



ITT

Interconnect Solutions
Cannon, VEAM, BIW

Defining **innovative**
aviation, military, and
industrial circulars since the DC-1,
over **70 years** ago



Engineered for life

Cannon KPT/KPSE MIL-C-26482 Series I Connectors



Introduction

The miniature circular connectors series KPT and KPSE from ITT Cannon conform to meet the performance specification of MIL-C-26482 with three point bayonet coupling and five-keyway polarization. They offer general purpose solder connectors and high performance crimp connectors. The broad product range provides the most complete family of connectors that conform to Mil-C-26482 and VG95328 performance specifications.

The versatility of these connectors has been proven by their usage in general as well as in high performance environmental applications.

In addition to the basic series presented in this section, connectors for special applications are available. They include corrosion resistant types, filter connectors for electromagnetic compatibility, and non-outgassing radiation resistant versions.

All connectors conform to the above mentioned performance specifications and are fully interchangeable and accept a wide range of interchangeable accessories. Thereby design modifications can be achieved more easily and at a lower cost with connectors of the KPT/KPSE series.

Circular

A

KPT General purpose solder contact connectors



KPT General purpose solder contact connectors

- General purpose
- Solder termination
- Closed entry socket contacts

Series KPT from ITT Cannon offers general purpose connectors used in military applications, but also widely used in industrial applications calling for a circular connector with fixed contacts for solder termination.

The KPT series conforms to meet the performance specifications of MIL-C-26482 and is interchangeable with all connectors according to the above specifications. VG95328H is also interchangeable with the KPT and MIL-C-26482, see page A-62





A

Circular

Technical Data

Material and Finishes	KPT	KPSE
Shell	Aluminum alloy, conductive olive drab chromate over cadmium finish per QQ-P-416 Contact Factor for other plating options	
Insulator	Polychloroprene	Polychloroprene
Grommet and Seal	Polychloroprene	Polychloroprene
Contacts	Copper alloy, gold plated	Copper alloy, gold plated

MECHANICAL

Shell Sizes 00 - wall mounting receptacle
 01 - cable connecting plug
 02 - box mounting receptacle
 06 - straight plug
 07 - jam nut receptacle
 08 - 90° angle plug
 B - thru-bulkhead receptacle (KPT only)

Shell Sizes KPT 8 thru 24
 KPSE 10 thru 24

Polarization/Coupling: five keyway/three point bayonet

Service Classes A - general duty
 B - general duty with strain relief
 E - grommet seal
 F - grommet seal with strain relief
 J - gland nut with strain relief for jacketed cable
 P - potted

Environmental Sealing	Acc. to VG95319 Part 2, Test No. 5.9.2. For styles A to E and J to W, Z1, Z2 and Z3 and gaskets style A and B only Test pressure 0,2 bar overpressure Test temperature 25 ± 3°C	Test duration 48 h The connector shall be free of moisture See 26482 specification
-----------------------	---	--

Operating temperature	-55 / 125°C
-----------------------	-------------

Electrical Data

Number of contacts	2 thru 61	3 thru 61
Wire Size AWG	16 thru 24	12 thru 24
Contact termination	Solder	Crimp

Contact rating	Size AWG	Rated current A	Test current A	Millivolt drop mV
	20	7.5	7.5	less than 55
	16	13.0	13.0	less than 50
	12	23.0	23.0	less than 42

Insulation resistance	⊕ 5000 MW
-----------------------	-----------

Service rating	Test voltage	Service class	Vrms	VDC	With scoop proof connectors operating voltages acc. to MIL-C-26482 and VG 96912 are permitted
	Sea level	1	1500	2100	
Exception:		2	2300	3200	
Service rating between the central contact and the housing of the coaxial contact	21336 m (70 000 ft)	1	375	535	
		2	550	770	
Operating voltage					
	Service class		VG 95328		MIL-C-26482
	1		140 VDC/100 VAC		850 VDC/600 VAC
	2		165 VDC/115 VAC		1400 VDC/1000 VAC

Operating voltage and connector usage Connectors are equipment which must not be separated or mated when under load conditions. When the connectors will be operated with line voltage, please consult factory.

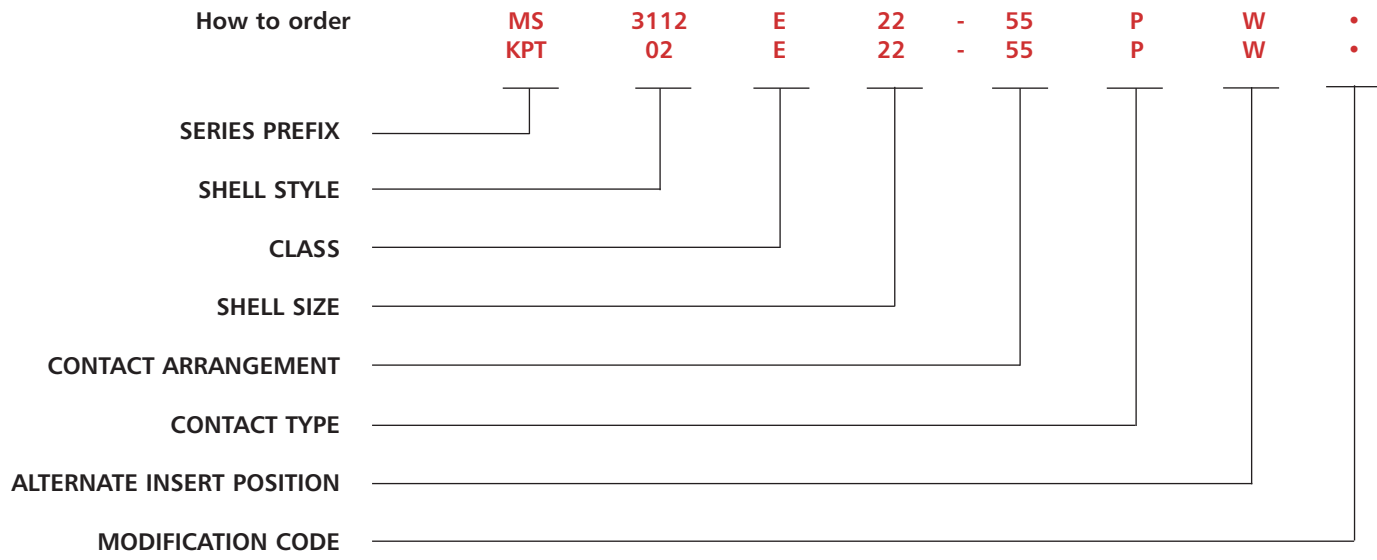




A

Circular

KPT General purpose solder contact connectors



SERIES PREFIX

- KPT -ITT Cannon prefix
- KPTR -ITT Cannon RoHS prefix (U.S. version)
- MS-MIL-DTL 26482 prefix

SHELL STYLE

- ITT Cannon designation
- 00 -wall mounting receptacle
- 01 -cable connecting receptacle
- 02 -box mounting receptacle (class E only)
- 06 -straight plug
- 07 -jam nut receptacle
- 08 -90° angle plug
- B - thru bulkhead receptacle, see page A-49

MS DESIGNATION

- 3110 - Wall mounting receptacle
- 3111 - Cable connecting receptacle
- 3112 - Box mounting receptacle (Class E only)
- 3114 - Jam nut receptacle
- 3116 - Straight plug

CLASS

- A -general duty (not MS approved)
- B -general duty with strain relief (not MS approved) without grommet and ferrule
- E -with a grommet seal, not for 02 and 3112 (MS specification)
- F -grommet seal with strain relief (MS specification)
- J -watertight gland seal with strain relief (MS specification) for jacketed cable (U.S. version)
- P -for potting (MS specification U.S. version)
- PG - PG adapter (not available for shell #8)
- ME - Metric adapter (not available for shell #8)

SHELL SIZES

- 8, 10, 12, 14, 16, 18, 20, 22, and 24

CONTACT ARRANGEMENTS

see page A-41

CONTACT TYPE

- P -Pin
- S -Socket

ALTERNATE INSERT POSITION

W, X, and Z (omit for normal), see page A-42

MODIFICATION CODE

- A34 - Electroless nickel hardware, RoHS compliant (European version)
- A71 - Electroless nickel hardware (U.S. version RoHS compliant after 11/1/07)
- A206 - Black zinc cobalt hardware (U.S. version, RoHS compliant)
- A232 - Black zinc cobalt hardware (European version, RoHS compliant)
- A233 - Green zinc cobalt hardware (European version)
- A408 - Extended Life Contact - Gold over Nickel
- DN - Shrink boot adapter for shell styles 00, 01, 06 and 07 (Class E only)
- DZ - Endbell for shielding braids and shrink boots. (Class E only)
- 07 - Clear chromate over cadmium hardware (U.S. version)
- 16 - Lanyard release (applicable to plug only) (U.S. version)
- 23 - Ground springs (applicable to plug only)
- F42 - connectors without endbell and related components

- | | |
|----------------------------|-----------------------------|
| P9 = PG9 for shell #10 | M12 = M12x1,5 for shell #10 |
| P11 = PG11 for shell #12 | M16 = M16x1,5 for shell #12 |
| P13 = PG13,5 for shell #14 | M20 = M20x1,5 for shell #14 |
| P16 = PG16 for shell #16 | M25 = M25x1,5 for shell #16 |
| P21 = PG21 for shell #18 | M25 = M25x1,5 for shell #18 |
| P21 = PG21 for shell #20 | M25 = M25x1,5 for shell #20 |
| P21 = PG21 for shell #22 | M32 = M32x1,5 for shell #22 |
| P29 = PG29 for shell #24 | M32 = M32x1,5 for shell #24 |

Consult factory for other modifications. Omit first digit (0) of shell style indication when using a modification code.





A

Circular

Contact Arrangements

LEGEND

- ▲ KPT
- ◆ KPSE
- △ Authorized per MIL-C-26482 (NAVY)
- Not MS approved ITTC proprietary
- ★ VG95328

Drawing not to scale; face view of pin insert shown (socket view is opposite)

Shell Size	No. of Contacts	Service Rating
Shell Size 8		
	8-2	I
	8-3	I
	8-3A	I
	8-4	I
	8-33	I
Shell Size 10		
	10-7	I
	10-6	I
	10-98	I
Shell Size 12		
	12-3	II
	12-8	I
	12-14	I
	12-10	I
Shell Size 14		
	14-5	II
	14-12	I
	14-15	I
Shell Size 16		
	16-8	II
	16-23	I
	16-26	I
	16-99	I
Shell Size 18		
	18-11	II
	18A28	I
Shell Size 20		
	20-16	II
	20A-6	I
	20-16	I
	20-24	I
	20-24	I
	20-39	I
	20-41	I
Shell Size 22		
	22-21	II
	22-32	I
	22-34	I
20A-6*		
	22-36	I
	22-41	I
	27-#20 14-#16	I
	22-55	I
Shell Size 24		
	24A57	I
	24-61	I

Dimensions shown in inches (mm)
Specifications and dimensions subject to change

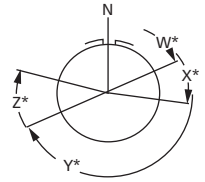


A

Circular

Alternate Insert Positions

Face view of pin inserts



The five positions (W,X,Y,Z and Normal) differ in degree or rotation for various sizes and arrangements

No. of Contacts	Shell Size	Arr. No.	W	Degrees of Rotation			
				X	Y	Z	
2	8	8-2	58	122	-	-	
3	8	8-3	60	210	.-	-	
3	8	8-3A*	60	-	-	-	
3	8	8-33	90	-	-	-	
3	12	12-3	-	-	180	-	
4	8	8-4	45	-	-	-	
5	14	14-5	40	92	184	273	
5	14	14-22	**	**	**	**	
5	20	20A-6*	90	180	270	-	
6	10	10-6	90	-	-	-	
6	10	10-98	90	180	240	270	
7	10	10-7*	**	**	**	**	
8	12	12-8	90	112	203	292	
8	16	16-8	54	152	180	331	
10	12	12-10	60	155	270	295	
11	18	18-11	62	119	241	340	
12	14	14-12	43	90	-	-	
14	12	12-14*	**	**	**	**	
15	14	14-15	17	110	155	234	
16	20	20-16	238	318	333	347	
18	14	14-18	15	90	180	270	
19	14	14-19	30	165	315	-	
21	22	22-21	16	135	175	349	
23	16	16-23	158	270	-	-	
23	16	16-99	66	156	223	340	
24	20	20-24	70	145	215	290	
26	16	16-26	60	-	275	338	
28	18	18A26*	-	-	-	-	
30	18	18-30	180	193	285	350	
32	18	18-32	85	138	222	265	
32	22	22-32	72	145	215	288	
34	22	22-34	62	142	218	298	
36	22	22-36*	72	144	216	288	
39	20	20-39	63	144	252	333	
41	20	20-41	45	126	225	-	
41	22	22-41	39	135	264	-	
55	22	22-55	30	142	226	314	
57	24	24A57*	90	180	270	324	
61	24	24-61	90	180	270	-	

* Contact arrangements not MIL-C-26482 qualified

† Not available in KPSE

LA, LBF, LE, LJ and LP are connector overall lengths



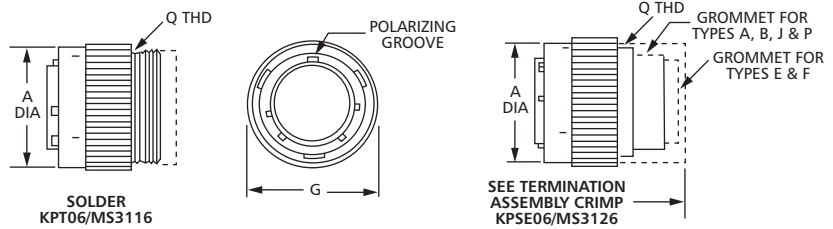


Circular

Straight Plugs

MS3116 (MS service class E,F,J,P)
MS3126 (MS service class E,F,P)

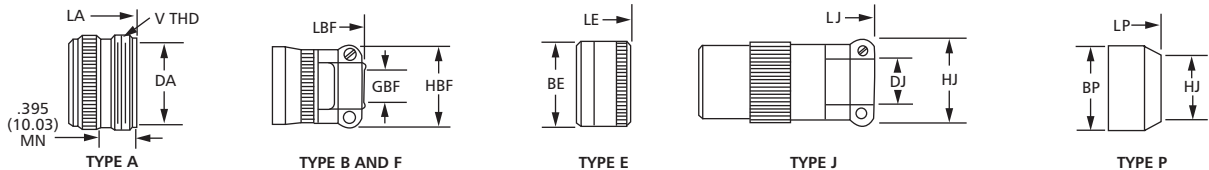
KPT06
KPSE06



Shell Size	A Dia. Max.	G Max.	J ±.010 (±0.25)	Q Thread Class 2A
†8	.765 (19.43)	.782 (19.86)	.353 (8.99)	7/16-28UNEF
10	.840 (21.34)	.926 (23.52)	.353 (8.99)	9/16-24UNEF
12	.999 (25.38)	1.043 (26.49)	.353 (8.99)	11/16-24UNEF
14	1.139 (28.93)	1.183 (30.05)	.353 (8.99)	13/16-20UNEF
16	1.261 (32.03)	1.305 (33.15)	.353 (8.99)	15/16-20UNEF
18	1.337 (33.96)	1.391 (35.33)	.353 (8.99)	1-1/16-18UNEF
20	1.477 (37.52)	1.531 (38.89)	.415 (10.54)	1-3/16-18UNEF
22	1.602 (40.69)	1.656 (42.06)	.415 (10.54)	1-5/16-18UNEF
24	1.723 (43.76)	1.777 (45.14)	.415 (10.54)	1-7/16-18UNEF

† Not available in KPSE

Straight Plugs with Termination Assemblies



Shell Size	TYPE A			TYPE B and F			TYPE E	
	DA Min.	LA Max.	V Thread Class 2A	GBF Min.	HBF Max.	LBF Max.	BE Max.	LE Max.
†8	.335 (8.51)	1.440 (36.58)	1/2-28UNEF	.115 (2.92)	.828 (21.03)	1.906 (48.41)	.608 (15.44)	1.328 (33.73)
10	.466 (11.84)	1.440 (36.58)	5/8-24UNEF	.178 (4.52)	.891 (22.63)	1.906 (48.41)	.734 (18.64)	1.328 (33.73)
12	.591 (15.01)	1.440 (36.58)	3/4-20UNEF	.302 (7.67)	1.016 (25.81)	1.906 (48.41)	.858 (21.79)	1.328 (33.73)
14	.700 (17.90)	1.440 (36.58)	7/8-20UNEF	.365 (9.27)	1.141 (28.98)	1.906 (48.41)	.984 (24.99)	1.328 (33.73)
16	.830 (21.08)	1.440 (36.58)	1-20UNEF	.490 (12.45)	1.203 (30.56)	2.047 (51.99)	1.110 (28.19)	1.328 (33.73)
18	.948 (24.08)	1.662 (42.21)	1-3/16-18UNEF	.615 (15.62)	1.469 (37.31)	2.078 (52.78)	1.234 (31.34)	1.328 (33.73)
20	1.043 (26.49)	1.662 (42.21)	1-3/16-18UNEF	.615 (15.62)	1.469 (37.31)	2.250 (57.15)	1.360 (34.54)	1.453 (36.91)
22	1.198 (30.43)	1.662 (42.21)	1-7/16-18UNEF	.740 (18.80)	1.656 (42.06)	2.250 (57.15)	1.484 (37.69)	1.453 (36.91)
24	1.293 (32.84)	1.672 (42.47)	1-7/16-18UNEF	.790 (20.07)	1.750 (44.45)	2.312 (58.72)	1.610 (40.49)	1.510 (38.54)

Shell Size	TYPE J			TYPE P		
	DJ Max./Min.	HJ Max.	LJ Max.	BP Max.	DP Min.	LP Max.
†8	.230/.168 (5.84/4.27)	.828 (21.03)	2.271 (57.68)	.608 (15.44)	.317 (8.05)	1.500 (38.10)
10	.312/.205 (7.92/5.21)	.891 (22.63)	2.271 (57.68)	.734 (18.64)	.434 (11.02)	1.500 (38.10)
12	.442/.338 (11.23/8.59)	1.016 (25.81)	2.411 (61.24)	.858 (21.79)	.548 (13.92)	1.500 (38.10)
14	.539/.416 (13.56/10.57)	1.141 (28.98)	2.599 (66.01)	.984 (24.99)	.673 (17.09)	1.500 (38.10)
16	.616/.550 (15.65/13.97)	1.203 (30.56)	2.943 (74.75)	1.110 (28.19)	.798 (20.27)	1.500 (38.10)
18	.672/.600 (17.07/15.24)	1.469 (37.31)	3.172 (80.57)	1.234 (31.34)	.899 (20.83)	1.500 (38.10)
20	.747/.634 (18.97/16.13)	1.469 (37.31)	3.610 (91.69)	1.360 (34.54)	1.024 (26.01)	1.609 (40.87)
22	.846/.670 (21.49/17.02)	1.656 (42.06)	3.766 (95.66)	1.484 (37.69)	1.149 (29.18)	1.609 (40.87)
24	.894/.740 (22.71/18.80)	1.750 (44.45)	3.985 (101.22)	1.610 (40.89)	1.274 (32.36)	1.687 (42.85)

† Not available in KPSE

LA, LBF, LE, LJ and LP are connector overall lengths



Dimensions shown in inches (mm)
Specifications and dimensions subject to change

www.ittcannon.com