	31.75	M18X1.0-6g
15	D	52.81	34.93	M22X1.0-6g
17	E	56.01	38.10	M25X1.0-6g
19	F	58.45	41.28	M28X1.0-6g
21	G	62.79	44.45	M31X1.0-6g
23	H	65.89	47.63	M34X1.0-6g
25	J	68.71	50.08	M37X1.0-6g

All dimensions for reference only

- III 38999
- II
- I
- 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



TV D38999/29 & D38999/30 – Series III

Breakaway Fail Safe Lanyard Release

38999 III
SJT I II

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

Easy Steps to build a part number... **Military**

1.	2.	3.	4.	5.	6.	7.
DOD Number Prefix	Spec Sheet Number	Service Class	Shell Size	Insert Arrangement	Lanyard Length Code	Alternate Keying Position
D38999/	29	F	B	35	P	N

Step 1. DOD Number Prefix
D38999/ designates MIL-DTL-38999, Series III, Tri-Start Connector

Step 2. Select a Specification Sheet Number

29	Designates Lanyard Release Plug with pin contacts
30	Designates Lanyard Release Plug with socket contacts

Step 3. Select a Service Class

F	Designates electroless nickel plated aluminum, optimum EMI shielding effectiveness –65dB@10 GHz specification min., 48 hour salt spray, 200°C
W	Designates corrosion resistant olive drab cadmium plate aluminum, 500 hour extended salt spray, EMI –50dB@10 GHz specification min., 175°C

Step 4. & 5 Insert Availability

Commercial Basic Part# Shell & Insert Arrg. Code	Shell Size-Insert Arrangement	Military Shell Size-Insert Arrangement	Service Rating	Total Contacts	Contact Size							
					22D	20	16	12	12 Coax	8 Coax	8 Twinax	
88/91-556508	11-2	B-2	I	2			2					
06	11-35	B-35	M	13	13							
07	11-98	B-98	I	6		6						
10	13-4	C-4	I	4			4					
11	13-8	C-8	I	8		8						
14	13-35	C-35	M	22	22							
13	13-98	C-98	I	10		10						
18	15-5	D-5	II	5			5					
23	15-15	D-15	I	15		14	1					
22	15-18	D-18	I	18		18						
19	15-19	D-19	I	19		19						
20	15-35	D-35	M	37	37							
21	15-97	D-97	I	12		8	4					
27	17-6	E-6	I	6				6				
28	17-8	E-8	II	8			8					
29	17-26	E-26	I	26		26						
30	17-35	E-35	M	55	55							
31	17-99	E-99	I	23		21	2					
37	19-11	F-11	II	11			11					
39	19-32	F-32	I	32		32						
40	19-35	F-35	M	66	66							
47	21-11	G-11	I	11				11				
48	21-16	G-16	II	16			16					
49	21-35	G-35	M	79	79							
51	21-39	G-39	I	39		37	2					
50	21-41	G-41	I	41		41						
57	23-21	H-21	II	21			21					
58	23-35	H-35	M	100	100							
59	23-53	H-53	I	53		53						
61	23-54	H-54	M	53	40		9	4				
60	23-55	H-55	I	55		55						
71	25-4	J-4	I	56		48	8					
66	25-19	J-19	I	19				19				
74	25-20	J-20	N	30		10	13		4		3	
72	25-24	J-24	I	24			12	12				
67	25-29	J-29	I	29				29				
68	25-35	J-35	M	128	128							
69	25-43	J-43	I	43		23	20					
73	25-46	J-46	I	46		40	4			2*		
70	25-61	J-61	I	61		61						



Step 6. Military/ Commercial Lanyard Length Code

Table II

Lanyard Length (in.) ± .236	Lanyard Length (mm) ± 6.0	Lanyard Length Code For Part Number
4.016	102	A
4.528	115	B
5.000	127	C
5.512	140	D
6.024	153	E
6.535	166	F
7.008	178	G
7.520	191	H
7.992	203	I
8.503	216	J
9.016	229	K
9.528	242	L
10.000	254	M
10.512	267	N
11.024	280	P
11.535	293	R
12.008	305	S
12.520	318	T
13.031	331	U
14.016	356	V
15.000	381	W
16.024	407	X
17.008	432	Y
18.031	458	Z

Step 7. Military Alternate Keying Position

For alternate positions of connector (to prevent cross-mating) see alternate positioning on page 24. (N indicates normal)

Easy Steps to build a part number... Commercial

FAIL SAFE 88-5565() & 91-5565()

Ordering procedure for example part number 88-556529-EP is shown below:

1.	2.	3.	4.	5.	6.
Service Class	Connector Type Identification	Shell Size & Insert Arrg. Code	Required Field	Lanyard Length Code	Contact Type/Alternate Keying Position
88	5565	29	0	E	P

Step 1. Select a Service Class

88	Designates corrosion resistant olive drab cadmium plate over nickel, 500 hour extended salt spray, EMI -50dB @ 10 GHz specification min., 175°C
91	Designates electroless nickel plated aluminum, optimum EMI shielding effectiveness -65dB @ 10 GHz specification min., 48 hour salt spray, 200°C

These are standard finishes. Consult Powell Electronics for other variations.

Step 2. Select a Connector Type Identification

5565	Designates MIL-DTL-38999, Series III Tri-Start Lanyard Release Plug
------	---

Step 3. Select a Commercial Shell Size & Insert Arrangement Code

MIL-DTL-38999, see insert availability chart on page 38.

Step 4. Required Field

0	The required field is always a 0
---	----------------------------------

Step 5. Select a Lanyard Length Code

See Table II (to the left) for lanyard length code number.

Step 6. Select a Contact Type/Alternate Keying Position

P designates pin, S designates socket for normal positioning of contacts. When an alternate position of the connector is required to prevent cross-mating, a different letter (other than P or S) is used. See alternate positioning on page 24, then convert to Amphenol Commercial coding by the following chart.

Pin Contacts		Socket Contacts	
MS Letter	Amphenol letter	MS Letter	Amphenol Letter
PN	P (normal)	SN	S (normal)
PA	G	SA	H
PB	I	SB	J
PC	K	SC	L
PD	M	SD	N
PE	R	SE	T

III
II
I
SJT
38999

Matrix 2
26482

Matrix
Pyle
83723 III

Release Matrix
Crimp Rear
5015

26500 Pyle

Printed
Circuit Board

EMI Filter
Transient

Fiber Optics

High Speed
Contacts

Options
Others



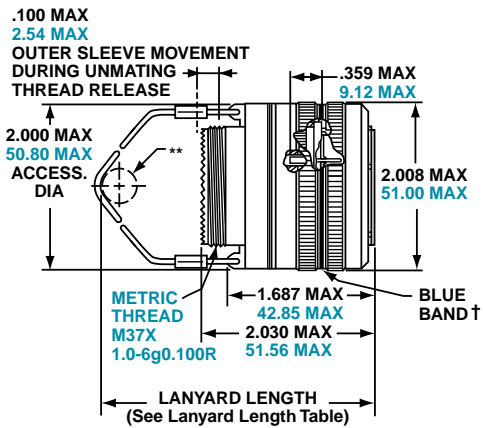
D38999/31 for MIL-STD-1760 – Series III TV Breakaway Fail Safe – Crimp, Metal Lanyard Release Plug

PIN CONTACTS ONLY,
SHELL SIZE 25 ONLY

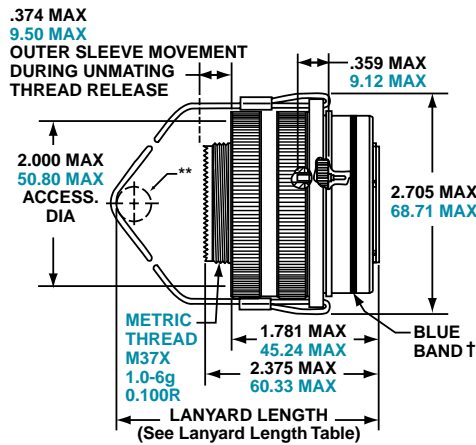
*Part number reference.
To complete, see how to order
page 41.

D38999/31
88-555875/76 } Type 6
91-555875/76 }
88-558518/19 } Type 2
91-558518/19 }
T3W-16B25-XXXX — Type 1

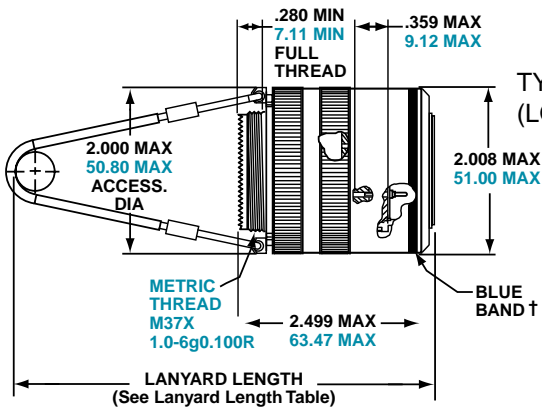
*To order by Commercial
Part numbers consult Powell
Electronics.



TYPE 6



TYPE 2

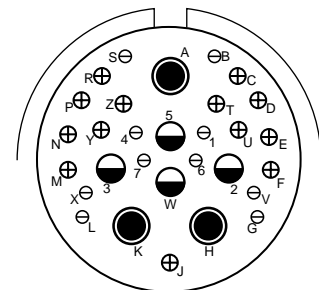


TYPE 1
(LONGER SHELL)

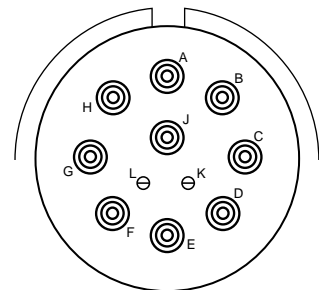
† Blue band indicates rear release
contact retention system
** Lanyard pulled taut against a
.500 ± .13 dia. Mandrel
All dimensions for reference only

Tri-Start Lanyard Separation Forces		
Shell Size	Straight Plug (lbs. max.)	15 Degree Pull (lbs. max.)
25	90	100

**INSERT AVAILABILITY
FAIL SAFE D38999/31
FOR MIL-STD-1760**



25-20
Primary Interface Signal Set



25-11
Auxiliary Power Signal Set



Pin Contact Data for MIL-STD-1760

Insert Arrangement	Service Rating	Total Contacts	Contact			
			20	16	12 (Coax)	8 (Twinax)
25-20	N	30	10	13	4	3

Contacts for 25-20 Pattern

Shell Size	Arrg. Number	Number of Contacts	Size Contacts	Service Rating	Contact Location	Standard Contacts	
						Pin	Socket
25	-20	3	8	Twinax	A, H, K	M39029/90-529	M39029/91-530
		4	12	Coax	2,3	M39029/28-211	M39029/75-416
					W, 5	M39029/102-558	M39029/103-559
		13	16	N	C, D, E, F, J, M, N, P, R, T, U, Y, Z	M39029/58-364	M39029/56-352
10	20	N	B, G, L, S, V, X, 1, 4, 6, 7	M39029/58-363	M39029/56-351		

Insert Arrangement	Service Rating	Total Contacts	Contact Size	
			20	10 (power)
25-11	N	11	2	9

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

D38999/31 for MIL-STD-1760 – Series III TV Breakaway Fail Safe for Stores Management

Applications- Lanyard Release Plug



HOW TO ORDER - BY MILITARY PART NUMBER FAIL SAFE D38999/31

Ordering procedure for example part number D38999/31WE20PN1 is shown below:

Easy Steps to build a part number... Military

1.	2.	3.	4.	5.	6.	7.	8.
DOD Number Prefix	Spec Sheet Number	Service Class	Lanyard Length Code	Insert Arrangement	Contact Style	Alternate Keying Position	Type Number
D38999/	31	W	E	20	P	N	1

1. Select a DOD Number Prefix

	Designates
D38999/	MIL-DTL-38999, Series III Tri-Start Connectors

2. Specification Sheet Number

	Designates
31	Designates Lanyard Release Plug for MIL-STD-1760 with pin contacts

3. Select a Service Class

	Designates
F	Electroless nickel plated aluminum, optimum EMI shielding effectiveness -65dB @ 10 GHz specification min., 48 hour salt spray, 200°C
W	Corrosion resistant olive drab cadmium plate aluminum, 500 hour extended salt spray, EMI -50dB @ 10 GHz specification min., 175°C

4. Select a Lanyard Length Code

Lanyard Length (in.) ±.236	Lanyard Length (mm.) ± 6.0	Lanyard Length Code for Part Number
6.024	153.0	E
6.535	166.0	F
7.008	178.0	G
7.520	191.0	H
7.992	203.0	I
8.504	216.0	J
9.016	229.0	K
9.528	242.0	L

5. Select an Insert Arrangement

Only 11 or 20 are available contact arrangement numbers. See page 40.

6. Contact Style – P & A are Valid Options

	Designates
P	Replaces the “no designation” option in the PIN on revision C and earlier revision of the Mil-Spec.
A	Designates supplied less contacts.

7. Alternate Keying Position

	Designates
N	Is required for normal position.

8. Type Number

Type 1, 2 or 6. See drawings on page 40.

For accessories for lanyard release plugs see page 90.

III
38999
II
I
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



D38999 Type Hybrid Breakaway – Series III Crimp, Metal Shell with Composite Operating Sleeve, And Lower Profile Lanyard Release Plug

38999 III
SJT I II

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

New Hybrid Lanyard Breakaway Fail Safe connector with a composite thermoplastic outer operating sleeve for greater durability.

This new hybrid breakaway is the breakaway of choice for the Navy F-18 program.

Amphenol's hybrid lanyard design offers greater durability over D38999 aluminum and composite designs because of its ability to handle abuse taken after weapons release. Other advantages include:

- Lower profile compared to full metal breakaway Fail Safe connectors
- Less weight

This Hybrid Breakaway meets the applicable requirements of MIL-DTL-38999/31 including random & sine vibration, ice resistance, fluid immersion and hydrolytic stability tests. (Test reports are available upon request). Currently the hybrid breakaway is available in shell sizes 25 and 17. It uses standard inserts available for breakaway plugs sizes 25 and 17, and is also available with inserts 25-20 and 25-11 for MIL-STD-1760. Consult Powell Electronics for ordering of the new hybrid breakaway connectors. These hybrid connectors will accommodate the standard backshells for breakaway connectors shown on page 90.



**New Hybrid Lanyard Release Plugs
(Metal inside shells and Composite, lower profile outer sleeves)**

Stores Management Type II, Rail Launch Plugs and receptacles that meet MIL-STD-1760

Amphenol provides a Breakaway Rail Launch connector that is designed for use on aircraft that carry rail launch missiles such as AMRAAM.

These connectors are designed for blindmating of stores on rail launch applications. They consist of a buffer plug and a missile receptacle that meet the specifications of MIL-STD-1760 Stores Management.

Other features and benefits include:

- Designed to MIL-C-83538 specifications
- Bayonet and push pull coupling
- Use standard MIL-DTL-38999 crimp termination with power, coax and twinax contacts also available
- Buffer provides flame barrier
- Buffers are replaceable

Consult Powell Electronics for more information and ordering.



Stores Management Type II Rail Launch Connectors

HD38999 High Density Connectors

Introduction



HD38999 High Density

A connector that has the connections...

The HD38999 family of connectors was designed to work with existing mil-specified 38999 shells. To the end users familiar with standard 38999 connectors, this family of high density connectors will look, feel, and perform just like the mil-qualified connectors. Utilizing an existing mil-qualified 39029 size 23 contact and mil-qualified shells, the new system will be, in many cases, a drop-in connector. Even though the HD38999 has 30% more contacts, it still performs to minimum electrical requirements of standard 38999 connectors.



High Density Interconnects

Goes from 9 to 187 contacts!

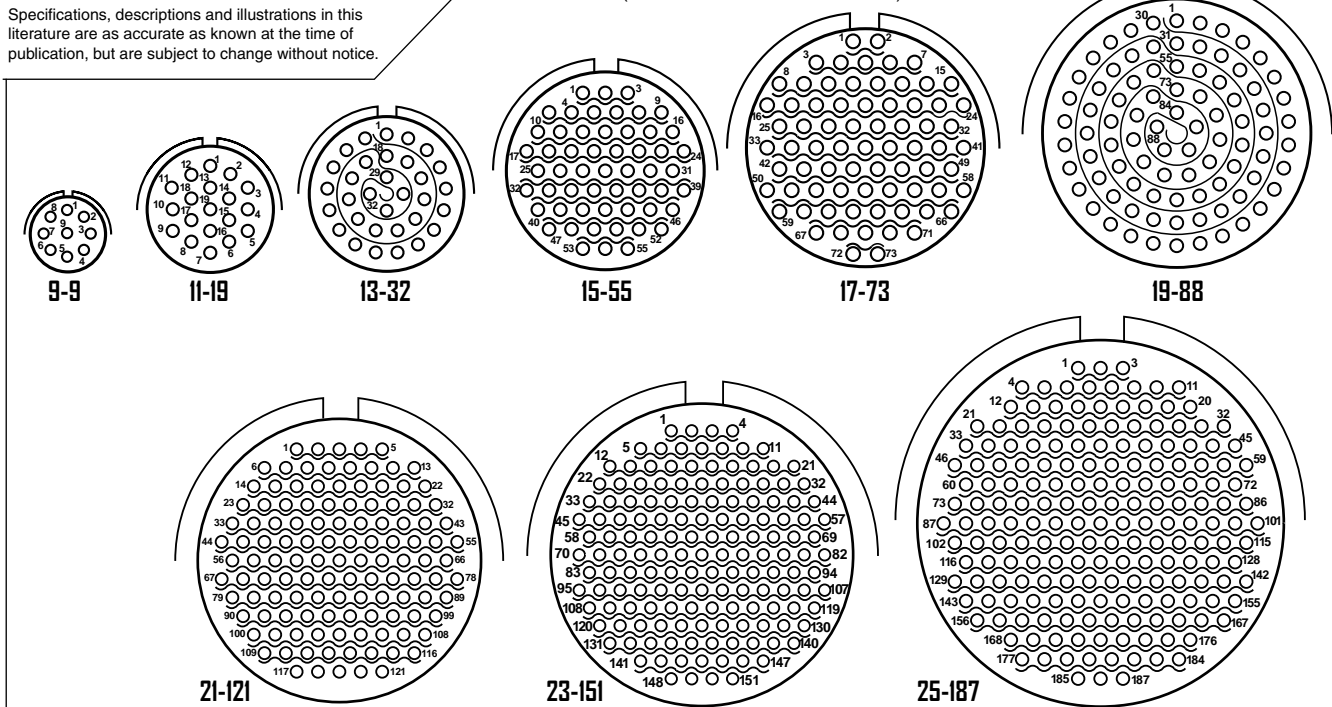


- Aluminum
- Composite
- Stainless Steel
- Sealed
- Filtered



Specifications, descriptions and illustrations in this literature are as accurate as known at the time of publication, but are subject to change without notice.

Shell Sizes (Front of Pin Insert Shown)



Front of Pin Insert Shown.

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



HD38999 High Density Connectors

How to Order

38999	III	CRIMP CONTACT SIZE	WIRE BARREL RANGES/CURRENT CAPABILITY	CRIMP BARREL DIAMETER	CRIMP BARREL
	II	SAE AS39029, SIZE 23	22 AWG 5.0 AMPS	(Inches) .034-.036	Depth (Inches).151-.155
	I		24 AWG 3.0 AMPS		
	SJT		26 AWG 2.0 AMPS		
			28 AWG 1.5 AMPS		

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

Contact Part Numbers
 Crimp Tool - Daniels M22520/2-01
 Positioner - Daniels M22520/2-13 - Pins
 Daniels M22520/2-16 - Sockets
 Sealing Plugs 10-405996-222 (M27488-22-2) Insertion/Removal Tool - Glenair 809-088

Temperature Range: -65C to 175C
 Insulation Resistance: 5000 megohms min. @ 500 VDC 25C
 Dielectric Withstanding Voltage: 1000 VRMS @ Sea level



Easy Steps to build a part number... HD38999

1.	2.	3.	4.	5.	6.	7.
Connector Type	Shell Styles	Service Class	Shell Size - Insert arrangement	Contact Type	Alternate Positions	PCB Options
(P)TV	06	RW	23-151	P	B	(P25)

Step 1. Select a Connector Type

	Designates
TV	Tri-Start Series Connector
TVP	Back panel mounted receptacle
(P)	Potted version

Step 2. Select a Shell Style

	Designates
00	Wall mount receptacle
01	Line receptacle
06	Straight plug
07	Jam nut receptacle

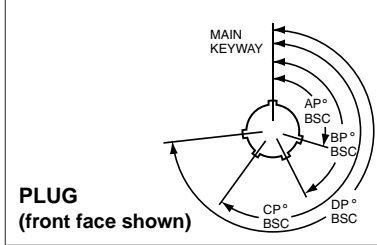
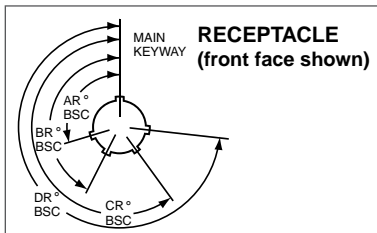
Step 3. Select a Service Class

	Designates
RF	Electroless nickel plated aluminum, optimum EMI shielding effectiveness -65dB @ 10GHz specification min., 48 hour salt spray, 175°C
RW	Corrosion resistant olive drab cadmium plate aluminum, 500 hour extended salt spray, EMI -50dB @ 10GHz specification min., 175°C
RK	Corrosion resistant stainless steel, plus 500 hour salt spray resistance, EMI -45 dB @ 10 GHz specification min., 175°C
DT	Durmalon plated, alternative to Cadmium. Corrosion resistant, 500 hour extended salt spray, EMI -50dB @ 10GHz specification min. without CR ⁶
ZN	Zinc-Nickel Alternative to Cadmium corrosion resistant, 500 hour salt spray, Conductive, -65°C to +175°C

Step 4. Select a Shell Size - Insert Arrangement

Shell Sizes are MIL-DTL-38999, Series III, plus newer High Density insert arrangements

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



Step 6. Select an Alternate Position

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

Shell Size	Key & keyway arrangement identification letter	AR° or AP° BSC	BR° or BP° BSC	CR° or CP° BSC	DR° or DP° BSC
9	N*	105	140	215	265
	A	102	132	248	320
	B	80	118	230	312
	C	35	140	205	275
	D	64	155	234	304
11, 13, and 15	E	91	131	197	240
	N*	95	141	208	236
	A	113	156	182	292
	B	90	145	195	252
	C	53	156	220	255
17 and 19	D	119	146	176	298
	E	51	141	184	242
	N*	80	142	196	293
	A	135	170	200	310
	B	49	169	200	244
21, 23, and 25	C	66	140	200	257
	D	62	145	180	280
	E	79	153	197	272
	N*	80	142	196	293
	A	135	170	200	310
	B	49	169	200	244
	C	66	140	200	257
	D	62	145	180	280
	E	79	153	197	272

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

Step 5. Select a Contact Type

	Designates
P	Pin contacts
S	Socket contacts

Step 7. Select a PCB Contacts

Pin	Socket	Designates
P1	S1	PCB tail stickout .100" nominal +/- .040 inch
P15	S15	PCB tail stickout .150" nominal +/- .040 inch
P2	S2	PCB tail stickout .200" nominal +/- .040 inch
P25	S25	PCB tail stickout .250" nominal +/- .040 inch

MIL-DTL-38999, Series I LJT

MIL-DTL-38999, Series II JT

Features & Benefits



Amphenol® LJT and JT Series subminiature cylindrical connectors are qualified to MIL-DTL-38999*, Series I and II respectively. These connectors were developed to meet the needs of the aerospace industry, and provided the impetus for development of the MIL-C-38999 specifications, which has been superseded by MIL-DTL-38999. Meeting or exceeding MIL-DTL-38999 requirements, Amphenol® JT/LJT connectors feature:

- **Lightweight, Space Saving Design**
- **Contact Protection** - 100% scoop-proof LJT design prevents bent pins and short circuits during mating
- **Quick Positive Coupling** - 3 point bayonet lock system
- **Mismating Eliminated** - with 5 key/keyway design
- **Error Proof Alternate Positioning** - insured by different key/keyway locations
- **EMI Shielding** - grounding fingers standard in LJT Series; optional in JT Series
- **Nine Shell Sizes and a Variety of Shell Styles**
- **Contact Options** - size 8, 10, 12, 16, 20, 22M and 22D Crimp, Solder, PCB, Wire wrap, Coax, Twinax, Triax, Thermocouple, Fiber Optic and Filter
- **Fixed Solder Contacts** - Amphenol MIL-DTL-38999 Series I LJT and II JT, are available in solder versions as both Commercial and Military qualified to MIL-DTL-27599
- **Hermetic** - air leakage limited to $1 \times 10^{-7} \text{ cm}^3$ per second optional
- **“Breakaway” Lanyard Release Style** - available in LJT plugs. Provides quick disconnect of the connector plug and receptacle with axial pull on the lanyard. See pages 78-80.
- **Inventory Support Commonality** - uses standard MIL-DTL-38999 contacts, insert arrangements and application tools.
- **RoHS Compliant Product Available** - Consult Powell Electronics Operations.



Where proof of high reliability and lot control is required, MS approved equivalents to most proprietary JT and LJT connectors are available.

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

Components

Shell components are impact extruded or machined bar stock aluminum. Standard plating on shell components is cadmium over nickel. Many finishes are optional (see “Specifications” page 16). Hermetic seal receptacles are available in carbon steel or stainless steel shells. Dependable 5 key/keyway polarization with bayonet lock coupling is incorporated to aid and assure positive mating.

Insert material is a rigid dielectric with excellent electrical characteristics, providing durable protection for molded-in solder type contacts. Contrasting letter or number designations are used on insert faces.

A fluorinated silicone interfacial seal wafer is featured on the mating face of “crimp type pin” inserts. This assures complete electrical isolation of pins when connector halves are mated. In addition, a main joint gasket is installed in the receptacle for moisture sealing between connector halves. Both features are also available for hermetic receptacles.

Contacts

Maximum design flexibility is built into the JT/LJT Series, with a minimum of 2 to a maximum of 128 circuits per connector in a wide variety of contact arrangements. Contacts are available in sizes 8, 10, 12, 16, 20, 22, 22D and 22M with standard 50 micro inch minimum gold plating (100 micro inches optional). All socket contacts are probe proof. Crimp type rear removable contacts are featured in JT-R and LJT-R connectors. Solder termination contacts are also available, as well as PCB, wire wrap, thermocouple, fiber optic, coaxial, triaxial and twinax contact options.

Optional Features

High temperature capability of 392°F is available only in JTS or LJTS crimp type connectors. High temperature versions feature gold plated contacts, high temperature shell plating, stainless steel coupling nut spring, and epoxy inserts/fluorinated silicone grommet combination. Standard temperature capability for both solder and crimp is 302°F.

The JTN or LJTN type connectors are available for N_2O_4 resistance provided they are mated, and un-grommated rear faces are suitably protected. For complete listing and definition of connector types, shell styles and service classes, see How to Order, page 46. For information on Fail-Safe Lanyard Release style plugs, see pages 78–80.

38999
I
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



MIL-DTL-38999, Series I LJT

MIL-DTL-38999, Series II JT

How to Order (Commercial)

Easy Steps to build a commercial part number... Series I and II

Commercial

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

Connector Type		Shell Style	Service Class	Shell Size- Insert Arrangement	Contact Type	Alternate Position	Strain Relief/Finish Variation Suffix	
Series I	II						SR	(014)
LJT	JT	00	RT	9-35	P	B		

Step 1. Select a Connector Type

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

Connector Type	Shell Style	Service Class	Shell Size- Insert Arrg.	Contact Type	Alternate Position	Special Variations
JT						

Series I	Series II	Designates
	JT	Standard Junior Tri-Lock
LJT		Long Junior Tri-Lock
LJTS	JTS	High temperature connector
LJTN	JTN	Chemical and fuel resistant
	JTL	Miniature mounting dimensions
	JTLN	Miniature mounting dimensions—Chemical resistant
	JTLS	Miniature mounting dimensions— High temperature
LJTPQ	JTPQ	Back panel mounted wall mounting receptacle
LJTP	JTP	Back panel mounted box mounting receptacle
LJTPN	JTPN	Back panel mounted—Chemical resistant
LJTPS	JTPS	Back panel mounted—High temperature
	JTG	Plug with grounding fingers*
	JTNG	Plug with grounding fingers* —Chemical resistant

*Grounding fingers standard on all LJT plugs

Step 2. Select a Shell Style... Series I & II

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

Connector Type	Shell Style	Service Class	Shell Size- Insert Arrg.	Contact Type	Alternate Position	Special Variations
	00					

Lanyard Release Connector (See pages 78-80 for ordering)

	Designates
00	Wall mount receptacle
01	Line mount receptacle
02	Box mount receptacle
06	Straight plug
07	Jam nut receptacle
08	90 degree plug
I	Solder mount receptacle- hermetic
88	Fail safe lanyard release plug with corrosion resistant olive drab cadmium plate over nickel shells
91	Fail safe lanyard release plug with electroless nickel plated aluminum shells.

Series I LJT

Series II JT



Wall Mounting Receptacle



Wall Mounting Receptacle



Line Receptacle



Box Mounting Receptacle



Jam Nut Receptacle



Straight Plug



Straight Plug



Jam Nut Receptacle



Solder Mounting Receptacle



90° Plug



Lanyard Release Plug



Solder Mounting Receptacle

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



How to Order (Commercial)

Step 3. Select a Service Class

1.	2.	3.	4.	5.	6.	7.
Connector Type	Shell Style	Service Class	Shell Size-Insert Arrg.	Contact Type	Alternate Position	Special Variations
		RX				

Commercial	Solder Contacts/Connectors
P	Potting applications: These connectors are supplied with a potting boot. All shells are designed with integral features to retain potting boots.
A	General Applications
A (SR)	Threaded rear design with strain relief†
C	Pressurized applications
C (SR)	Threaded rear design with strain relief.†
E	Box mount and thru-bulkhead only with no backend threads.
H	Hermetic applications- Fused compression glass sealed inserts. Leadage rate less than .01 micron cu. ft./hr. (1 x 10 ⁻⁷ cc/sec.) at 15 psi differential.
Y	Same as "H" with interfacial seal.
T	MS27599A applications-general duty, pressurized (receptacle only)
Commercial	Crimp Contacts/Connectors
RP	Potting crimp applications. Supplied with spacer grommet and potting boot.††
RE	Environmental crimp applications. Supplied with a grommet and compression nut.† Can be supplied with strain relief integral with compression nut "RE(SR)". (JT Series only)
RGF	Electroless nickel plated ground plane aluminum, 200°C
RGW	Olive drab cadmium plated ground plane aluminum, 175°C
RT	Environmental applications. Supplied without rear accessories. Design provides serrations on rear threads of shells.

† Not applicable to box mounting style or LJT Series I.
 †† Not applicable to box mounting style.

Step 4. Select a Shell Size & Insert Arrangement see page 4-7

Shell Size & Insert Arrangements are on pages 4-7.
 First number represents Shell Size,
 second number is the Insert Arrangement.

1.	2.	3.	4.	5.	6.	7.
Connector Type	Shell Style	Service Class	Shell Size-Insert Arrg.	Contact Type	Alternate Position	Special Variations
			22-2			

Step 5. Select a Contact Type

1.	2.	3.	4.	5.	6.	7.
Connector Type	Shell Style	Service Class	Shell Size-Insert Arrg.	Contact Type	Alternate Position	Special Variations
				P		

	Designates
P	Pin Contacts
S	Socket Contacts

III
 II
38999
 I
 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



MIL-DTL-38999, Series I LJT

MIL-DTL-38999, Series II JT

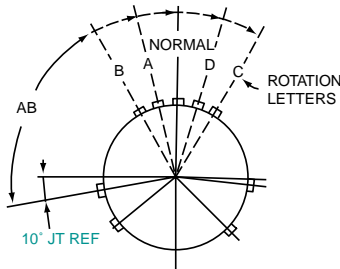
How to Order (Commercial)

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

Connector Type	Shell Style	Service Class	Shell Size Insert Arrg.	Contact Type	Alternate Position	Special Variations
					A	

Step 6. Select an Alternate Keying Position

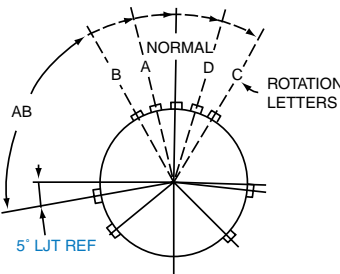
“A” designates Alternate keying connector assembly. Other basic alternate keys are “B”, “C” and “D”. No letter required for normal rotation (no rotation) position.



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

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 minor keys are fixed.

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)

The “N” designation is not referenced in part number, it is omitted.

JT 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°

LJT 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°

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

Connector Type	Shell Style	Service Class	Shell Size-Insert Arrg.	Contact Type	Alternate Position	Special Variations
						()

Step 7. Select a Strain Relief Option or Finish Variation Suffix

Strain Relief Options: “SR” designates a strain relief clamp. Strain reliefs are available only on Service Class “A”, “C” and “RE” (see step 3. Service Class)

Finish Variation Suffix: See finish variations available in table to your right.

Finish	Military Finish Data	Finish Suffix	Finish Plus “SR” Suffix
Cadmium plated nickel base 175° C	A		(SR)
Olive drab cadmium plate nickel base 175° C	B	(014)	(386)
Electroless nickel 200° C	F	(023)	(424)
Electroless nickel, space compatible 200° C		(453)	(467)
Anodic coating (Alumilite) 200° C	C	(005)	(300)
Chromate treated (Iridite 14-2) 125° C		(011)	(344)
Passivated steel 200° C	E	-	-
Nickel-PTFE 175° C		(038)	

38999
SJT I II III

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



How to Order (Commercial)

Easy Steps to build a Military part number... Series I and II

Military

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

MS Number	Service Class	Shell Size	Finish	Insert Arrangement	Contact Style (P or S)	Alternate Keying Position
MS27473	E	14	A	18	P	A

Step 1. Choose your Military Connector Type

1. MS Number	2. Service Class	3. Shell Size	4. Finish	5. Insert Arrangement	6. Contact Style (P or S)	7. Alternate Position
MS27473						

Series II JT

	Designates
MS27472	Crimp Wall Mount Receptacle
MS27497	Crimp Wall Mount Receptacle Back Panel Mounting
MS27499	Crimp Box Mounting Receptacle
MS27513	Crimp Box Mounting Receptacle with grommet and compression nut
MS27508	Crimp Box Mounting Receptacle (Back Panel Mounting)
MS27473	Crimp Straight Plug
MS27484	Crimp Straight Plug with Grounding Fingers
MS27474	Crimp Jam Nut Receptacle
MS27500	Crimp 90° plug
MS27475	Hermetic Wall Mounting Receptacle
MS27476	Hermetic Box Mounting Receptacle
MS27477	Hermetic Jam Nut Receptacle
MS27478	Hermetic Solder Mounting Receptacle
MS27334	Solder Wall Mount Receptacle
MS27335	Solder Box Mounting Receptacle
MS27336	Solder Straight Plug
MS27337	Solder Jam Mounting Receptacle

Series I LJT

	Designates
MS27466	Crimp Wall Mount Receptacle
MS27656	Crimp Wall Mount Receptacle Back Panel Mounting
MS27496	Crimp Box Mounting Receptacle
MS27505	Crimp Box Mounting Receptacle (Back Panel Mounting)
MS27467	Crimp Straight Plug
MS27468	Crimp Jam Nut Receptacle
MS27469	Hermetic Wall Mounting Receptacle
MS27470	Hermetic Jam Nut Receptacle
MS27471	Hermetic Solder Mounting Receptacle
MS20026	Solder Wall Mounting Receptacle
MS20027	Solder Line Receptacle
MS20028	Solder Straight Plug
MS20029	Solder Jam Nut Receptacle

Step 2. Select a Military Service Class

1. MS Number	2. Service Class	3. Shell Size	4. Finish	5. Insert Arrangement	6. Contact Style (P or S)	7. Alternate Position
	E					

Military	Service Class
E	Environmental crimp applications. Supplied with a grommet and compression nut. † Can be supplied with strain relief integral with compression nut "RE(SR)". (JT Series only). Box Mount versions using spacer grommets are not environmental.
P	Potting crimp applications. Supplied with spacer grommet and potting boot. ††
T	Environmental applications. Supplied without rear accessories. Design provides serrations on rear threads of shells. (MS27599 applications)- General duty-pressurized (receptacles only)
Y	Hermetically interfacial seal

† Not applicable to box mounting style or LJT Series I.

†† Not applicable to box mounting style.

38999
II
I
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



MIL-DTL-38999, Series I LJT

MIL-DTL-38999, Series II JT

How to Order (Military)

38999
SJT I II III

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

Step 3 & 5. Select a Shell Size and Insert Arrangement from Pages 4-7

1.	2.	3.	4.	5.	6.	7.
MS Number	Service Class	Shell Size	4. Finish	Insert Arrangement	Contact Style (P or S)	Alternate Position
		14		18		

Shell Size & Insert Arrangement are on pages 4-7. First number represents Shell Size, second number is the Insert Arrangement. Place Shell Size in box 3 and Insert Arrangement in box 5.

Step 4. Select a Military Finish

1.	2.	3.	4.	5.	6.	7.
MS Number	Service Class	Shell Size	Finish	Insert Arrangement	Contact Style (P or S)	Alternate Position
			A			

Finish	Military Finish Data	Finish Suffix	Finish Plus "SR" Suffix
Cadmium plated nickel base 175° C	A		(SR)
Olive drab cadmium plate nickel base 175° C	B	(014)	(386)
Electroless nickel 200° C	F	(023)	(424)
Electroless nickel, space compatible 200° C		(453)	(467)
Anodic coating (Alumilite) 200° C	C	(005)	(300)
Chromate treated (Iridite 14-2) 125° C		(011)	(344)
Passivated steel 200° C	E	-	-
Nickel-PTFE 175° C		(038)	

Step 6. Select a Military Contact Type

	Designates
P	Pin Contacts
S	Socket Contacts

1.	2.	3.	4.	5.	6.	7.
MS Number	Service Class	Shell Size	Finish	Insert Arrangement	Contact Style (P or S)	Alternate Position
					P	

Step 7. Select an Alternate Keying Position

See pg 48 for information, No letter required for normal position

1.	2.	3.	4.	5.	6.	7.
MS Number	Service Class	Shell Size	Finish	Insert Arrangement	Contact Style (P or S)	Alternate Position
						A

Amphenol MIL-DTL-38999, Series II, JT



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MIL-DTL-38999, Series II JT and Series I LJT

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MIL-DTL-38999 Series II Typical Markets:

- Military & Commercial Aviation
- Military Vehicles
- Missiles & Ordnance
- C4ISR



JT00R (MS27472) Series II – Crimp Wall Mounting Receptacle

- 38999 III
- SJT I II
- 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

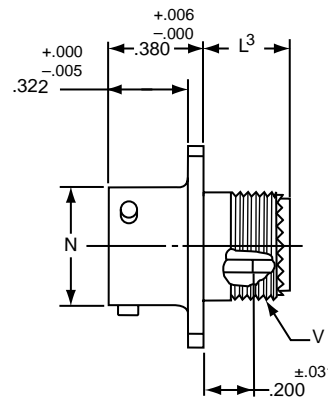
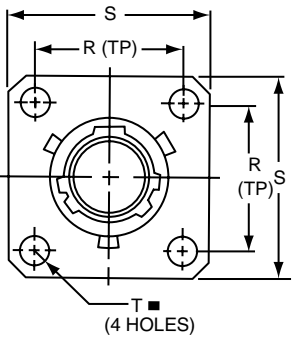
PART # Part number reference. To complete, see how to order pages 46-50.

Commercial

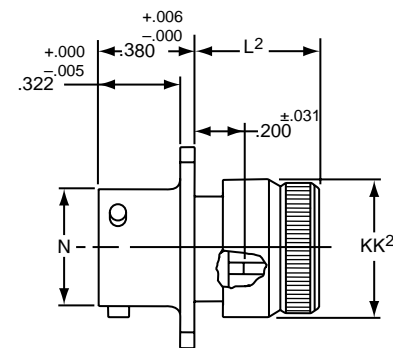
Connector Type	Shell Style	Service Class	Shell Size & Insert Arrg	Contact Type	Alternate Position	Special Variations
JT/JTS/JTN	00	RT	22-2	P	A	(XXX)

Military

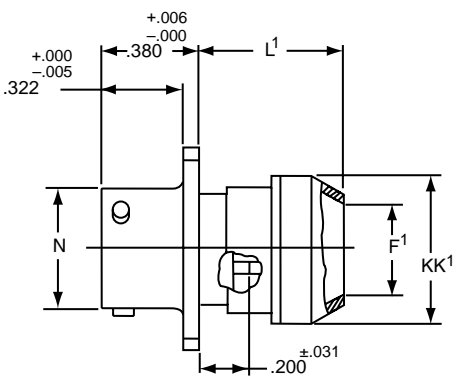
MS Number	Service Class	Shell Size	Finish	Insert Arrg	Contact Style (P or S)	Alternate Position
MS27472	E	14	A	18	P	A
MS27479	E	14	A	18	P	A



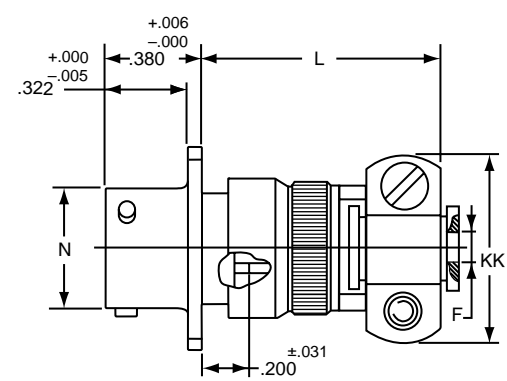
* JT00RT-XX-XXX(MS27472T)
 ** JTS00RT-XX-XXX(MS27479T)
 *** JTN00RT-XX-XXX



* JT00RE-XX-XXX (MS27472E)
 ** JTS00RE-XX-XXX(MS27479E)
 *** JTN00RE-XX-XXX



* JT00RP-XX-XXX(MS27472P)
 ** JTS00RP-XX-XXX
 *** JTN00RP-XX-XXX



* JT00RE-XX-XXX (SR)
 ** JTS00RE-XX-XXX (SR)
 *** JTN00RE-XX-XXX (SR)

- ⊕ .005 DIA
- Ⓜ
- * Standard Junior Tri-Lock
- ** High temperature version
- *** Clear iridite finish (gold color), N₂O₄ resistant

Shell Size	F Dia. +.010 - .025	F' Dia. ±.010	L Max.	L ¹ Max.	L ² Max.	L ³ Max.	N +.001 - .005	R (TP)	S ±.016	T ±.005	V Thread UNEF Class 2A (Plated)	KK Max.	KK ¹ Dia. Max.	KK ² Dia. Max.
8	.125	.444	1.094	.609	.547	.500	.473	.594	.812	.120	.4375-28	.812	.625	.578
10	.188	.558	1.094	.609	.547	.500	.590	.719	.938	.120	.5625-24	.875	.750	.703
12	.312	.683	1.094	.609	.547	.500	.750	.812	1.031	.120	.6875-24	1.000	.875	.828
14	.375	.808	1.344	.609	.547	.500	.875	.906	1.125	.120	.8125-20	1.125	1.000	.953
16	.500	.909	1.344	.609	.547	.500	1.000	.969	1.219	.120	.9375-20	1.188	1.125	1.078
18	.625	1.034	1.344	.609	.547	.500	1.125	1.062	1.312	.120	1.0625-18	1.438	1.250	1.203
20	.625	1.159	1.344	.609	.547	.500	1.250	1.156	1.438	.120	1.1875-18	1.438	1.375	1.328
22	.750	1.284	1.469	.609	.547	.500	1.375	1.250	1.562	.120	1.3125-18	1.625	1.500	1.453
24	.800	1.409	1.469	.688	.547	.500	1.500	1.375	1.688	.147	1.4375-18	1.719	1.625	1.578

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

JTPQ00R (MS27497) Series II – Crimp

Wall Mounting Receptacle

(Back Panel Mounting)

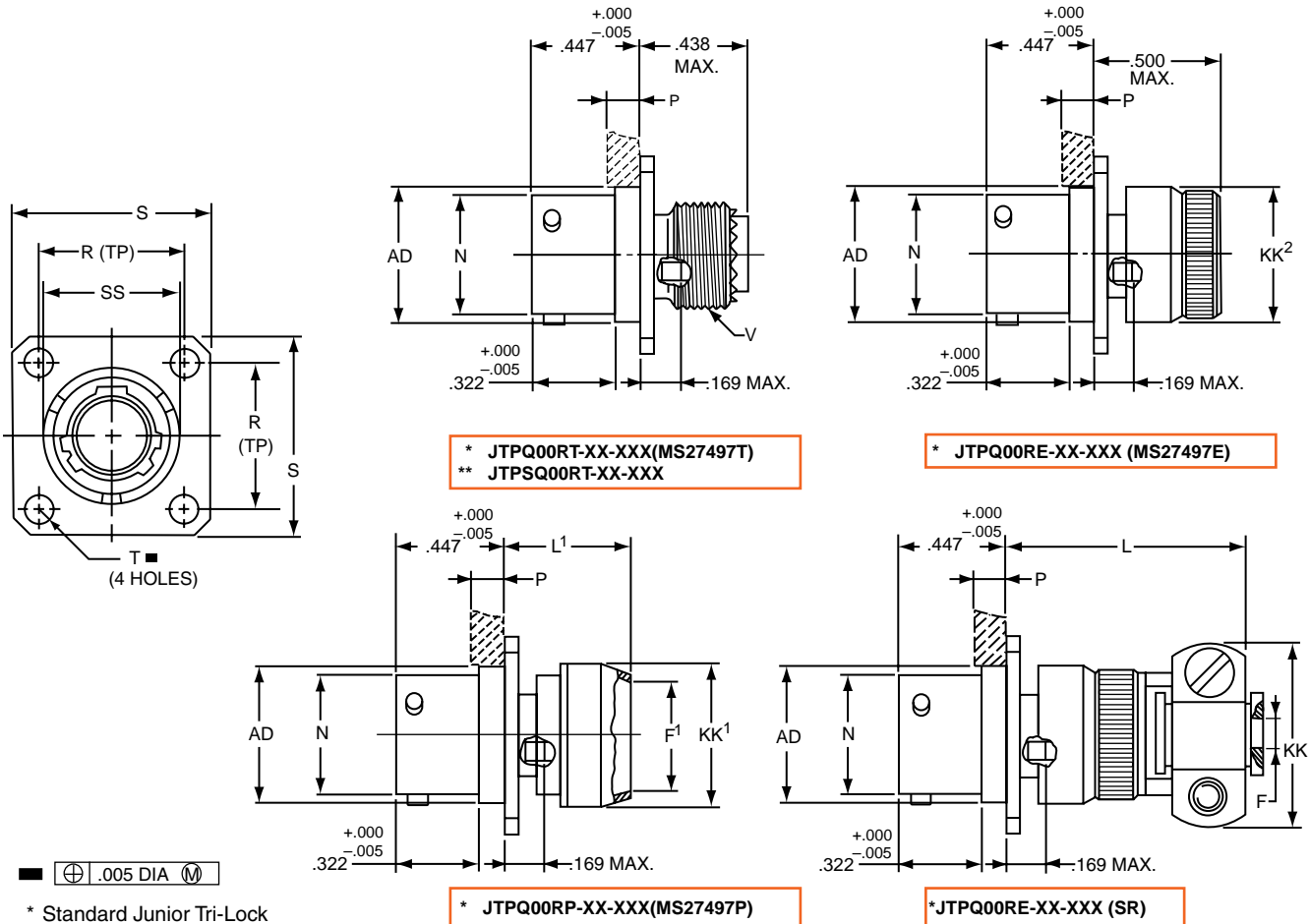


PART # Part number reference. To complete, see how to order pages 46-50.
Commercial

Connector Type	Shell Style	Service Class	Shell Size & Insert Arrg	Contact Type	Alternate Position	Special Variations
JTPQ/JTPSQ	00	RT	22-2	P	A	(XXX)

Military

MS Number	Service Class	Shell Size	Finish	Insert Arrg	Contact Style (P or S)	Alternate Position
MS27497	E	14	A	18	P	A



* Standard Junior Tri-Lock

** High temperature version

Shell Size	F Dia. +.010 -.025	F' Dia. ±.010	L Max.	L' Max.	N +.001 -.005	P Max. Panel Thickness	R (TP)	S ±.016	T ±.005	V Thread UNEF Class 2A (Plated)	AD Dia. ±.005	KK Max.	KK' Dia. Max.	KK² Dia. Max.	SS Dia. +.000 -.016
8	.125	.444	1.140	.468	.473	.142	.594	.812	.120	.4375-28	.516	.781	.625	.578	.563
10	.188	.558	1.140	.468	.590	.142	.719	.938	.120	.5625-24	.633	.844	.750	.703	.680
12	.312	.683	1.140	.468	.750	.142	.812	1.031	.120	.6875-24	.802	.969	.875	.828	.859
14	.375	.808	1.375	.468	.875	.142	.906	1.125	.120	.8125-20	.927	1.094	1.000	.953	.984
16	.500	.909	1.375	.468	1.000	.142	.969	1.219	.120	.9375-20	1.052	1.154	1.125	1.078	1.108
18	.625	1.034	1.375	.468	1.125	.142	1.062	1.312	.120	1.0625-18	1.177	1.406	1.250	1.203	1.233
20	.625	1.159	1.375	.468	1.250	.142	1.156	1.438	.120	1.1875-18	1.302	1.406	1.375	1.328	1.358
22	.750	1.284	1.516	.468	1.375	.142	1.250	1.562	.120	1.3125-18	1.427	1.594	1.500	1.453	1.483
24	.800	1.409	1.500	.540	1.500	.142	1.375	1.688	.147	1.4375-18	1.552	1.688	1.625	1.578	1.610

All dimensions for reference only.

III
II
I
SJT
38999

Matrix 2
26482

Matrix Pyle
83723 III

Crimp Rear Release Matrix
5015

Pyle
26500

Printed Circuit Board

EMI Filter Transient

Fiber Optics

High Speed Contacts

Options Others

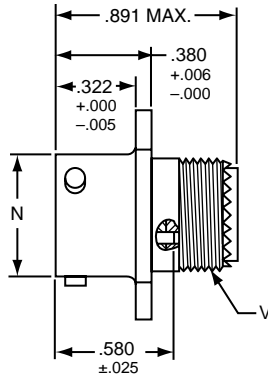
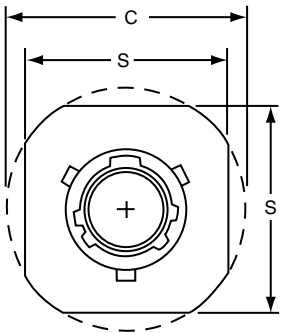


JT01R Series II – Crimp Line Receptacle

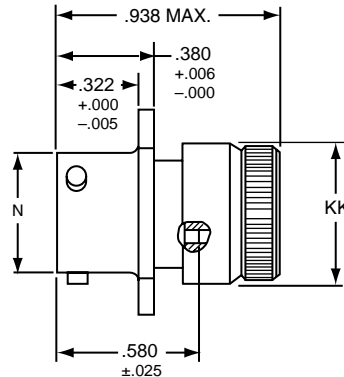
- 38999 III
- SJT I II
- 26482 Matrix 2
- 83723 III Pyle Matrix
- 5015 Crimp Rear Release Matrix
- 26500 Pyle
- Printed Circuit Board
- EMI Filter Transient
- Fiber Optics
- High Speed Contacts
- Options Others

PART # Part number reference. To complete, see how to order pages 46-50.
Commercial

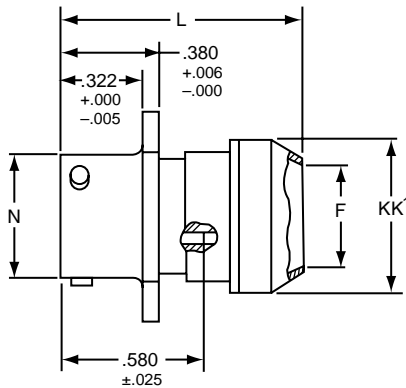
Connector Type	Shell Style	Service Class	Shell Size & Insert Arrg	Contact Type	Alternate Position	Special Variations
JT/JTS/JTN	01	RT	22-2	P	A	(XXX)



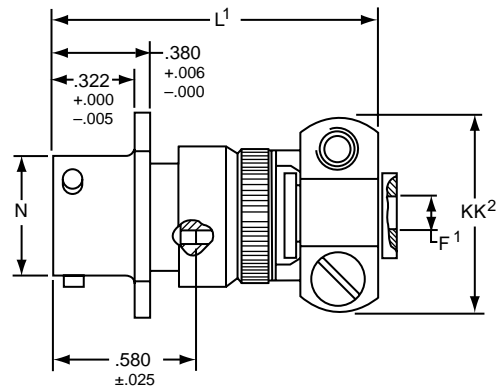
* JT01RT-XX-XXX
** JTS01RT-XX-XXX
*** JTN01RT-XX-XXX



* JT01RE-XX-XXX
** JTS01RE-XX-XXX
*** JTN01RE-XX-XXX



* JT01RP-XX-XXX
** JTS01RP-XX-XXX
*** JTN01RP-XX-XXX



* JT01RE-XX-XXX (SR)
** JTS01RE-XX-XXX (SR)
*** JTN01RE-XX-XXX (SR)

- * Standard Junior Tri-Lock
- ** High temperature version
- *** Clear iridite finish (gold color), N₂O₄ resistant

Shell Size	C Max.	F Dia. +.010	F¹ Dia. +.010 - .025	L Max.	L¹ Max.	N Dia. +.001 - .005	S +.017 - .016	V Thread UNEF Class 2A (Plated)	KK Dia. Max.	KK¹ Dia. Max.	KK² 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.

For information and ordering visit www.powell.com or email info@powell.com
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JT02RE (MS27499) Series II – Crimp JT02RE (053) (MS27513)



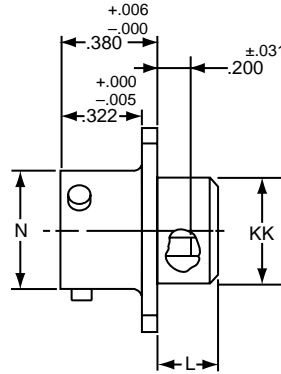
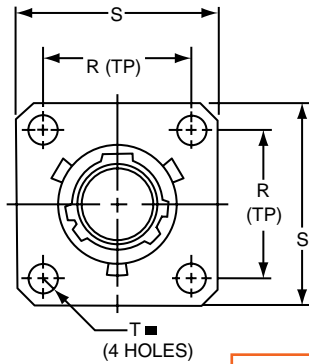
Box Mounting Receptacle

PART # Part number reference. To complete, see how to order pages 46-50.
Commercial

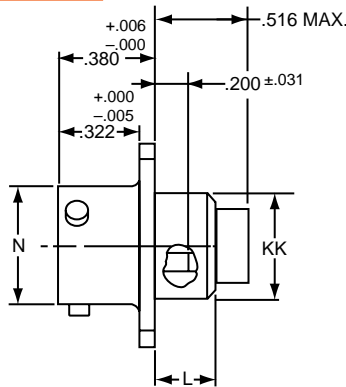
Connector Type	Shell Style	Service Class	Shell Size & Insert Arrg	Contact Type	Alternate Position	Special Variations
JT/JTS/JTN	02	RE	22-2	P	A	(XXX)

Military

MS Number	Service Class	Shell Size	Finish	Insert Arrg	Contact Style (P or S)	Alternate Position
MS27499	E	14	A	18	P	A
MS27513	E	14	A	18	P	A



- * JT02RE-XX-XXX (MS27499)
- ** JTS02RE-XX-XXX
- *** JTN02RE-XX-XXX



- * JT02RE-XX-XXX (053) (MS27513)
- ** JTS02RE-XX-XXX (053)
- *** JTN02RE-XX-XXX (053)

■ $\oplus .005 \text{ DIA } (M)$

- * Standard Junior Tri-Lock
- ** High temperature version
- *** Clear iridite finish (gold color), N_2O_4 resistant

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 47.

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



JTP02R (MS27508) Series II – Crimp Box Mounting Receptacle

Back Panel Mounting

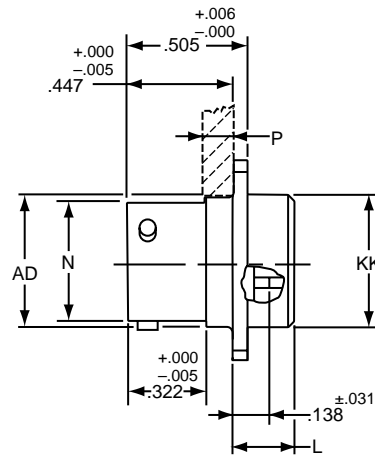
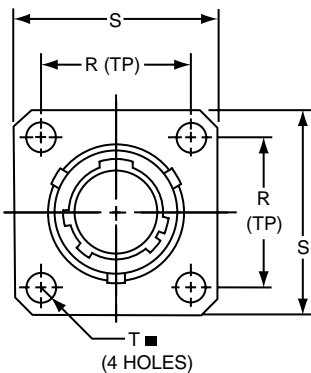
- 38999 III
- SJT I II
- 26482 Matrix 2
- 83723 III Matrix Pyle
- 5015 Crimp Rear Release Matrix
- 26500 Pyle
- Printed Circuit Board
- EMI Filter Transient
- Fiber Optics
- High Speed Contacts
- Options Others

PART # Part number reference. To complete, see how to order pages 46-50.
Commercial

Connector Type	Shell Style	Service Class	Shell Size & Insert Arrg	Contact Type	Alternate Position	Special Variations
JT/JTPS/JTPN	02	RE	22-2	P	A	(XXX)

Military

MS Number	Service Class	Shell Size	Finish	Insert Arrg	Contact Style (P or S)	Alternate Position
MS27508	E	14	A	18	P	A



* JTP02RE-XX-XXX (MS27508E)
 ** JTPS02RE-XX-XXX
 ***JTPN02RE-XX-XXX

■ ⊕ .005 DIA M

- * Standard Junior Tri-Lock
- ** High temperature version
- *** Clear iridite finish (gold color), N₂O₄ resistant

Shell Size	L Max.	N +.001 -.005	P Max. Panel Thickness	R (TP)	S ±.016	T Dia. ±.005	AD Dia. ±.005	KK Dia. Max.
8	.225	.473	.147	.594	.812	.120	.516	.531
10	.225	.590	.152	.719	.938	.120	.633	.656
12	.225	.750	.152	.812	1.031	.120	.802	.828
14	.225	.875	.152	.906	1.125	.120	.927	.953
16	.225	1.000	.152	.969	1.219	.120	1.052	1.078
18	.225	1.125	.152	1.062	1.312	.120	1.177	1.203
20	.225	1.250	.179	1.156	1.438	.120	1.302	1.328
22	.225	1.375	.179	1.250	1.562	.120	1.427	1.453
24	.225	1.500	.169	1.375	1.688	.147	1.552	1.578

All dimensions for reference only.

JT06R (MS27473) Series II – Crimp Straight Plug



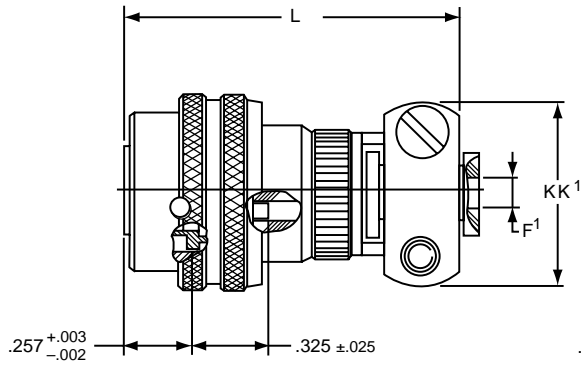
- III 38999
- II 26482 Matrix 2
- I 83723 III Matrix Pyle
- SJT 5015 Crimp Rear Release Matrix
- 26500 Pyle
- Printed Circuit Board
- EMI Filter Transient
- Fiber Optics
- High Speed Contacts
- Options Others

PART # Commercial Part number reference. To complete, see how to order pages 46-50.

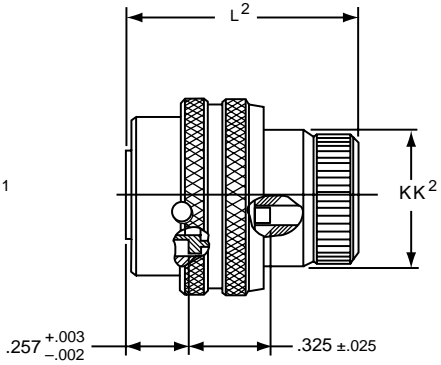
Connector Type	Shell Style	Service Class	Shell Size & Insert Arrg	Contact Type	Alternate Position	Special Variations
JT/JTS/JTN	06	RE	22-2	P	A	(XXX)

Military

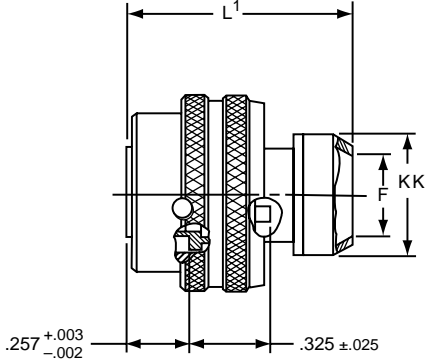
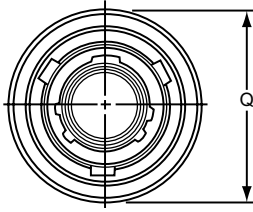
MS Number	Service Class	Shell Size	Finish	Insert Arrg	Contact Style (P or S)	Alternate Position
MS27473	E	14	A	18	P	A



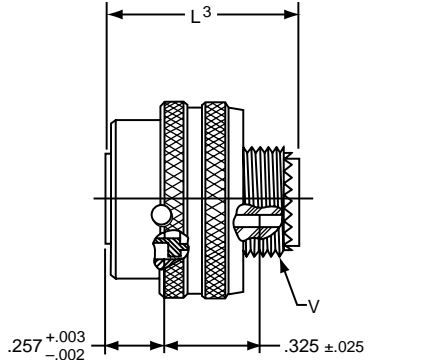
* JT06RE-XX-XXX (SR)
 ** JTS06RE-XX-XXX (SR)
 ***JTN06RE-XX-XXX (SR)



* JT06RE-XX-XXX (MS27473E)
 ** JTS06RE-XX-XXX
 ***JTN06RE-XX-XXX



* JT06RP-XX-XXX (MS27473P)
 ** JTS06RP-XX-XXX
 ***JTN06RP-XX-XXX



* JT06RT-XX-XXX (MS27473T)
 ** JTS06RT-XX-XXX
 ***JTN06RT-XX-XXX

- * Standard Junior Tri-Lock
- ** High temperature version
- *** Clear iridite finish (gold color), N₂O₄ resistant

Shell Size	F Dia.	F ¹ Dia. +.001 / -.025	L Max.	L ¹ Max.	L ² Max.	L ³ Max.	Q Dia Max.	V Thread Modified		KK Dia. Max.	KK ¹ Max.	KK ² Dia. Max.
								Class 2A UNEF	Modified Major Dia.			
8	.444	.125	1.562	1.000	.938	.891	.734	.4375-28	.421 – .417	.625	.812	.578
10	.558	.188	1.562	1.000	.938	.891	.844	.5625-24	.542 – .538	.750	.875	.703
12	.683	.312	1.562	1.000	.938	.891	1.016	.6875-24	.667 – .663	.875	1.000	.828
14	.808	.375	1.812	1.000	.938	.891	1.141	.8125-20	.791 – .787	1.000	1.125	.953
16	.909	.500	1.812	1.000	.938	.891	1.265	.9375-20	.916 – .912	1.125	1.188	1.078
18	1.034	.625	1.812	1.000	.938	.891	1.391	1.0625-18	1.034 – 1.030	1.250	1.438	1.203
20	1.159	.625	1.812	1.000	.938	.891	1.500	1.1875-18	1.158 – 1.154	1.375	1.438	1.328
22	1.284	.750	1.938	1.000	.938	.891	1.625	1.3125-18	1.283 – 1.279	1.500	1.625	1.453
24	1.409	.800	1.938	1.062	.938	.891	1.750	1.4375-18	1.408 – 1.404	1.625	1.719	1.578

All dimensions for reference only.



JTG06R (MS27484) Series II – Crimp Straight Plug (With Grounding Fingers)

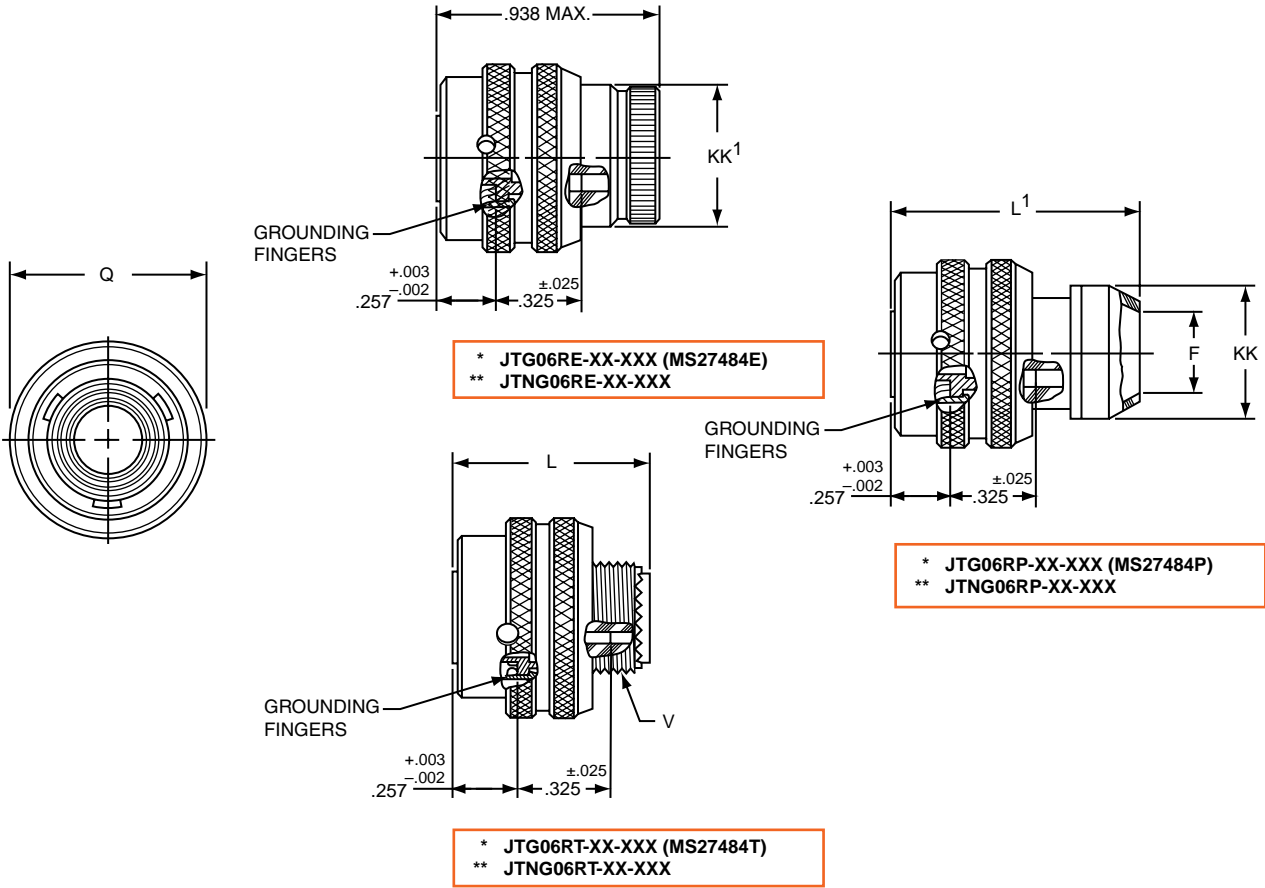
- 38999 III
- SJT I II
- 26482 Matrix 2
- 83723 III Pyle Matrix
- 5015 Crimp Rear Release Matrix
- 26500 Pyle
- Printed Circuit Board
- EMI Filter Transient
- Fiber Optics
- High Speed Contacts
- Options Others

PART # Part number reference. To complete, see how to order pages 46-50.

Connector Type	Shell Style	Service Class	Shell Size & Insert Arrg	Contact Type	Alternate Position	Special Variations
JTG/JTNG	06	RE	22-2	P	A	(XXX)

Military

MS Number	Service Class	Shell Size	Finish	Insert Arrg	Contact Style (P or S)	Alternate Position
MS27484	E	14	A	18	P	A



* Plug with grounding fingers
 ** Clear iridite finish (gold color), N₂O₄ resistant

Shell Size	F Dia.	L Max.	L ¹ Max.	Q Dia Max.	V Thread Modified		KK Dia. Max.	KK ¹ Dia. Max.
					Class 2A UNEF	Modified Major Dia.		
8	.444	.891	1.000	.734	.4375-28	.421 – .417	.625	.578
10	.558	.891	1.000	.844	.5625-24	.542 – .538	.750	.703
12	.683	.891	1.000	1.016	.6875-24	.667 – .663	.875	.828
14	.808	.891	1.000	1.141	.8125-20	.791 – .787	1.000	.953
16	.909	.891	1.000	1.265	.9375-20	.916 – .912	1.125	1.078
18	1.034	.891	1.000	1.391	1.0625-18	1.034 – 1.030	1.250	1.203
20	1.159	.891	1.000	1.500	1.1875-18	1.158 – 1.154	1.375	1.328
22	1.284	.891	1.000	1.625	1.3125-18	1.283 – 1.279	1.500	1.453
24	1.409	.891	1.062	1.750	1.4375-18	1.408 – 1.404	1.625	1.578

All dimensions for reference only.

JT07R (MS27474) Series II – Crimp Jam Nut Receptacle



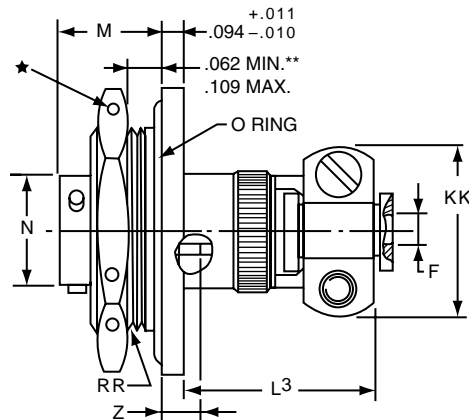
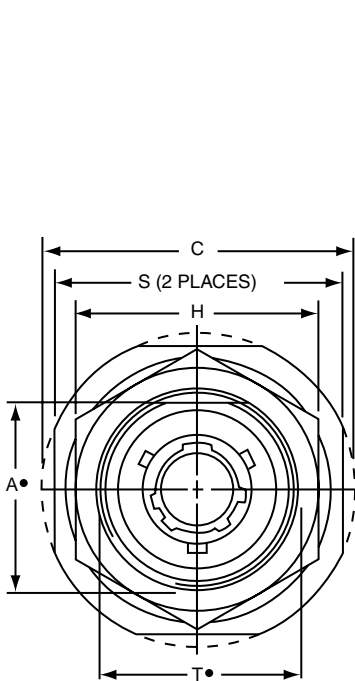
PART # Commercial Part number reference. To complete, see how to order pages 46-50.

Connector Type	Shell Style	Service Class	Shell Size & Insert Arrg	Contact Type	Alternate Position	Special Variations
JT/JTS/JTN	07	RE	22-2	P	A	(XXX)

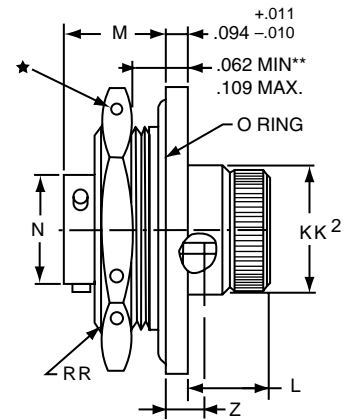
Military

MS Number	Service Class	Shell Size	Finish	Insert Arrg	Contact Style (P or S)	Alternate Position
MS27474	E	14	A	18	P	A

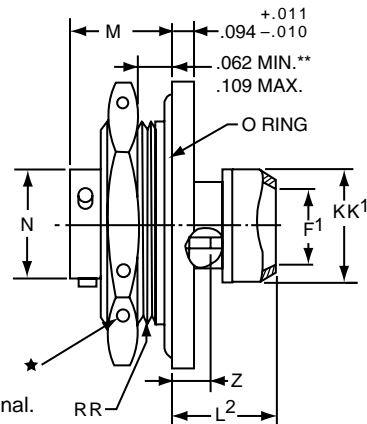
- III 38999
- II SJT
- Matrix 2 26482
- Matrix Pyle 83723 III
- Crimp Rear Release Matrix 5015
- Pyle 26500
- Printed Circuit Board
- EM1 Filter Transient
- Fiber Optics
- High Speed Contacts
- Options Others



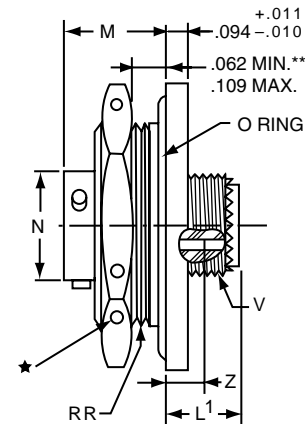
* JT07RE-XX-XXX (SR)
 *** JTS07RE-XX-XXX (SR)
 **** JTN07RE-XX-XXX (SR)



* JT07RE-XX-XXX (MS27474E)
 *** JTS07RE-XX-XXX
 **** JTN07RE-XX-XXX



* JT07RP-XX-XXX (MS27474P)
 *** JTS07RP-XX-XXX
 **** JTN07RP-XX-XXX



* JT07RT-XX-XXX (MS27474T)
 *** JTS07RT-XX-XXX
 **** JTN07RT-XX-XXX

- * .059 Dia. Min. 3 lockwire holes. Formed lockwire hole design (6 holes) is optional.
- "D" shaped mounting hole dimensions.
- * Standard Junior Tri-Lock
- ** Panel Thickness
- *** High temperature version
- **** Clear iridite finish (gold color), N₂O₄ resistant

Shell Size	A* +.000 -.010	C Max.	F Dia. +.010 -.025	F ¹ Dia.	H Hex +.017 -.016	L Max.	L ¹ Max.	L ² Max.	L ³ Max.	M ±.005	N Dia. +.001 -.005	S ±.016	T* +.010 -.000	V Thread UNEF Class 2A	Z ±.031	KK Max.	KK ¹ Dia. Max.	KK ² Max.	RR Thread (Plated) Class 2A
8	.830	1.390	.125	.444	1.062	.484	.453	.563	1.047	.438	.473	1.250	.884	.4375-28	.144	.812	.625	.578	.8750-20UNEF
10	.955	1.515	.188	.558	1.188	.484	.453	.563	1.047	.438	.590	1.375	1.007	.5625-24	.144	.875	.750	.703	1.0000-20UNEF
12	1.084	1.640	.312	.683	1.312	.484	.453	.563	1.047	.438	.750	1.500	1.134	.6875-24	.144	1.000	.875	.828	1.1250-18UNEF
14	1.208	1.765	.375	.808	1.438	.484	.453	.563	1.297	.438	.875	1.625	1.259	.8125-20	.144	1.125	1.000	.953	1.2500-18UNEF
16	1.333	1.953	.500	.909	1.562	.484	.453	.563	1.297	.438	1.000	1.781	1.384	.9375-20	.144	1.188	1.125	1.078	1.3750-18UNEF
18	1.459	2.031	.625	1.034	1.688	.484	.453	.563	1.297	.438	1.125	1.890	1.507	1.0625-18	.144	1.438	1.250	1.203	1.5000-18UNEF
20	1.576	2.156	.625	1.159	1.812	.453	.422	.531	1.266	.464	1.250	2.016	1.634	1.1875-18	.188	1.438	1.375	1.328	1.6250-18UNEF
22	1.701	2.280	.750	1.284	2.000	.453	.422	.531	1.391	.464	1.375	2.140	1.759	1.3125-18	.188	1.625	1.500	1.453	1.7500-18UNS
24	1.826	2.405	.800	1.409	2.125	.375	.422	.609	1.391	.464	1.500	2.265	1.884	1.4375-18	.188	1.719	1.625	1.578	1.8750-16UN

All dimensions for reference only.



JTL07R Series II – Crimp Jam Nut Receptacle

38999
SJT

26482
Matrix 2

83723 III
Matrix Pyle

5015
Crimp Rear Release Matrix

26500 Pyle

Printed
Circuit Board

EMI Filter
Transient

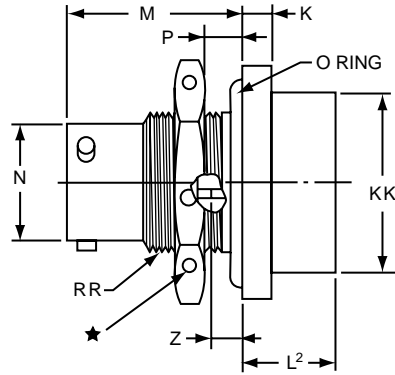
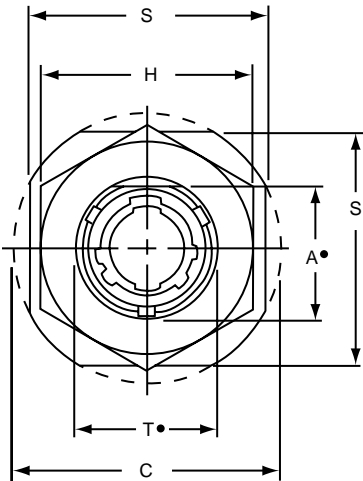
Fiber Optics

High Speed
Contacts

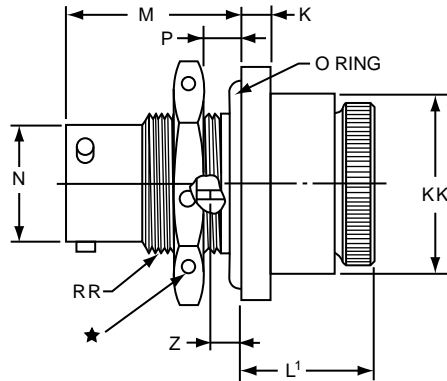
Options
Others

PART # Part number reference. To complete, see how to order pages 46-50.
Commercial

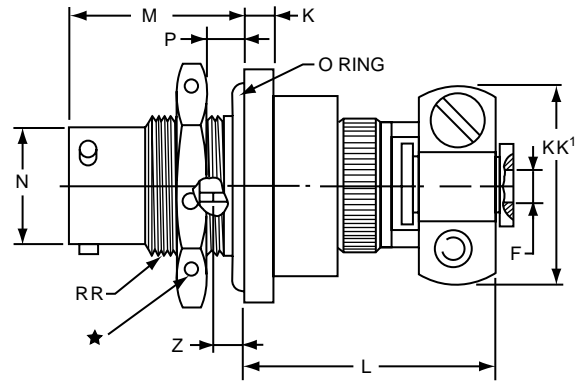
Connector Type	Shell Style	Service Class	Shell Size & Insert Arrg	Contact Type	Alternate Position	Special Variations
JTL/JTLS/JTLN	07	RP	22-2	P	A	(XXX)



* JTL07RP-XX-XXX
*** JTLS07RP-XX-XXX
**** JTLN07RP-XX-XXX



* JTL07RE-XX-XXX
*** JTLS07RE-XX-XXX
**** JTLN07RE-XX-XXX



* JTL07RE-XX-XXX (SR)
*** JTLS07RE-XX-XXX (SR)
**** JTLN07RE-XX-XXX (SR)

- ★ .059 Dia. Min. 3 lockwire holes. Formed lockwire hole design (6 holes) is optional.
- "D" shaped mounting hole dimensions.
- * Miniature mounting dimensions
- *** High temperature version
- **** Clear iridite finish (gold color), N₂O₄ resistant

Shell Size	A* +.000 -.010	C Max.	F Dia. +.010 -.025	H Hex +.017 -.016	K +.011 -.010	L Max.	L ¹ Max.	L ² Max.	M ±.005	N Dia. +.001 -.005	P Panel Thickness		S ±.016	T* +.010 -.000	Z ±.026	KK Dia. Max.	KK ¹ Max.	RR Thread Class 2A
											Min.	Max.						
8	.542	1.077	.125	.750	.125	1.062	.641	.375	.630	.473	.062	.125	.938	.572	.047	.688	.812	.5625-24UNEF
10	.669	1.203	.188	.875	.125	1.062	.641	.375	.630	.590	.062	.125	1.062	.697	.047	.812	.875	.6875-24UNEF
12	.830	1.390	.312	1.062	.125	1.062	.641	.375	.630	.750	.062	.125	1.250	.844	.047	.938	1.000	.8750-20UNEF
14	.955	1.515	.375	1.188	.125	1.062	.641	.375	.630	.875	.062	.125	1.375	1.007	.047	1.062	1.125	1.0000-20UNEF
16	1.084	1.640	.500	1.312	.125	1.062	.641	.375	.630	1.000	.062	.125	1.500	1.134	.047	1.188	1.188	1.1250-18UNEF
18	1.208	1.765	.625	1.438	.125	1.062	.641	.375	.630	1.125	.062	.125	1.625	1.259	.047	1.312	1.438	1.2500-18UNEF
20	1.333	1.953	.625	1.562	.156	1.062	.703	.328	.755	1.250	.062	.250	1.812	1.384	.172	1.469	1.438	1.3750-18UNEF
22	1.459	2.075	.750	1.688	.156	1.062	.703	.328	.755	1.375	.062	.250	1.938	1.507	.172	1.594	1.625	1.5000-18UNEF
24	1.575	2.203	.800	1.812	.156	1.062	.703	.328	.755	1.500	.062	.250	2.062	1.634	.172	1.719	1.719	1.6250-18UNEF

All dimensions for reference only.

For information and ordering visit www.powell.com or email info@powell.com
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JT08R (MS27500) Series II – Crimp

90° Plug



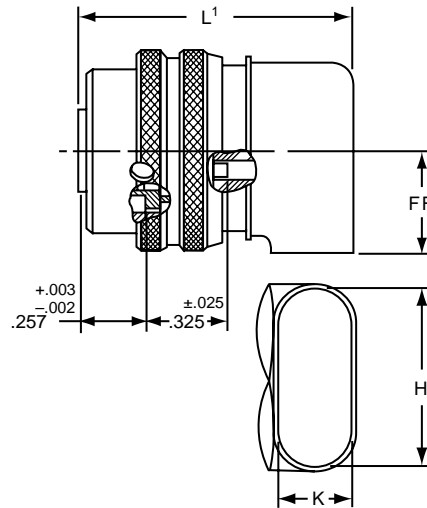
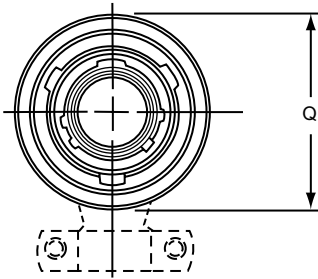
PART # Part number reference. To complete, see how to order pages 46-50.
Commercial

Connector Type	Shell Style	Service Class	Shell Size & Insert Arrg	Contact Type	Alternate Position	Special Variations
JT/JTS/JTN	08	RP	22-2	P	A	(XXX)

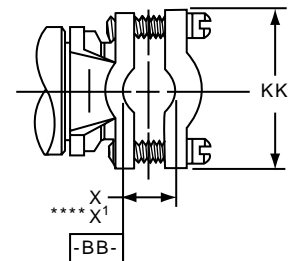
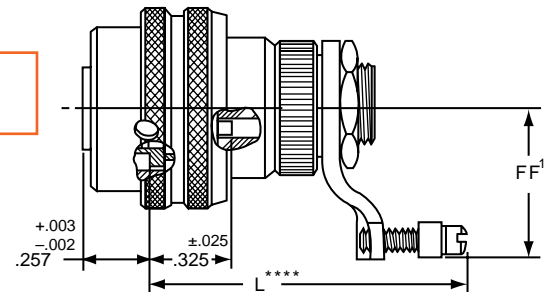
Military

MS Number	Service Class	Shell Size	Finish	Insert Arrg	Contact Style (P or S)	Alternate Position
MS27500	E	14	A	18	P	A

- * JT08RP-XX-XXX
- ** JTS08RP-XX-XXX
- *** JTN08RP-XX-XXX



- * JT08RE-XX-XXX (MS27500E)
- ** JTS08RE-XX-XXX
- *** JTN08RE-XX-XXX



- * Standard Junior Tri-Lock
- ** High temperature version
- *** Clear iridite finish (gold color), N₂O₄ resistant
- ****Dimensions L and X¹ are applicable when the end of the screw is flush with the surface BB.

Shell Size	H ±.010	K ±.010	L Max.	L' Max.	Q Dia. Max.	X Min. Cable	X' Max. Cable	FF Max.	FF' Max.	KK Max.
8	.547	.156	1.578	1.125	.734	.082	.234	.438	.984	.755
10	.709	.188	1.578	1.156	.844	.082	.234	.516	1.016	.755
12	.829	.281	1.656	1.250	1.016	.114	.328	.594	1.078	.817
14	1.000	.438	1.844	1.406	1.141	.176	.457	.656	1.203	.943
16	1.021	.500	2.000	1.469	1.265	.238	.634	.719	1.265	1.067
18	1.145	.562	2.046	1.531	1.391	.208	.614	.781	1.328	1.149
20	1.270	.625	2.125	1.594	1.500	.302	.608	.844	1.359	1.399
22	1.395	.688	2.250	1.656	1.625	.302	.823	.906	1.421	1.399
24	1.520	.750	2.422	1.797	1.750	.332	.853	.969	1.703	1.587

All dimensions for reference only.

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



JT00 (MS27475) Series II – Hermetic Wall Mounting Receptacle

38999 III
SJT I

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

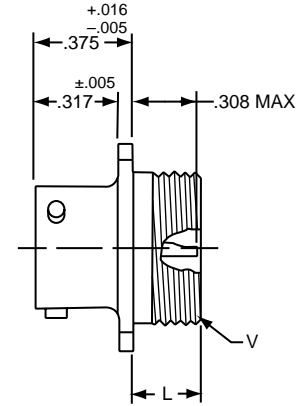
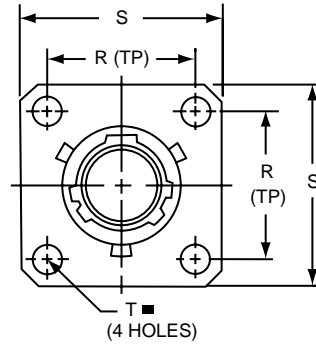
Options Others

PART # Part number reference. To complete, see how to order pages 46-50.
Commercial

Connector Type	Shell Style	Service Class	Shell Size & Insert Arrg	Contact Type	Alternate Position	Special Variations
JT/JTS	00	H	22-2	P	A	(XXX)

Military

MS Number	Service Class	Shell Size	Finish	Insert Arrg	Contact Style (P or S)	Alternate Position
MS27475	Y	14	A	18	P	A
MS27482	Y	14	A	18	P	A
MS27476	Y	14	A	18	P	A



Shell Size	L Max.	N +.001 - .005	R (TP)	S ±.016	T ±.005	V Thread Class 2A
8	.234	.473	.594	.812	.120	.5625-24UNEF
10	.234	.590	.719	.938	.120	.6875-24UNEF
12	.234	.750	.812	1.031	.120	.8125-20UNEF
14	.234	.875	.906	1.125	.120	.9375-20UNEF
16	.234	1.000	.969	1.219	.120	1.0625-18UNEF
18	.234	1.125	1.062	1.312	.120	1.1875-18UNEF
20	.234	1.250	1.156	1.438	.120	1.3125-18UNEF
22	.234	1.375	1.250	1.562	.120	1.4375-18UNEF
24	.313	1.500	1.375	1.688	.147	1.5625-18UNEF

⊕ .005 DIA Ⓜ

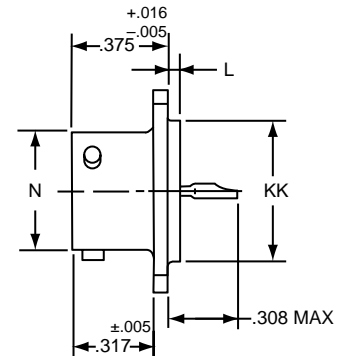
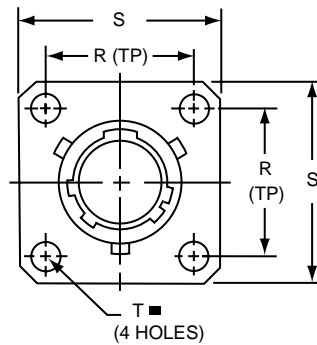
- * Standard Junior Tri-Lock
- ** Interfacial seal wafer
- *** High temperature version, interfacial seal wafer with stainless steel shell

* JT00H-XX-XXX
** JT00Y-XX-XXX (MS27475YXXDXXX)
*** JTS00Y-XX-XXX (MS27482YXXEXXX)

JT02 (MS27476) Series II – Hermetic Box Mounting Receptacle

⊕ .005 DIA Ⓜ

- * Standard Junior Tri-Lock
- ** Interfacial seal wafer
- *** High temperature version, interfacial seal wafer with stainless steel shell



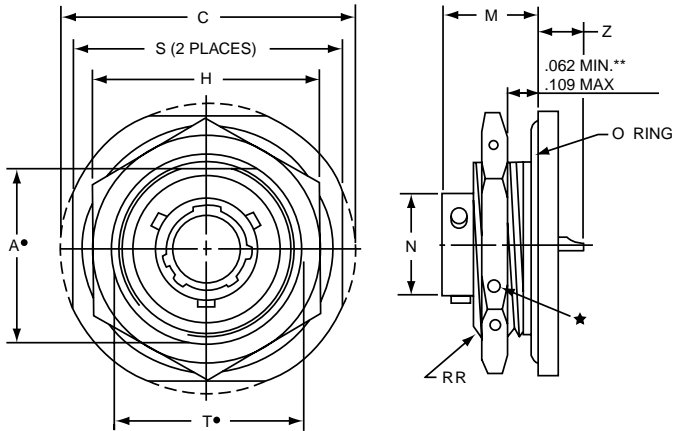
Shell Size	L +.006 - .015	N +.001 - .005	R (TP)	S ±.016	T ±.005	KK +.001 - .005
8	.051	.473	.594	.812	.120	.562
10	.051	.590	.719	.938	.120	.672
12	.051	.750	.812	1.031	.120	.781
14	.051	.875	.906	1.125	.120	.906
16	.051	1.000	.969	1.219	.120	1.031
18	.051	1.125	1.062	1.312	.120	1.156
20	.051	1.250	1.156	1.438	.120	1.250
22	.080	1.375	1.250	1.562	.120	1.375
24	.080	1.500	1.375	1.688	.147	1.500

* JT02H-XX-XXX
** JT02Y-XX-XXX (MS27476YXXDXXX)
*** JTS02Y-XX-XXX (MS27476YXXEXXX)

All dimensions for reference only.

For information and ordering visit www.powell.com or email info@powell.com
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JT07 (MS27477) Series II – Hermetic Jam Nut Receptacle



- * Standard Junior Tri-Lock
- ★ .059 Dia. Min. 3 lockwire holes. Formed lockwire hole design (6 holes) is optional.
- “D” shaped mounting hole dimensions.
- ** Panel Thickness
- *** Interfacial seal wafer
- ****High temperature version, interfacial seal wafer with stainless steel shell

PART # Part number reference. To complete, see how to order pages 46-50.

Connector Type	Shell Style	Service Class	Shell Size & Insert Arrg	Contact Type	Alternate Position	Special Variations
JT/JTS	07	H	22-2	P	A	(XXX)

Military

MS Number	Service Class	Shell Size	Finish	Insert Arrg	Contact Style (P or S)	Alternate Position
MS27477	Y	14	A	18	P	A
MS27483	Y	14	A	18	P	A
MS27478	Y	14	A	18	P	A
MS27503	Y	14	A	18	P	A

- * JT07H-XX-XXX
- *** JT07Y-XX-XX (MS27477YXXDXXX)
- **** JTS07Y-XX-XXX (MS27483YXXEXXX)

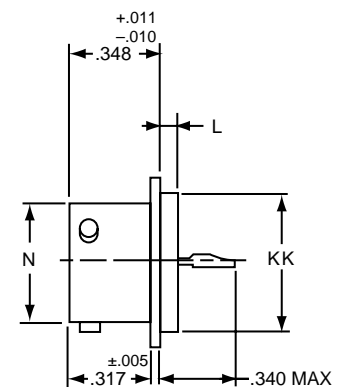
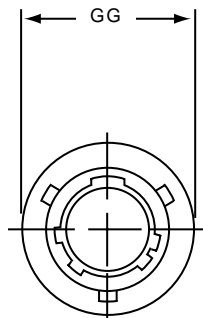
Shell Size	A* +.000 -.010	C Max.	H +.017 -.016	M ±.005	N +.001 -.005	S ±.016	T* +.010 -.000	Z Max.	RR Thread Class 2A
8	.830	1.390	1.062	.438	.473	1.250	.884	.244	.8750-20UNEF
10	.955	1.515	1.188	.438	.590	1.375	1.007	.244	1.0000-20UNEF
12	1.084	1.640	1.312	.438	.750	1.500	1.134	.244	1.1250-18UNEF
14	1.208	1.765	1.438	.438	.875	1.625	1.259	.244	1.2500-18UNEF
16	1.333	1.953	1.562	.438	1.000	1.781	1.384	.244	1.3750-18UNEF
18	1.459	2.031	1.688	.438	1.125	1.890	1.507	.244	1.5000-18UNEF
20	1.576	2.156	1.812	.464	1.250	2.016	1.634	.218	1.6250-18UNEF
22	1.701	2.280	2.000	.464	1.375	2.140	1.759	.218	1.7500-18UNS
24	1.826	2.405	2.125	.464	1.500	2.265	1.884	.218	1.8750-16UN

JTI (MS27478) Series II – Hermetic Solder Mounting Receptacle

- * Standard Junior Tri-Lock
- ** Interfacial seal wafer
- *** High temperature version, interfacial seal wafer with stainless steel shell

- * JTIH-XX-XXX
- ** JTIY-XX-XX (MS27478YXXDXXX)
- *** JTSIY-XX-XXX (MS27503YXXEXXX)

Shell Size	L +.011 -.010	N +.001 -.005	GG +.011 -.010	KK +.001 -.005
8	.078	.473	.687	.562
10	.078	.590	.797	.672
12	.078	.750	.906	.781
14	.078	.875	1.031	.906
16	.078	1.000	1.156	1.031
18	.078	1.125	1.281	1.156
20	.078	1.250	1.375	1.250
22	.107	1.375	1.500	1.375
24	.107	1.500	1.625	1.500



All dimensions for reference only.
Weld mounting hermetic receptacle also available. Consult Powell Electronics, for availability and dimensions.

All dimensions for reference only.

- 38999
- 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



JT00 (MS27334) Series II – Solder Wall Mounting Receptacle

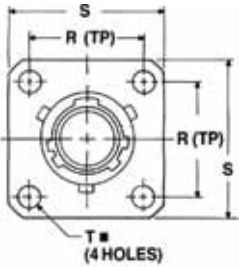
Military qualified to MIL-DTL-27599

PART # Part number reference. To complete, see how to order pages 46-50.
Commercial

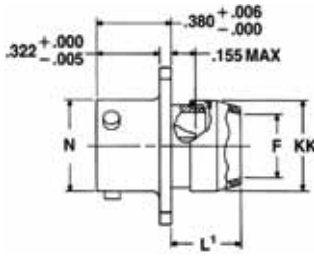
Connector Type	Shell Style	Service Class	Shell Size & Insert Arrg	Contact Type	Alternate Position	Special Variations
JT/JTN	07	RE	22-2	P	A	(XXX)

Military

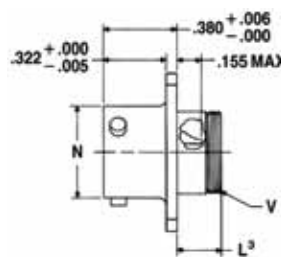
MS Number	Service Class	Shell Size	Finish	Insert Arrg	Contact Style (P or S)	Alternate Position
MS27334	P	14	A	18	P	A
MS27335	T					



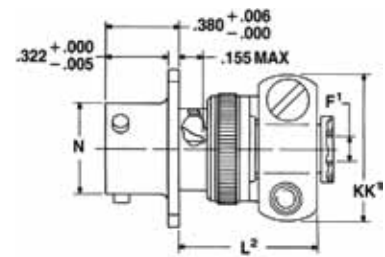
⊕ .005 DIA Ⓜ



*JT00P-XX-XXX (MS27334P)
 *JTN00P-XX-XXX



*JT00A-XX-XXX
 *JT00C-XX-XXX (MS27334T)
 *JTN00A-XX-XXX
 *JTN00C-XX-XXX



*JT00A-XX-XXX(SR)
 *JTN00A-XX-XXX(SR)
 *JTN00C-XX-XXX(SR)

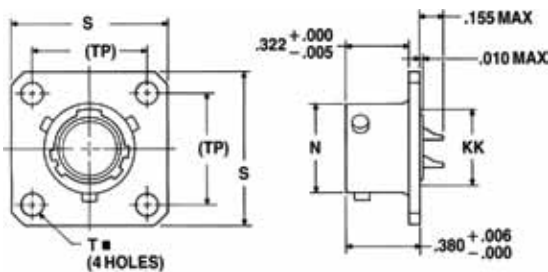
* Standard Junior Tri-Lock

NOTE: For availability of back panel mounting types, consult Powell Electronics.

Shell Size	F Dia. Min.	F' +.010 - .025	L1 Max.	L2 Max.	L3 Max.	N +.001 - .005	R (TP)	S ±.016	T ±.005	V Thread Modified		KK Dia. Max.	KK' Max.
										Size Class 2A	Modified Major Dia.		
8	.312	.125	.422	.734	.234	.473	.594	.812	.120	.4375-28UNEF	.421 - .417	.500	.812
10	.429	.188	.422	.734	.234	.590	.719	.938	.120	.5625-24UNEF	.542 - .538	.625	.875
12	.543	.312	.422	.734	.234	.750	.812	1.031	.120	.6875-24UNEF	.667 - .663	.750	1.000
14	.668	.375	.422	.797	.234	.875	.906	1.125	.120	.8125-20UNEF	.791 - .787	.875	1.125
16	.793	.500	.422	.797	.234	1.000	.969	1.219	.120	.9375-20UNEF	.916 - .912	1.000	1.188
18	.894	.625	.422	.797	.234	1.125	1.062	1.312	.120	1.0625-18UNEF	1.034 - 1.030	1.109	1.438
20	1.019	.625	.422	.859	.234	1.250	1.156	1.438	.120	1.1875-18UNEF	1.158 - 1.154	1.234	1.438
22	1.144	.750	.422	.859	.234	1.375	1.250	1.562	.120	1.3125-18UNEF	1.283 - 1.279	1.359	1.625
24	1.269	.800	.422	.922	.313	1.500	1.375	1.688	.147	1.4375-18UNEF	1.408 - 1.404	1.484	1.719

JT02 (MS27335) Series II – Solder Box Mounting Receptacle

Military qualified to MIL-DTL-27599



⊕ .005 DIA Ⓜ

* Standard Junior Tri-Lock

NOTE: For availability of back panel mounting types, consult Powell Electronics.

Shell Size	N +.001 - .005	R (TP)	S ±.016	T ±.005	KK Max.
8	.473	.594	.812	.120	.391
10	.590	.719	.938	.120	.508
12	.750	.812	1.031	.120	.622
14	.875	.906	1.125	.120	.749
16	1.000	.969	1.219	.120	.872
18	1.125	1.062	1.312	.120	.976
20	1.250	1.156	1.438	.120	1.101
22	1.375	1.250	1.562	.120	1.226
24	1.500	1.375	1.688	.147	1.351

All dimensions for reference only.

*JT02P-XX-XXX
 *JT02A-XX-XXX
 *JT02C-XX-XXX (MS27335T)
 *JTN02P-XX-XXX
 *JTN02A-XX-XXX
 *JTN02C-XX-XXX

38999 II III
SJT I

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

JT06 (MS27336) Series II – Solder Straight Plug



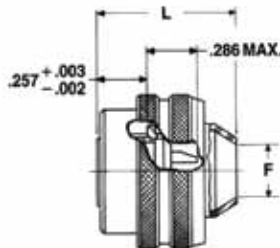
Military qualified to MIL-DTL-27599

PART # Part number reference. To complete, see how to order pages 46-50.
Commercial

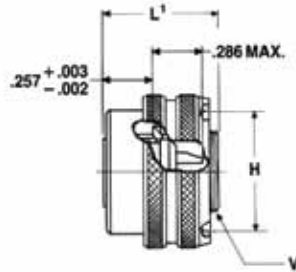
Connector Type	Shell Style	Service Class	Shell Size & Insert Arrg	Contact Type	Alternate Position	Special Variations
JT/JTN/JTG/JTNG	06	RE	22-2	P	A	(XXX)

Military

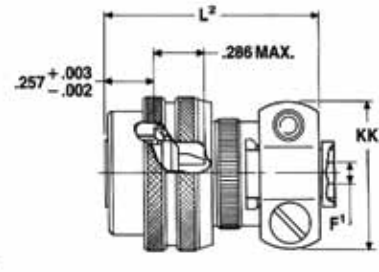
MS Number	Service Class	Shell Size	Finish	Insert Arrg	Contact Style (P or S)	Alternate Position
MS27336	P	14	A	18	P	A



*JT06P-XX-XXX (MS27336P)
*JTN06P-XX-XXX



*JT06A-XX-XXX (MS27336T)
*JTN06A-XX-XXX



*JT06A-XX-XXX(SR)
*JTN06A-XX-XXX(SR)

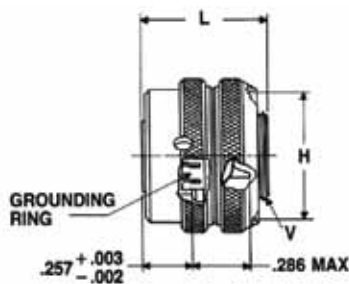
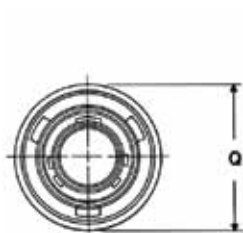
*Standard Junior Tri-Lock

Shell Size	F Min.	F' +.010 / -.025	H +.010 / -.001	L Max.	L1 Max.	L2 Max.	Q Max.	V Thread Modified		KK Max.
								Size Class 2A	Modified Major Dia.	
8	.312	.125	.635	.812	.625	1.109	.734	.4375-28UNEF	.421 - .417	.812
10	.429	.188	.734	.812	.625	1.109	.844	.5625-24UNEF	.542 - .538	.875
12	.543	.312	.870	.812	.625	1.109	1.016	.6875-24UNEF	.667 - .663	1.000
14	.668	.375	.996	.812	.625	1.172	1.141	.8125-20UNEF	.791 - .787	1.125
16	.793	.500	1.122	.828	.625	1.172	1.265	.9375-20UNEF	.916 - .912	1.188
18	.894	.625	1.246	.828	.625	1.172	1.391	1.0625-18UNEF	1.034 - 1.030	1.438
20	1.019	.625	1.372	.828	.625	1.234	1.500	1.1875-18UNEF	1.158 - 1.154	1.438
22	1.144	.750	1.496	.828	.625	1.234	1.625	1.3125-18UNEF	1.283 - 1.279	1.625
24	1.269	.800	1.622	.906	.688	1.297	1.750	1.4375-18UNEF	1.408 - 1.404	1.719

Military qualified to MIL-DTL-27599

JTG06A Series II – Solder

Straight Plug (With Grounding Ring)



*JTG06A-XX-XXX
**JTNG06A-XX-XXX

* Plug with grounding fingers

** Coupling nut is clear iridite finish (gold color), shell and grounding fingers are gold plated N₂O₄ resistant.

Shell Size	H Dia. +.010 / -.001	L Max.	Q Dia. Max.	V Thread Modified	
				Size Class 2A	Modified Major Dia.
8	.635	.625	.734	.4375-28UNEF	.421 - .417
10	.734	.625	.844	.5625-24UNEF	.542 - .538
12	.870	.625	1.016	.6875-24UNEF	.667 - .663
14	.996	.625	1.141	.8125-20UNEF	.791 - .787
16	1.122	.625	1.265	.9375-20UNEF	.916 - .912
18	1.246	.625	1.391	1.0625-18UNEF	1.034 - 1.030
20	1.372	.625	1.500	1.1875-18UNEF	1.158 - 1.154
22	1.496	.625	1.625	1.3125-18UNEF	1.283 - 1.279
24	1.622	.688	1.750	1.4375-18UNEF	1.408 - 1.404

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

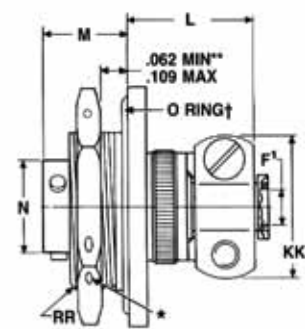
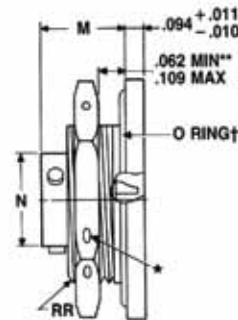
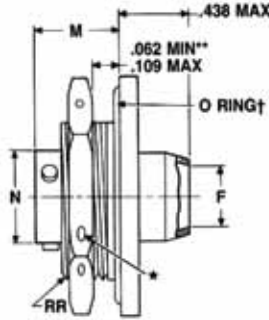
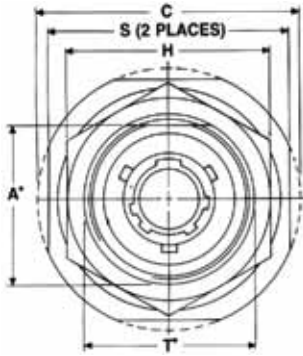


JT07 (MS27337) Series II – Solder Jam Mounting Receptacle

Military qualified to MIL-DTL-27599

PART # Part number reference. To complete, see how to order pages 46-50.
Commercial

Connector Type	Shell Style	Service Class	Shell Size & Insert Arrg	Contact Type	Alternate Position	Special Variations
JT/JTN	P	RE	22-2	P	A	(XXX)



- ★ .059 dia. min. 3 lockwire holes
- "D" shaped mounting hole dimensions.
- * Standard Junior Tri-Lock
- ** Panel thickness
- † O Ring not furnished with MS27337

*JT07P-XX-XXX (MS27337P)
*JTN07P-XX-XXX

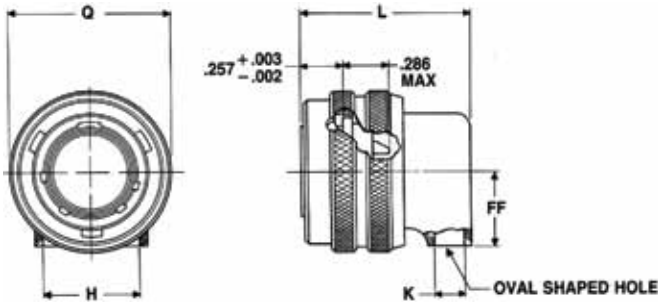
*JT07A-XX-XXX
*JT07C-XX-XXX
*JTN07A-XX-XXX
*JTN07C-XX-XXX

*JT07A-XX-XXX(SR)
*JTN07A-XX-XXX(SR)
*JTN07C-XX-XXX(SR)

Shell Size	A* +.000 -.010	C Max.	F Min.	F' +.010 -.025	H +.017 -.016	L Max.	M ±.005	N +.001 -.005	S ±.016	T* +.010 -.000	KK Max.	RR Thread Class 2A
8	.830	1.390	.312	.125	1.062	.666	.438	.473	1.250	.884	.812	.8750-20UNEF
10	.955	1.515	.429	.188	1.188	.666	.438	.590	1.375	1.007	.875	1.0000-20UNEF
12	1.084	1.640	.543	.312	1.312	.666	.438	.750	1.500	1.134	1.000	1.1250-18UNEF
14	1.208	1.765	.668	.375	1.438	.729	.438	.875	1.625	1.259	1.125	1.2500-18UNEF
16	1.333	1.953	.793	.500	1.562	.729	.438	1.000	1.781	1.384	1.188	1.3750-18UNEF
18	1.459	2.031	.894	.625	1.688	.729	.438	1.125	1.890	1.507	1.438	1.5000-18UNEF
20	1.576	2.156	1.019	.625	1.812	.765	.464	1.250	2.016	1.634	1.438	1.6250-18UNEF
22	1.701	2.280	1.144	.750	2.000	.765	.464	1.375	2.140	1.759	1.625	1.7500-18UNS
24	1.826	2.405	1.269	.800	2.125	.828	.464	1.500	2.265	1.884	1.719	1.8750-16UN

JT08 Series II – Solder 90° Plug

Military qualified to MIL-DTL-27599



*JT08P-XX-XXX
*JTN08P-XX-XXX

* To complete order number see page 46.

Shell Size	H Min.	K Min.	L Max.	Q Max.	FF Max.
8	.396	.126	.891	.734	.391
10	.532	.141	.906	.844	.438
12	.694	.173	.938	1.016	.516
14	.814	.266	1.031	1.141	.594
16	.985	.423	1.188	1.265	.656
18	1.006	.485	1.250	1.391	.719
20	1.130	.547	1.312	1.500	.781
22	1.255	.610	1.375	1.625	.844
24	1.380	.673	1.516	1.750	.906

All dimensions for reference only.

Amphenol MIL-DTL-38999, Series I, LJT

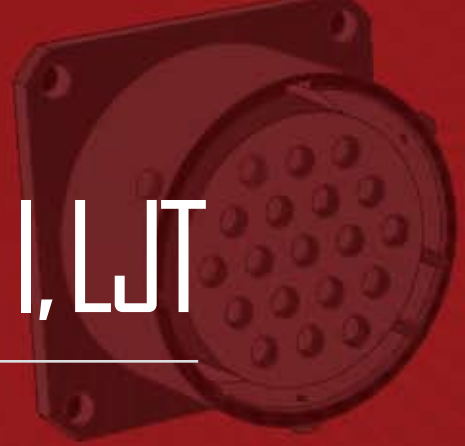


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MIL-DTL-38999 Series I Typical Markets:

- Military & Commercial Aviation
- Military Vehicles
- Missiles & Ordnance
- C4ISR



LJT00R (MS27466) Series I – Crimp Wall Mounting Receptacle

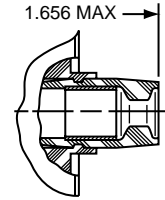
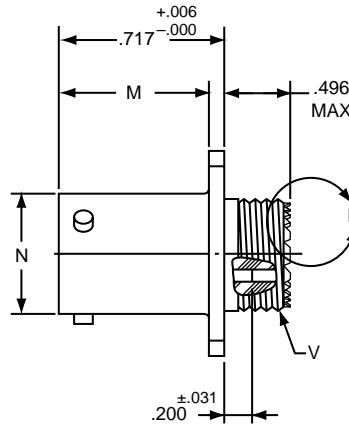
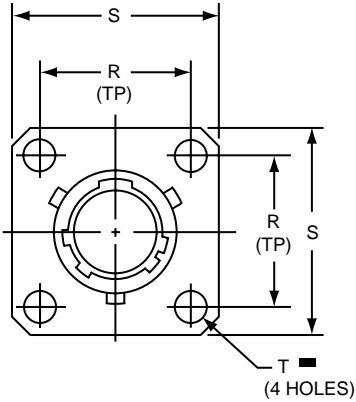
- 38999
SJT I II III
- 26482
Matrix 2
- 83723 III
Matrix Pyle
- 5015
Crimp Rear
Release Matrix
- 26500 Pyle
- Printed
Circuit Board
- EMI Filter
Transient
- Fiber Optics
- High Speed
Contacts
- Options
Others

PART # Part number reference. To complete, see how to order pages 46-50.
Commercial

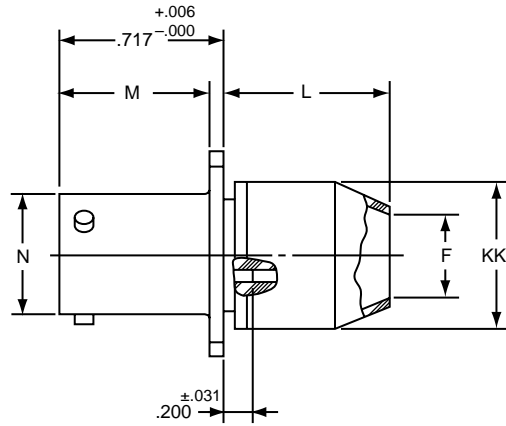
Connector Type	Shell Style	Service Class	Shell Size & Insert Arrg	Contact Type	Alternate Position	Special Variations
LJT	00	RE	22-2	P	A	(XXX)

Military

MS Number	Service Class	Shell Size	Finish	Insert Arrg	Contact Style (P or S)	Alternate Position
MS27466	E	14	A	18	P	A



LJT00RE-XX-XXX (MS27466E)
LJT00RT-XX-XXX (MS27466T)



LJT00RP-XX-XXX (MS27466P)

■ \oplus .005 DIA $\text{\textcircled{M}}$

Shell Size	F Dia. $\pm .010$	L Max.	M $+ .000$ $- .005$	N $+ .001$ $- .005$	R (TP)	S $\pm .016$	T Dia. $\pm .005$	V Thread Class 2A (Plated)	KK Dia. Max
9	.444	.813	.632	.572	.719	.938	.128	.4375-28 UNEF	.608
11	.558	.813	.632	.700	.812	1.031	.128	.5625-24 UNEF	.734
13	.683	.813	.632	.850	.906	1.125	.128	.6875-24 UNEF	.858
15	.808	.813	.632	.975	.969	1.219	.128	.8125-20 UNEF	.984
17	.909	.813	.632	1.100	1.062	1.312	.128	.9375-20 UNEF	1.110
19	1.034	.813	.632	1.207	1.156	1.438	.128	1.0625-18 UNEF	1.234
21	1.159	.906	.602	1.332	1.250	1.562	.128	1.1875-18 UNEF	1.360
23	1.284	.906	.602	1.457	1.375	1.688	.147	1.3125-18 UNEF	1.484
25	1.409	.906	.602	1.582	1.500	1.812	.147	1.4375-18 UNEF	1.610

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

LJTPQ00R (MS27656) Series I – Crimp Wall Mounting Receptacle (Back Panel Mounting)

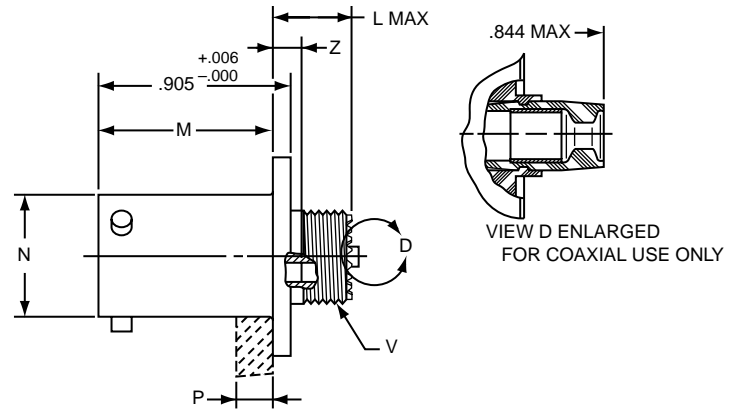
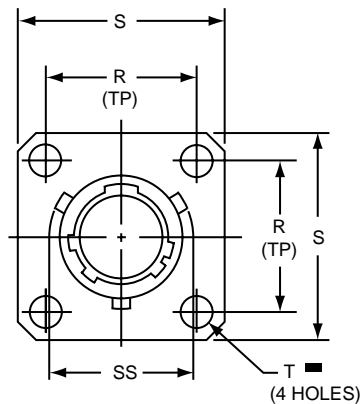


PART # Part number reference. To complete, see how to order pages 46-50.
Commercial

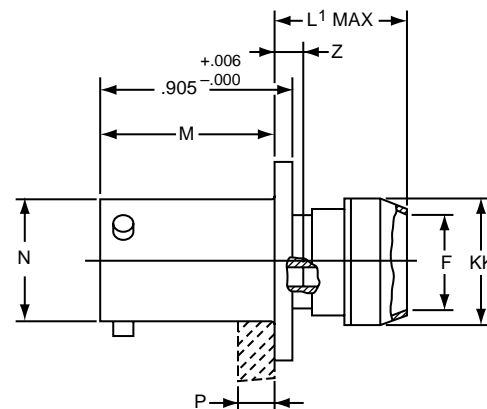
Connector Type	Shell Style	Service Class	Shell Size & Insert Arrg	Contact Type	Alternate Position	Special Variations
LJTPQ	00	RE	22-2	P	A	(XXX)

Military

MS Number	Service Class	Shell Size	Finish	Insert Arrg	Contact Style (P or S)	Alternate Position
MS27656	E	14	A	18	P	A



LJTPQ00RE-XX-XXX (MS27656E)
LJTPQ00RT-XX-XXX (MS27656T)



LJTPQ00RP-XX-XXX (MS27656P)

⊕ .005 DIA ⊕

Shell Size	F Dia. ±.010	L Max.	L' Max.	M +.000 - .005	N Dia.	P Max. Panel Thickness	R (TP)	S +.011 - .010	T Dia. ±.005	V Thread Class 2A (Plated)	Z Max	KK Dia. Max	SS Dia. +.000 - .016
9	.444	.453	.641	.820	.572	.234	.719	.938	.128	.4375-28 UNEF	.138	.625	.662
11	.558	.453	.641	.820	.700	.234	.812	1.031	.128	.5625-24 UNEF	.138	.750	.810
13	.683	.453	.641	.820	.850	.234	.906	1.125	.128	.6875-24 UNEF	.138	.875	.960
15	.808	.453	.641	.820	.975	.234	.969	1.219	.128	.8125-20 UNEF	.138	1.000	1.085
17	.909	.453	.641	.820	1.100	.234	1.062	1.312	.128	.9375-20 UNEF	.138	1.125	1.210
19	1.034	.453	.641	.820	1.207	.234	1.156	1.438	.128	1.0625-18 UNEF	.138	1.250	1.317
21	1.159	.484	.672	.790	1.332	.204	1.250	1.562	.128	1.1875-18 UNEF	.168	1.375	1.442
23	1.284	.484	.672	.790	1.457	.204	1.375	1.688	.147	1.3125-18 UNEF	.168	1.500	1.567
25	1.409	.484	.672	.790	1.582	.193	1.500	1.812	.147	1.4375-18 UNEF	.168	1.625	1.692

All dimensions for reference only.
Note: MS27656 superseded MS 27515.

- III 38999
- II 1
- I SJT
- Matrix 2 26482
- Matrix Pyle 83723 III
- Crimp Rear Release Matrix 5015
- Pyle 26500
- Printed Circuit Board
- EM I Filter Transient
- Fiber Optics
- High Speed Contacts
- Options Others

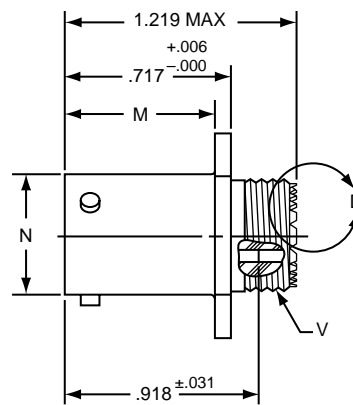
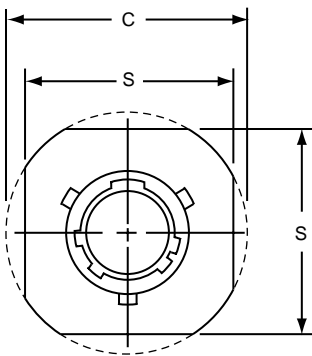


LJT01R Series I – Crimp Line Receptacle

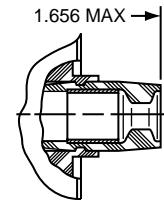
- 38999
SJT I II III
- 26482
Matrix 2
- 83723 III
Matrix Pyle
- 5015
Crimp Rear
Release Matrix
- 26500 Pyle
- Printed
Circuit Board
- EMI Filter
Transient
- Fiber Optics
- High Speed
Contacts
- Options
Others

PART # Part number reference. To complete, see how to order pages 46-50.
Commercial

Connector Type	Shell Style	Service Class	Shell Size & Insert Arrg	Contact Type	Alternate Position	Special Variations
LJT	01	RE	22-2	P	A	(XXX)



LJT01RE-XX-XXX
LJT01RT-XX-XXX



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Shell Size	C Max.	M +.000 -.005	N +.001 -.005	S ±.016	V Thread Class 2A (Plated)
9	1.094	.632	.572	.938	.4375-28 UNEF
11	1.188	.632	.700	1.031	.5625-24 UNEF
13	1.281	.632	.850	1.125	.6875-24 UNEF
15	1.375	.632	.975	1.219	.8125-20 UNEF
17	1.469	.632	1.100	1.312	.9375-20 UNEF
19	1.594	.632	1.207	1.438	1.0625-18 UNEF
21	1.719	.602	1.332	1.562	1.1875-18 UNEF
23	1.844	.602	1.457	1.688	1.3125-18 UNEF
25	1.969	.602	1.582	1.812	1.4375-18 UNEF

All dimensions for reference only.

LJT02R (MS27496) – Crimp (Box Mount Recept.)

LJTP02R (MS27505) – Crimp

Box Mounting Receptacle (Back Panel Mounting)

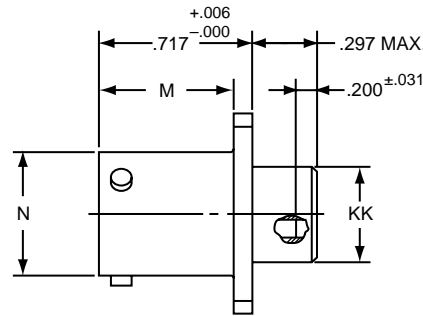
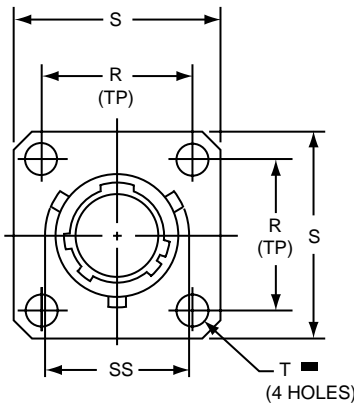


PART # Part number reference. To complete, see how to order pages 46-50.
Commercial

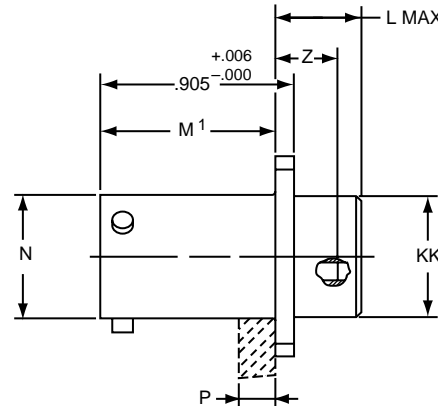
Connector Type	Shell Style	Service Class	Shell Size & Insert Arrg	Contact Type	Alternate Position	Special Variations
LJT/LJTP	02	RE	22-2	P	A	(XXX)

Military

MS Number	Service Class	Shell Size	Finish	Insert Arrg	Contact Style (P or S)	Alternate Position
MS27496	E	14	A	18	P	A
MS27505	E	14	A	18	P	A



LJT02RE-XX-XXX (MS27496E)



LJTP02RE-XX-XXX (MS27505E)

⊕ .005 DIA ⊕

Shell Size	L Max.	M +.000 -.005	M' +.001 -.005	N Dia +.001 -.005	P Max. Panel Thickness	R (TP)	S +.011 -.010	T Dia. ±.005	Z ±.031	KK Dia. +.006 -.005	SS Dia. +.000 -.016
9	.203	.632	.820	.572	.234	.719	.938	.128	.107	.433	.662
11	.203	.632	.820	.700	.234	.812	1.031	.128	.107	.557	.810
13	.203	.632	.820	.850	.234	.906	1.125	.128	.107	.676	.960
15	.203	.632	.820	.975	.234	.969	1.219	.128	.107	.801	1.085
17	.203	.632	.820	1.100	.234	1.062	1.312	.128	.107	.926	1.210
19	.203	.632	.820	1.207	.234	1.156	1.438	.128	.107	1.032	1.317
21	.234	.602	.790	1.332	.204	1.250	1.562	.128	.137	1.157	1.442
23	.234	.602	.790	1.457	.204	1.375	1.688	.147	.137	1.282	1.567
25	.234	.602	.790	1.582	.193	1.500	1.812	.147	.137	1.407	1.692

All dimensions for reference only.

- III 38999
- II 1
- I 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



LJT06R (MS27467) Series I – Crimp Straight Plug

38999

SJT I II III

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

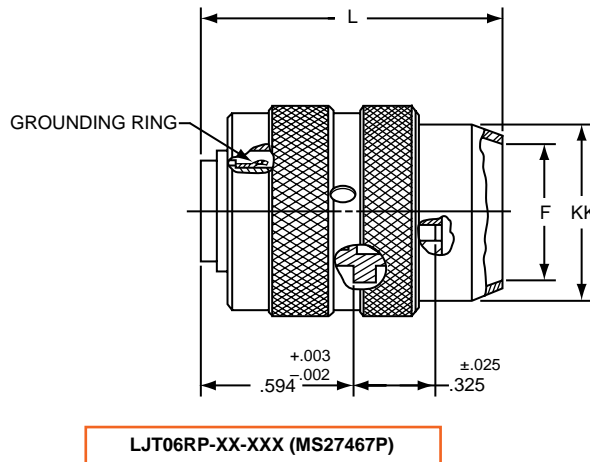
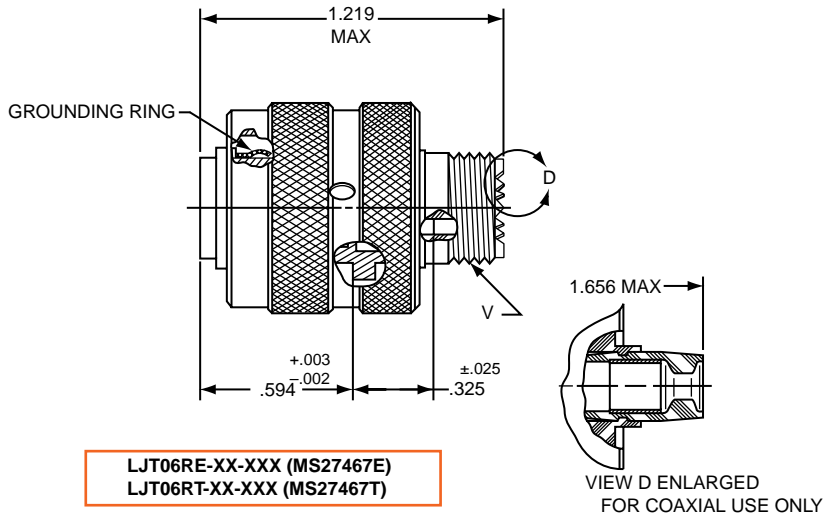
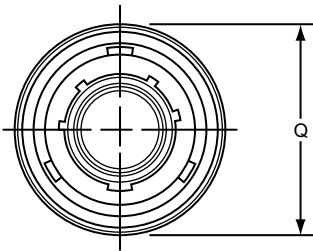
Options Others

PART # Part number reference. To complete, see how to order pages 46-50.

Connector Type	Shell Style	Service Class	Shell Size & Insert Arrg	Contact Type	Alternate Position	Special Variations
LJT	06	RE	22-2	P	A	(XXX)

Military

MS Number	Service Class	Shell Size	Finish	Insert Arrg	Contact Style (P or S)	Alternate Position
MS27467	E	14	A	18	P	A



Shell Size	F Dia. ±.010	L Max.	Q Max.	V Thread Class 2A (Plated)	KK Dia. Max.
9	.444	1.531	.844	.4375-28 UNEF	.608
11	.528	1.531	.969	.5625-24 UNEF	.734
13	.683	1.531	1.141	.6875-24 UNEF	.858
15	.808	1.531	1.266	.8125-20 UNEF	.984
17	.909	1.531	1.391	.9375-20 UNEF	1.110
19	1.034	1.531	1.500	1.0625-18 UNEF	1.234
21	1.159	1.625	1.625	1.1875-18 UNEF	1.360
23	1.284	1.625	1.750	1.3125-18 UNEF	1.484
25	1.409	1.625	1.875	1.4375-18 UNEF	1.610

All dimensions for reference only.

LJT07R (MS27468) Series I – Crimp Jam Nut Receptacle

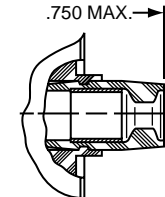
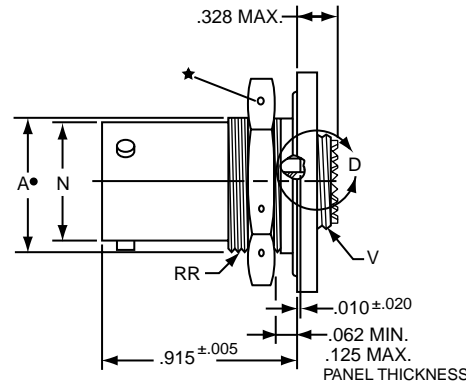
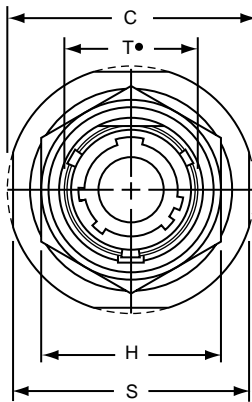


PART # Part number reference. To complete, see how to order pages 46-50.
Commercial

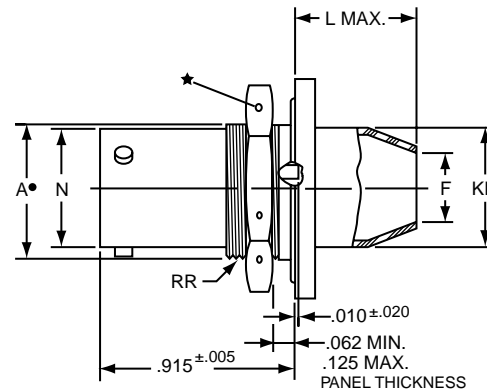
Connector Type	Shell Style	Service Class	Shell Size & Insert Arrg	Contact Type	Alternate Position	Special Variations
LJT	07	RE	22-2	P	A	(XXX)

Military

MS Number	Service Class	Shell Size	Finish	Insert Arrg	Contact Style (P or S)	Alternate Position
MS27498	E	14	A	18	P	A



LJT07RE-XX-XXX (MS27468E)
 LJT07RT-XX-XXX (MS27468T)



LJT07RP-XX-XXX (MS27468P)

- ★ .059 Dia. Min. 3 lockwire holes.
- Formed lockwire hole design (6 holes) is optional.
- “D” shaped mounting hole dimensions.

Shell Size	A* +.000 -.010	C Max.	F Dia. ±.010	H Hex +.017 -.016	L Max.	N +.001 -.005	S ±.016	T* +.010 -.000	V Thread Class 2A (Plated)	KK Dia. Max.	RR Thread Class 2A (Plated)
9	.669	1.199	.444	.875	.625	.572	1.062	.697	.4375-28 UNEF	.608	.6875-24 UNEF
11	.769	1.386	.558	1.000	.625	.700	1.250	.822	.5625-24 UNEF	.734	.8125-20 UNEF
13	.955	1.511	.683	1.188	.625	.850	1.375	1.007	.6875-24 UNEF	.858	1.0000-20 UNEF
15	1.084	1.636	.808	1.312	.625	.975	1.500	1.134	.8125-20 UNEF	.984	1.1250-18 UNEF
17	1.208	1.761	.909	1.438	.625	1.100	1.625	1.259	.9375-20 UNEF	1.110	1.2500-18 UNEF
19	1.333	1.949	1.034	1.562	.656	1.207	1.812	1.384	1.0625-18 UNEF	1.234	1.3750-18 UNEF
21	1.459	2.073	1.159	1.688	.750	1.332	1.938	1.507	1.1875-18 UNEF	1.360	1.5000-18 UNEF
23	1.580	2.199	1.284	1.812	.750	1.457	2.062	1.634	1.3125-18 UNEF	1.484	1.6250-18 UNEF
25	1.709	2.323	1.409	2.000	.750	1.582	2.188	1.759	1.4375-18 UNEF	1.610	1.7500-18 UNS

All dimensions for reference only.

- III 38999
- II 1
- I SJT
- Matrix 2 26482
- Matrix Pyle 83723 III
- Crimp Rear Release Matrix 5015
- Pyle 26500
- Printed Circuit Board
- EM I Filter Transient
- Fiber Optics
- High Speed Contacts
- Options Others



LJT00 (MS27469) Series I – Hermetic Wall Mounting Receptacle

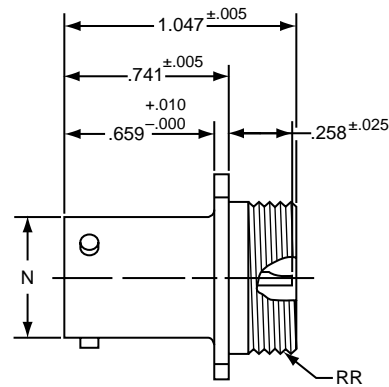
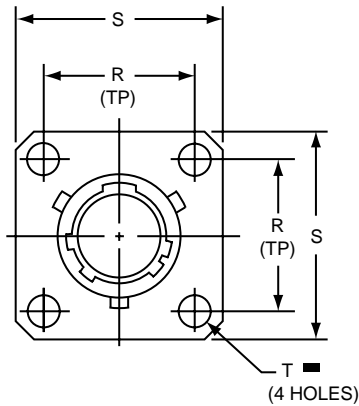
- 38999
SJT I III
- 26482
Matrix 2
- 83723 III
Matrix Pyle
- 5015
Crimp Rear Release Matrix
- 26500 Pyle
- Printed
Circuit Board
- EMI Filter
Transient
- Fiber Optics
- High Speed
Contacts
- Options
Others

PART # Part number reference. To complete, see how to order pages 46-50.
Commercial

Connector Type	Shell Style	Service Class	Shell Size & Insert Arrg	Contact Type	Alternate Position	Special Variations
LJT/LJTS	00	Y	22-2	P	A	(XXX)

Military

MS Number	Service Class	Shell Size	Finish	Insert Arrg	Contact Style (P or S)	Alternate Position
MS27469	Y	14	D	18	P	A



- * LJT00H-XX-XXX
- ** LJT00Y-XX-XXX (MS27469YXXD)
- *** LJTS00Y-XX-XXX (MS27469YXXE)

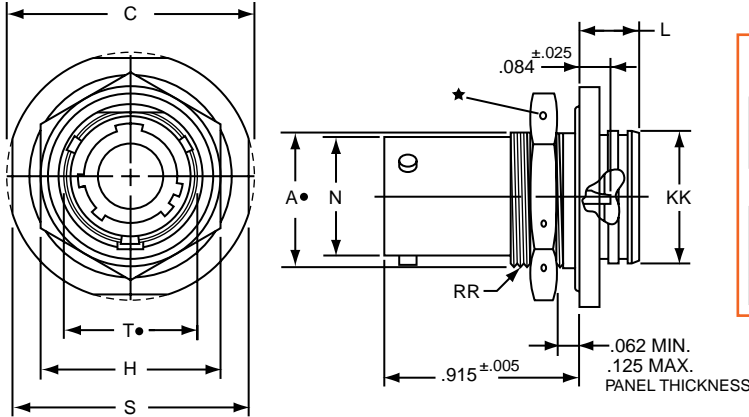
■ \oplus .005 DIA $\text{\textcircled{M}}$

- * Long Junior Tri-Lock
- ** Interfacial seal wafer
- *** High temperature version, interfacial seal wafer with stainless steel shell

Shell Size	N Dia. +.001 -.005	R (TP)	S ±.016	T Dia. ±.005	RR Thread Class 2A
9	.572	.719	.938	.128	.6875-24 UNEF
11	.700	.812	1.031	.128	.8125-20 UNEF
13	.850	.906	1.125	.128	.9375-20 UNEF
15	.975	.969	1.219	.128	1.0625-18 UNEF
17	1.100	1.062	1.312	.128	1.1875-18 UNEF
19	1.207	1.156	1.438	.128	1.3125-18 UNEF
21	1.332	1.250	1.562	.128	1.4375-18 UNEF
23	1.457	1.375	1.688	.147	1.5625-18 UNEF
25	1.582	1.500	1.812	.147	1.6875-18 UNEF

All dimensions for reference only.

LJT07 (MS27470) Series I – Hermetic Jam Nut Receptacle



PART # Part number reference. To complete, see how to order pages 46-50.
Commercial

Connector Type	Shell Style	Service Class	Shell Size & Insert Arrg	Contact Type	Alternate Position	Special Variations
LJT/LJTS	H	RE	22-2	P	A	(XXX)

Military

MS Number	Service Class	Shell Size	Finish	Insert Arrg	Contact Style (P or S)	Alternate Position
MS27470	Y	14	A	18	P	A
MS27471	Y	14	A	18	P	A

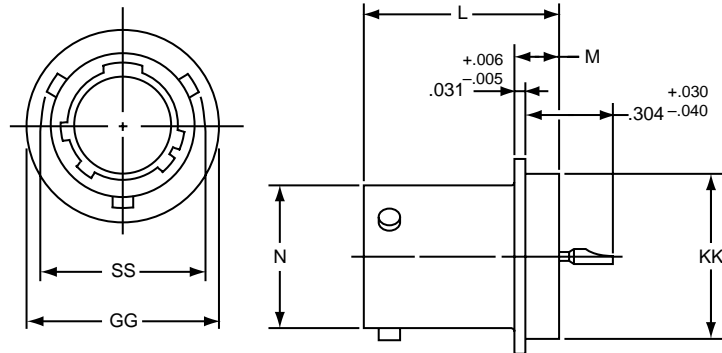
Shell Size	A* +.000 -.010	C Max.	H Hex +.017 -.016	L Max.	N +.000 -.005	S ±.016	T* +.010 -.000	KK +.011 -.000	RR Thread Class 2A (Plated)
9	.669	1.199	.875	.297	.572	1.062	.697	.642	.6875-24 UNEF
11	.769	1.386	1.000	.297	.700	1.250	.822	.766	.8125-20 UNEF
13	.955	1.511	1.188	.297	.850	1.375	1.007	.892	1.0000-20 UNEF
15	1.084	1.636	1.312	.297	.975	1.500	1.134	1.018	1.1250-18 UNEF
17	1.208	1.761	1.438	.297	1.100	1.625	1.259	1.142	1.2500-18 UNEF
19	1.333	1.949	1.562	.328	1.207	1.812	1.384	1.268	1.3750-18 UNEF
21	1.459	2.073	1.688	.328	1.332	1.938	1.507	1.392	1.5000-18 UNEF
23	1.580	2.199	1.812	.328	1.457	2.062	1.634	1.518	1.6250-18 UNEF
25	1.709	2.328	2.000	.328	1.582	2.188	1.759	1.642	1.7500-18 UNS

All dimensions for reference only.

- * LJT07H-XX-XXX
- ** LJT07Y-XX-XXX (MS27470YXXD)
- *** LJTS07Y-XX-XXX (MS27470YXXE)

- ★ .059 Dia. Min. 3 lockwire holes. Formed lockwire hole design (6 holes) is optional.
- "D" shaped mounting hole dimensions.
- * *Long Junior Tri-Lock
- ** Interfacial seal wafer
- *** High temperature version, interfacial seal wafer with stainless steel shell

LJTI (MS27471) Series I – Hermetic Solder Mounting Receptacle



- * Long Junior Tri-Lock
- ** Interfacial seal wafer
- *** High temperature version, interfacial seal wafer with stainless steel shell

Shell Size	N Dia. +.001 -.005	SS Dia. +.000 -.016	L +.011 -.000	M +.006 -.005	GG Dia. +.011 -.010	KK Dia. +.001 -.005
9	.572	.662	.789	.125	.750	.672
11	.700	.810	.789	.125	.844	.781
13	.850	.960	.789	.125	.969	.906
15	.975	1.085	.789	.125	1.094	1.031
17	1.100	1.210	.789	.125	1.218	1.156
19	1.207	1.317	.789	.125	1.312	1.250
21	1.332	1.442	.789	.125	1.438	1.375
23	1.457	1.567	.821	.156	1.563	1.500
25	1.582	1.692	.821	.156	1.688	1.625

- * LJTIH-XX-XXX
- ** LJTIY-XX-XXX (MS27471YXXD)
- *** LJTSIY-XX-XXX (MS27471YXXE)

All dimensions for reference only.
 Weld mounting hermetic receptacle also available.
 Consult Powell Electronics for availability and dimensions.

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



LJT00 (MS20026) Series I – Solder Wall Mounting Receptacle

Military qualified to MIL-DTL-27599

PART # Part number reference. To complete, see how to order pages 46-50.

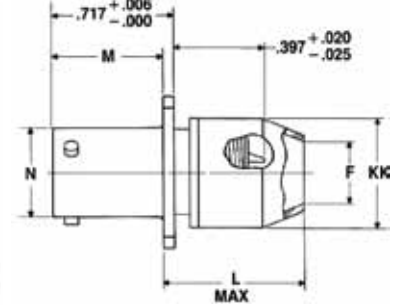
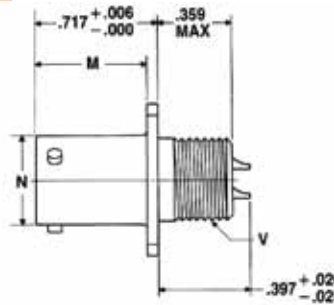
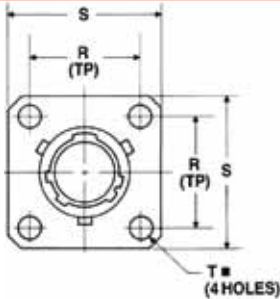
Connector Type	Shell Style	Service Class	Shell Size & Insert Arrg	Contact Type	Alternate Position	Special Variations
LJT	00	P	22-2	P	A	(XXX)

Military

MS Number	Service Class	Shell Size	Finish	Insert Arrg	Contact Style (P or S)	Alternate Position
MS20026	T	14	A	18	P	A
MS20027	T	14	A	18	P	A

LJT00T-XX-XXX (MS20026T)

LJT00P-XX-XXX



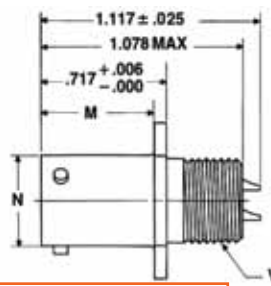
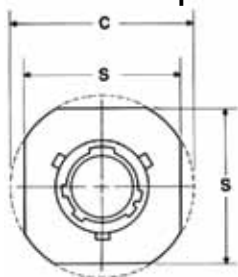
⊕ .005 DIA (M)

NOTE: For availability of back panel mounting types, check with nearest sales office or call Powell Electronics.

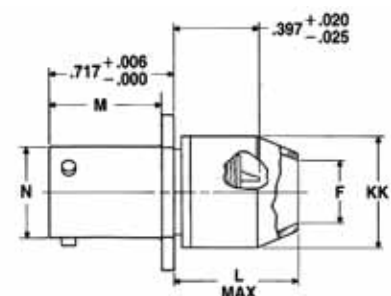
Shell Size	F Dia.	L Max.	M +.000 / -.005	N +.001 / -.005	R (TP)	S ±.016	T Dia. ±.005	VThread Class 2A UNEF (Plated)	KK Dia. Max.
9	.327	.625	.632	.572	.719	.938	.128	.4375-28	.608
11	.444	.625	.632	.700	.812	1.031	.128	.5625-24	.734
13	.558	.625	.632	.850	.906	1.125	.128	.6875-24	.858
15	.683	.625	.632	.975	.969	1.219	.128	.8125-20	.984
17	.808	.625	.632	1.100	1.062	1.312	.128	.9375-20	1.110
19	.909	.625	.632	1.207	1.156	1.438	.128	1.0625-18	1.234
21	1.034	.703	.602	1.332	1.250	1.562	.128	1.1875-18	1.360
23	1.159	.703	.602	1.457	1.375	1.688	.147	1.3125-18	1.484
25	1.284	.703	.602	1.582	1.500	1.812	.147	1.4375-18	1.610

LJT01 (MS20027) Series I – Solder Line Receptacle

Military qualified to MIL-DTL-27599



LJT01T-XX-XXX (MS20027T)



LJT01P-XX-XXX

Shell Size	C Max.	F Dia.	L Max.	M +.000 / -.005	N +.001 / -.005	S ±.016	VThread Class 2A UNEF (Plated)	KK Dia. Max.
9	1.094	.327	.625	.632	.572	.938	.4375-28	.608
11	1.188	.444	.625	.632	.700	1.031	.5625-24	.734
13	1.281	.558	.625	.632	.850	1.125	.6875-24	.858
15	1.375	.683	.625	.632	.975	1.219	.8125-20	.984
17	1.469	.808	.625	.632	1.100	1.312	.9375-20	1.110
19	1.594	.909	.625	.632	1.207	1.438	1.0625-18	1.234
21	1.719	1.034	.703	.602	1.332	1.562	1.1875-18	1.360
23	1.844	1.159	.703	.602	1.457	1.688	1.3125-18	1.484
25	1.969	1.284	.703	.602	1.582	1.812	1.4375-18	1.610

All dimensions for reference only.

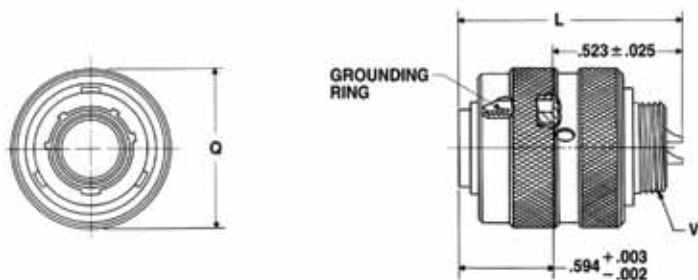
For information and ordering visit www.powell.com or email info@powell.com
Toll Free: 800-235-7880 Phone: 856-241-8000 Fax: 888-467-6935

38999
SJT I II III
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

LJT06 (MS20028) Series I – Solder Straight Plug



Military qualified to MIL-DTL-27599



PART

Commercial

Part number reference. To complete, see how to order pages 46-50.

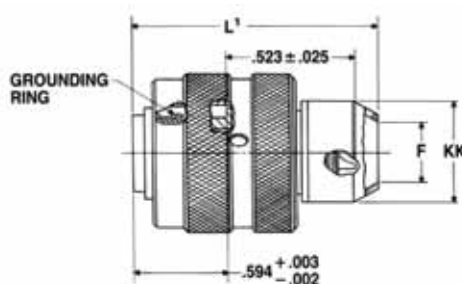
Connector Type	Shell Style	Service Class	Shell Size & Insert Arrg	Contact Type	Alternate Position	Special Variations
LJT	06	T	22-2	P	A	(XXX)

Military

MS Number	Service Class	Shell Size	Finish	Insert Arrg	Contact Style (P or S)	Alternate Position
MS20028	T	14	A	18	P	A
MS20029	T	14	A	18	P	A

LJT06T-XX-XXX (MS20028T)

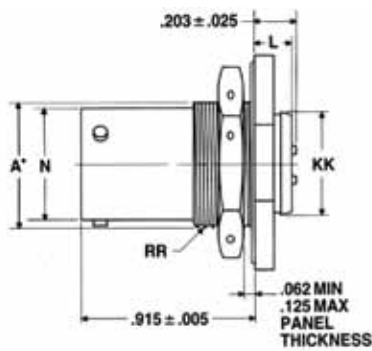
Shell Size	F Dia.	L Max.	L' Max.	Q Max.	VThread Class 2A UNEF (Plated)	KK Dia. Max.
9	.327	1.128	1.488	.844	.4375-28	.608
11	.444	1.128	1.488	.969	.5625-24	.734
13	.558	1.128	1.488	1.141	.6875-24	.858
15	.683	1.128	1.488	1.266	.8125-20	.984
17	.808	1.128	1.488	1.391	.9375-20	1.110
19	.909	1.128	1.488	1.500	1.0625-18	1.234
21	1.034	1.128	1.566	1.625	1.1875-18	1.360
23	1.159	1.128	1.566	1.750	1.3125-18	1.484
25	1.284	1.191	1.644	1.875	1.4375-18	1.610



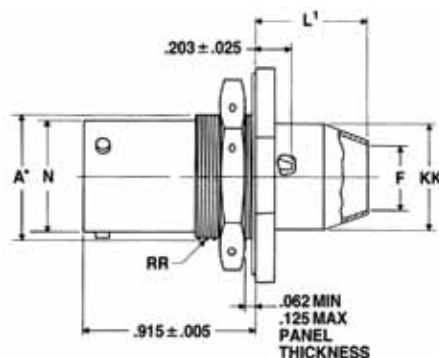
LJT06P-XX-XXX

LJT07 (MS20029) Series I – Solder Jam Nut Receptacle

Military qualified to MIL-DTL-27599



LJT07T-XX-XXX (MS20029T)



LJT07P-XX-XXX (MS20029P)

• "D" shaped mounting hole dimensions

Shell Size	A* +.000 / -.010	C Max.	F Dia.	H Hex +.017 / -.016	L Max.	L' Max.	N +.001 / -.005	S ±.016	T* +.010 / -.000	KK +.011 / -.000	KK' Dia. Max.	RR Thread Class 2A (Plated)
9	.669	1.199	.327	.875	.234	.625	.572	1.062	.697	.516	.608	.6875-24UNEF
11	.769	1.386	.444	1.000	.234	.625	.700	1.250	.822	.642	.734	.8125-20UNEF
13	.955	1.511	.558	1.188	.234	.625	.850	1.375	1.007	.766	.858	1.0000-20UNEF
15	1.084	1.636	.683	1.312	.234	.625	.975	1.500	1.134	.892	.984	1.1250-18UNEF
17	1.208	1.761	.808	1.438	.234	.625	1.100	1.625	1.259	1.018	1.110	1.2500-18UNEF
19	1.333	1.949	.909	1.562	.266	.625	1.207	1.812	1.384	1.142	1.234	1.3750-18UNEF
21	1.459	2.073	1.034	1.688	.266	.656	1.332	1.938	1.507	1.268	1.360	1.5000-18UNEF
23	1.580	2.199	1.159	1.812	.266	.750	1.457	2.062	1.634	1.392	1.484	1.6250-18UNEF
25	1.709	2.323	1.284	2.000	.266	.750	1.582	2.188	1.759	1.518	1.610	1.7500-18UNS

All dimensions for reference only.

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



Series I, LJT Breakaway Fail Safe Lanyard Release Plug Insert Availability

INSERT AVAILABILITY

Shell Size / Insert Arrangement	Service Rating	Total Contacts	Contact Size							
			22D	20	16	12	12 Coax	8 Coax*	8 Twinax	
11-2	I	2			2					
11-35	M	13	13							
11-98	I	6		6						
13-4	I	4			4					
13-8	I	8		8						
13-35	M	22	22							
13-98	I	10		10						
15-5	II	5			5					
15-15	I	15		14	1					
15-18	I	18		18						
15-19	I	19		19						
15-35	M	37	37							
15-97	I	12		8	4					
17-6	I	6				6				
17-8	II	8			8					
17-26	I	26		26						
17-35	M	55	55							
17-99	I	23		21	2					
19-11	II	11			11					
19-32	I	32		32						
19-35	M	66	66							
21-11	I	11				11				
21-16	II	16			16					
21-35	M	79	79							
21-39	I	39		37	2					
21-41	I	41		41						
23-21	II	21			21					
23-35	M	100	100							
23-53	I	53		53						
23-54	M	53	40		9	4				
23-55	I	55		55						
25-4	I	56		48	8					
25-19	I	19				19				
25-20	N	30		10	13		4			3
25-24	I	24			12	12				
25-29	I	29			29					
25-35	M	128	128							
25-43	I	43		23	20					
25-46	I	46		40	4			2*		
25-61	I	61		61						

LJT Lanyard Separation Forces

Shell Size	Straight Plug (lbs. max.)	15 Degree Pull (lbs. Max.)
11 13 15	45	55
17 19 21 23 25	90	100

* For RG 180/U and RG 195/U cables only. (Check Powell Electronics for other cable applications). For availability of other insert arrangements and accessories consult Powell Electronics.

TABLE I INSERT ARRANGEMENT CODE

Basic Part Number	MIL-DTL-38999 Insert Arrangement
88/91-538808	11-2
06	11-35
07	11-98
10	13-4
11	13-8
13	13-98
14	13-35
18	15-5
23	15-15
22	15-18
19	15-19
20	15-35
27	17-6
28	17-8
29	17-26
30	17-35
31	17-99
37	19-11
39	19-32
40	19-35
47	21-11
48	21-16
49	21-35
50	21-41
51	21-39
57	23-21
58	23-35
59	23-53
61	23-54
60	23-55
66	25-19
74	25-20
67	25-29
68	25-35
69	25-43
70	25-61
71	25-4
72	25-24

TABLE II LANYARD LENGTH CODES

Lanyard Length (in.) ±.250	MS	Commercial Code
4.000		40
4.250		41
4.500		42
4.750		43
5.000		50
5.250		51
5.500		52
5.750		53
6.000	No	60
6.250	Code	61
6.500		62
6.750	Std.	63
7.000	Length	70
7.250	6.250	71
7.500		72
7.750		73
8.000		80
8.250		81
8.500		82
8.750		83
9.000		90
9.250		91
9.500		92
9.750		93

Series I, LJT Breakaway Fail Safe Lanyard Release Plug How to Order, cont.



HOW TO ORDER - BY MILITARY PART NUMBER FAIL SAFE MS27661

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

MS Number	Service Class	Shell Size	Finish	Insert Arrg.	Contact Style	Alternate Position
MS27661	T	17	B	35	P	A

1. MS27661 Number

MS Number designates MIL-DTL-38999, Series I LJT Lanyard Release Plug

2. Select a Service Class

E	For environmental crimp applications (inactive for new design)
T	For environmental crimp applications with serrations on rear threads of shell

3. Select a Shell Size

MIL-DTL-38999, sizes 11 through 25, see chart on page 78.

4. Select a Finish

B	Designates corrosion resistant olive drab cadmium plated aluminum, 500 hour extended salt spray, EMI shielding effectiveness -50dB @ 10 GHz specification min., 175°C
F	Designates electroless nickel plated aluminum, 48 hour salt spray, EMI shielding effectiveness -65dB @ 10 GHz 500 specification min., 200°C

These are standard finishes. Consult Powell Electronics for variations.

5. Select an Insert Arrangement

MIL-DTL-38999, see insert identification chart on page 78.

6. Select a Contact Style

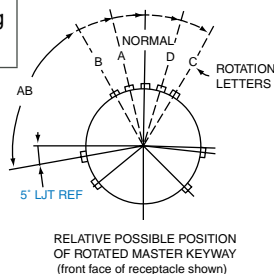
P	Designates Lanyard Release plug with pin contacts
S	Designates Lanyard Release plug with socket contacts

7. Alternate Keying Position

For alternate Position of connector (to prevent cross-mating) see LJT key/keyway rotation below. (No letter is required for normal)

LJT Key/Keyway Rotation

Shell Size	AB ANGLE OF ROTATION (Degrees)				
	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°



HOW TO ORDER - BY COMMERCIAL PART NUMBER FAIL SAFE 88-5388 OR 91-5388

- 1.
- 2.
- 3.
- 4.
- 5.

Finish	Connector Type Identification	Shell Size & Insert Arrangement	Lanyard Length Code	Contact Type Alternate Rotation of Insert
88	5388	29	40	P

1. Select a Finish

88	Designates corrosion resistant olive drab cadmium plate over nickel, 500 hour extended salt spray, EMI -50dB @ 10 GHz specification min., 175°C
91	Designates electroless nickel plated aluminum, optimum EMI shielding effectiveness -65dB @ 10 GHz specification min., 48 hour salt spray, 200°C

These are standard finishes. Consult Powell Electronics, for variations.

2. Connector Type Identification

5388	Designates MIL-DTL-38999, Series I LJT Lanyard Release Plug
-------------	---

3. Select a Shell Size and Insert Arrangement

Shell sizes are MIL-DTL-38999, Series III from sizes 11 thru 25. The basic part number selected specifies the insert arrangement. See Table I (page 78) for coded part number that correlates to insert arrangement.

4. Select a Lanyard Length Code

See Table II (page 78) for lanyard length code number.

5. Select a Contact Type/Alternate Rotation of Insert

P	Designates Lanyard Release plug with pin contacts
S	Designates Lanyard Release plug with socket contacts

When an alternate position of the connector is required to prevent cross-mating, a different letter (other than P or S) is used. See alternate positioning for LJT (to your left), then convert to Amphenol commercial coding by the following chart below.

Pin Contacts		Socket Contacts	
MS Letter	Amphenol Letter	MS Letter	Amphenol Letter
P	P (normal)	S	S (normal)
PA	E	SA	F
PB	R	SB	T
PC	W	SC	X
PD	Y	SD	Z

III
II
I
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



Series I, LJT Breakaway Fail Safe Quick-Disconnect with Axial Pull of Lanyard

- 38999 SJT I II III
- 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

Amphenol LJT Breakaway Fail Safe Connectors provide unequalled performance in environments requiring instant disengagement.

Designed to provide quick disconnect of a connector plug and receptacle with an axial pull on the lanyard, the "Breakaway" Fail Safe connector family offers a wide range of electrical and mechanical features:

- Instant decoupling and damage free separation
- Completely intermateable with standard LJT receptacles
- Inventory support commonality through the use of standard insert arrangements and contacts

Breakaway un-mating is initiated by applying a pull force to the lanyard which causes the operating sleeve on the plug to move away from the receptacle. Coupling segments on the plug then move away from the mating receptacle while expanding, thus releasing the receptacle. After completion of the un-mating sequence, spring compression returns the sleeve and segments to their original positions. Un-mating of the plug may also be accomplished by normal rotation of the coupling ring without affecting the breakaway capability.

The LJT Breakaway Fail Safe connector features which provide EMI EMP shielding in excess of MIL-DTL-38999 Series I requirements:

- Solid metal-to-metal coupling
- EMI grounding fingers
- Conductive finishes

Contact Powell Electronics for more information on breakaway, quick-disconnect connectors. Other Amphenol cylindrical families (MIL-DTL-38999 Series III, MIL-DTL-26482, MIL-DTL-83723) also offer breakaway quick-disconnect connectors.

PART # Part number reference. To complete, see how to order pages 79.

Connector Type	Shell Style	Service Class	Shell Size & Insert Arrg	Contact Type	Alternate Position	Special Variations
88/91	5388	T	22-2	P	A	(XXX)

Military

MS Number	Service Class	Shell Size	Finish	Insert Arrg	Contact Style (P or S)	Alternate Position
MS27661	T	14	A	18	P	A

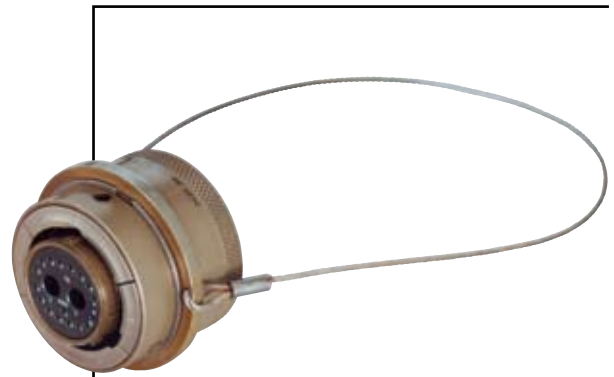
LJT Fail Safe 88-5388/91-5388 (MS27661)

Lanyard Release Plug

* To complete order number see page 79.

Shell Size	A Dia. Max.	B Max.	D Max. Accessory Dia.	L Max.	V Thread UNEF Class 2A (Plated)
11	1.393	1.797	.740	1.703	.5625-24
13	1.558	1.969	.926	1.703	.6875-24
15	1.669	2.078	1.051	1.703	.8125-20
17	1.797	2.203	1.176	1.703	.9375-20
19	1.926	2.323	1.300	1.703	1.0625-18
21	2.054	2.469	1.426	1.703	1.1875-18
23	2.183	2.594	1.551	1.703	1.3125-18
25	2.293	2.703	1.676	1.766	1.4375-18

All dimensions for reference only.



LJT Breakaway Fail Safe

In addition to standard Breakaway connectors, Amphenol also manufactures custom breakaway connectors including those with:

- Increased pull-force capability
- Custom lanyard lengths and backshells
- Low force separation capabilities
- Low insertion/separation force contacts
- Non-cadmium finishes
- Custom JT Series Breakaway designs have been developed for special applications; however the LJT Series is recommended over the JT Series for the quick-disconnect breakaway style.

