

Amphenol



Amphenol

SERIES PUSH PULL
CONNECTORS
REF. MIL - C - 81703



Amphenol Interconnect India Pvt. Ltd. manufacturers of India's largest range of connection, is a subsidiary of Amphenol Corporation, USA. Technical and financial support from Amphenol Corp. one of the largest connector manufacturers in the world, back the production of more than 885 varieties of connectors at Amphenol. With over two decades of experience in the manufacture and development of professional grade connectors. Amphenol is supported by infrastructure that includes an in-house R&D facility employing state of the art computer aided designing and a full fledged tool room. The production facility has the latest manufacturing technology and stringent quality control check ensure reliability.

We have excellent infrastructure to design and manufacture high performance Space Grade Circular/PC/ Rectangular Rack & Panel Connectors like modern sophisticated computerized numerically controlled machines, a well equipped tool room, modernized Quality control laboratory and sophisticated CAD/IDEAS/PRO-E design facility etc. Our Engineers are well trained in Amphenol facilities for design of connectors. We are confident with our experience & exposure of over 30 years in the connector technology and our proven success in the development of space grade connectors.

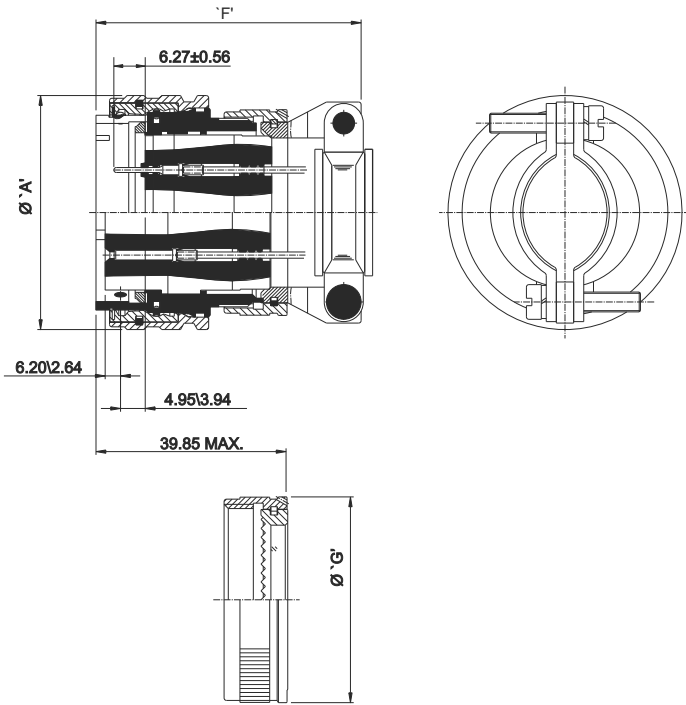
PUSH PULL CONNECTORS:

The Amphenol PTDS Series Push Pull Connectors are developed for Aerospace applications the stage separation of satellites and missiles. The PTDS is with unique locking system which ensure full proof mating and protection. These features allow unmanned disconnection of discarded stages, which proves to be mission critical in nature. The Amphenol PTDS series connectors are also qualified by Indian Space Agency to specifications ELG/INDG/TF/DBAS/01/97 and used successfully in many major Indian programs.

Page Contents

Introduction	1
Straight Plug/Rec	2
Lanyard Straight Plug/Rec	3
Receptacle/Orientation	4
Technical Data	5
Insert Configuration	6
Ordering Information	7
Accessories	8

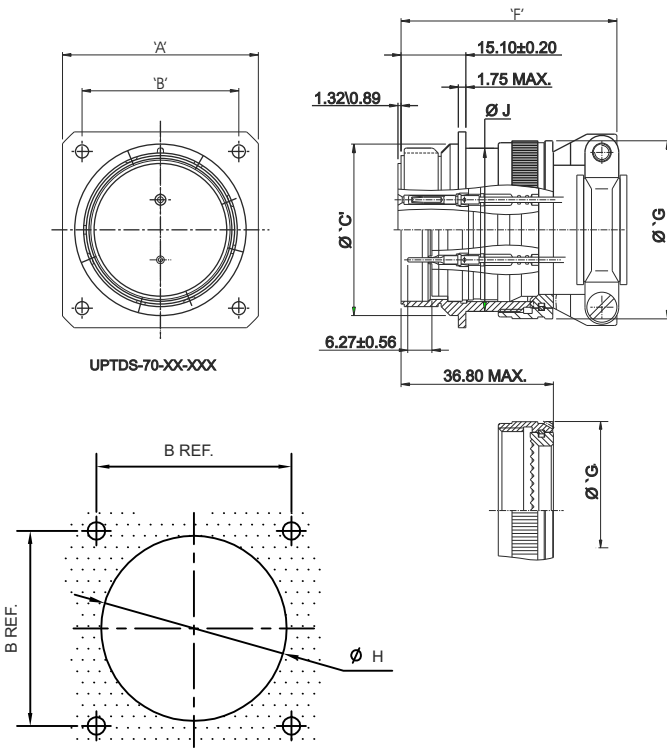
S TRAIGHT PLUG (PTDS76)



Shell Size		A	F	G
MIL	A11L	max	max	max
03	10	20.40	48.74	17.00
07	12	23.70		21.80
12	14	26.90	54.71	25.00
19	16	31.50		28.25
27	18	36.10		30.95
37	20	39.30		34.15
61	24	47.30		42.00

*Ref. Ordering information page 7

WALL MOUNTING RECEPTACLE (PTDS70)



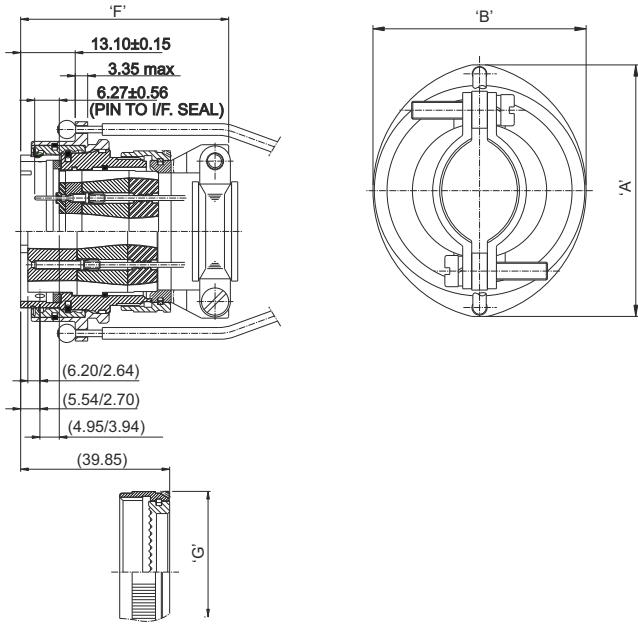
(SHELL REAR SIDE OD.)

Shell Size	A11L	A max	B ±0.10	C max	F max	G max	H ±0.08	J ±0.03
03	10	22.60	15.90	14.50	45.77	17.00	14.81	-
07	12	25.80	18.26	17.35		21.80	19.30	19.02
12	14	28.20	20.62	20.80	51.73	25.00	22.48	22.19
19	16	30.60	23.02	24.00		28.25	25.65	-
27	18	33.00	24.60	28.70		30.95	28.98	26.95
37	20	36.90	29.36	32.00		34.15	32.28	30.16
61	24	45.70	36.53	39.90		42.00	40.21	38.06

Panel Cut Out for Front or Rear Mount

*Ref. Ordering information page 7

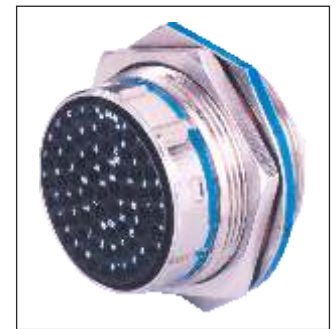
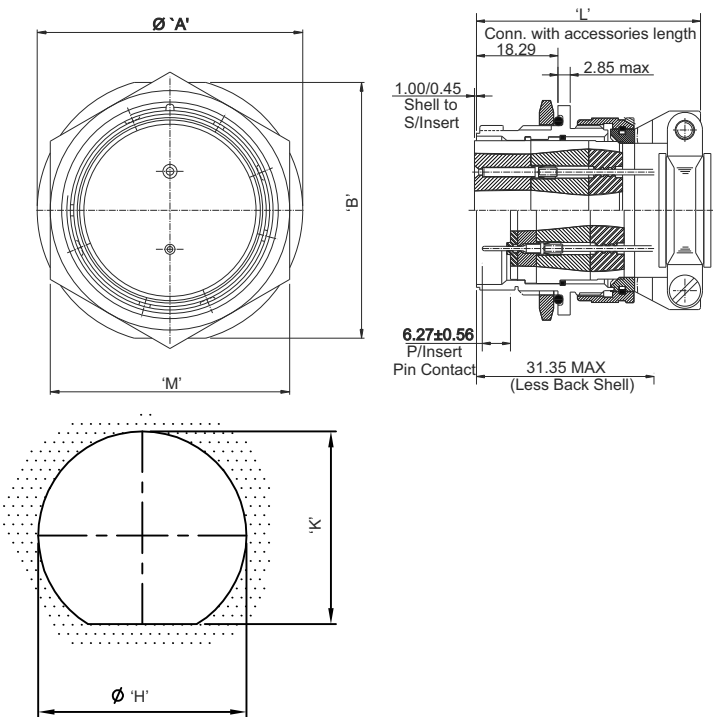
L ANYARD STRAIGHT PLUG (PTDS78)



Shell Size	A	B	F	G
MIL	A _{ILL}	max	max	max
3	10	32.35	23.30	17.00
7	12	36.15	26.80	48.74
12	14	39.20	29.60	25.00
19	16	43.00	33.55	28.25
27	18	46.70	37.20	54.71
37	20	48.95	40.70	30.95
61	24	57.10	47.85	34.15
				42.00

*Ref. Ordering information page 7

JAM NUT TYPE RECEPTACLE (PTDS74)



Shell Size	A	B	H	K	L	M
	max	max	$\begin{matrix} +0.20 \\ -0 \end{matrix}$	$\begin{matrix} +0.10 \\ -0 \end{matrix}$	max	Max
03	19.20	19.20	14.40	13.56		16.31
07	22.40	22.40	17.55	16.79	44.80	21.07
12	27.20	27.20	20.73	19.91		24.24
19	30.40	29.60	25.48	24.61		27.40
27	33.60	33.50	28.65	27.81	50.80	32.18
37	38.30	36.30	31.83	30.99		35.36
61	47.80	47.20	38.20	37.26		43.02

Panel Cut Out

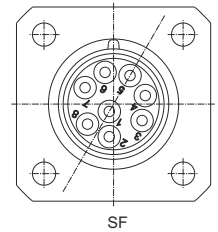
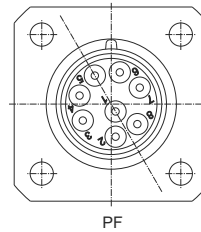
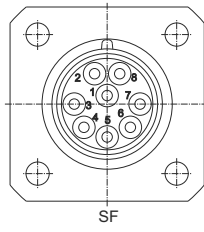
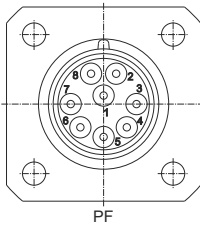
*Not yet developed. Contact factory for further details.

*Ref. Ordering information page 7

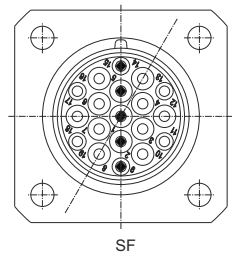
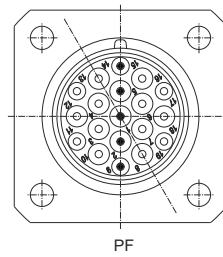
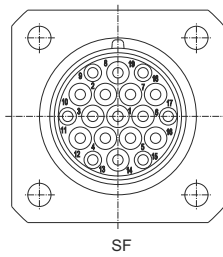
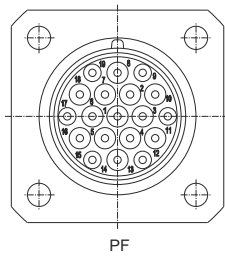
12-8

Recept. with normal Orientation

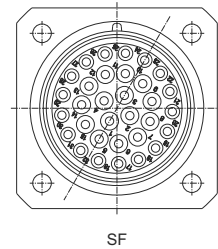
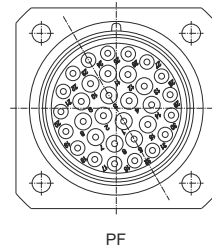
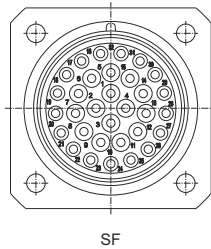
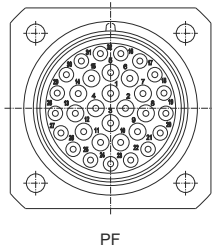
Recept. with with Pin & Socket Insert (150° 'B' ORIENT.)



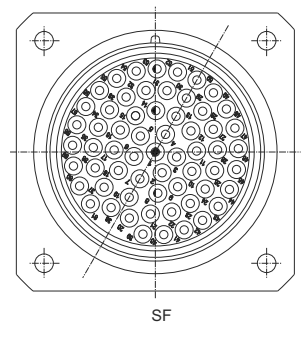
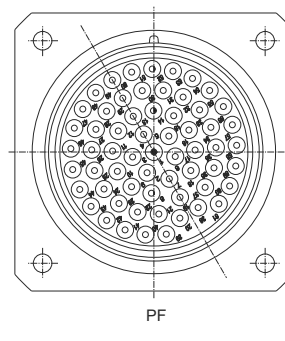
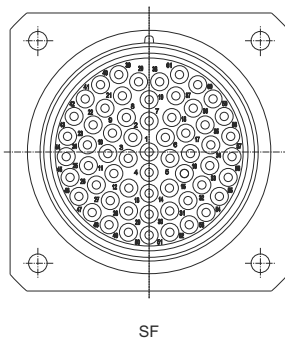
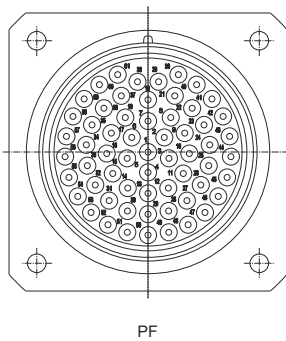
14-19



18-32



24-61



1. Operating Voltage	: Service rating	Voltage
	I	600V RMS
	II	1000V RMS
2. Operating Current	: Contact Size	Current in AMPH
	20	7.5
	16	13.0
3. Operating Temperature	-55 to + 200° C	
4. Materials		
a) Shell	: Aluminum Alloy	
b) Insulator	: High Grade Plastic	
c) Contact	: Copper Alloy	
d) Grommet & Seal	: Silicon Based Elastomer	
5. Finish		
a) Contact	: 1.27 micron Gold plating over nickel	
b) Shell & C/Ring & Accessory	: Electroless Nickel plating	
6. Contact resistance	: Contact Size	CR in milliohms max.
	20	7.3
	16	3.9
7. Insulation resistance	: 10000 Megaohms	
8. Voltage Proof	: 0.8 KV M	
9. Voltage Proof	: Service Rating	Voltage
	I	1500V RMS
Coupling Force Axial - Pounds (Kgs)	II	2300V RMS

Shell Size		Max. Engagement & Disengagement force as per SAE AS81703	Min. Disengagement force as per SAE AS81703	Recommended by VSCC. in (Kgs) Space Application
MIL	AILL			
* 3	10			
7	12	20 (9.07)	1.50 (0.680)	(4.0 - 7.0)
12	14	34 (15.42)	2.00 (0.907)	(4.5 - 8.0)
*19	16			
27	18	40 (18.14)	4.00 (1.814)	(5.0 - 9.0)
*37	20			
61	24	49 (22.24)	7.00 (3.175)	(5.5 - 11.00)

*Not in Amphenol Range

10. Applicable Tools

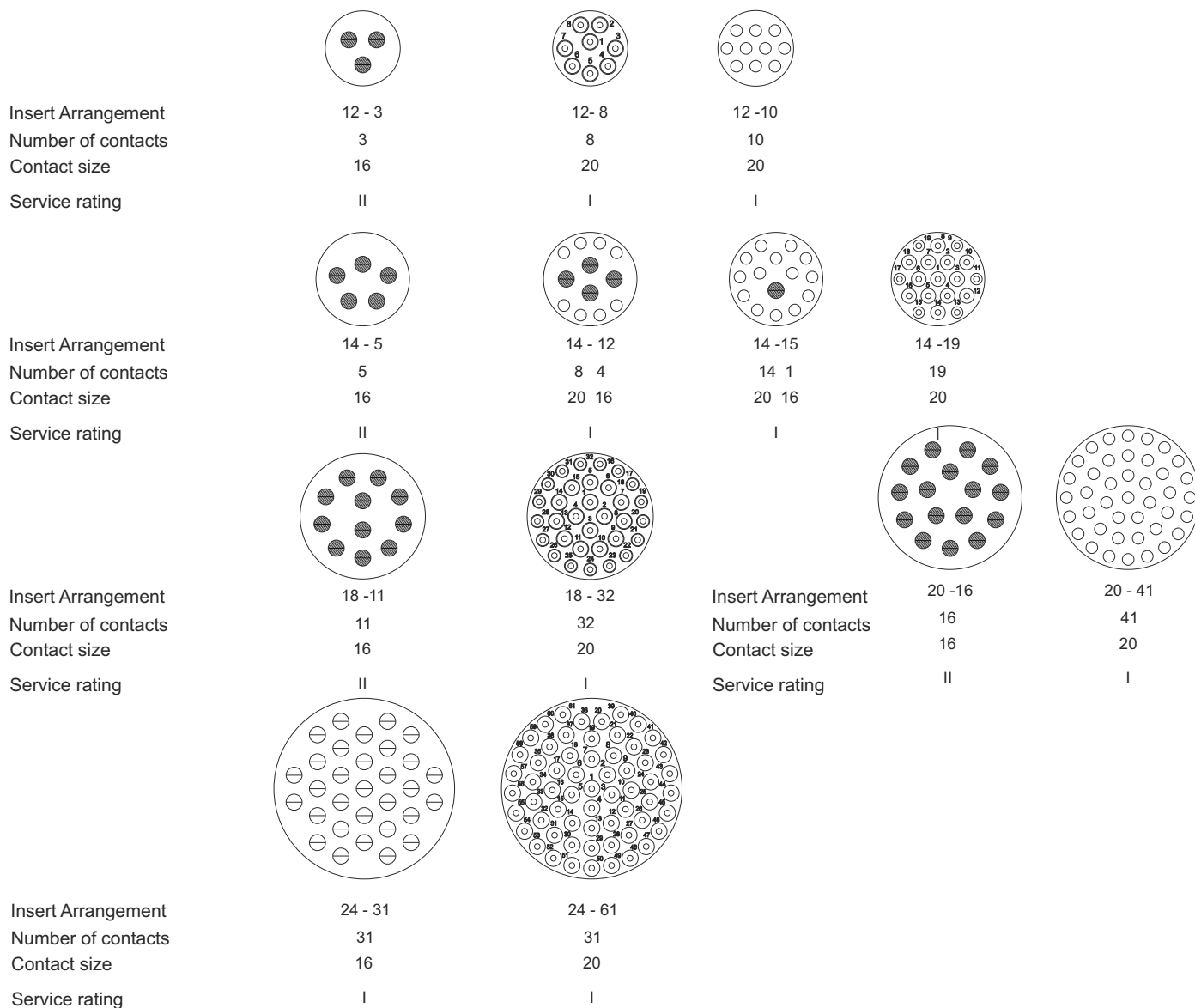
a) Crimping Tools	M22520/ 1-01
b) Locator	M22520/ 1-01
c) I/R Tool	a) M 81969/14-11 (20 size) b) M 81969/14-03 (16 size)

11. Ref. Std./Spec

MIL-C-81703

VSSC SPEC. ELG/INDG/TF/DBAS/01/97

Insert Configuration



MIL-C 81703 S/Size	Amphenol Insert Configuration	W	X	Y	Z	B	C	# 20	# 16
7-0	12-3	-	-	180	-	-	-	-	03
	12-8	90	112	203	292	150	-	08	-
	12-10	60	155	270	295	-	-	10	-
12-0	14-5	40	92	184	273	-	-	-	05
	14-12	43	90	-	-	-	-	08	04
	14-15	30	165	315	-	-	-	14	01
	14-19	30	165	315	-	150	-	19	-
27-0	18-11	62	119	241	340	150	-	-	11
	18-32	85	138	222	265	150	-	32	-
37-0	20-16	238	318	333	347	-	-	-	16
	20-41	45	126	225	-	-	-	41	-
61-0	24-31	90	225	255	-	-	-	-	31
	24-61	90	180	270	324	150	-	61	-

<u>A</u> 1	<u>PTDS</u> 2	<u>70</u> 3	<u>18</u> 4	<u>32</u> 5	<u>P</u> 6	<u>W</u> 7	<u>L</u> 8	<u>V2</u> 9
	Series	Shell Style	Shell Size	Insert Arrangement	Contact Configuration	Orientation	Modification	Modification

1. Manufacturer Logo

2. Connector Type

3. Shell Type

- 70 Wall Mounting Receptacle
- 74 Jam Nut Receptacle
- 76 Straight Plug
- 78 Lanyard Plug

4. Shell Size

- 12 Size
- 14 Size
- 18 Size
- 20 Size
- 24 Size

5. Insert Arrangement

Refer page No. 6

6. Contact Configuration

- P- Pin Socket
- S- Socket Contact

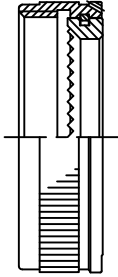
7. Orientation

- (Omit if normal Orientation)
- Keys/Keyways B Orientation
- For Inserts : W, X, Y & Z
- (Refer page no. 4)

8. Launch Vehicle

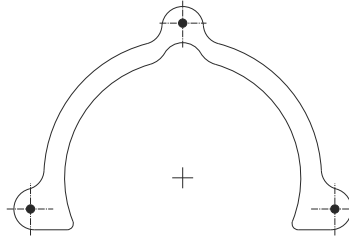
9. Version

CLAMP NUT



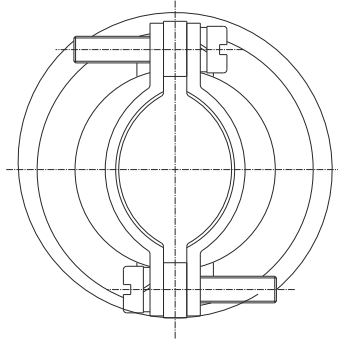
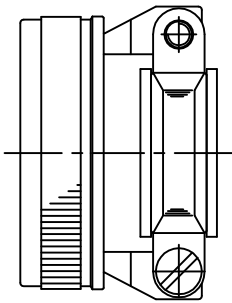
Shell Size		CONN. P/NOS.	
MIL	A IIL		
*	3	10	PTDS-10-BS-416
	7	12	PTDS-12-BS-416
	12	14	PTDS-14-BS-416
*	19	16	PTDS-16-BS-416
	27	18	PTDS-18-BS-416
	37	20	PTDS-20-BS-416
	61	24	PTDS-24-BS-416

Leading Clip



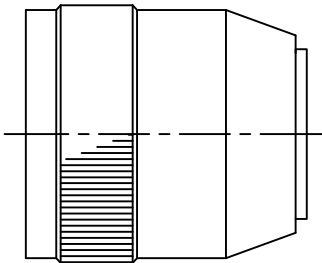
Shell Size		CONN. P/NOS.	
MIL	A IIL		
	3	10	PTDS-76-10-LC
	7	12	PTDS-76-12-LC
	12	14	PTDS-76-14-LC
	19	16	PTDS-76-16-LC
	27	18	PTDS-76-18-LC
	37	20	PTDS-76-20-LC
	61	24	PTDS-76-24-LC

S/R CLAMP BODY



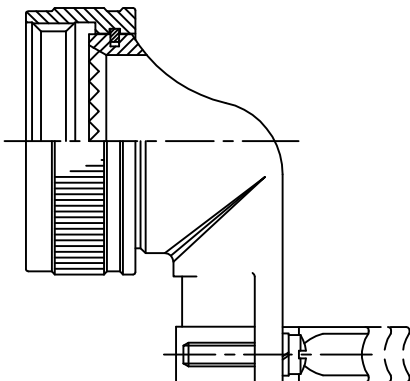
Shell Size		CONN. P/NOS.	
MIL	A IIL		
*	3	10	PTDS-10-SR-416
	7	12	PTDS-12-SR-416
	12	14	PTDS-14-SR-416
*	19	16	PTDS-16-SR-416
	27	18	PTDS-18-SR-416
	37	20	PTDS-20-SR-416
	61	24	PTDS-24-SR-416

POTTING CUP



Shell Size		CONN. P/NOS.	
MIL	A IIL		
*	3	10	PTDS-10-PC-416
	7	12	PTDS-12-PC-416
	12	14	PTDS-14-PC-416
*	19	16	PTDS-16-PC-416
	27	18	PTDS-18-PC-416
	37	20	PTDS-20-PC-416
	61	24	PTDS-24-PC-416

S/R ANGLE PLUG



Shell Size		CONN. P/NOS.	
MIL	A IIL		
*	3	10	PTDS-10-RT-416
	7	12	PTDS-12-RT-416
	12	14	PTDS-14-RT-416
*	19	16	PTDS-16-RT-416
	27	18	PTDS-18-RT-416
*	37	20	PTDS-20-RT-416
	61	24	PTDS-24-RT-416

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Amphenol

A Global Company



Pune Operations



Bangalore Operations

Amphenol

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