Amphenol® Miniature Cylindrical Connectors
Proprietary/MIL-C-26482, Series 1

Amphenol® Miniature Cylindrical connectors offer twice the number of contacts in just half the size of a Standard connector. These miniature connectors, are available in several series, each with varying design characteristics and customer options to meet cost considerations and provide maximum design flexibility. There are two styles within the family that are MS approved and qualified to MIL-C-26482, Series 1, and in addition there are several proprietary styles.

Common features of all styles:

- All are for general duty applications and environmental sealing is achieved with the grommet and clamp design.
- Operating temperature is from –55°C to +125°; Operating voltage to 1000 VAC (RMS) at sea level.
- Pin and socket contacts are machined from low loss copper alloy and gold plated to eliminate contact corrosion and provide an indefinite shelf life.
- All have resilient inserts which provide high dielectric strength and moisture barrier.
- A variety of shell finishes (including non-cadmium) and a variety of backend accessories are available within the styles.

PT Solder
jam nut receptacle and mated straight plug

PT Solder
wall mount receptacle

PT-SE Crimp
wall mount receptacle and mated straight plug

PC Threaded Crimp
straight plug and wall mount receptacle

Bayonet Coupling with Solder Contact Termination

PT, MS/PT (solder)

- MS and proprietary versions
- Factory installed solder contacts
- 3 point bayonet coupling and 5 key/keyway mating.
- Intermateable with all miniature series connectors except threaded PC series.
- MS/PT meets MIL-C-26482 Series 1, service classes E, F and P.
- MS/PT is UL recognized.

SP (solder)

- SP Series is a modification of the PT with same features except a wider flange for back panel mounting

Options

- 7 shell styles with 60 insert patterns
- Hermetic seal (glass fusion) receptacle styles available
- Pressurized thru bulkhead receptacle style available
- Breakaway quick disconnect styles
- EMI filter protection styles
- Pre-installed coax solder contacts are available
- Printed circuit board contacts are available

Bayonet Coupling with Crimp Contact Termination

PT-SE, MS/PT-SE (crimp)

- MS and proprietary versions
- Crimp rear insertable/front release contact termination. (closed entry socket insert prevents probe damage).
- 3 point bayonet coupling and 5 key/keyway mating.
- Intermateable with all miniature series connectors except threaded PC series.
- MS/PT-SE meets MIL-C-26482 Series 1, service classes E, F, P.

SP-SE (crimp)

- Modification of the PT-SE with wider flange for back panel mounting

PT-CE, SP-CE (crimp)

- Incorporates a special one-piece insert and grommet assembly

Options

- 6 shell styles with 47 insert patterns
- Breakaway quick disconnect style available
- Coax and thermocouple contacts are available

Threaded Coupling with Solder Contact Termination

PC (solder) Proprietary

- Double stub threaded coupling and single hole polarization.
- Factory installed solder contacts

Options

- 5 shell styles with 60 insert patterns
- Hermetic receptacles available
- Pressurized thru bulkhead receptacle style available
- Pre-installed coax solder contacts are available.

Threaded Coupling with Crimp Contact Termination

Two threaded PC styles are offered in some shell sizes. Both have crimp front release and front removable contacts, but they have different retention systems.

PC-SE (crimp) Proprietary - with spring tower retention system

- Spring tower retention system

PC-CE (crimp) Proprietary - with nylon wafer dielectric system

Options

- 5 shell styles (consult Amphenol for availability of shell sizes and insert patterns)

Amphenol® Miniature Cylindrical
design flexibility

The large family of miniature proprietary and MS style connectors provides for many optional features and designs. In addition to the choices of bayonet or threaded shells, solder or crimp termination within the style variations, there are additional options that are shown here.

Hermetics
Hermetically sealed receptacles have fused compression glass sealed inserts which provide envionrmental moisture sealing. There are three hermetic styles within the PT bayonet series and three hermetic styles within the PC threaded series.

26482 Connector with Hermetic Seal Insert and Coax Contacts

26482 Connector with PC Tail Contacts

Coaxial Contacts
Amphenol Miniature connectors can incorporate shielded coax contacts. Size 8 and 12 crimp coax contacts are available in PT-SE, SP-SE, MS/PT-SE. Factory installed size 8 and 12 solder type coax contacts are available in PT, SP,MS/PT connectors. See coax contact information pages at the end of this catalog.

Printed Circuit Board Tail Contacts
PT bayonet connectors in box mounting receptacle and jam nut receptacle styles are available with printed circuit board contacts. Standard PCB tails for MIL-C-26482 connectors have gold plating, .0050 inches over nickel. See page 20 and call Amphenol for further information.

Flex Circuitry
Flex termination assemblies for attaching cylindrical connectors to printed circuit boards are available through the Amphenol division ACT, Advanced Circuit Technology. Flex can be used with miniature 26482 connectors and it can be designed to meet specific length, current carrying capacity and to fit the precise geometric shape of the connector to board package. Flex circuity plugs into a printed circuit board and creates a self-locking terminal pad which eliminates the need for an additional interconnect to the PCB.

26482 Connector with Flex

Breakaway, Twist Pull Miniatures
Quick disconnect “breakaway” styles are shown in this catalogs. These are available in PT solder style plugs (page 26), PT-SE crimp style plugs (page 38) or PT-CE crimp style plugs (page 48). Quick disconnect of the connector plug from the receptacle is accomplished with axial pull on the lanyard. This instant decoupling and damage free separation is ideal for weapons release and blind or difficult accessibility situations. Separation forces vary per connector series. The plug and receptacle need to be fully mated before disengagement by the lanyard pull.

Breakaway Twist Pull 26482

Filter Protection
Amphenol offers the FPT Series which combines the miniature PT series with an EMI filter. Designed to provide EMI protection for sensitive circuits, each circuit is individually filtered within the connector, eliminating the need for costly and bulky exterior network filters. Filter contacts are available in MF, HF, VHF, and UHF ranges and are intermateable and intermountable with MIL-C-26482 connectors. For further information see catalog 12-120, Amphenol EMI Filter Transient Protection Connectors. (online at www.amphenol-aerospace.com).

26482 Connector with EMI Filter Protection

26482 Connector with Overmolded Cable

Overmolded Cable
Overmold seals and cables can be designed for almost any industrial application. A variety of materials are available: neoprene, hypalon and others; and a variety of lengths can be designed to meet customer specifications. Overmold seals to the rear of the connector and to the cable jacket providing moisture sealing.

Amphenol® Miniature Cylindrical
connector selection guide

The accompanying chart is provided to assist the user in selecting the appropriate type of miniature connector to meet the application requirements. Further information can be found in specific sections of this catalog.

CHARACTERISTICS		Solder				Crimp						
		PT	MS/PT	SP	PC	MS/ PT-SE	PT-SE	SP-SE	PC-SE	PT-CE	SP-CE	PC-CE
Intermateable†		o	o	o	X	o	o	o	X	o	o	X
Contacts	Solder	•	•	•	•							
	Crimp RI/FR					•	•	•	•	•	•	•
Contact Retention System	Non-Removable	•	•	•	•							
	Removable					•	•	•	•	•	•	•
Coupling	Bayonet	•	•	•		•	•	•		•	•	
	Threaded				•				•			•
Standard Finishes††	Olive Drab Cadmium (003)	•	•			•	•			•		
	Anodic Coated (005)			•				•			•	
	Bright Cadmium (001)				•				•			•
Temperature Range	Resilient Dielectric (–55°C to +125°C)	•	•	•	•	•	•	•	•	•	•	•
Wide Mounting Flange				•				•			•	
Hermetic Seal		•	•	•	•							
SHELL STYLE AVAILABILITY												
Wall Mounting Receptacle “00”		•	•	•	•	•	**•	•	•	•	•	
Cable Connecting Receptacle “01” ***		•	•		•	•	•		•	•		•
Box Mounting Receptacle “02”		*•	•	•	*•	•	**•	•	•	•	•	
Straight Plug “06”		•	•	•	•	•	•	•	•	•	•	•
Jam Nut Receptacle “07”		*•	*•	•	*•	•	•	•	•	•	•	•
Thru-bulkhead Receptacle “TB”		•		•								
Solder Mount Receptacle “I”		*•	*•		*•							
90° Plug “08”		•		•	•		•	•	•	•	•	

RI/FR = Rear Insertion/Front Releasable

† o intermates with o
X intermates with X

†† Optional finishes available. See “how to order” sections.

* Available in hermetic version

** Dual mounting holes

*** This connector style is sometimes referred to as a cable connecting “plug.” It does, however, mate with either a straight or 90 degree plug.

Amphenol®/Matrix® MIL-C-26482, Series 2 bayonet coupling connectors with rear insertable and rear releaseable contacts are covered in another catalog - See pageXX for a brief description and see complete details in catalog 12-071 which is online at www.amphenol-aerospace.com.

Amphenol® Miniature Cylindrical
insert availability

Insert Arrangement	Solder Termination					Crimp Termination		Total Contacts	Contact Size					
	MS/PT	PT	SP	PC	Hermetic PT MS-PT PC	MS/PT-SE PT-SE SP-SE PC-SE	PT-CE SP-CE PC-CE		20	16	12	Coax 12	Coax 8	Service Rating
6-1		X	X	X	X*			1	1					I
8-2	X	X	X	X	X		X	2	2					I
8-3	X	X	X	X	X		X	3	3					I
8-4	X	X	X	X	X		X	4	4					I
8-33		X	X	X	X	X		3	3					I
8-98		X	X	X				3	3					I
10-2		X	X	X				2		2				I
10-5		X	X	X	X*			5	5					I
10-6	X	X	X	X	X	X	X	6	6					I
10-70		X	X	X				1					1	Coax
10-98	X	X	X	X	X*		X	6	6					I
12-3	X	X	X	X	X	X	X	3		3				II
12-4		X	X	X	X*			4		4				I
12-8	X	X	X	X	X*	X	X	8	8					I
12-10	X	X	X	X	X	X	X	10	10					I
12-14		X	X	X				14	14					I
12-98		X	X	X				10	10					I
14-2		X	X	X				2				2		II
14-4		S	S	S	X			4			4			I
14-5	X	X	X	X	X	X	X	5		5				II
14-8		X	X	X				8	6		2			I
14-12	X	X	X	X	X	X	X	12	8	4				I
14-15	X	X	X	X	X	X	X	15	14	1				I
14-18	X	X	X	X	X*	X	X	18	18					I
14-19	X	X	X	X	X	X	X	19	19					I
14-22						X*		5	1		4			I
14-71		P	X	X			(02CE)	4		3			1	I
14-91 HV		S	X	X		X*		3	3					**
14-AA		X	X	X	X			4			4			I
16-8	X	X	X	X	X	X	X	8		8				II
16-23	X	X	X	X		X	X	23	22	1				I
16-26	X	X	X	X	X	X	X	26	26					I
16-70		X	X	X				15	14			1		N/A
16-76†††						X*		14	8		1	5		***
16-99	X	X	X	X		X		23	21	2				I
18-5		X	X	X		X*		5			5			II
18-8								8			8			I
18-11	X	X	X	X	X	X	X	11		11				II
18-30	X	X	X	X	X*	X	X	30	29	1				I

*Not available in MS version
**Flashover voltage 5,000 VAC (RMS)
***1500 VAC (RMS)
Sdesignates Socket insert only.
P designates Pin insert only.
†Size 12 contacts for #10 wire
††Not presently tooled
†††Contacts must be ordered separately

Amphenol® Miniature Cylindrical
insert availability, cont.

Insert Arrangement	Solder Termination					Crimp Termination		Total Contacts	Contact Size					
	MS/PT	PT	SP	PC	Hermetic PT MS-PT PC	MS/PT-SE PT-SE SP-SE PC-SE	PT-CE SP-CE PC-CE		20	16	12	Coax 12	Coax 8	Service Rating
18-32	X	X	X	X	X	X	X	32	32					I
18-71						X*		9		8			1	Coax, II
18-72		X	X	X				14	10			4		N/A
18-75		X	X	X				4					4	Coax
18-76								4				3	1	II
18-80		X	X	X			X	8	6				2	Coax, I
18-91 HV						X*	X	6	6					**
20-16	X	X	X	X	X	X	X	16		16				II
20-24	X	X	X	X			X	24	24					I
20-25		X	X	X				25	25					I
20-26		X	X	X				26	20		6			I
20-27	X	X	X	X			X	27	27					I
20-39	X	X	X	X	X	X	X	39	37	2				I
20-41	X	X	X	X	X	X	X	41	41					I
20-70								14	10				4	Coax
20-90 HV		X	X	X				7	7					Hi-Voltage
22-7		X	X	X		X*		7					7	Coax
22-21	X	X	X	X	X	X	X	21		21				II
22-25						X*		25		25				I
22-32	X	X	X	X		X	P	32	32					I
22-34		X	X	X			X	34	34					I
22-36		X	X	X			X	36	36					I
22-41	X	X	X	X	X	X	X	41	27	14				I
22-55	X	X	X	X	X	X	X	55	55					I
22-70		X	X	X				19	13				6	I, Coax
22-71								9	2				7	I, Coax
22-72		X	X	X				19	12	4			3	N/A
22-78†††						X*		7					7	Coax
22-96						X*		7			7†			II
24-31		X	X	X			X	31		31				I
24-51						X*		51	47			4		I
24-61	X	X	X	X	X	X	X	61	61					I
24-71		X	X	X				49	45	2			2	N/A
24-79								6	1				5	Coax

*Not available in MS version
**Flashover voltage 5,000 VAC (RMS)
***1500 VAC (RMS)

†Size 12 contacts for #10 wire
††Not presently tooled
†††Contacts must be ordered separately

Amphenol® Miniature Breakaway Twist Pull
insert availability

Insert Availability - Breakway Twist Pull

Insert Arrangement	Crimp Termination		Solder Termination	Total Contacts	Contact Size			
	PT-CE	PT-SE	PT		20	16	12	Service Rating
8-2	X		X	2	2			I
8-3	X		X	3	3			I
8-4	X		X	4	4			I
10-2			X	2		2		I
10-6	X	X	X	6	6			I
10-98	X		X	6	6			I
10-99	X	X		7	7			I
12-3	X	X	X	3		3		II
12-4			X	4		4		I
12-8	X	X	X	8	8			I
12-10	X	X	X	10	10			I
12-98			X	10	10			I
14-2			X	2			2	II
14-5	X	X	X	5		5		II
14-8			X	8	6		2	I
14-12	X	X	X	12	8	4		I
14-15	X	X	X	15	14	1		I
14-16			X	4		2	2	II
14-18	X	X	X	18	18			I
14-19	X	X	X	19	19			I
14-91		X	X	3	3*			H.V.
16-6			X	6			6	I
16-8	X	X	X	8		8		II
16-23	X	X	X	23	22	1		I
16-26	X	X	X	26	26			I
16-99		X	X	23	21	2		I
18-5		X	X	5			5	II
18-11	X	X	X	11		11		II
18-28		X	X	28	26	2		I
18-30	X	X	X	30	29	1		I
18-32	X	X	X	32	32			I
18-91		X	X	6	6*			H.V.
20-8			X	8		8		I
20-16	X	X	X	16		16		II
20-24	X		X	24	24			I
20-25			X	25	25			I
20-27	X		X	27	27			I
20-39	X	X	X	39	37	2		I
20-41	X	X	X	41	41			I
22-8			X	8		8		II
22-21	X	X	X	21		21		II
22-25		X		25		25		I
22-32	X	X	X	32	32			I
22-34	X		X	34	34			I
22-36	X		X	36	36			I
22-41		X	X	41	27	14		I
22-55	X	X	X	55	55			I
22-96		X		7			7†	II
22-97			X	16		16		II
22-99			X	11		11		II
24-31	X			31		31		I
24-61	X	X	X	61	61			I

For further information regarding any additional insert patterns available in Breakaway Miniature connectors, please contact Amphenol Aerospace. For availability of shielded coax contacts within Breakaway Miniature connectors contact Amphenol.The Breakaway style pages are: PT (solder) breakaway plug is on page 26, the PT-SE (crimp) breakaway plug is on page 38, and the PT-CE (crimp) breakaway plug is on page 48.

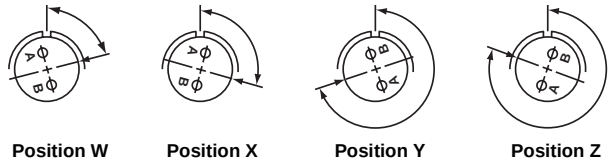
* 5KV Voltage Rating
† Size 12 contact for #10 wire.

Amphenol® Miniature Cylindrical
alternate positioning

Alternate Positioning

To avoid cross-plugging problems in applications requiring the use of more than one miniature cylindrical connector of the same size and arrangement, alternate insert rotations are available as indicated in the accompanying chart.

As shown in the diagram at right, the front face of the pin insert is rotated within the shell in a clockwise direction from the normal shell key. The socket insert would be rotated counterclockwise the same number of degrees in respect to the normal shell key.



Views looking into front face of pin insert or rear of socket insert.

Insert Rotation					
Shell Size	Insert Arrangement	Degrees			
		W	X	Y	Z
6	6-1	–	–	–	–
8	8-2*	58	122	–	–
8	8-3	60	210	–	–
8	8-4*	45	97	184	–
8	8-33*	90	–	–	–
8	8-98	–	–	–	–
10	10-2	45	90	315	–
10	10-5*	45	151	180	270
10	10-6*	90	–	–	–
10	10-70	–	–	–	–
10	10-98*	90	180	240	270
12	12-3*	–	–	180	–
12	12-4*	38	–	–	–
12	12-8	90	112	203	292
12	12-10*	60	155	270	295
12	12-14	–	–	–	–
12	12-98*	61	135	189	340
14	14-2	58	122	–	–
14	14-4*	45	–	–	–
14	14-5*	40	92	184	273
14	14-8	48	162	189	312
14	14-12*	43	90	–	–
14	14-15*	17	110	155	234
14	14-18*	15	90	180	270
14	14-19*	30	165	315	–
14	14-22	45	–	–	–
14	14-71	–	–	–	–
14	14-91HV	–	60	–	–
14	14-AA*	45	–	–	–
16	16-8*	54	152	180	331
16	16-23	158	270	–	–
16	16-26*	60	–	275	338
16	16-70	41	122	216	286
16	16-76	–	–	–	–
16	16-99*	66	156	223	340
18	18-5	55	97	263	315
18	18-8	180	–	–	–

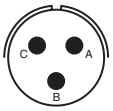
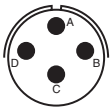
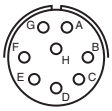
Insert Rotation					
Shell Size	Insert Arrangement	Degrees			
		W	X	Y	Z
18	18-11*	62	119	241	340
18	18-30*	180	193	285	350
18	18-32*	85	138	222	265
18	18-71	18	108	127	215
18	18-72	53	102	213	293
18	18-75	45	–	–	–
18	18-76	–	–	–	–
18	18-80	45	90	135	160
18	18-91HV	90	180	240	270
20	20-16*	238	318	333	347
20	20-24	70	145	215	290
20	20-25	72	144	216	288
20	20-26	13	107	210	322
20	20-27	72	144	216	288
20	20-39*	63	144	252	333
20	20-41*	45	126	225	–
20	20-70	63	135	222	335
20	20-90	45	135	225	315
22	22-7	19	41	–	–
22	22-21*	16	135	175	349
22	22-25	60	125	211	336
22	22-32	72	145	215	288
22	22-34	62	142	218	298
22	22-36	72	144	216	288
22	22-41	39	135	264	–
22	22-55*	30	142	226	314
22	22-70	30	82	218	312
22	22-71	33	191	236	270
22	22-72	42	200	277	339
22	22-78	19	41	–	–
22	22-96*	19	41	–	–
24	24-31	90	225	255	–
24	24-51	22	171	313	–
24	24-61*	90	180	270	324
24	24-71	39	131	205	281
24	24-79	–	–	–	–

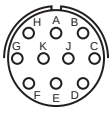
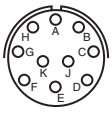
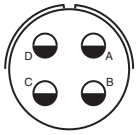
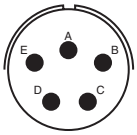
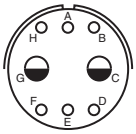
* Available in Hermetic Class

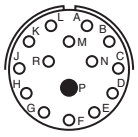
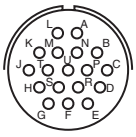
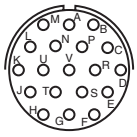
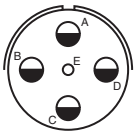
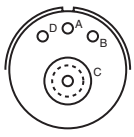
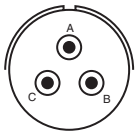
Amphenol® Miniature Cylindrical
insert arrangements

front face of pin inserts illustrated

							
Insert Arrangement	**6-1**	**8-2**	**8-3**	**8-4**	**8-33**	**8-98**	**10-2**
Service Rating	**I**	**I**	**I**	**I**	**I**	**I**	**I**
Number of Contacts	**1**	**2**	**3**	**4**	**3**	**3**	**2**
Contact Size	**20**	**20**	**20**	**20**	**20**	**20**	**16**

							
Insert Arrangement	**10-5**	**10-6**	**10-70**	**10-98**	**12-3**	**12-4**	**12-8**
Service Rating	**I**	**I**	**Coax**	**I**	**II**	**I**	**I**
Number of Contacts	**5**	**6**	**1**	**6**	**3**	**4**	**8**
Contact Size	**20**	**20**	**8 Coax**	**20**	**16**	**16**	**20**

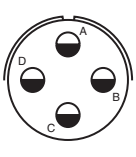
							
Insert Arrangement	**12-10**	**12-14**	**12-98**	**14-2**	**14-4**	**14-5**	**14-8**
Service Rating	**I**	**I**	**I**	**II**	**I**	**II**	**I**
Number of Contacts	**10**	**14**	**10**	**2**	**4**	**5**	**6 2**
Contact Size	**20**	**20**	**20**	**12**	**12**	**16**	**20 12**

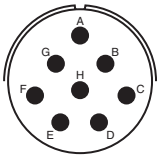
							
Insert Arrangement	**14-12**	**14-15**	**14-18**	**14-19**	**14-22**	**14-71**	**14-91HV** **Flashover 5,000 VAC (RMS)**
Service Rating	**I**	**I**	**I**	**I**	**I**	**I**	
Number of Contacts	**8 4**	**14 1**	**18**	**19**	**1 4**	**3 1**	**3**
Contact Size	**20 16**	**20 16**	**20**	**20**	**20 12**	**16 8 Coax**	**20**

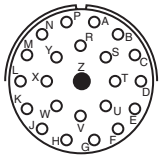
For contact legend see page 61.

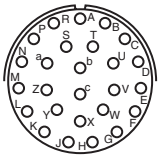
Amphenol® Miniature Cylindrical
insert arrangements

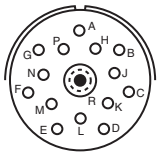
front face of pin inserts illustrated



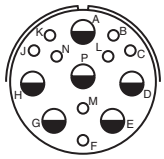


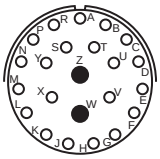


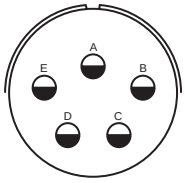


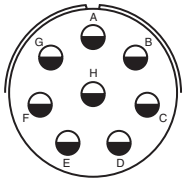


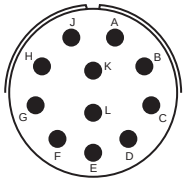
Insert Arrangement	**14-AA**	**16-8**	**16-23**	**16-26**	**16-70**
Service Rating	**I**	**II**	**I**	**I**	**N/A**
Number of Contacts	**4**	**8**	**22 1**	**26**	**14 1**
Contact Size	**12**	**16**	**20 16**	**20**	**20 12 Coax**





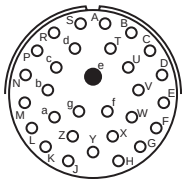


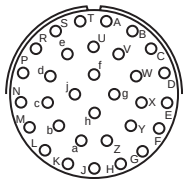


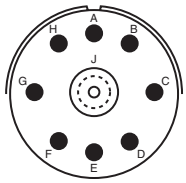


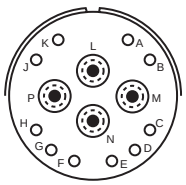
Insert Arrangement	**16-76**	**16-99**	**18-5**	**18-8**	**18-11**
Service Rating	**Flashover 1.500 VAC (RMS)**	**I**	**II**	**I**	**II**
Number of Contacts	**8 1 5**	**21 2**	**5**	**8**	**11**
Contact Size	**20 12* 2 Coax***	**20 16**	**12**	**12**	**16**

***Contact Positions Optional**

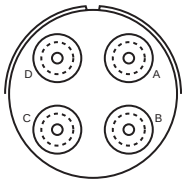


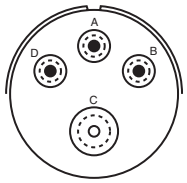


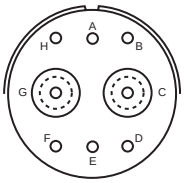


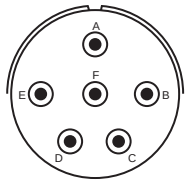


Insert Arrangement	**18-30**	**18-32**	**18-71**	**18-72**
Service Rating	**I**	**I**	**II, Coax**	**N/A**
Number of Contacts	**29 1**	**32**	**8 1**	**10 4**
Contact Size	**20 16**	**20**	**16 8 Coax**	**20 12 Coax**





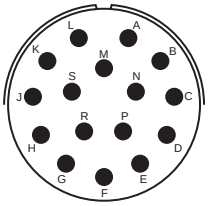




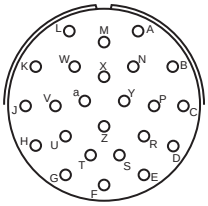
Insert Arrangement	**18-75**	**18-76**	**18-80**	**18-91 HV**
Service Rating	**Coax**	**II**	**I, Coax**	**Flashover 5,000 VAC (RMS)**
Number of Contacts	**4**	**3 1**	**6 2**	**6**
Contact Size	**8 Coax**	**12 Coax 8 Coax**	**20 8 Coax**	**20**

Amphenol® Miniature Cylindrical
insert arrangements

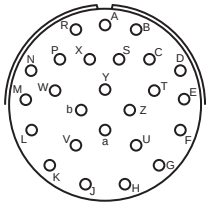
front face of pin inserts illustrated



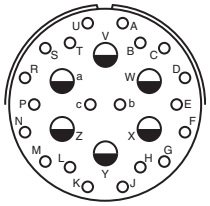
Insert Arrangement	**20-16**
Service Rating	**II**
Number of Contacts	**16**
Contact Size	**16**



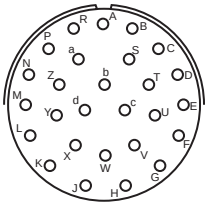
Insert Arrangement	**20-24**
Service Rating	**I**
Number of Contacts	**24**
Contact Size	**20**



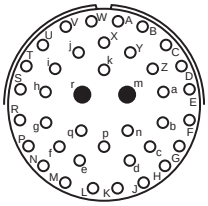
Insert Arrangement	**20-25**
Service Rating	**I**
Number of Contacts	**25**
Contact Size	**20**



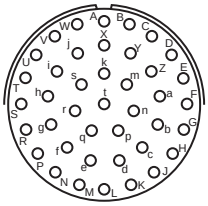
Insert Arrangement	**20-26**
Service Rating	**I**
Number of Contacts	**20 6**
Contact Size	**20 12**



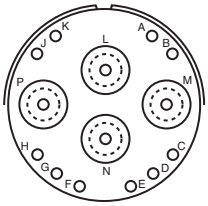
Insert Arrangement	**20-27**
Service Rating	**I**
Number of Contacts	**27**
Contact Size	**20**



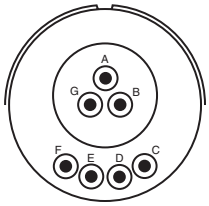
Insert Arrangement	**20-39**
Service Rating	**I**
Number of Contacts	**37 2**
Contact Size	**20 16**



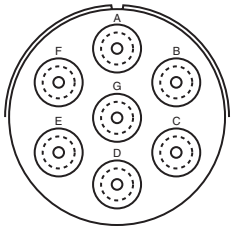
Insert Arrangement	**20-41**
Service Rating	**I**
Number of Contacts	**41**
Contact Size	**20**



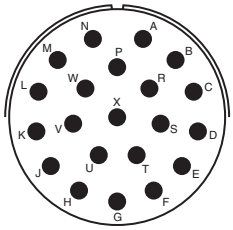
Insert Arrangement	**20-70**
Service Rating	**Coax**
Number of Contacts	**10 4**
Contact Size	**20 8 Coax**



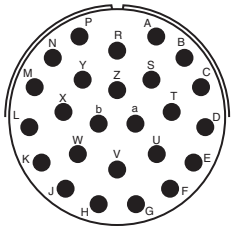
Insert Arrangement	**20-90**
Service Rating	**Hi-Voltage**
Number of Contacts	**7**
Contact Size	**20**



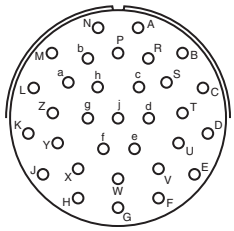
Insert Arrangement	**22-7**
Service Rating	**Coax**
Number of Contacts	**7**
Contact Size	**8 Coax**



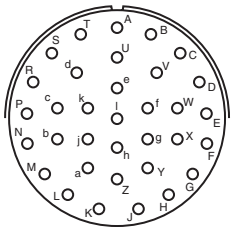
Insert Arrangement	**22-21**
Service Rating	**II**
Number of Contacts	**21**
Contact Size	**16**



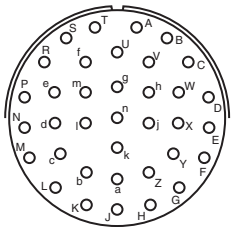
Insert Arrangement	**22-25**
Service Rating	**I**
Number of Contacts	**25**
Contact Size	**16**



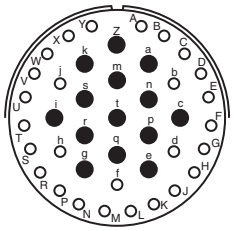
Insert Arrangement	**22-32**
Service Rating	**I**
Number of Contacts	**32**
Contact Size	**20**



Insert Arrangement	**22-34**
Service Rating	**I**
Number of Contacts	**34**
Contact Size	**20**



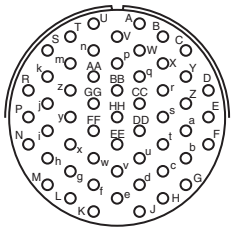
Insert Arrangement	**22-36**
Service Rating	**I**
Number of Contacts	**36**
Contact Size	**20**



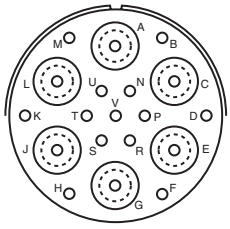
Insert Arrangement	**22-41**
Service Rating	**I**
Number of Contacts	**27 14**
Contact Size	**20 16**

Amphenol® Miniature Cylindrical
insert arrangements

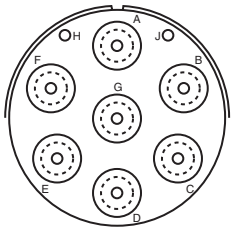
front face of pin inserts illustrated



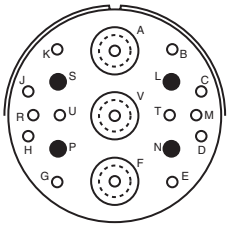
Insert Arrangement	**22-55**
Service Rating	**I**
Number of Contacts	**55**
Contact Size	**20**



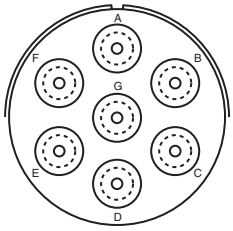
Insert Arrangement	**22-70**
Service Rating	**I, Coax**
Number of Contacts	**13 6**
Contact Size	**20 8 Coax**



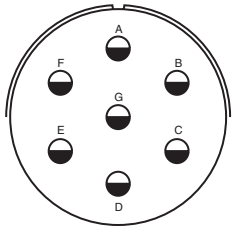
Insert Arrangement	**22-71**
Service Rating	**I, Coax**
Number of Contacts	**2 7**
Contact Size	**20 8 Coax**



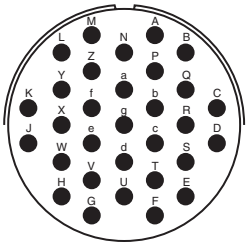
Insert Arrangement	**22-72**
Service Rating	**N/A**
Number of Contacts	**12 4 3**
Contact Size	**20 16 8 Coax**



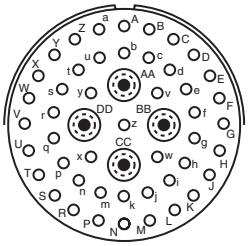
Insert Arrangement	**22-78**
Service Rating	**Coax**
Number of Contacts	**7**
Contact Size	**8 Coax**



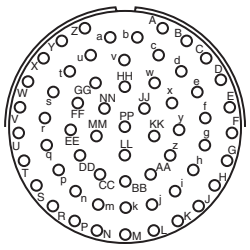
Insert Arrangement	**22-96**
Service Rating	**II**
Number of Contacts	**7**
Contact Size	**12 for # 10 wire**



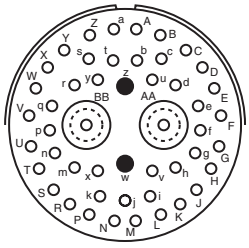
Insert Arrangement	**24-31**
Service Rating	**I**
Number of Contacts	**31**
Contact Size	**16**



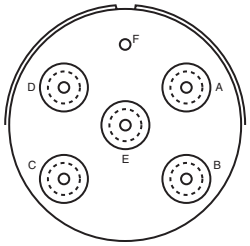
Insert Arrangement	**24-51**
Service Rating	**I**
Number of Contacts	**47 4**
Contact Size	**20 12 Coax**



Insert Arrangement	**24-61**
Service Rating	**I**
Number of Contacts	**61**
Contact Size	**20**



Insert Arrangement	**24-71**
Service Rating	**N/A**
Number of Contacts	**45 2 2**
Contact Size	**20 16 8 Coax**



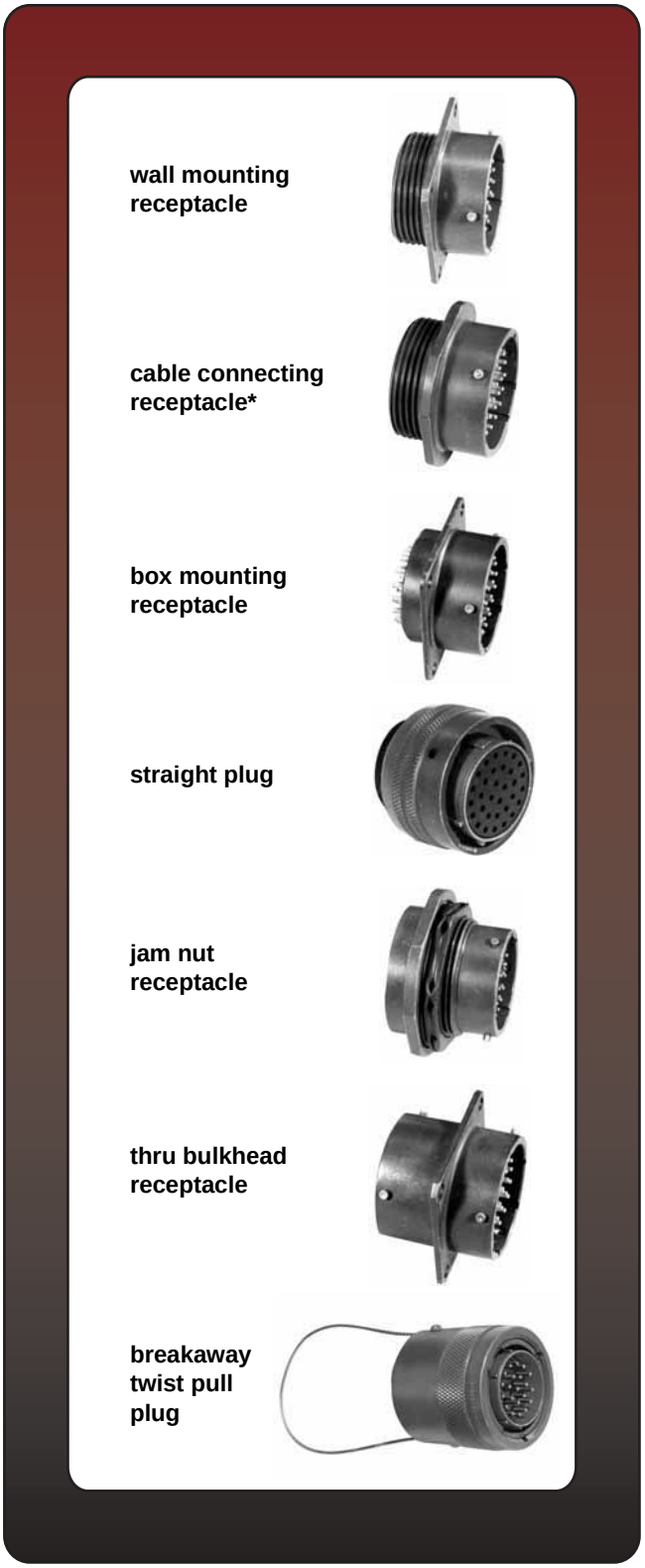
Insert Arrangement	**24-79**
Service Rating	**Coax**
Number of Contacts	**1 5**
Contact Size	**20 8 Coax**

Contact Legend

Symbol	Contact Size
○	20
●	16
◒	12
◉	HV
◉	12 Coax
◎	8 Coax

Amphenol® PT, SP, MS/PT

Proprietary/MIL-C-26482, Series 1 bayonet coupling and solder termination



Amphenol® solder contact miniature cylindrical connectors meet the most critical application needs. Design versatility combined with high reliability performance makes these series of Miniature Cylindrical Connectors ideal for environmental sealing or pressurized applications.

The MS/PT Series is qualified to MIL-C-26482, Series 1 and has all the outstanding design characteristics and quality of the PT Series. The SP Series is a modification of the PT, providing special shells with a wide mounting flange for back panel mounting.

A corrosion resistant electrically conductive finish of cadmium plate with an olive drab chromate after-treatment is used on the PT and MS/PT. The SP is given a durable non-conductive hard anodic "Alumilite"® coating which provides abrasion protection and resistance to corrosion.

Shell components for these series are aluminum. The dependable 5 key/keyway polarization with bayonet lock coupling assures positive mating with no chance of cross plugging. Spring tension provided by a wave washer in the coupling nut ensures maintenance of interfacial seal between mating halves.

Both the insert and main joint gasket are molded from resilient neoprene. This provides excellent moisture sealing at the gasket and superior electrical isolation of the contact in the insert.

Both pins and sockets are machined from a copper alloy and are gold plated. This gold plating eliminates contact corrosion and offers an indefinite shelf life. Socket contacts for these series are a closed entry design. A breakaway style plug is available in the PT solder series. Hermetics receptacles are available in PT and MS/PT solder series. Receptacles with printed circuit board contacts are also available.

PT Solder is UL recognized under file #E115497, Vol. 1, Sec. 5.

The PT, SP and MS/PT Series are intermateable and intermountable with all existing Miniature Cylindrical Series connectors except for the threaded coupling PC Series.

Refer to pages 4-11 for insert arrangement availability.

PT, SP, MS/PT

CONTACT DATA/CONNECTOR RATINGS

Contact Specifications				
Contact Size	Test Current	Maximum Millivolt Drop†	Solder Well Diameter	Solder Well Depth
20	7.5	55	.046 +.004 –.000	.125 +.031 –.000
16	13.0	50	.078 +.005 –.003	.188 +.031 –.000
12	23.0	42	.116 +.004 –.002	.188 +.031 –.000

Service Rating					
	Recommended Operating AC Voltage at Sea Level	Test Voltage AC (RMS), 60 cps			
Service Rating		Sea Level	50,000 ft.	70,000 ft.	110,000 ft.
I	600	1,500	500	375	200
II	1,000	2,300	750	500	200

† Silver plated wire per MIL-C-26482

* This connector style is sometimes referred to as a cable connecting "plug." It does, however, mate with a straight or 90 degree plug.

PT, SP Service Classes

PT and SP connectors are available in the service classes listed below. Each class, with the exception of hermetic, offers one or more means of terminating or supporting a cable or wire bundle. Class "W" is not available in the SP Series.

"A"	General duty; back shell is threaded for conduit attachment of MS3057 cable clamp
"A" (SR)	General duty, with strain relief clamp for cable or wire bundle support
"C"	Pressurized receptacle; less than 1 cu. in. per hour leakage at 30 psi over a temperature range of –65°F to +257°F
"E"	Environmental resistant connectors - supplied with a multi-holed grommet and clamping nut for moisture-proofing individual open wires
"E" (SR)	Environmental resistant strain relief clamp and grommet for moisture proofing individual wires; provides added wire bundle support
"J"	Same as "W" class except with strain relief
"P"	Translucent nylon boot for retaining customer-applied potting compounds; held in place by a threaded ring
"P" (SR)	Strain relief clamp suitable for retaining customer applied potting compounds, with provision for wire support
"W"	Compressing clamp and neoprene gland for moisture proofing multi-conductor jacketed cables. Telescoping sleeves (MS 3420A) can be used to adapt to cables smaller than minimum close-down.
"H"*	Hermetically sealed with compression glass inserts (see pages 22-25)

Style with printed circuit board contacts- see page 20.

Breakaway style - see page 26.

MS/PT Service Classes

The MS/PT Miniature connector is available in the following certified service classes:

"E"	Environmental resistant connectors - supplied with a multi-holed grommet and clamping nut for moisture-proofing individual open wires
"F"	Grommet seal with strain relief clamp
"P"	Translucent nylon boot for retaining customer-applied potting compounds; held in place by a threaded ring

"A"
general duty

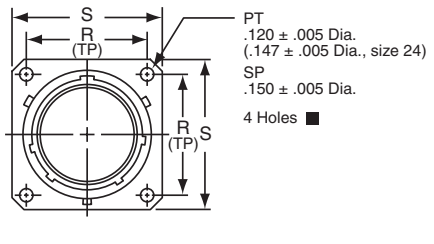
"E" (SR),
MS / "F"
strain relief

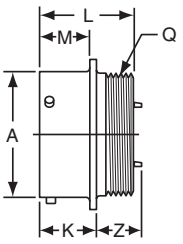
"E",
MS / "E"
open wire seal

"P",
MS / "P"
potting boot

"W"
cable seal

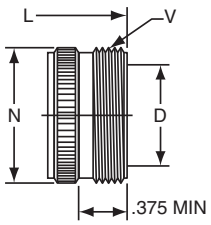
PT00 (MS3110)
SP00
wall mounting receptacle





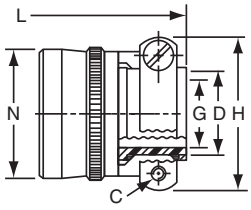
TERMINATION ASSEMBLIES

"A" General Duty/ "C" Pressurized"



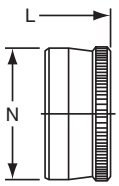
PT00A-XX-XXX
SP00A-XX-XXX
PT00C-XX-XXX

"A" (SR), "E" (SR), "P" (SR), MS / "F" Strain Relief



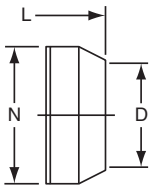
PT00A-XX-XXX (SR)
SP00A-XX-XXX (SR)
PT00E-XX-XXX (SR)
SP00E-XX-XXX (SR)
PT00P-XX-XXX (SR)
SP00P-XX-XXX (SR)
MS3110F-XX-XXX

"E" Open Wire Seal



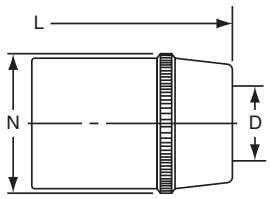
PT00E-XX-XXX
SP00E-XX-XXX
MS3110E-XX-XXX

"P" Potting Boot



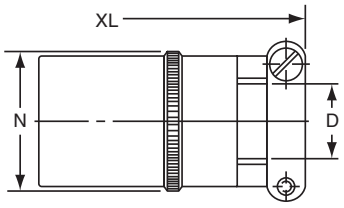
PT00P-XX-XXX
SP00P-XX-XXX
MS3110P-XX-XXX

"W" Cable Seal



PT00W-XX-XXX

"J" Cable Seal



PT00J-XX-XXX
MS3110J-XX-XXX

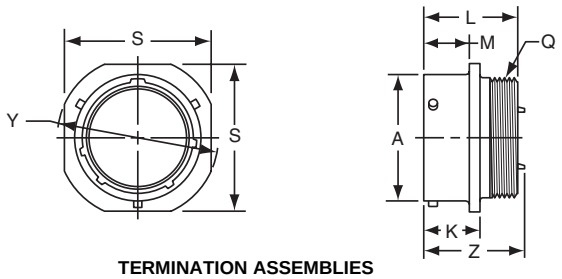
To complete part number see how to order on page 27.
■ (MMC) located within .0025 of (TP)

Shell Size	Receptacle Front View R (TP) PT	R (TP) SP	S Max. PT	S Max. SP	Receptacle Side View A +.001 –.005	K +.020 –.010 PT	K +.020 –.010 SP	L Max.	M +.010 –.000 PT	M +.010 –.000 SP	Q Thread Class 2A	Z Max. PT	Z Max. SP	Class "A", "C" D Min.	L Max.	N Max.	V Thread Class A
6	.469	.641	.688	.953	.348	.493	.524	.906	.431	.462	.3125-32 NEF	.468	.438	.175	1.553	.462	.3750-32 NEF
8	.594	.734	.812	1.047	.473	.493	.524	.906	.431	.462	.4375-28 UNEF	.468	.438	.297	1.553	.590	.5000-28 UNEF
10	.719	.812	.938	1.125	.590	.493	.524	.906	.431	.462	.5625-24 NEF	.468	.438	.421	1.553	.717	.6250-24 NEF
12	.812	.938	1.031	1.250	.750	.493	.524	.906	.431	.462	.6875-24 NEF	.468	.438	.546	1.553	.834	.7500-20 UNEF
14	.906	1.031	1.125	1.344	.875	.493	.524	.906	.431	.462	.8125-20 UNEF	.468	.438	.663	1.553	.970	.8750-20 UNEF
16	.969	1.125	1.219	1.438	1.000	.493	.524	.906	.431	.462	.9375-20 UNEF	.468	.438	.787	1.553	1.088	1.0000-20 UNEF
18	1.062	1.203	1.312	1.516	1.125	.493	.524	.906	.431	.462	1.0625-18 NEF	.531	.438	.879	1.553	1.216	1.1875-18 NEF
20	1.156	1.297	1.438	1.672	1.250	.650	.650	1.125	.556	.556	1.1875-18 NEF	.531	.531	1.014	1.703	1.332	1.1875-18 NEF
22	1.250	1.375	1.562	1.750	1.375	.650	.650	1.125	.556	.556	1.3125-18 NEF	.531	.531	1.134	1.703	1.460	1.4375-18 NEF
24	1.375	1.500	1.688	1.875	1.500	.683	.683	1.188	.589	.589	1.4375-18 NEF	.498	.498	1.259	1.765	1.585	1.4375-18 NEF

Shell Size	Class "A" (SR), "E" (SR), "P" (SR), MS / "F" C Thread	D Min.	G Max.	H Max.	L Max.	N Max.	Class "E", MS / "E" L Max.	N Max.	Class "P", MS / "P" D Min.	L Max.	N Max.	Class "W", "J" D Closed	D Free	L Max.	N Max.	XL Max.
6	–	–	–	–	–	–	1.266	.440	.192	1.438	.484	–	–	–	–	–
8	6-32	.240	.125	.812	1.922	.550	1.266	.560	.317	1.438	.608	.168	.230	1.705	.547	2.271
10	6-32	.302	.188	.875	1.922	.675	1.266	.685	.434	1.438	.734	.205	.312	1.705	.675	2.271
12	6-32	.428	.312	1.000	1.922	.803	1.266	.813	.548	1.438	.858	.338	.442	1.848	.812	2.411
14	6-32	.552	.375	1.125	1.922	.920	1.266	.930	.673	1.438	.984	.416	.539	2.040	.940	2.599
16	6-32	.615	.500	1.188	2.047	1.047	1.266	1.057	.798	1.438	1.110	.550	.616	2.256	1.067	2.943
18	8-32	.740	.625	1.438	2.078	1.165	1.266	1.175	.899	1.438	1.234	.600	.672	2.486	1.194	3.172
20	8-32	.740	.625	1.438	2.344	1.290	1.516	1.301	1.024	1.656	1.360	.635	.747	2.922	1.322	3.610
22	8-32	.928	.750	1.625	2.344	1.418	1.516	1.430	1.149	1.656	1.484	.670	.846	3.086	1.449	3.766
24	8-32	.990	.800	1.719	2.406	1.543	1.578	1.555	1.274	1.717	1.610	.740	.894	3.310	1.576	3.985

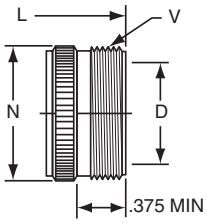
All dimensions for reference only.

PT01 (MS3111)
cable connecting receptacle



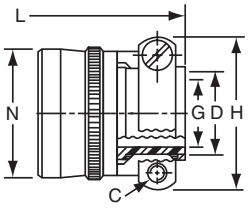
TERMINATION ASSEMBLIES

"A" General Duty



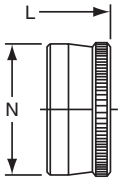
PT01A-XX-XXX

"A" (SR), "E" (SR), "P" (SR), MS / "F" Strain Relief



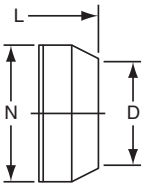
PT01A-XX-XXX (SR)
PT01E-XX-XXX (SR)
PT01P-XX-XXX (SR)
MS3111F-XX-XXX

"E" Open Wire Seal



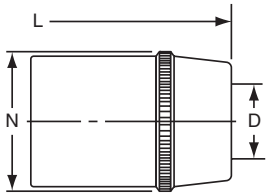
PT01E-XX-XXX
MS3111E-XX-XXX

"P" Potting Boot



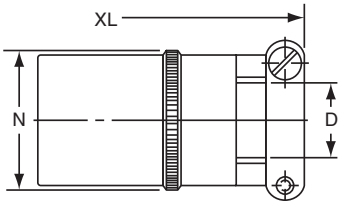
PT01P-XX-XXX
MS3111P-XX-XXX

"W" Cable Seal



PT01W-XX-XXX

"J" Cable Seal



PT01J-XX-XXX
MS3111J-XX-XXX

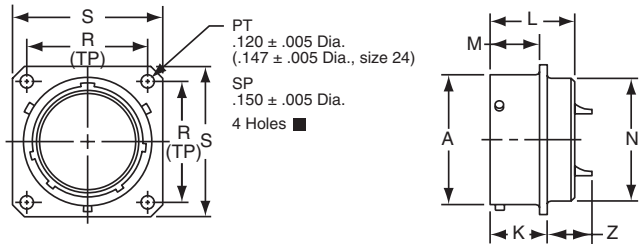
Note: This connector style is sometimes referred to as a cable connecting "plug".
It does, however, mate with either a straight or 90 degree plug.
To complete part number see how to order on page 27.

Shell Size	Recept. Front View		Receptacle Side View						Class "A",			
	S ±.020	Y ±.020	A +.001 –.005	K +.020 –.010	L Max.	M +.016 –.000	Q Thread Class 2A	Z Max.	D Min.	L Max.	N Max.	V Thread Class A
6	.688	.812	.348	.494	.906	.400	.3125-32 NEF	.948	.175	1.553	.462	.3750-32 NEF
8	.812	.938	.473	.494	.906	.400	.4375-28 UNEF	.948	.297	1.553	.590	.5000-28 UNEF
10	.938	1.062	.590	.494	.906	.400	.5625-24 NEF	.948	.421	1.553	.717	.6250-24 NEF
12	1.031	1.156	.750	.494	.906	.400	.6875-24 NEF	.948	.546	1.553	.834	.7500-20 UNEF
14	1.125	1.250	.875	.494	.906	.400	.8125-20 UNEF	.948	.663	1.553	.970	.8750-20 UNEF
16	1.219	1.344	1.000	.494	.906	.400	.9375-20 UNEF	.948	.787	1.553	1.088	1.0000-20 UNEF
18	1.312	1.438	1.125	.494	.906	.400	1.0625-18 NEF	.948	.879	1.553	1.216	1.1875-18 NEF
20	1.438	1.562	1.250	.650	1.125	.535	1.1875-18 NEF	1.166	1.041	1.703	1.332	1.1875-18 NEF
22	1.562	1.688	1.375	.650	1.125	.535	1.3125-18 NEF	1.166	1.135	1.703	1.460	1.4375-18 NEF
24	1.688	1.812	1.500	.683	1.188	.568	1.4375-18 NEF	1.166	1.259	1.765	1.585	1.4375-18 NEF

Shell Size	Class "A" (SR), "E" (SR), "P" (SR), MS / "F"						Class "E", MS / "E"		Class "P", MS / "P"			Class "W", "J"				
	C Thread	D Min.	G Max.	H Max.	L Max.	N Max.	L Max.	N Max.	D Min.	L Max.	N Max.	D Closed	D Free	L Max.	N Max.	XL Max.
6	–	–	–	–	–	–	1.266	.440	.192	1.438	.484	–	–	–	–	–
8	6-32	.240	.125	.812	1.922	.550	1.266	.560	.317	1.438	.608	.168	.230	1.705	.547	2.271
10	6-32	.302	.188	.875	1.922	.675	1.266	.685	.434	1.438	.734	.205	.312	1.705	.675	2.271
12	6-32	.428	.312	1.000	1.922	.803	1.266	.813	.548	1.438	.858	.338	.442	1.848	.812	2.411
14	6-32	.552	.375	1.125	1.922	.920	1.266	.930	.673	1.438	.984	.416	.539	2.040	.940	2.599
16	6-32	.615	.500	1.188	2.047	1.047	1.266	1.057	.798	1.438	1.110	.550	.616	2.256	1.067	2.943
18	8-32	.740	.625	1.438	2.078	1.165	1.266	1.175	.899	1.438	1.234	.600	.672	2.486	1.194	3.172
20	8-32	.740	.625	1.438	2.344	1.290	1.516	1.301	1.024	1.656	1.360	.635	.747	2.922	1.322	3.610
22	8-32	.928	.750	1.625	2.344	1.418	1.516	1.430	1.149	1.656	1.484	.670	.846	3.086	1.449	3.766
24	8-32	.990	.800	1.719	2.406	1.543	1.578	1.555	1.274	1.717	1.610	.740	.894	3.310	1.576	3.985

All dimensions for reference only.

PT02 (MS3112)
SP02
box mounting receptacle



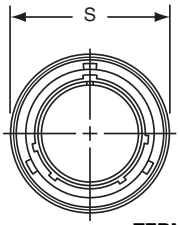
PT02A-XX-XXX
SP02A-XX-XXX
*** PT02C-XX-XXX**
*** SP02C-XX-XXX**
*** PT02E-XX-XXX**
*** SP02E-XX-XXX**
MS3112E-XX-XXX
*** PT02P-XX-XXX**
*** SP02P-XX-XXX**
MS3112P-XX-XXX
*** PT02W-XX-XXX**
*** SP02W-XX-XXX**

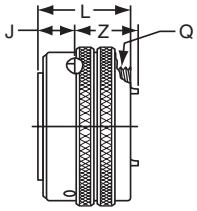
To complete part number see how to order on page 27.
■ (MMC) located within .0025 of (TP)
* The PT02 and SP02 box mounting receptacles are made only to complete a series; no provision is made for accessories or potting on the rear skirt.

Shell Size	Receptacle Front View				Receptacle Side View								
	R (TP)		S		A +.001 –.005	K +.020 –.010		L Max.	M +.010 –.000		N Dia. Max.	Z Max.	
	PT	SP	PT	SP		PT	SP		PT	SP		PT	SP
6	.469	.641	.688	.953	.348	.493	.524	.825	.431	.462	.323	.465	.438
8	.594	.734	.812	1.047	.473	.493	.524	.825	.431	.462	.449	.465	.438
10	.719	.812	.938	1.125	.590	.493	.524	.825	.431	.462	.573	.465	.438
12	.812	.938	1.031	1.250	.750	.493	.524	.825	.431	.462	.699	.465	.438
14	.906	1.031	1.125	1.344	.875	.493	.524	.825	.431	.462	.823	.465	.438
16	.969	1.125	1.219	1.438	1.000	.493	.524	.825	.431	.462	.949	.465	.438
18	1.062	1.203	1.312	1.516	1.125	.493	.524	.825	.431	.462	1.073	.465	.438
20	1.156	1.297	1.438	1.672	1.250	.650	.650	1.076	.556	.556	1.199	.526	.531
22	1.250	1.375	1.562	1.750	1.375	.650	.650	1.076	.556	.556	1.323	.526	.531
24	1.375	1.500	1.688	1.875	1.500	.683	.683	1.109	.589	.589	1.449	.493	.497

All dimensions for reference only.

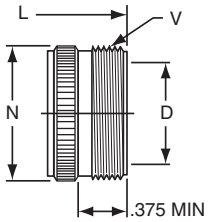
PT06 (MS3116)
SP06
straight plug





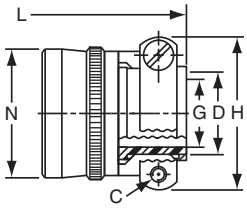
TERMINATION ASSEMBLIES

"A" General Duty



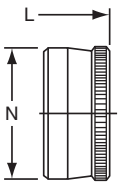
PT06A-XX-XXX
SP06A-XX-XXX
PTG06A-XX-XXX

"A" (SR), "E" (SR), "P" (SR), MS / "F" Strain Relief



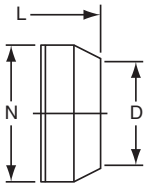
PT06A-XX-XXX (SR)
SP06A-XX-XXX (SR)
PTG06A-XX-XXX (SR)
PT06E-XX-XXX (SR)
SP06E-XX-XXX (SR)
PTG06E-XX-XXX (SR)
PT06P-XX-XXX (SR)
SP06P-XX-XXX (SR)
PTG06P-XX-XXX (SR)
MS3116F-XX-XXX

"E" Open Wire Seal



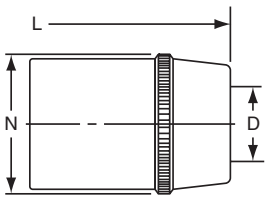
PT06E-XX-XXX
SP06E-XX-XXX
PTG06E-XX-XXX
MS3116E-XX-XXX

"P" Potting Boot



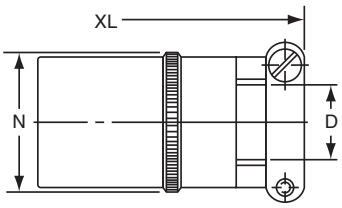
PT06P-XX-XXX
SP06P-XX-XXX
PTG06P-XX-XXX
MS3116P-XX-XXX

"W" Cable Seal



PT06W-XX-XXX
SP06W-XX-XXX
PTG06W-XX-XXX

"J" Cable Seal



PT06J-XX-XXX
MS3116J-XX-XXX

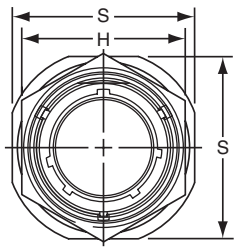
To complete part number see how to order on page 27.

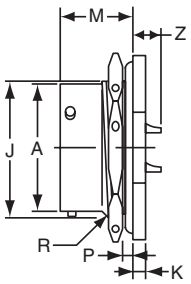
Shell Size	Plug Front View S Max.	Plug Side View J	L Max.	Q Thread Class 2A	Z Max.	Class "A" D Min.	L Max.	N Max.	V Thread Class A
6	.625	.353	.906	.3125-32 NEF	.594	.175	1.609	.462	.3750-32 NEF
8	.750	.353	.906	.4375-28 UNEF	.594	.297	1.609	.590	.5000-28 UNEF
10	.859	.353	.906	.5625-24 NEF	.594	.421	1.609	.717	.6250-24 NEF
12	1.013	.353	.906	.6875-24 NEF	.594	.546	1.609	.834	.7500-20 UNEF
14	1.156	.353	.906	.8125-20 UNEF	.594	.663	1.609	.970	.8750-20 UNEF
16	1.281	.353	.906	.9375-20 UNEF	.594	.787	1.609	1.088	1.0000-20 UNEF
18	1.319	.353	.906	1.0625-18 NEF	.594	.879	1.609	1.216	1.1875-18 NEF
20	1.531	.415	1.062	1.1875-18 NEF	.672	1.014	1.656	1.332	1.1875-18 NEF
22	1.656	.415	1.062	1.3125-18 NEF	.672	1.135	1.656	1.460	1.4375-18 NEF
24*	1.776	.415	1.125	1.4375-18 NEF	.672	1.259	1.750	1.587	1.4375-18 NEF

Shell Size	Class "A" (SR), "E" (SR), "P" (SR), MS / "F" C Thread	D Min.	G ±.010	H Max.	L Max.	N Max.	Class "E", MS / "E" L Max.	N Max.	Class "P", MS / "P" D Min.	L Max.	N Max.	Class "W", "J" D Closed	D Free	L Max.	N Max.	XL Max.
6	–	–	–	–	–	–	1.266	.440	.192	1.526	.484	–	–	–	–	–
8	6-32	.240	.125	.812	1.906	.550	1.266	.560	.317	1.526	.608	.168	.230	1.705	.547	2.271
10	6-32	.302	.188	.875	1.906	.675	1.266	.685	.434	1.526	.734	.205	.312	1.705	.675	2.271
12	6-32	.428	.312	1.000	1.906	.803	1.266	.813	.548	1.526	.858	.338	.442	1.848	.812	2.411
14	6-32	.552	.375	1.125	1.906	.920	1.266	.930	.673	1.526	.984	.416	.539	2.040	.940	2.599
16	6-32	.615	.500	1.188	2.047	1.047	1.266	1.057	.798	1.526	1.110	.550	.616	2.256	1.067	2.943
18	8-32	.740	.625	1.438	2.078	1.165	1.266	1.175	.899	1.526	1.234	.600	.672	2.486	1.194	3.172
20	8-32	.740	.625	1.438	2.250	1.290	1.438	1.301	1.024	1.546	1.360	.635	.747	2.844	1.322	3.610
22	8-32	.928	.750	1.625	2.250	1.418	1.438	1.430	1.149	1.546	1.484	.670	.846	3.000	1.449	3.766
24*	8-32	.990	.800	1.750	2.312	1.543	1.500	1.555	1.274	1.656	1.610	.740	.894	3.210	1.576	3.985

* Available in PT06 only
All dimensions for reference only.

PT07 (MS3114)
SP07
jam nut receptacle

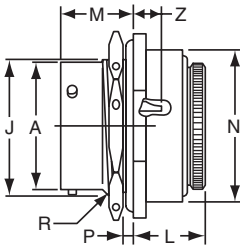




"A" General Duty/
"C" Pressurized Receptacle
PT07A-XX-XXX
PT07C-XX-XXX

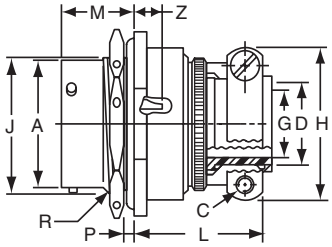
TERMINATION ASSEMBLIES

"E" Open Wire Seal



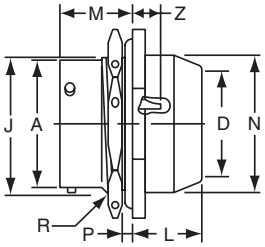
PT07E-XX-XXX
SP07E-XX-XXX
MS3114E-XX-XXX

"A" (SR), "E" (SR), "P" (SR), MS / "F" Strain Relief



PT07A-XX-XXX (SR)
SP07A-XX-XXX (SR)
PT07E-XX-XXX (SR)
MS3114F-XX-XXX

"P" Potting Boot



PT07P-XX-XXX
MS3114P-XX-XXX

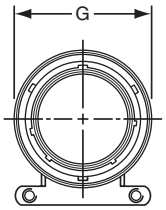
To complete part number see how to order on page 27.

Shell Size	Recept. Front View H ±.016	S	Receptacle Side View A Dia. +.001 –.005	J Flat +.000 –.010	K +.011 –.010	M	P Panel Thickness Min.	P Panel Thickness Max.	R Thread Class 2A UNEF	Z	Class "E", MS / "E" L Max.	M	N Max.	Z ±.040
6	.625	.812	.348	.405	.125	.696	.062	.125	.4375-28	.231	.568	.696	.604	.191
8	.750	.938	.473	.530	.125	.696	.062	.125	.5625-24	.231	.568	.696	.729	.191
10	.875	1.062	.590	.655	.125	.696	.062	.125	.6875-24	.231	.568	.696	.854	.191
12	1.062	1.250	.750	.818	.125	.696	.062	.125	.8750-20	.231	.568	.696	.979	.191
14	1.188	1.375	.875	.942	.125	.696	.062	.125	1.0000-20	.231	.568	.696	1.104	.191
16	1.312	1.500	1.000	1.066	.125	.696	.062	.125	1.1250-18	.231	.568	.696	1.229	.191
18	1.438	1.625	1.125	1.191	.125	.696	.062	.125	1.2500-18	.231	.568	.696	1.354	.191
20	1.562	1.812	1.250	1.316	.156	.884	.062	.250	1.3750-18	.261	.630	.884	1.510	.221
22	1.688	1.938	1.375	1.441	.156	.884	.062	.250	1.5000-18	.261	.630	.884	1.635	.221
24	1.816	2.062	1.500	1.566	.156	.917	.062	.250	1.6250-18	.228	.660	.917	1.760	.188

Shell Size	Class "A" (SR), "P" (SR), MS / "F" C Thread	D Max.	G	H	L	M	Class "E" (SR) C Thread	D Max.	G	H	L	M	Class "P", MS / "P" D Max.	L +.010 –.026	M	N	Z
6	–	–	–	–	–	–	–	–	–	–	–	–	.202	.593	.696	.484	.191
8	6-32	.250	.125	.781	1.062	.696	6-32	.250	.125	.775	1.029	.696	.327	.593	.696	.608	.191
10	6-32	.312	.188	.844	1.062	.696	6-32	.312	.188	.837	1.029	.696	.444	.593	.696	.734	.191
12	6-32	.438	.312	.969	1.062	.696	6-32	.438	.312	.963	1.029	.696	.558	.593	.696	.858	.191
14	6-32	.562	.375	1.094	1.062	.696	6-32	.562	.375	1.087	1.029	.696	.683	.593	.696	.984	.191
16	6-32	.625	.500	1.156	1.188	.696	6-32	.625	.500	1.150	1.161	.696	.808	.593	.696	1.110	.191
18	8-32	.750	.625	1.406	1.188	.696	8-32	.750	.625	1.400	1.161	.696	.909	.593	.696	1.234	.191
20	8-32	.750	.625	1.406	1.250	.884	8-32	.750	.625	1.400	1.224	.884	1.034	.718	.884	1.360	.221
22	8-32	.938	.750	1.594	1.250	.884	8-32	.938	.750	1.587	1.224	.884	1.159	.718	.884	1.484	.221
24*	8-32	1.000	.800	1.594	1.250	.917	8-32	1.000	.800	1.681	1.320	.917	1.284	.718	.917	1.610	.188

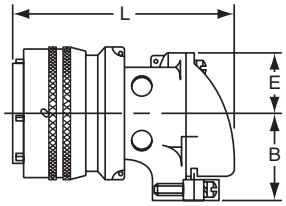
* Size 24 strain relief available in PT only. All dimensions for reference only.

PT08 E
SP08 E
90 degree plug

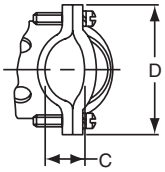


TERMINATION ASSEMBLIES

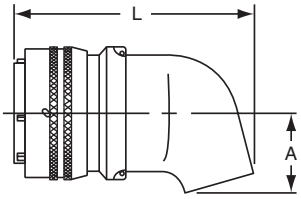
"E" Open Wire Seal, "E" (SR) Strain Relief



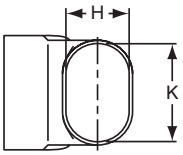
PT08E-XX-XXX
SP08E-XX-XXX
PT08E-XX-XXX (SR)
SP08E-XX-XXX (SR)



"P" Potting Boot 75 degrees



PT08P-XX-XXX
SP08P-XX-XXX



To complete part number see how to order on page 27.
All lockwire holes are .044 Dia. Min.

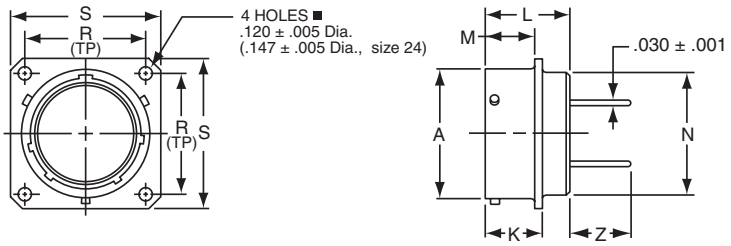
Shell Size	Plug Front View	Plug Side View								
		Class "E", "E" (SR)					Class "P"			
	G Dia. Max.	B ±.031	C +.010 −.025	D ±.062	E +.047 −.025	L ±.057	A ±.025	H ±.015	K ±.015	L Max.
8	.796	.655	.169	.941	.339	1.786	.469	.312	.438	1.656
10	.921	.749	.170	1.191	.393	1.880	.547	.438	.562	1.781
12	1.046	.812	.264	1.191	.450	1.965	.625	.516	.688	1.843
14	1.171	.905	.310	1.254	.519	2.113	.734	.625	.781	1.953
16	1.297	1.030	.330	1.316	.583	2.315	.750	.656	.890	2.000
18	1.422	1.015	.444	1.562	.621	2.423	.781	.703	1.000	2.046
20	1.562	1.077	.510	1.625	.683	2.695	.859	.766	1.125	2.218
22	1.672	1.139	.515	1.719	.739	2.742	.906	.812	1.234	2.265
24	1.797	1.265	.656	1.751	.797	2.980	1.169	.918	1.374	2.624

All dimensions for reference only.

PT Connectors with Printed Circuit Board Contacts

Box Mounting Receptacle (PT02) with PCB Contacts

Order by applicable part number in chart below; add insert arrangement number. Refer to insert availability on pages 4-11.
■ (MMC) located within .0025 of (TP)

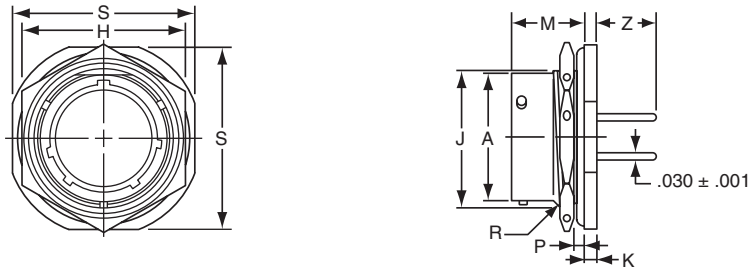


Shell Size	Part Number* PT02 with PCB Contacts	Receptacle Front View		Receptacle Side View					
		R (TP)	S +.011 –.010	A +.001 –.005	K +.021 –.010	L Max.	M +.010 –.000	N Dia. Max.	Z +.040 –.050
6	71-570120-XXX	.469	.688	.348	.493	.825	.431	.323	.380
8	71-570121-XXX	.594	.812	.473	.493	.825	.431	.449	.380
10	71-570122-XXX	.719	.938	.590	.493	.825	.431	.573	.380
12	71-570123-XXX	.812	1.031	.750	.493	.825	.431	.699	.380
14	71-570124-XXX	.906	1.125	.875	.493	.825	.431	.823	.380
16	71-570125-XXX	.969	1.219	1.000	.493	.825	.431	.949	.380
18	71-570126-XXX	1.062	1.312	1.125	.493	.825	.431	1.073	.380
20	71-570127-XXX	1.156	1.438	1.250	.650	1.076	.556	1.199	.286
22	71-570128-XXX	1.250	1.562	1.375	.650	1.076	.556	1.323	.286
24	71-570129-XXX	1.375	1.688	1.500	.683	1.109	.589	1.449	.253

All dimensions for reference only.

Jam Nut Receptacle (PT07) with PCB Contacts

All lockwire holes are .044 Dia. Min.
Order by applicable part number in chart below; add insert arrangement number. Refer to insert availability on pages 4-11.

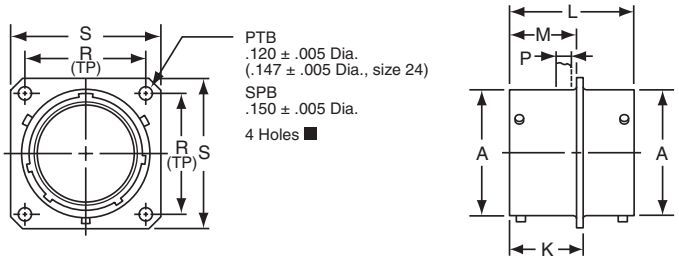


Shell Size	Part Number* PT07 with PCB Contacts	Receptacle Front View		Receptacle Side View							
		H +.017 –.016	S ±.010	A Dia. +.001 –.005	J Flat +.000 –.010	K +.011 –.010	M ±.010	P Panel Thickness Min.	P Panel Thickness Max.	R Thread Class 2A	Z +.025 –.035
6	71-533720-XXX	.625	.812	.348	.405	.125	.696	.062	.125	.4375-28 UNEF	.376
8	71-533721-XXX	.750	.938	.473	.530	.125	.696	.062	.125	.5625-24 UNEF	.376
10	71-533722-XXX	.875	1.062	.590	.655	.125	.696	.062	.125	.6875-24 UNEF	.376
12	71-533723-XXX	1.062	1.250	.750	.818	.125	.696	.062	.125	.8750-20 UNEF	.376
14	71-533724-XXX	1.188	1.375	.875	.942	.125	.696	.062	.125	1.0000-20 UNEF	.376
16	71-533725-XXX	1.312	1.500	1.000	1.066	.125	.696	.062	.125	1.1250-18 UNEF	.376
18	71-533726-XXX	1.438	1.625	1.125	1.191	.125	.696	.062	.125	1.2500-18 UNEF	.376
20	71-533727-XXX	1.562	1.812	1.250	1.316	.156	.884	.062	.250	1.3750-18 UNEF	.367
22	71-533728-XXX	1.688	1.938	1.375	1.441	.156	.884	.062	.250	1.5000-18 UNEF	.367
24	71-533729-XXX	1.816	2.062	1.500	1.566	.156	.917	.062	.250	1.6250-18 UNEF	.334

All dimensions for reference only.

* For RoHS compliance connectors with PCB contacts change “71”- to:
“58” designates conductive black zinc cobalt plating
“93” designates non-conductive black zinc cobalt plating

PTB
SPB
thru bulkhead receptacle



*** PTB-XX-XXX**
*** SPB-XX-XXX**

* To complete part number add desired arrangement number (refer to pages 4 and 5 for insert availability) and add "PS"; Example: PTB-18-32PS. If a rotation is required, use PTB-18-32PS and add W, X, Y or Z. Example: PTB-18-32 PSW. The socket end of the insert always appears at the "P" dimension end of shell.

■ (MMC) located within .0025 of (TP)

Shell Size	Receptacle Front View				Receptacle Side View					
	R (TP)		S		A +.001 −.005	K +.016 −.000	L ±.005	M +.010 −.000	P Max.	
	PTB	SPB	PTB	SPB					PTB	SPB
6	.469	.641	.688	.953	.348	.625	1.050	.562	.125	.188
8	.594	.734	.812	1.047	.473	.625	1.050	.562	.125	.188
10	.719	.812	.938	1.125	.590	.625	1.050	.562	.125	.188
12	.812	.938	1.031	1.250	.750	.625	1.050	.562	.125	.188
14	.906	1.031	1.125	1.344	.875	.625	1.050	.562	.125	.188
16	.969	1.125	1.219	1.438	1.000	.625	1.050	.562	.125	.188
18	1.062	1.203	1.312	1.516	1.125	.625	1.050	.562	.125	.188
20	1.156	1.297	1.438	1.672	1.250	.781	1.330	.688	.125	.312
22	1.250	1.375	1.562	1.750	1.375	.781	1.330	.688	.125	.312
24	1.375	1.500	1.688	1.875	1.500	.781	1.330	.688	.125	.312

All dimensions for reference only.

PT
hermetic

solder mounting receptacle

box mounting receptacle

jam nut receptacle

Three shell styles are available in the hermetic PT bayonet series:

- **PT1H (MS3113H)**
- **PT02H**
- **PT07H (MS3114H)**

These hermetic connectors are only available with solder cup or flat eyelet pin contacts in the MS/PT version. Socket contacts are available in some proprietary PT versions. Other design characteristics of the PT hermetic connector series are as follows:

Shell sizes: 8 through 24 (tin plated)

Contact count: 2 through 61. Refer to pages 4 and 5 for insert availability for hermetics.

Current: 5.0 amp each #20 contact
10 amp each #16 contact
17 amp each #12 contact

Contacts are tin plated for PT; gold is optional

Dielectric Withstanding Voltage (sea level):
1500 volts (RMS) 60 cps, Service Rating I
2300 volts (RMS) 60 cps, Service Rating II

Compression glass inserts, permanently lettered

Helium Leakage: Less than 1.0 X 10^{-6} cc/sec. at 15 psi differential

Physical Shock: 100 G's

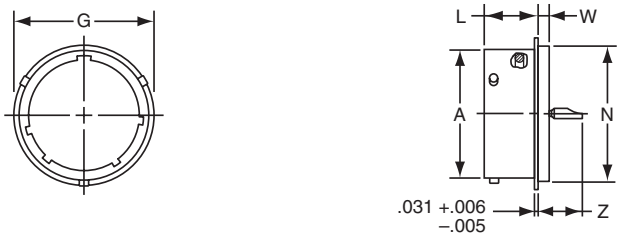
Vibration: Exceeds MIL-E-5272 Procedure II

Thermal Shock: No deterioration or failure after 5 cycles at –55°F to +257°F

Intermateability: Mates with MS3116 and PT06

Refer to pages 4-11 for insert arrangement availability.

PT□H (MS3113H)
hermetic solder mounting receptacle



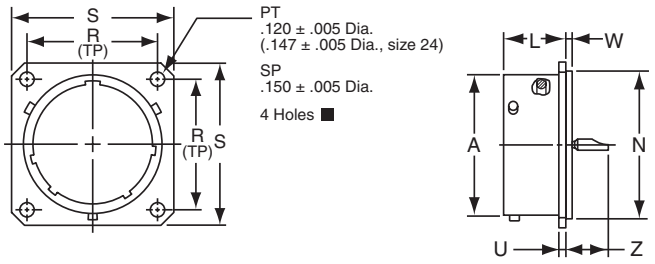
*** PT□H-XX-XXX**
**** PT□Y-XX-XXX**
**** MS3113H-XXCXXX**
† PT□H-XX-XXX (100)
†† PT□Y-XX-XXX (100)
†† MS3113H-XXYXXX

To complete part number see how to order on page 27.
* Solder cup pin contacts without interfacial seal
** Solder cup pin contacts with interfacial seal
† Flat eyelet pin contacts without interfacial seal
†† Flat eyelet pin contacts with interfacial seal

Shell Size	Recept. Front View	Receptacle Side View				
	G Dia. Max.	A Dia. +.001 –.005	L +.025 –.016	N Dia. +.001 –.005	W +.011 –.010	Z Max.
6	.511	.348	.447	.438	.094	.386
8	.636	.473	.447	.562	.094	.386
10	.761	.590	.447	.672	.094	.386
12	.855	.750	.447	.781	.094	.386
14	.980	.875	.447	.906	.094	.386
16	1.105	1.000	.447	1.031	.094	.386
18	1.229	1.125	.447	1.156	.094	.386
20	1.323	1.250	.509	1.250	.094	.386
22	1.449	1.375	.509	1.375	.125	.418
24	1.574	1.500	.542	1.500	.125	.418

All dimensions for reference only.

PT02H
hermetic box mounting receptacle



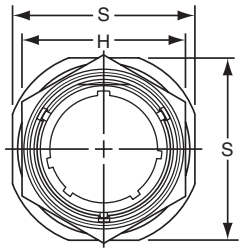
***** **PT02H-XX-XXX**
****** **PT02Y-XX-XXX**
† **PT02H-XX-XXX (100)**
†† **PT02Y-XX-XXX (100)**

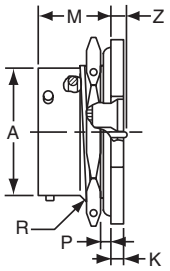
To complete part number see how to order on page 27.
* Solder cup pin contacts without interfacial seal
** Solder cup pin contacts with interfacial seal
† Flat eyelet pin contacts without interfacial seal
†† Flat eyelet pin contacts with interfacial seal
■ (MMC) located within .0025 of (TP)

Shell Size	Receptacle Front View		Receptacle Side View					
	R (TP)	S ±.016	A Dia. +.001 –.005	K ±.015	L +.025 –.015	N Dia. +.001 –.005	U +.011 –.010	Z Max.
6	.469	.688	.348	.047	.494	.438	.062	.344
8	.594	.812	.473	.047	.494	.562	.062	.344
10	.719	.938	.590	.047	.494	.672	.062	.344
12	.812	1.031	.750	.047	.494	.781	.062	.344
14	.906	1.125	.875	.047	.494	.906	.062	.344
16	.969	1.219	1.000	.047	.494	1.031	.062	.344
18	1.062	1.312	1.125	.047	.494	1.156	.062	.344
20	1.156	1.438	1.250	.047	.556	1.250	.062	.344
22	1.250	1.562	1.375	.079	.556	1.375	.062	.377
24	1.375	1.688	1.500	.079	.588	1.500	.062	.377

All dimensions for reference only.

PT07H (MS3114H)
hermetic jam nut receptacle





*** PT07H-XX-XXX**
**** PT07Y-XX-XXX**
**** MS3114H-XXCXXX**
† PT07H-XX-XXX (100)
†† PT07Y-XX-XXX (100)
†† MS3114H-XXYXXX

To complete part number see how to order on page 27.
* Solder cup pin contacts without interfacial seal
** Solder cup pin contacts with interfacial seal
† Flat eyelet pin contacts without interfacial seal
†† Flat eyelet pin contacts with interfacial seal

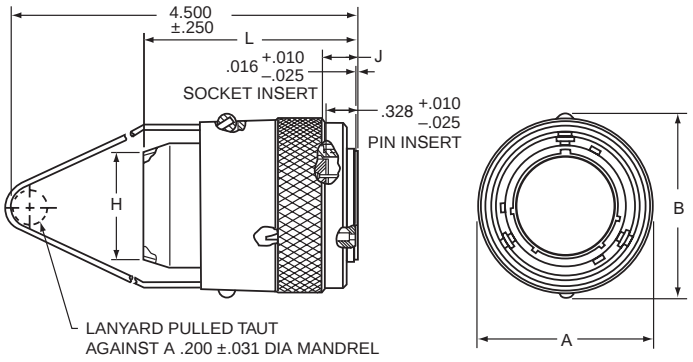
Shell Size	Receptacle Front View		Receptacle Side View						
	S +.016	H Hex +.017 −.016	A +.001 −.005	K +.043 −.016	M +.031 −.000	P Panel Thickness Max.	P Panel Thickness Min.	R Thread Class 2A	Z Max.
6	.812	.625	.348	.094	.696	.125	.062	.4375-28 UNEF	.206
8	.938	.750	.473	.094	.696	.125	.062	.5625-24 NEF	.206
10	1.062	.875	.590	.094	.696	.125	.062	.6875-24 NEF	.206
12	1.250	1.062	.750	.094	.696	.125	.062	.8750-20 UNEF	.206
14	1.375	1.188	.875	.094	.696	.125	.062	1.0000-20 UNEF	.206
16	1.500	1.312	1.000	.094	.696	.125	.062	1.1250-18 NEF	.206
18	1.625	1.438	1.125	.094	.696	.125	.062	1.2500-18 NEF	.206
20	1.812	1.562	1.250	.125	.884	.250	.062	1.3750-18 NEF	.081
22	1.938	1.688	1.375	.125	.884	.250	.062	1.5000-18 NEF	.081
24	2.062	1.812	1.500	.125	.917	.250	.062	1.6250-18 NEF	.048

All dimensions for reference only.

PT Breakaway
twist pull plug

The PT miniature breakaway connector has the following design features:

- solder contacts, potted termination
- instant decoupling of plug and receptacle with an axial pull on the lanyard when they are fully mated
- intermateable with standard receptacles
- operating voltage to 900 VAC (RMS) at sea level
- same quick positive bayonet coupling and 5 key/ keyway polarization as other PT styles



Breakaway Plug with PT Solder Contacts, Potted Termination
71-3048XX-( )
72-3048XX-( )

Part Number*	Shell Size	A Dia. Max.	B Max.	H ±.016	J ±.010	L Max.
71-304808	8	.875	.984	.327	.353	1.937
71-304810	10	1.125	1.125	.444	.353	1.890
71-304812	12	1.281	1.406	.558	.353	1.906
71-304814	14	1.438	1.562	.683	.353	1.953
71-304816	16	1.562	1.688	.808	.353	2.000
71-304818	18	1.718	1.844	.909	.353	2.031
71-304820	20	1.875	2.000	1.034	.415	2.234
71-304822	22	2.031	2.188	1.159	.415	2.328
71-304824	24	2.156	2.312	1.284	.415	2.359

All dimensions for reference only.
* See Finish information below to determine prefix 71 or 72 in part number.
Drawing above shows standard lanyard length.

Order by Amphenol Propriety number as follows (example part number shown):

71 -	3048	18 - 32	P
1	2	3	4

1. Finish
   "71"designates corrosion resistant olive drab cadmium plate
   "72" designates anodic coated (electrically nonconductive-anodic) finish providing extreme wear and corrosion resistance, 500 hour extended salt spray.
2. Connector Type Identification
   3048 designates PT plug, solder, potted termination style
3. Shell Size and Insert Arrangement Number
   See insert arrangement availability for Miniature Breakaway connectors on page 6. The numbers in the insert arrangement are hyphenated. The number preceding the hyphen is the shell size. The number following the hyphen is the insert arrangement number.
4. Contact Type/Alternate Insert Rotation
   P designates pin, S designates socket for normal positioning of inserts. When an alternate position of the insert is required to prevent cross-mating a different letter (other than P or S) is used. See page 7 for description of alternate positions; then convert to Amphenol proprietary coding by the chart at right to complete the part number.

Pin Contacts		Socket Contacts	
Amphenol Letter	Equates to MS letter	Amphenol Letter	Equates to MS letter
G	PW	H	SW
I	PX	J	SX
K	PY	L	SY
M	PZ	N	SZ

PT, SP, MS/PT
how to order

PT, SP

To more easily illustrate ordering procedure, part number PT00A-20-41PW(SR) is shown as follows:

PT	00	A	-	20	-	41	P	W	(SR)
1	2	3		4		5	6	7	8

See code below:

1. Connector Type
   - "PT" designates standard olive drab, electrically conductive cadmium plate bayonet lock connector with solder contacts
   - "SP" designates electrically non-conductive, hard anodic coated bayonet lock connector with solder contacts and larger flange and mounting holes for back panel mounting
   - "PTG" designates plug with grounding fingers
2. Shell Style
   - "00" designates wall mounting receptacle
   - "01" designates cable connecting receptacle**
   - "02" designates box mounting receptacle
   - "06" designates straight plug
   - "07" designates jam nut receptacle
   - "08" designates 90 degree plug cable support
   - "B" designates thru bulkhead receptacle (pressurized)
   - "T" designates solder mount receptacle (Hermetic only)
3. Service Classes
   - "A" designates general duty back shell
   - "C" designates pressurized receptacle
   - "E" designates environmental resisting open wire seal with grommet and nut
   - "J" designates clamp assembly for moisture proofing multi-jacketed cables, with strain relief
   - "P" designates assembly with potting boot
   - W" designates clamp assembly for moisture proofing multi-jacketed cables
   - "H" designates hermetic* without interfacial seal
   - "Y" designates hermetic* with interfacial seal
4. Shell Size
   "20" designates shell size. Shell sizes 6 through 24 available.
5. Insert Arrangement - Refer to pages 4-11 for insert availability.
   "20 - 41" designates insert arrangement. (The number following the hyphen is the number only that is used in the part number).
6. Contacts
   "P" designates pin contacts
   "S" designates socket contacts
   For ordering connectors with printed circuit board contacts, see pg. 20.
7. Insert Rotation - Refer to page 7.
   "W", "X", "Y", "Z" designate that insert is rotated in its shell from "normal position. No letter required for normal (no rotation) position.
8. "SR" designates a strain relief clamp.
   Indicate optional finishes as follows:
   - (003) olive drab cadmium plate (standard on "PT")
   - (005) anodic coating - Alumilite® (standard on "SP")
   - (014) olive drab cadmium plate over nickel
   - (023) electroless nickel
   - (024) olive drab zinc cobalt plating
   - (424) electroless nickel finish with strain relief
   - (466) olive drab zinc cobalt plating with strain relief
   - (100) Suffix added for flat eyelet pin contacts in hermetic versions

   OR

   RoHS Compliant finish suffix as follow:
   - (025) non-conductive black zinc cobalt plating
   - (027) conductive black zinc cobalt plating
   - (470) non-conductive black zinc cobalt plating with strain relief
   - (476) conductive black zinc cobalt plating with strain relief

MS/PT
MIL-C-26482, Series 1

Part number MS3110E20-41PW is shown as follows:

MS	311	0	E	20	-	41	P	W
1	2	3	4	5		6	7	8

For Hermetic connectors part number MS3113H20Y41PW is shown as follows:

MS	311	3	H	20 Y 41	P	W
1	2	3	4	5, 6	7	8

See code below:

1. "MS" designates Military Standard
2. Specification Number
   "311" designates basic family number for MIL-C-26482, Series 1 solder type
3. Shell Style
   "0" designates wall mounting receptacle
   "1" designates cable connecting receptacle**
   "2" designates box mounting receptacle
   "3" designates solder mount receptacle (hermetic only)
   "4" designates jam nut receptacle
   "6" designates straight plug
4. Service Class
   "E" designates environmental resisting connector
   "F" designates environmental resisting connectors with strain relief
   "J" designates clamp assembly for moisture proofing multi-jacketed cables, with strain relief
   "P" designates potted type with potting boot
   "H" designates hermetic
5. Shell Size
   "20" designates shell size. Shell sizes 8 through 24 available.
6. Insert Arrangement - Refer to pages 4-11 for insert availability.
   "20 - 41" designates arrangement. (The number following the hyphen is the number only that is used in the part number).
   Hermetic version
   "20Y41" designates insert arrangement; specify "Y" for flat eyelet pin contacts, or "C" for solder cup pin contacts
7. Contact Configuration
   "P" designates pin contacts
   "S" designates socket contacts
8. Insert Rotation- Refer to page 7.
   "W", "X", "Y", "Z" designate that insert is rotated in it shell from "normal" position. No letter require fo normal (no rotation) position.

* Hermetic connectors are supplied with tin plated shells.

** This connector style is sometimes referred to as a cable connecting "plug". It does, however, mate with either a straight or 90 degree plug.

For ordering Miniature Breakaway PT Solder connectors see pg. 26.