Solder **Crimp**

- General purpose
- Closed-entry socket contacts
- Solder termination

KPT connectors are a series of general - purpose, environment - resistant, miniature circular connectors, qualified for use in industrial applications calling for quick - disconnect connectors with fixed contacts for solder termination. These miniature circular connectors are grouped into two series ranging from general purpose solder pot connectors . . . to high performance, crimp connectors . . . to connectors with high contact density. This broad range provides the most complete family of 26482 connectors available today. The versatility of these connectors is proven by the fulfillment of requuirements ranging from general purpose to space environmental.

In addition to the two basic series, connectors for special applications are also available. They include RFI filtering versions (with loss pass internal filter pin contacts), hermetic connectors for high pressure watertight requirements, and twist - on pull - off couplers for MIL-C-26482 plugs.

This series is intermateable and intermountable with all MIL-C-26482 connectors, whether solder or crimp type and is available with many materials, finishers and configurations.

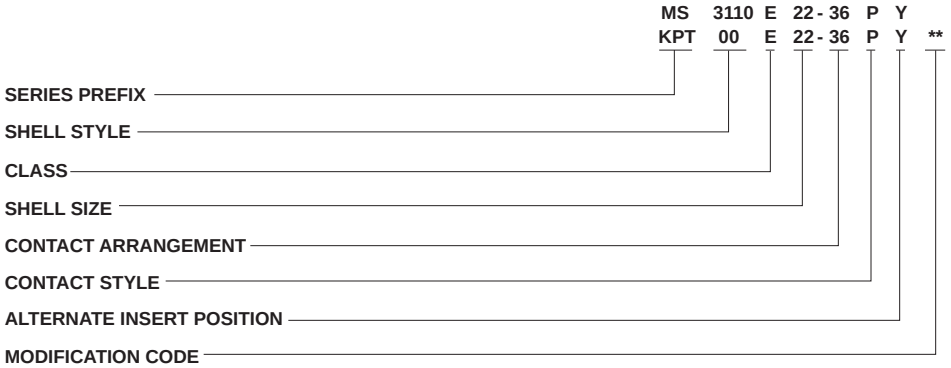
How to Order - KPT - Solder Contact Connectors

SERIES PREFIX
KPT - ITT Cannon prefix
MS - MIL-C-26482 prefix

SHELL STYLE
Cannon Designation
00 - wall mounting receptacle
01 - cable connecting plug
02 - box mounting receptacle (Class E only)
*03 - wall mounting receptacle without grommet, ferrule and endbell
*04 - cable connecting plug without grommet, ferrule and endbell
*05 - straight plug withoug grommet, ferrule, and endbell
06 - straight plug
07 - jam nut receptacle (available in hermetic version also)
08 - 90˚ angle plug
B - thru-bulkhead receptacle (Class E only)

*Consult factory for details

SHELL STYLE (cont'd)
MS Designation
3110 - wall mounting receptacle
3111 - cable connecting plug
3112 - box mounting receptacle (Class E only)
3114 - jam nut receptacle
3116 - straight plug
3119 - thru-bulkhead receptacle (Class E only)



CLASS
A - general duty (not MS approved)
B - general duty with strain relief without grommet & ferrules (may be used for potting when strain relief is desired) (not MS approved)
E - grommet seal except on 02 and 3112 (MS specification)
F - grommet seal with strain relief (MS specification)
J - water tight gland seal with strain relief for jacketed cable (MS specification)
P - potted (MS specification)

SHELL SIZE
8, 10, 12, 14, 16, 18, 20, 22, and 24

CONTACT ARRANGEMENT
See contact arrangement page 149.

CONTACT STYLE
P - pin; S - socket

ALTERNATE INSERT POSITION
W, X, Y and Z. (Omit for normal.)

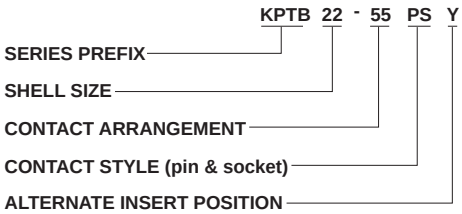
MODIFICATION CODE
Omit first (0) of shell style indication when using modifications code.
07 - clear chromate over cadmium
16 - twist-pull lanyard release coupler (appli cable to plug only).
23 - grounding springs fingers (applicable to plug only)

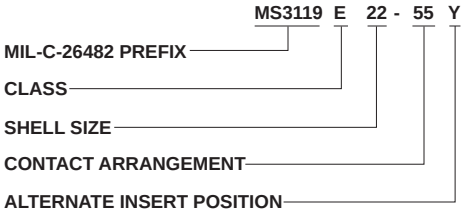
How to Order - KPTB Thru-Bulkhead Receptacle Connectors

- General Purpose
- Double ended pin and socket contacts
- Contains KPT socket insert
- Nonremovable contacts

KPT connectors are a series of general - purpose, miniature circular connectors, qualified for use in military applications. Ther are also widely used in industrial applications. The KPTB in a thru-bulkhead version with double faced pin and socket insert construction allowing mating from both ends. They contain KPT socket inserts with feed-thru (pin/socket) non-removable contacts.

The thru-bulkhead receptacle is provided for applications requiring the disconnnection of a power source from either side of a panel. A typical connector to be used if air leakage requirements are critical.





How to Order - KPSE Crimp Contact Connectors

MS	3120	E	18	-	32	P	X		
KPSE	00	E	18	-	32	P	X	**	

SERIES PREFIX
SHELL STYLE
CLASS
SHELL SIZE
CONTACT ARRANGEMENT
CONTACT TYPE
ALTERNTE INSERT POSITION
MODIFICATION CODE

SERIES PREFIX
KPSE - ITT Cannon prefix
MS - MIL-C-26482 prefix

SHELL STYLE
ITT Cannon Number:
00 - wall mounting receptacle
01 - cable connecting plug
02 - box mounting receptacle (without wire seals)
* 03 - wall mounting receptacle without ferrule and endbell
* 04 - cable connector plug without ferrule and endbell
* 05 - straight plug without ferrule and endbell
06 - straight plug
07 - jam nut receptacle
08 - 90˚ angle plug

* Consult factory for details

MS Desgination
3120 - wall mounting receptacle
3121 - cable connnecting plug
3122 - box mounting receptacle
3124 - jam nut receptacle
3126 - straight plug

CLASS
A - general duty (not MS approved)
B - general duty with strain relief without grommet & ferrules (not MS approved)
E - grommet seal (MSspecification)
F - grommet seal with strain relief (MS specification)
J - gland seal with strain relief for jacketed cable (not MS approved)
P - potted (MS specification)

SHELL SIZE
10, 12, 14, 16, 18, 20, 22, and 24

CONTACT ARRANGEMENT
See contact arrangements page 149.

CONTACT STYLE
P - pin
S - socket

ALTERNATE INSERT POSITION
W, X, Y and Z. (Omit for normal.)

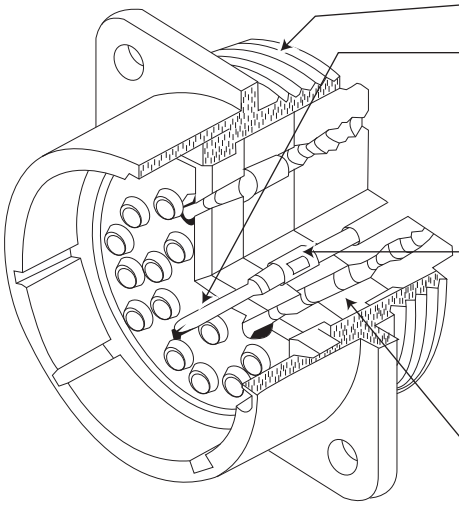
MODIFICATION CODE
Omit first (0) of shell style indication when using modifications code.
F0 - less contacts, not marked on connectors
07 - clear chromate over cadmium
16 - twist-pull lanyard release coupler (appli cable to plug only).
23 - grounding springs fingers (applicable to plug only)

KPSE High Performance Crimp Contact Connectors

- Environment -resistant
- Voidless integrally molded insulator
- Front-release, crimp snap-in contacts
- Closed entry socket contacts
- 4 moisture seals for complete sealing
- Contact clip protected in hard dieletric
- Positive insert-to-shell mechanical retention

KPSE environment-resistant, miniature circular, quick disconnect connectors, qualified to MIL-C-26482, are designed for the exacting requirements of today's electronic industry. The KPSE features an insulator which is mechanically retained in the shell by a positive, hard plastic-to-metal lock retention augmented by a reliable adhesive bond. Complete moisture sealing is achieved by four seal; shell, peripheral, interfiacial and wire seals. Crimp snap-in contacts are retained in clips that are completely encased in a tough hard dieletric wafer, thus protecting the clips tines from damage. Closed-entry socket contacts facilitate positive mating.

The KPSE series is intermateable, intermountable and interchangeable with all MIL-C-26482 connectors, whether crimp or solder type, and is avialiable with many materials, finishes and configurations.



STANDARD MIL-C-26482 HARDWARE mates with any connector designed to MIL-C-26482.

CRIMP, SNAP-IN CONTACTS are designed to MIL-C-39029 and can be crimped with the standard M22520/1 crimp tool.
CLOSED-ENTRY SOCKET CONTACTS eliminate damage from abuse by test probes and help to correct any misaligned pins during engagement.
CONTACT INSERTION is accomplished from the rear of the connector. When the contact is fully inserted, the clip tines snap securely behind the contact shoulder.
CONTACT EXTRACTION is accomplished with a front-inserted extraction tool. Pressing the tool plunger pushes the contact out thru the rear of the connnector.

CONTACT RETAINING CLIP is completely encased in a tough plastic wafer to protect the clip from damage.

COMPLETE MOISTURE SEALING is achieved by combining four seals: shell, peripheral, interfacial and wire seals.
SHELL SEAL is effected when the plug shell pushes against the sealing ring in the receptacle when the connectors are mated.
PERIPHERAL SEAL around the edge of the pin insulator is designed so that mating the connector puts tension on the seal and greatly reduces compression set.
INTERFACIAL SEAL is achieved by the insulator faces meeting when the plug and receptacle are mated.
WIRE SEAL is accomplished by a mulitiple ripple design, exceeding the wire sealing requirements of MIL-C-26482.

POSITIVE INSERT-TO-SHELL MECHANICAL RETENTION with hard plastic wafer firmly locked into a groove in the shell, in addition to a strong adhesive bond between the insert and shell.

Performance and Material Specifications

STANDARD MATERIALS AND FINISHES

Shell	aluminum alloy, conductive olive drab chromate over cadmium finish per QQ-P-416
Insulator	polychloroprene
Grommet and Seal	polychloroprene
Contacts	Copper alloy, gold plate per MIL-G-45204 type II
Temperature Range	- 55˚C to +125˚C

MECHANICAL

Shell Sizes
- 00 - wall mounting receptacle
- 01 - cable connecting plug
- 02 - box mounting receptacle
- 06 - straight plut
- 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

ELECTRICAL

Contact Termination	solder (KPT)	crimp snap-in (KPSE)
Number of contacts	KPT 2 thru 61	KPSE 3 thru 61
Wire size, AWG	KPT 12 thru 24	KPSE 16 thru 24

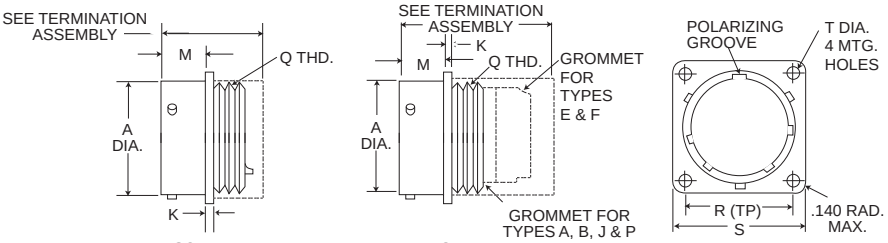
Wire Range Accommodations		Insulation O.D. Limits		
Contact Size	AWG Wire Size	Min. KPT	Min. KPSE	Max. KPT/ KPSE
20	24, 22 and 20	.060 (1.52)	.047 (1.19)	.083 (2.11)
16	20, 18 and 16	.066 (1.68)	.066 (1.68)	.109 (2.77)
12	14 and 12	.097 (2.46)		.142 (3.61)

Contact Rating	Contact Size	Rated Amps	Test Current	Millivolt Drop
	20	7.5	7.5	less than 55
	16	22.0	13.0	less than 50

Service Rating	Test Volt	Service	AC(rms)	DC
Maximum Operating Voltage	Sea level	1	1500	2100
		2	2300	3200
	70,000 ft.	1	375	535
		2	550	770
	Sea level	1	600	850
		2	1000	1275

Wall Mounting Receptacles

MS3110 (MS service class E, F, J, P) **KPT00**
MS3120 (MS service class E, F, P) **KPSE00**

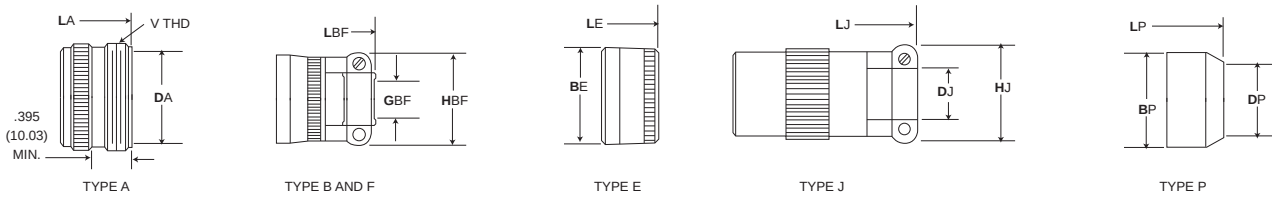


SOLDER KPT00/MS3110 **CRIMP KPSE00/MS3120** **RECEPTACLE ASSEMBLY**

Shell Size	A ± .003 (±.08)	K ± .016 (±.41)	M + .031 (+.79) -.000 (-.00)	R* (TP)	S Max.	T - .005 (±.13)	Q Thread Class 2A
‡8	.471 (11.96)	.062 (1.57)	.431 (10.95)	.594 (15.09)	.828 (21.03)	.120 (3.05)	7/16-28UNEF
10	.588 (14.96)	.062 (1.57)	.431 (10.95)	.719 (18.26)	.954 (24.23)	.120 (3.05)	9/16-24UNEF
12	.748 (19.00)	.062 (1.57)	.431 (10.95)	.812 (20.62)	1.047 (26.59)	.120 (3.05)	11/16-24UNEF
14	.873 (22.17)	.062 (1.57)	.431 (10.95)	.906 (23.01)	1.141 (28.98)	.120 (3.05)	13/16-20UNEF
16	.998 (25.35)	.062 (1.57)	.431 (10.95)	.969 (24.61)	1.234 (31.34)	.120 (3.05)	15/16-20UNEF
18	1.123 (28.52)	.062 (1.57)	.431 (10.95)	1.062 (26.97)	1.328 (33.73)	.120 (3.05)	1-1/16-18UNEF
20	1.248 (31.70)	.094 (2.39)	.556 (14.12)	1.156 (29.36)	1.453 (36.91)	.120 (3.05)	1-3/16-18UNEF
22	1.373 (34.87)	.094 (2.39)	.556 (14.12)	1.250 (31.75)	1.578 (40.08)	.120 (3.05)	1-5/16-18UNEF
24	1.498 (38.05)	.094 (2.39)	.589 (14.96)	1.375 (34.92)	1.703 (43.26)	.147 (3.73)	1-7/16-18UNEF

‡Not available in KPSE *(TP) located within .010 T.P. with respect to diameter A and master keyway.

Receptacles with Termination Assemblies



	TYPE A			TYPE B and F			TYPE E	
Shell Size	DA Min.	LA Max.	V Thread Class 2A	GBF Min.	HBF Max.	LBF Max.	BE Max.	LE Max.
†8	.335 (8.15)	1.44 (36.68)	1/2-28UNEF	.115 (2.92)	.828 (21.03)	1.922 (48.82)	.608 (15.44)	1.328 (33.73)
10	.466 (11.84)	1.44 (36.68)	5/8-24UNEF	.178 (4.52)	.891 (22.63)	1.922 (48.82)	.734 (18.64)	1.328 (33.73)
12	.591 (15.01)	1.444 (36.68)	3/4-20UNEF	.302 (7.67)	1.016 (25.81)	1.922 (48.82)	.858 (21.79)	1.328 (33.73)
14	.705 (19.05)	1.444 (36.68)	7/8-20UNEF	.365 (9.27)	1.141 (28.98)	1.922 (48.82)	.984 (24.99)	1.328 (33.73)
16	.830 (21.08)	1.444 (36.68)	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)	1.444 (36.68)	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)	1.728 (43.89)	1-3/16-18UNEF	.615 (15.62)	1.469 (37.31)	2.344 (59.54)	1.360 (34.54)	1.531 (38.89)
22	1.198 (30.43)	1.728 (43.89)	1-7/16-18UNEF	.740 (18.80)	1.656 (42.06)	1.344 (59.54)	1.484 (37.69)	1.531 (38.89)
24	1.293 (32.84)	1.738 (44.15)	1-7/16-18UNEF	.790 (20.07)	1.750 (44.45)	2.406 (61.11)	1.610 (40.89)	1.594 (40.49)

	TYPE J			TYPE P		
Shell Size	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)	1.453 (36.91)
10	.312/.205 (7.92/5.21)	.891 (22.63)	2.271 (57.68)	.734 (18.64)	.434 (11.02)	1.453 (36.91)
12	.442/.338 (11.23/8.59)	1.016 (25.81)	2.411 (61.24)	.858 (21.79)	.548 (13.92)	1.453 (36.91)
14	.539/.416 (13.56/10.57)	1.141 (28.98)	2.599 (66.01)	.984 (24.99)	.673 (17.09)	1.453 (36.91)
16	.616/.550 (15.65/13.97)	1.203 (30.56)	2.943 (74.75)	1.110 (28.19)	.798 (20.27)	1.453 (36.91)
18	.672/.600 (17.07/15.24)	1.469 (37.31)	3.172 (80.57)	1.234 (31.34)	.899 (22.83)	1.453 (36.91)
20	.747/.634 (18.97/16.13)	1.469 (37.31)	3.610 (91.69)	1.360 (34.54)	1.024 (26.01)	1.672 (42.47)
22	.846/.670 (21.49/17.02)	1.656 (42.06)	3.766 (95.66)	1.484 (37.69)	1.149 (29.18)	1.672 (42.47)
24	.894/.740 (22.71/18.80)	1.750 (44.45)	3.985 (101.22)	1.610 (40.89)	1.274 (32.36)	1.734 (44.04)

†Not available in KPSE

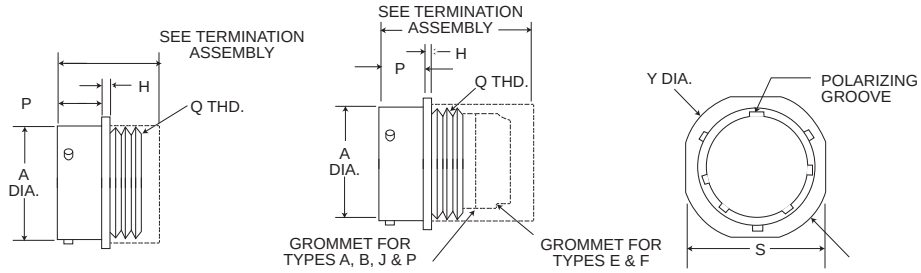
Performance Specifications - Page 142
Contacts, Sealing Plugs, Assembly Tools - Page 154
Contact Arrangements - Page 149

Cable Connecting Plugs

MS3111
(MS service class E, F, J, P)
MS3121
(MS service clase E, F, P)

KPT01

KPSE01



SOLDER
KPT01/MS3111

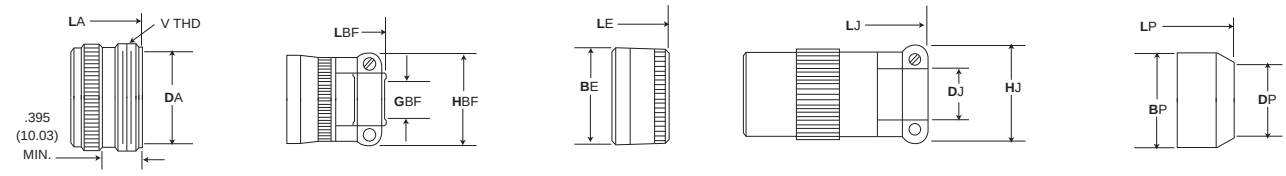
CRIMP
KPSE01/MS3121

PLUG ASSEMBLY

Shell Size	A ± .003 (±.08)	H ± .016 (±.41)	P + .031 (+.79) -.000 (-.00)	S Max.	Y Max.	Q Thread Class 2A
†8	.471 (11.96)	.094 (2.39)	.400 (10.16)	.828 (21.03)	.958 (24.33)	7/16-28UNEF
10	.588 (14.94)	.094 (2.39)	.400 (10.16)	.954 (24.23)	1.082 (27.48)	9/16-24UNEF
12	.748 (19.00)	.094 (2.39)	.400 (10.16)	1.047 (26.59)	1.176 (29.87)	11/16-24UNEF
14	.873 (22.17)	.094 (2.39)	.400 (10.16)	1.141 (28.98)	1.270 (32.26)	13/16-20UNEF
16	.998 (25.35)	.094 (2.39)	.400 (10.16)	1.234 (31.34)	1.364 (34.65)	15/16-20UNEF
18	1.123 (28.52)	.094 (2.39)	.400 (10.16)	1.328 (33.73)	1.458 (37.03)	1-1/16-18UNEF
20	1.248 (31.70)	.115 (2.92)	.535 (13.59)	1.453 (36.91)	1.582 (40.18)	1-3/16-18UNEF
22	1.373 (34.87)	.115 (2.92)	.535 (13.59)	1.578 (40.08)	1.708 (43.38)	1-5/16-18UNEF
24	1.498 (38.05)	.115 (2.92)	.558 (14.43)	1.703 (43.26)	1.832 (46.53)	1-7/16-18UNEF

†Not available in KPSE *(TP) located within .010T.P. with respect to diameters A and master keyway.

Cable Connecting Plugs With Termination Assemblies



TYPE A TYPE B AND F TYPE E TYPE J TYPE P

With Termination Assemblies

	TYPE A			TYPE B and F			TYPE E	
Shell Size	DA Min.	LA Max.	V Thread Class 2A	GBF Min.	HBF Max.	LBF Max.	BE Max.	LE Max.
†8	.335 (8.15)	1.44 (36.68)	1/2-28UNEF	.115 (2.92)	.828 (21.03)	1.922 (48.82)	.608 (15.44)	1.328 (33.73)
10	.466 (11.84)	1.44 (36.68)	5/8-24UNEF	.178 (4.52)	.891 (22.63)	1.922 (48.82)	.734 (18.64)	1.328 (33.73)
12	.591 (15.01)	1.44 (36.68)	3/4-20UNEF	.302 (7.67)	1.016 (25.81)	1.922 (48.82)	.858 (21.79)	1.328 (33.73)
14	.705 (19.05)	1.44 (36.68)	7/8-20UNEF	.365 (9.27)	1.141 (28.98)	1.922 (48.82)	.984 (24.99)	1.328 (33.73)
16	.830 (21.08)	1.44 (36.68)	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)	1.44 (36.68)	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)	1.728 (43.89)	1-3/16-18UNEF	.615 (15.62)	1.469 (37.31)	2.344 (59.54)	1.360 (34.54)	1.531 (38.89)
22	1.198 (30.43)	1.728 (43.89)	1-7/16-18UNEF	.740 (18.80)	1.656 (42.06)	1.344 (59.54)	1.484 (37.69)	1.531 (38.89)
24	1.293 (32.84)	1.738 (44.15)	1-7/16-18UNEF	.790 (20.07)	1.750 (44.45)	2.406 (61.11)	1.610 (40.89)	1.594 (40.49)

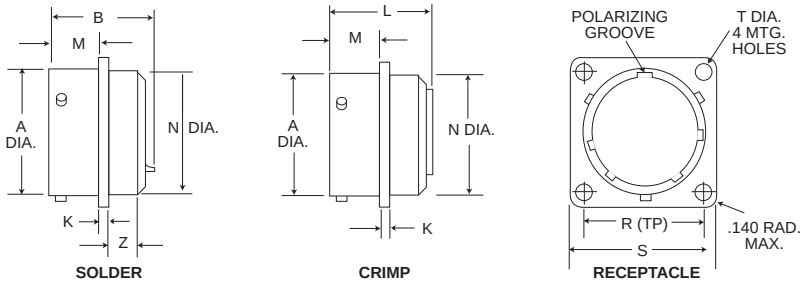
	TYPE J			TYPE P		
Shell Size	DJ Max./Min.	HJ Max.	LJ Max.	BP Max.	DP Min.	LP Max.
†8	.230/.168 (5.84/4.27)	.828 (21.03)	2.271 (57.68)	.608 (15.44)	.317 (8.05)	1.453 (36.91)
10	.312/.205 (7.92/5.21)	.891 (22.63)	2.271 (57.68)	.734 (18.64)	.434 (11.02)	1.453 (36.91)
12	.442/.338 (11.23/8.59)	1.016 (25.81)	2.411 (61.24)	.858 (21.79)	.548 (13.92)	1.453 (36.91)
14	.539/.416 (13.56/10.57)	1.141 (28.98)	2.599 (66.01)	.984 (24.99)	.673 (17.09)	1.453 (36.91)
16	.616/.550 (15.65/13.97)	1.203 (30.56)	2.943 (74.75)	1.110 (28.19)	.798 (20.27)	1.453 (36.91)
18	.672/.600 (17.07/15.24)	1.469 (37.31)	3.172 (80.57)	1.234 (31.34)	.899 (22.83)	1.453 (36.91)
20	.747/.634 (18.97/16.13)	1.469 (37.31)	3.610 (91.69)	1.360 (34.54)	1.024 (26.01)	1.672 (42.47)
22	.846/.670 (21.49/17.02)	1.656 (42.06)	3.766 (95.66)	1.484 (37.69)	1.149 (29.18)	1.672 (42.47)
24	.894/.740 (22.71/18.80)	1.750 (44.45)	3.985 (101.22)	1.610 (40.89)	1.274 (32.36)	1.734 (44.04)

†Not available in KPSE

Performance Specifications - Page 142
Contacts, Sealing Plugs, Assembly Tools - Page 154
Contact Arrangements - Page 149

Box Mounting Receptacles

MS3112 **KPT02**
(MS service class E)
MS3122 **KPSE02**
(MS service class E)



SOLDER KPT02/MS3112 **CRIMP KPSE02/MS3122** **RECEPTACLE ASSEMBLY**

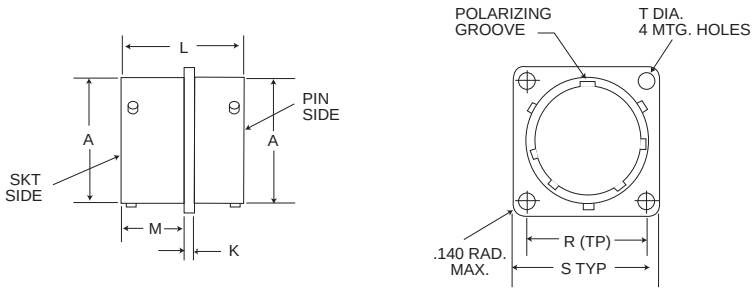
Note: Connector does not accommodate backshell.

Shell Size	A ± .003 (±.08)	B Max	K ± .016 (±.41)	L Max.	M + .031 (+.79) -.000 (-.00)	N Dia. Max.	R* (TP)	S Max.	T ± .005	Z Max.
†8	.471 (11.96)	.978 (12.14)	.062 (1.57)	1.320 (33.07)	.431 (10.95)	.469 (11.91)	.594 (15.09)	.828 (21.03)	.120 (3.05)	.354 (8.99)
10	.588 (14.96)	.978 (12.14)	.062 (1.57)	1.320 (33.07)	.431 (10.95)	.593 (15.06)	.719 (18.26)	.954 (24.23)	.120 (3.05)	.354 (8.99)
12	.748 (19.00)	.978 (12.14)	.062 (1.57)	1.320 (33.07)	.431 (10.95)	.719 (18.26)	.812 (20.62)	1.047 (26.59)	.120 (3.05)	.354 (8.99)
14	.873 (22.17)	.978 (12.14)	.062 (1.57)	1.320 (33.07)	.431 (10.95)	.843 (21.41)	.906 (23.01)	1.141 (28.98)	.120 (3.05)	.354 (8.99)
16	.998 (25.35)	.978 (12.14)	.062 (1.57)	1.320 (33.07)	.431 (10.95)	.969 (24.61)	.969 (24.61)	1.234 (31.34)	.120 (3.05)	.354 (8.99)
18	1.123 (28.52)	.978 (12.14)	.062 (1.57)	1.320 (33.07)	.431 (10.95)	1.093 (27.76)	1.062 (26.97)	1.328 (33.73)	.120 (3.05)	.354 (8.99)
20	1.248 (31.70)	1.196 (30.38)	.094 (2.39)	1.367 (34.72)	.556 (14.12)	1.219 (30.96)	1.156 (29.36)	1.453 (36.91)	.120 (3.05)	.417 (10.59)
22	1.373 (34.87)	1.196 (30.38)	.094 (2.39)	1.367 (34.72)	.556 (14.12)	1.343 (34.11)	1.250 (31.75)	1.578 (40.08)	.120 (3.05)	.417 (10.59)
24	1.498 (38.05)	1.196 (30.98)	.094 (2.39)	1.418 (36.02)	.589 (14.96)	1.469 (37.31)	1.375 (34.92)	1.703 (43.26)	.147 (3.73)	.445 (11.30)

†Not available in KPSE *(TP) located within .010T.P. with respect to diameter A and master keyway.

Thru-Bulkhead Receptacles

MS3119 **KPTB**
(MS service class E)



*(T.P) located within .010 T.P. with respect to diameter A and master keyway.

Shell Size	A Dia. ± .003 (±.08)	K ± .016 (±.406)	L Max.	M + .031 (+.79) -.000 (-.00)	R* (TP)	S Max.	T ± .005 (± .127)
†8	.471 (11.96)	.062 (1.57)	1.125 (28.58)	.562 (14.27)	.594 (15.09)	.828 (21.03)	.120 (3.05)
10	.588 (14.94)	.062 (1.57)	1.125 (28.58)	.562 (14.27)	.719 (18.26)	.954 (24.23)	.120 (3.05)
12	.748 (18.00)	.062 (1.57)	1.125 (28.58)	.562 (14.27)	.812 (20.62)	1.047 (26.59)	.120 (3.05)
14	.873 (22.17)	.062 (1.57)	1.125 (28.58)	.562 (14.27)	.906 (23.01)	1.141 (28.98)	.120 (3.05)
16	.998 (25.35)	.062 (1.57)	1.125 (28.58)	.562 (14.27)	.969 (24.61)	1.234 (31.34)	.120 (3.05)
18	1.123 (28.52)	.062 (1.57)	1.125 (28.58)	.562 (14.27)	1.062 (26.97)	1.328 (33.73)	.120 (3.05)
20	1.248 (31.70)	.094 (2.39)	1.406 (35.71)	.688 (17.48)	1.156 (29.36)	1.453 (36.91)	.120 (3.05)
22	1.373 (34.87)	.094 (2.39)	1.406 (35.71)	.688 (17.48)	1.250 (31.76)	1.578 (40.08)	.120 (3.05)
24	1.498 (38.05)	.094 (2.39)	1.406 (35.71)	.688 (17.48)	1.375 (34.92)	1.703 (43.26)	.147 (3.73)

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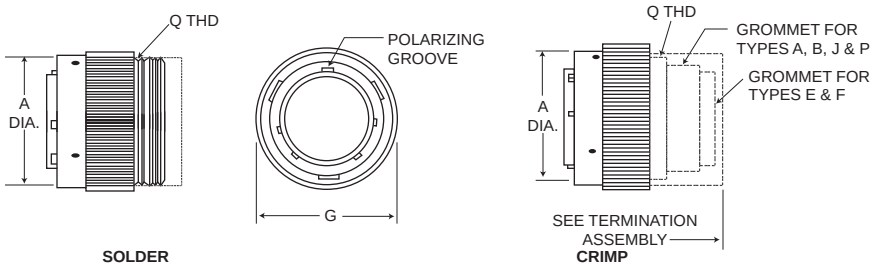
Straight Plugs

MS3116 **KPT06**
(MS service class E, F, J, P)
MS3126 **KPSE06**
(MS service class E, F, P)



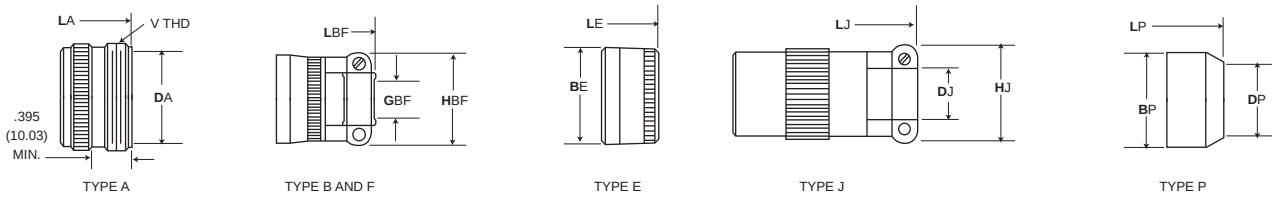
SOLDER
KPT06/MS3116

CRIMP
KPSE06/MS3126

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)	1.77 (45.14)	.415 (10.54)	1-7/16-18UNEF

†Not available in KPSE

Straight Plugs With Termination Assemblies



	TYPE A			TYPE B and F			TYPE E	
Shell Size	LA Max.	DA Min.	V Thread Class 2A	LBF Max.	HBF Max.	GBF Min.	BE Max.	LE Max.
†8	1.440 (36.58)	.335 (8.51)	1/2-28UNEF	1.906 (48.41)	.828 (21.03)	.115 (2.02)	.608 (15.44)	1.328 (33.73)
10	1.440 (36.58)	.466 (11.84)	5/8-24UNEF	1.906 (48.41)	.891 (22.63)	.178 (4.52)	.734 (18.64)	1.328 (33.73)
12	1.440 (36.58)	.591 (15.01)	3/4-20UNEF	1.906 (48.41)	1.016 (25.81)	.302 (7.67)	.858 (21.79)	1.328 (33.73)
14	1.440 (36.58)	.705 (19.05)	7/8-20UNEF	1.906 (48.41)	1.141 (28.98)	.365 (9.27)	.984 (24.99)	1.328 (33.73)
16	1.440 (36.58)	.830 (21.08)	1-20UNEF	2.047 (51.99)	1.203 (30.56)	.490 (12.45)	1.110 (28.19)	1.328 (33.73)
18	1.662 (42.21)	.948 (24.08)	1-3/16-18UNEF	2.078 (52.78)	1.469 (37.31)	.615 (15.62)	1.234 (31.34)	1.328 (33.73)
20	1.662 (42.21)	1.043 (26.49)	1-3/16-18UNEF	2.250 (57.15)	1.469 (37.31)	.615 (15.62)	1.360 (34.54)	1.453 (36.91)
22	1.662 (42.21)	1.198 (30.43)	1-7/16-18UNEF	2.250 (57.15)	1.656 (42.06)	.740 (18.80)	1.484 (37.69)	1.453 (36.91)
24	1.672 (42.47)	1.293 (32.84)	1-7/16-18UNEF	2.312 (58.72)	1.750 (44.45)	.790 (20.07)	1.610 (40.89)	1.510 (38.54)

	TYPE J			TYPE P		
Shell Size	LJ Max.	HJ Max.	DJ Max./Min.	LP Max.	DP Min.	BP Max.
†8	2.271 (57.68)	.828 (21.03)	.230/.168 (5.84/4.27)	1.500 (38.10)	.317 (8.05)	.608 (15.44)
10	2.271 (57.68)	.891 (22.63)	.312/.205 (7.92/5.21)	1.500 (38.10)	.434 (11.02)	.734 (18.64)
12	2.411 (61.24)	1.016 (25.81)	.442/.338 (11.23/8.59)	1.500 (38.10)	.548 (13.92)	.858 (21.79)
14	2.599 (66.01)	1.141 (28.98)	.539/.416 (13.56/10.57)	1.500 (38.10)	.673 (17.09)	.984 (24.99)
16	2.943 (74.75)	1.203 (30.56)	.616/.550 (15.65/13.97)	1.500 (38.10)	.798 (20.27)	1.110 (28.19)
18	3.172 (80.57)	1.469 (37.31)	.672/.600 (17.07/15.24)	1.500 (38.10)	.899 (22.83)	1.234 (31.34)
20	3.610 (91.69)	1.469 (37.31)	.747/.634 (18.97/16.13)	1.609 (40.87)	1.024 (26.01)	1.360 (34.54)
22	3.766 (95.66)	1.656 (42.06)	.846/.670 (21.49/17.02)	1.609 (40.87)	1.149 (29.18)	1.484 (37.69)
24	3.985 (101.22)	1.750 (44.45)	.894/.740 (22.71/18.80)	1.687 (42.85)	1.274 (32.36)	1.610 (40.89)

†Not available in KPSE

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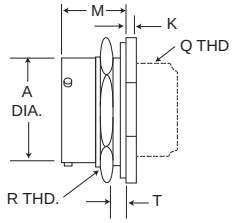
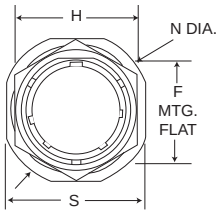
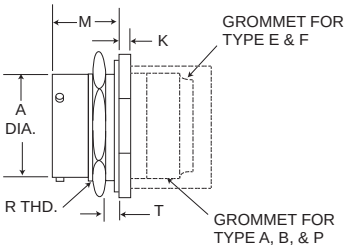
Jam Nut Receptacles

MS3114 **KPT07**
(MS service class E, F, P)
MS3124 **KPSE07**
(MS service class E, F, P)







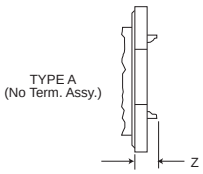
SOLDER
KPT07/MS3114

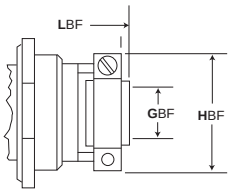
CRIMP
KPSE07/MS3124

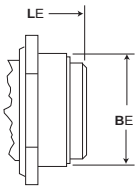
Shell Size	A ±.003 (±0.08)	A ±.005 (0.130)	H ±.017 (±0.43)	K ±.020 (±.05)	M +.031 (+.08) -.000 (-.00)	N Max.	S Max.	T Panel Thickness Min.	T Panel Thickness Max.	R thread Class 2A
†8	.471 (11.96)	.525 (13.34)	.750 (19.05)	.117 (2.97)	.691 (17.55)	1.078 (27.38)	.954 (24.23)	.062 (1.57)	.125 (3.17)	9/16-24UNEF
10	.588 (14.93)	.650 (16.51)	.875 (22.22)	.117 (2.97)	.691 (17.55)	1.206 (30.56)	1.078 (27.38	.062 (1.57)	.125 (3.17)	11/16-24UNEF
12	.748 (19.00)	.813 (20.65)	1.062 (26.97)	.117 (2.97)	.691 (17.55)	1.319 (35.33)	1.266 (32.16)	.062 (1.57)	.125 (3.17)	7/8-20UNEF
14	.873 (22.17)	.937 (23.80)	1.188 (30.17)	.117 (2.97)	.691 (17.55)	1.516 (38.51)	1.391 (35.33)	.062 (1.57)	.125 (3.17)	1-20UNEF
16	.988 (25.35)	1.061 (26.95)	1.312 (33.32)	.117 (2.97)	.691 (17.55)	1.641 (41.68)	1.516 (38.51)	.062 (1.57)	.125 (3.17)	1-1/8-18UNEF
18	1.123 (28.52)	1.186 (30.12)	1.438 (36.25)	.117 (2.97)	.691 (17.55)	1.766 (44.86)	1.41 (41.68)	.062 (1.57)	.125 (3.17)	1-1/4-18UNEF
20	1.248 (31.70)	1.311 (33.30)	1.562 (39.67)	.148 (3.76)	.879 (22.33)	1.954 (49.63)	1.828 (46.43)	.062 (1.57)	.250 (6.35)	1-3/8-18UNEF
22	1.373 (34.87)	1.436 (36.47)	1.688 (42.87)	.148 (3.76)	.879 (22.33)	2.078 (52.78)	1.954 (49.63)	.062 (1.57)	.250 (6.35)	1-1/2-18UNEF
24	1.498 (38.05)	1.561 (39.65)	1.812 (46.02)	.148 (3.76)	.912 (23.16)	2.203 (55.96)	2.078 (52.78)	.062 (1.57)	.250 (6.35)	1-5/8-18UNEF

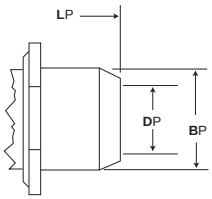
†Not available in KPSE

Jam Nut Receptacles With Termination Assemblies









Shell Size	TYPE A Z Max.	TYPE B AND F HBF Max.	TYPE B AND F GBF Min.	TYPE B AND F LBF Max.	TYPE E BE Max.	TYPE E LE Max.	TYPE P BP Max.	TYPE P DP Min.	TYPE P LP Max.
†8	.312 (7.92)	.828 (21.03)	.115 (2.02)	1.906 (48.41)	.608 (15.44)	1.344 (34.14)	.608 (15.44)	.317 (8.05)	1.391 (35.33)
10	.312 (7.92)	.891 (22.63)	.178 (4.52)	1.906 (48.41)	.734 (18.64)	1.344 (34.14)	.734 (18.64)	.434 (11.02)	1.391 (35.33)
12	.312 (7.92)	1.016 (25.81)	.302 (7.67)	1.906 (48.41)	.858 (21.79)	1.344 (34.14)	.858 (21.79)	.548 (13.92)	1.391 (35.33)
14	.312 (7.92)	1.141 (28.98)	.365 (9.27)	1.906 (48.41)	.984 (24.99)	1.344 (34.14)	.984 (24.99)	.673 (17.09)	1.391 (35.33)
16	.312 (7.92)	1.203 (30.56)	.490 (12.45)	2.047 (51.99)	1.110 (28.19)	1.344 (34.14)	1.110 (28.19)	.798 (20.27)	1.391 (35.33)
18	.312 (7.92)	1.469 (37.31)	.615 (15.62)	2.078 (52.78)	1.234 (31.34)	1.344 (34.14)	1.234 (31.34)	.899 (22.83)	1.391 (35.33)
20	1.93 (4.90)	1.469 (37.31)	.615 (15.62)	2.328 (59.13)	1.360 (34.54)	1.594 (40.49)	1.360 (34.54)	1.024 (26.01)	1.641 (41.68)
22	1.93 (4.90)	1.656 (42.06)	.740 (18.80)	2.328 (59.13)	1.484 (37.69)	1.594 (40.49)	1.484 (37.69)	1.149 (29.18)	1.641 (41.68)
24	.150 (3.81)	1.750 (44.45)	.790 (20.07)	2.453 (62.31)	1.610 (40.89)	1.641 (41.68)	1.610 (40.89)	1.274 (32.36)	1.703 (43.26)

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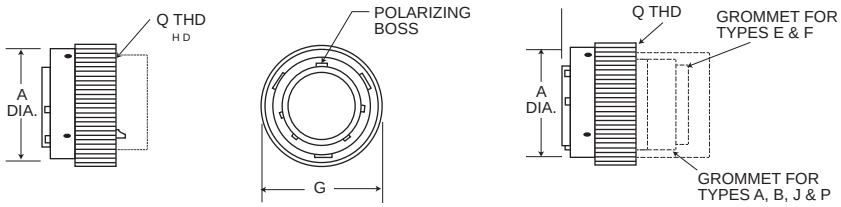
Right Angle Plugs

KPT08/KPSE08

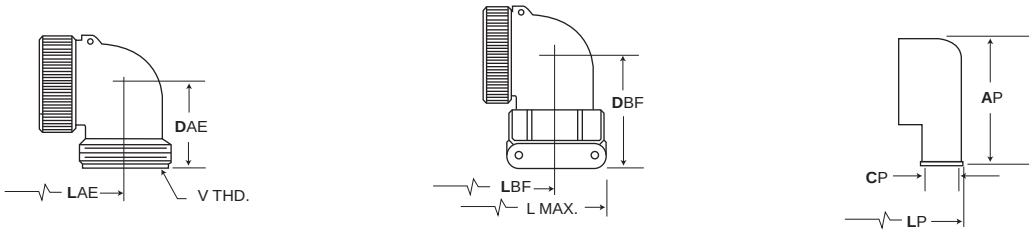


Solder KPT08 **Crimp KPSE08**

Shell Size	KPT/KPSE A Dia. Max.	KPT/KPSE G Max.	Q Thread Class 2A
†8	.765 (19.43)	.782 (19.86)	7/16-28UNEF
10	.840 (21.34)	.926 (23.52)	9/16-24UNEF
12	.999 (25.38)	1.043 (26.49)	11/16-24UNEF
14	1.139 (28.93)	1.183 (30.05)	13/16-20UNEF
16	1.261 (32.03)	1.305 (33.15)	15/16-20UNEF
18	1.337 (33.96)	1.391 (35.33)	1-1/16-18UNEF
20	1.477 (37.52)	1.531 (38.89)	1-3/16-18UNEF
22	1.602 (40.69)	1.656 (42.09)	1-5/16-18UNEF
24	1.723 (43.76)	1.777 (45.13)	1-7/16-18UNEF

†Not available in KPSE.
NOTE: for size 10 and 24 consult factory for availability in type A, B, E and F,
For size 8 consult factory for availablitiy in Type P.

Right Angle Plugs With Termination Assemblies



Shell Size	TYPE A AND E LAE Max.	DAE Max.	V Thread Class 2A	TYPE B AND F DBF Max.	LBF Max.	L Max.	V Thread Class 2A	TYPE P AP Max.	LP Max.	CP Min.	V Thread Class 2A
†8	1.421 (36.09)	.822 (20.88)	1/2-28UNEF	1.238 (31.44)	1.421 (36.09)	1.842 (46.79)	1/2-28UNEF	-(-)	-(-)	-(-)	1/2-28UNEF
10	1.484 (37.69)	.853 (21.67)	5/8-28UNEF	1.269 (32.24)	1.484 (37.69)	1.937 (49.20)	5/8-28UNEF	1.030 (26.16)	1.380 (35.05)	.252 (6.40)	5/8-28UNEF
12	1.546 (39.27)	.916 (23.27)	3/4-20UNEF	1.395 (35.43)	1.546 (39.27)	1.937 (49.20)	3/4-20UNEF	1.030 (26.16)	1.567 (39.80)	.252 (6.40)	3/4-20UNEF
14	1.577 (40.05)	.978 (24.84)	7/8-20UNEF	1.519 (38.58)	1.577 (40.05)	2.124 (53.95)	7/8-20UNEF	1.030 (26.16)	1.567 (39.80)	.283 (7.19)	7/8-20UNEF
16	1.609 (40.87)	1.041 (26.44)	1-20UNEF	1.582 (40.18)	1.609 (40.87)	2.203 (55.96)	1-20UNEF	1.280 (32.51)	1.567 (39.80)	.355 (9.02)	1-20UNEF
18	1.734 (44.04)	1.103 (28.70)	1-3/16-18UNEF	1.644 (41.76)	1.734 (44.04)	2.380 (60.45)	1-3/16-18UNEF	1.280 (32.51)	1.755 (44.58)	.530 (13.46)	1-3/16-18UNEF
20	1.879 (47.73)	1.166 (29.62)	1-5/16-18UNEF	1.707 (43.36)	1.879 (47.73)	2.629 (66.78)	1-5/16-18UNEF	1.530 (38.86)	1.782 (45.26)	.562 (14.27)	1-5/16-18UNEF
22	2.035 (51.69)	1.245 (31.62)	1-7/16-18UNEF	1.884 (47.85)	2.035 (51.69)	2.629 (66.78)	1-7/16-18UNEF	1.530 (38.86)	1.782 (45.26)	.562 (14.27)	1-7/16-18UNEF
24	2.035 (51.69)	1.322 (33.58)	1-7/16-18UNEF	1.963 (49.86)	2.035 (51.69)	2.895 (73.53)	1-7/16-18UNEF	1.780 (45.21)	2.087 (53.01)	.610 (15.49)	1-7/16-18UNEF

†Not available in KPSE. NOTE: For size 10 and 24 consult factory for availability in type A, B, E and F, For size 8 consult factory for availablitiy in Type P.

Performance Specifications - Page 142
Contacts, Sealing Plugs, Assembly Tools - Page 154
Contact Arrangements - Page 149

Contact Arrangements

LEGEND

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

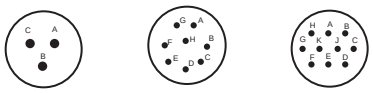
Drawing not to scale; face view of pin insert shown (socket view is opposite)

Shell Size 8

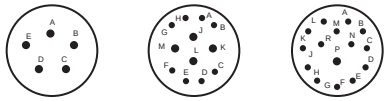
	8-2	8-3	8-4	8-33
Shell Size	8-2	8-3	8-4	8-33
No. of Contacts	2-#20	3-#20	4-#20	3-#20
Service Rating	I	I	I	I

Shell Size 10

Shell Size 12

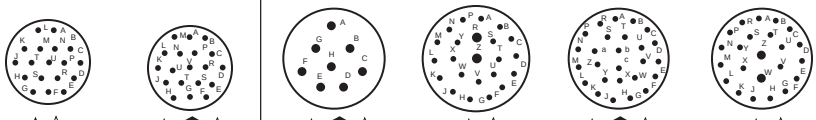


Shell Size 14

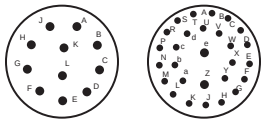


	10-6	10-98	12-3	12-8	12-10	14-5	14-12	14-15
Shell Size	10-6	10-98	12-3	12-8	12-10	14-5	14-12	14-15
No. of Contacts	6-#20	6-#20	3-#16	8-#20	10-#20	5-#16	8-#20 4-#16	14-#20 1-#16
Service Rating	I	I	II	I	I	II	I	I

Shell Size 16

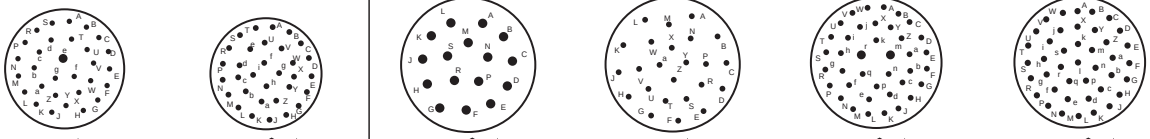


Shell Size 18



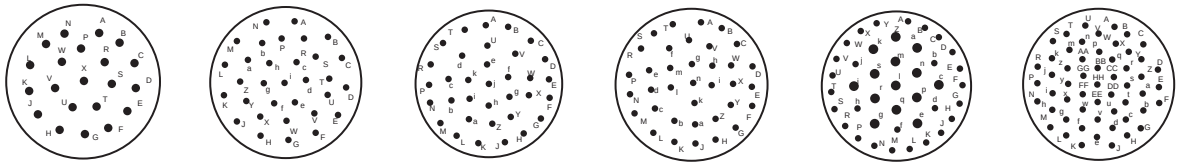
	14-18	14-19	16-8	16-23	16-26	16-99	18-11	18A28
Shell Size	14-18	14-19	16-8	16-23	16-26	16-99	18-11	18A28
No. of Contacts	18-#20	19-#20	8-#16	22-#20 1-#16	26-#20	21-#20 2-#16	11-#16	26-#20 2-#16
Service Rating	I	I	II	I	I	I	II	I

Shell Size 20



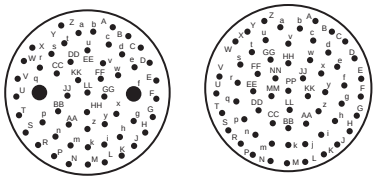
	18-30	18-32	20-16	20-24	20-39	20-41
Shell Size	18-30	18-32	20-16	20-24	20-39	20-41
No. of Contacts	29-#20 1-#16	32-#20	16-#16	24-#20	37-#20 2-#16	41-#20
Service Rating	I	I	II	I	I	I

Shell Size 22



	22-21	22-32	22-34	22-36	22-41	22-55
Shell Size	22-21	22-32	22-34	22-36	22-41	22-55
No. of Contacts	21-#16	32-#20	34-#20	36-#20	27-#20 14-#16	55-#20
Service Rating	II	I	I	I	II	I

Shell Size 24

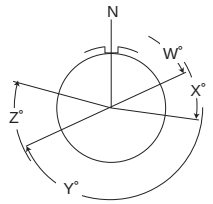


	24A57	24-61
Shell Size	24A57	24-61
No. of Contacts	55-#20 2-#12	61-#20
Service Rating	I	I

(See page 150 for Alternate Insert Positions.)

Alternate Insert Positions

Face view of pin inserts



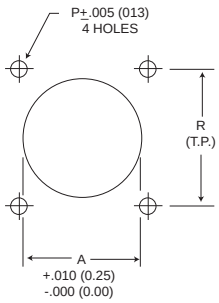
The five positions (W, X, Y, Z and Normal) differ in degree of rotation for various sizes and arrangements.

NO. OF CONTACTS	SHELL SIZE	ARR. NO.	Degrees of Rotation W	X	Y	Z
2	8	8-2	58	122	-	-
3	8	8-3	60	210	-	-
	8	8-33	90	-	-	-
	12	12-3	-	-	180	-
4	8	8-4	45	-	-	-
5	14	14-5	40	92	184	273
6	10	10-6	90	-	-	-
	10	10-98	90	180	240	270
8	12	12-8	90	112	203	292
	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	-	-
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	-	-
	16	16-99	66	156	223	340
24	20	20-24	70	145	215	290
26	16	16-26	60	-	275	338
28	18	18A28	-	-	-	-
30	18	18-30	180	193	285	350
32	18	18-32	85	138	222	265
	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	-
	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	324

Numbers in bold face indicate contact arrangements are not to MIL-C-26482.

Panel Cutouts

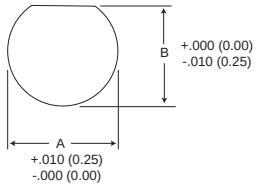
Box and Wall Mounting Receptacle



Shell Size	FLANGE (FRONT MOUNTING) KPT/KPSE		MOUNTING HOLE DIA. KPT/KPSE	
	A Dia.	R	P ±.005	Screw
†8	.618 (15.70)	.594 (15.09)	.125 (3.17)	#4
10	.735 (18.67)	.719 (18.26)	.125 (3.17)	#4
12	.859 (21.82)	.812 (20.62)	.125 (3.17)	#4
14	.985 (25.02)	.906 (23.01)	.125 (3.17)	#4
16	1.113 (28.27)	.969 (24.61)	.125 (3.17)	#4
18	1.235 (31.37)	1.062 (26.97)	.125 (3.17)	#4
20	1.361 (34.57)	1.156 (29.36)	.125 (3.17)	#4
22	1.485 (37.72)	1.250 (31.75)	.125 (3.17)	#4
24	1.611 (40.92)	1.375 (34.92)	.155 (3.94)	#6

†Not Available in KPSE connectors.

Jam Nut Receptacle



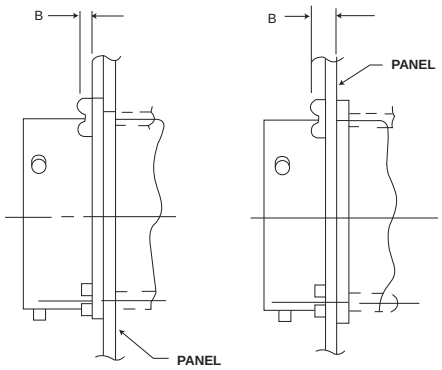
Shell Size	KPT/KPSE	
	A	B
†8	.578 (14.68)	.540 (13.72)
10	.703 (17.86)	.665 (16.89)
12	.890 (22.61)	.828 (21.02)
14	1.015 (25.78)	.952 (24.18)
16	1.140 (28.96)	1.076 (27.33)
18	1.265 (32.13)	1.201 (30.51)
20	1.390 (35.31)	1.326 (33.68)
22	1.515 (38.48)	1.451 (36.86)
24	1.640 (41.66)	1.576 (40.03)

†Not Available in KPSE connectors.

Panel Thickness

Maximum panel thickness dimensions allowable to ensure complete connector operation for the Wall Mounting Receptacle, Box Mounting Receptacle, and Thru-Bulkhead Receptacle.

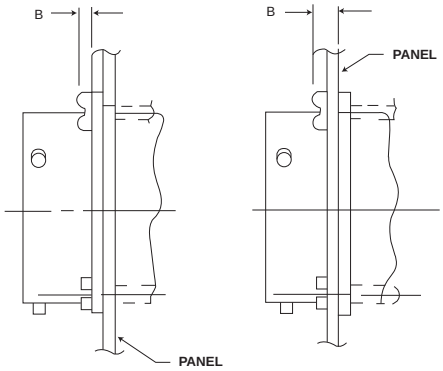
Wall Mounting and Box Mounting Receptacle



FRONT PANEL MTG REF

REAR PANEL MTG REF

Thru-Bulkhead Receptacle



FRONT PANEL MTG REF

REAR PANEL MTG REF

Size	B Max
8	.087 (2.21)
10	
12	
14	
16	
18	
20	.212 (5.38)
22	
24	

Size	B Max panel and screw head
8	.218 (5.54)
10	
12	
14	
16	
18	
20	.334 (8.74)
22	
24	.311 (7.90)

Dummy Receptacles

How To Order **KPT 15 - 12A ***

SERIES PREFIX

DUMMY RECEPTACLE INDICATOR

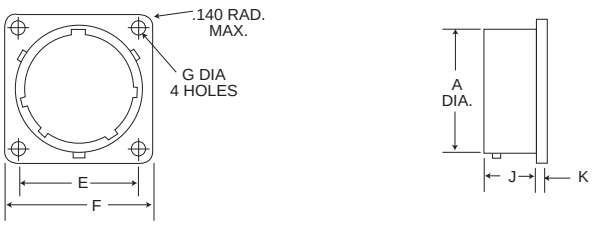
SHELL SIZE

MODIFICATIONS

SERIES PREFIX
KPT - ITT Cannon Prefix

SHELL SIZE
8 thru 24

MODIFICATIONS
None - Olive drab chromate over cadmium



NOTE: For MS Version and additional finishes see PV catalog.

Shell Size	A ± .003 (.08)	E Basic	F Max.	G ± .005 (.13)	J +.031 (.79) -.000 (.00)	K ± .016 (.41)
8	.471 (11.96)	.594 (15.09)	.828 (21.03)	.120 (3.05)	.412 (10.46)	.062 (1.57)
10	.588 (14.94)	.719 (18.26)	.954 (24.23)	.120 (3.05)	.412 (10.46)	.062 (1.57)
12	.748 (19.00)	.812 (20.62)	1.047 (26.60)	.120 (3.05)	.412 (10.46)	.062 (1.57)
14	.873 (22.17)	.906 (23.01)	1.141 (28.98)	.120 (3.05)	.412 (10.46)	.062 (1.57)
16	.998 (25.35)	969 (24.61)	1.234 (31.34)	.120 (3.05)	.412 (10.46)	.062 (1.57)
18	1.123 (28.52)	11.57 (26.97)	1.328 (33.73)	.120 (3.05)	.462 (11.73)	.062 (1.57)
20	1.248 (31.70)	1.156 (23.96)	1.453 (36.91)	.120 (3.05)	.556 (14.12)	.094 (2.39)
22	1.373 (34.87)	1.250 (31.75)	1.578 (40.08)	.120 (3.05)	.556 (14.12)	.094 (2.39)
24	1.498 (38.05)	1.375 (34.93)	1.703 (43.26)	.147 (3.73)	.589 (14.96)	.094 (2.39)

Protective Metal Caps (Cannon Codes) For MS version and additional finishes see next page

How To Order **KPT 80 12 C ***

SERIES PREFIX

TYPE

SHEL SIZE

TERMINATION STYLE

MODIFICATIONS

SERIES PREFIX
KPT - ITT Cannon Prefix

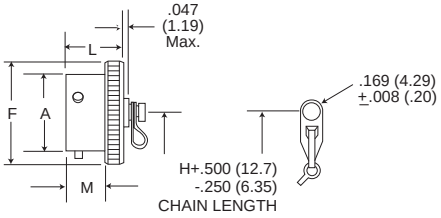
TYPE
80 - Plug Cap
81 - Receptacle Cap

SHELL SIZE
8 thru 24

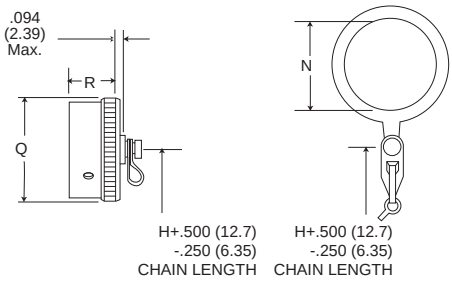
TERMINATION STYLE
C - Sash Chain
N - Sash Chain with Ring (81 type only)

NOTE: For MS version and additional finishes see below.
(N Style use Primarily for Jam Nut Receptacle)

80 - cap for plugs



81 - cap for receptacle



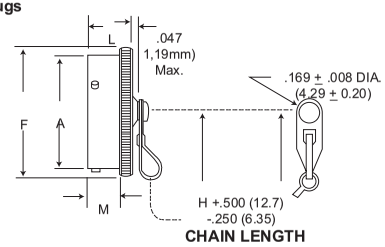
Shell Size	A ± .003 (.08)	F Max.	H	L Max.	M +0.31 (.79) -.000 (.00)	N Min.	Q Max.	R Max.
8	.471 (11.96)	.719 (18.26)	3.000 (76.20)	.562 (14.27)	.368 (9.35)	.578 (14.68)	.734 (18.64)	.562 (14.27)
10	.588 (14.94)	.844 (21.44)	3.000 (76.20)	.562 (14.27)	.368 (9.35)	.703 (17.86)	.859 (21.82)	.562 (14.27)
12	.748 (19.00)	1.000 (25.40)	3.500 (88.90)	.562 (14.27)	.368 (9.35)	.891 (22.63)	1.000 (24.40)	.562 (14.27)
14	.873 (22.17)	1.125 (28.58)	3.500 (88.90)	.562 (14.27)	.368 (9.35)	1.016 (25.81)	1.125 (28.58)	.562 (14.27)
16	.998 (25.35)	1.250 (31.75)	3.500 (88.90)	.562 (14.27)	.368 (9.35)	1.141 (28.98)	1.250 (31.75)	.562 (14.27)
18	1.123 (28.52)	1.375 (34.93)	3.500 (88.90)	.562 (14.27)	.368 (9.35)	1.266 (32.16)	1.375 (34.93)	.562 (14.27)
20	1.248 (31.70)	1.500 (38.10)	4.000 (101.60)	.625 (15.88)	.430 (10.92)	1.391 (35.33)	1.500 (38.10)	.562 (14.27)
22	1.373 (34.87)	1.625 (41.26)	4.000 (101.60)	.625 (15.88)	.430 (10.92)	1.516 (38.51)	1.625 (41.26)	.562 (14.27)
24	1.498 (38.05)	1.750 (44.45)	4.000 (101.60)	.658 (16.71)	.463 (11.76)	1.641 (41.68)	1.750 (44.45)	.602 (15.29)

MATERIALS AND FINISHES

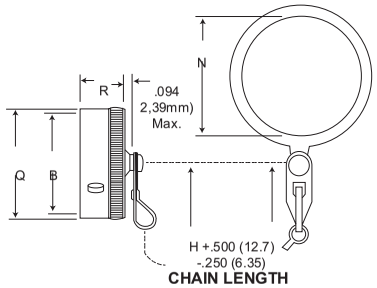
	KPT
Protective Cap	aluminum alloy, olive drab finish per QQ-P-416
Sash Chain	stainless steel
Ring/Rivet	stainless steel
Gasket	polychloroprene

Protective Metal Caps including MS version and additional finishes

Plugs



Receptacles



PVS	80	-12	C	A
MS	3180	-12	C	A

SERIES PREFIX

PVS - ITT Cannon Prefix

MS - Complies with MIL-C-26482 (Series 2)

TYPE

80 or 3180 - Plug Cap

81 or 3181 - Receptacle Cap

SHELL SIZE

8 thru 24

TERMINATION STYLE

C - Sash chain (MS approved)

N - Sash chain with ring (81 or3181 type only) MS approved

FINISH

A - Hard anodic, non-conductive (MS approved)

G - Nickel, conductive (not MS) (PVS only)

NOTE: Usable on KPT/KPSE series also.
N style used primarily on Jam Nut Receptacle.

Shell Size	A Max. Dia.	B Max.	F Max. Dia.	H	L Max.	M Max.	N Min. Dia.	Q Max.	R Max.
8	.474 (12.04)	.486 (12.34)	.719 (18.26)	3.000 (76.20)	.562 (14.27)	.399 (10.13)	.578 (14.68)	.734 (18.64)	.562 (14.27)
10	.591 (15.01)	.607 (15.42)	.844 (21.44)	3.000 (76.20)	.562 (14.27)	.399 (10.13)	.703 (17.86)	.859 (21.82)	.562 (14.27)
12	.751 (19.08)	.766 (19.46)	1.000 (25.40)	3.500 (76.20)	.562 (14.27)	.399 (10.13)	.891 (22.63	1.000 (25.40)	.562 (14.27)
14	.876 (22.25)	.890 (22.60)	1.125 (28.58)	3.500 (88.90)	.562 (14.27)	.399 (10.13)	1.016 (25.81)	1.125 (28.58)	.562 (14.27)
16	1.001 (25.43)	1.015 (25.78)	1.250 (31.75)	3.500 (88.90)	.562 (14.27)	.399 (10.13)	1.141 (28.98)	1.250 (31.75)	.562 (14.27)
18	1.126 (28.60)	1.141 (28.98)	1.375 (34.93)	3.500 (88.90)	.562 (14.27)	.399 (10.13)	1.266 (32.16)	1.375 (34.93)	.562 (14.27)
20	1.251 (31.78)	1.265 (32.13)	1.500 (38.10)	4.000 (101.60)	.625 (15.88)	.461 (11.71)	1.391 (35.33)	1.500 (38.10)	.562 (14.27)
22	1.376 (34.96)	1.390 (35.31)	1.625 (41.26)	4.000 (101.60)	.625 (15.88)	.461(11.71)	1.516 (38.51)	1.625 (41.26)	.562 (14.27)
24	1.501 (38.13)	1.515 (38.48)	1.750 (44.45)	4.000 (101.60)	.658 (16.71)	.494 (12.55)	1.641 (41.68)	1.750 (44.45)	.602 (15.29)

MIL-C-26482 Specifications

The following excerpts are some of the parameter requirements of the MIL-C-26482 specification.

Test Description	Paragraph Reference	Requirements
Contact Retention	4.6.32.1	After preloading to 3 pounds maximum, the force shall be applied at a rate of approximately 1 pound per second and maintained at full load for 5-10 seconds. No damage to contacts or insert shall result nor shall the contacts be dislocated from their normal position in the connector more that 0.012 inch under giveload for KPSE and within 1 minute after the load is removed for KPT.
Contact Insertion/Extraction (KPSE only)	4.6.11	When using the proper insertion and extraction tools the forces required to insert or extract the contact shall not exceed 20 lbs. Connectors shall be less endbell.
Coupling Torque	4.6.3	For qualification testing, mating halves shall be coupled and uncoupled, measuring the torques necessary. The torques required to couple and uncouple mating connectors halves shall fall within the limits specified as follows:
Durability	4.6.17	Connector halves shall be mated and unmated 500 times at a rate of 200 ± 100 cycles per hour. The test may be performed by hand or by mechanical means, but the coupling ring shall be operated as in normal service. Failure to complete this test because of mechanical malfunction shall be cause for rejection.
Insert Retention	4.6.29	Connectors witht he endbells and grommets (if possible) removed shall be subjected to a 75 psi load on the insulator in both directions. The load shall be applied at a rate of 10lb/sec. and held for 5 to 10 secs. Insulators shall not be dislogged from their original position.
Insulation Resistance	4.6.7.1	On unmated connectors at 25˚C±3˚C a potential of 500 VDC ± 10% shall be applied between all, but not more than 6, pairs of adjacent contacts and between all, but not more than 6, contacts and the shell. Failure to meet a minimum requirement of 5,000 megohms shall be cause for rejection.
Vibration	4.6.21	Wired, mated connectors shall be subjected to the vibration test of MIL-STD-1344, Method 2005, Test Condition II. Receptacles shall be mounted on the vibration fixture by normal means, All contacts shall be wired in a series circuit and 100 max. milliamperes of current shall be allowed to flow through the series circuit during vibration. Suitable means shall be employed to monitor the current f low and to indicate any discontinuity of more than 10 microseconds. The wire bundle shall be clamped to nonvibrating points at least 8 inches from the rear of the connector. Current discontinuity of 10 microsecond or more, disengagement of the mated connectors, evidence of cracking, breaking, or loosening of parts shall be cause for rejection.
Shock	4.6.23	Wired, mated connectors shall be subjected to one shock in each direction in each of three mutually perpendicular axes. The pulse shall be approximate half sine wave of 50g±15% magnitude with a duration of 11 ±1 milliseconds. Receptacles shall be mounted on a shock fixture by normal means. All contacts shall be wired in a series circuit and 90-110 ma, of current shall flow through the series circuit during shock. Suitable means shall be employed to Monitor the current flow and to indicate any discontinuity of more than 10 microseconds. Current discontinuity of 10 microseconds or more, disengagement of the mated connectors, evidence of cracking, breaking. or loosening of parts shall be cause for rejection.
Thermal Shock	4.6.12	Wired, unmated plug and receptacle shall be subjected to 5 cycles of hot and cold temperatures. Maximum temperature shall be + 125˚C and the minimum shall be -55˚C. Duration at each temperature extreme shall be 1/2 hour minimum. Cracking, breaking or loosening of parts shall be cause for rejection.
Humidity	4.6.25	The connectors shall be subjected to varying humidity, 50% to 95%, conditions for a period of 10 days KPSE or 20 days KPT. The insulation resistance shall not be less than 100 megohms.
Air Leakage (KPT Only)	4.6.15.1	A 30 psi pressure differential shall be applied across the connector for 30 minutes. The leak rate, in either direction, shall be no greater than 1 atmosphere cubic inch per hour (4.55 X 10^{-3} cm^3/S) at - 67˚F (- 55˚C).
Salt Spray (Corrosion)	4.6.19	Unmated and wired connectors shall be subject to a salt fog for 48 hours. These shall be no exposure of base metal, the connector shall be functional and meet the contact resistance requirement.
Fluid Immersion	4.6.27	At least one connector, unmated and wired, shall he immersed in each fluid for a period of 20 hours then dried at room conditions for hour. Connectors shall be able to mate and meet the coupling torque requirements. a) Hydraulic Fluid per MIL-H-5606, b) Lubricating Oil per MIL-L-7808

Shell Size	Torque lb./in. Max.	Torque lb./in. Min.	Shell Size	Torque lb./in. Max.	Torque lb./in. Min.
8	8	1	18	28	4
10	12	1	20	32	6
12	16	2	22	36	7
14	20	4	24	44	7
16	24	4			

Contact Size	20	16	12
Load in Pounds Min.	15	25	25

Tooling, Crimp

M22520/1-01 CRIMP TOOL
M22520/1-02 Turret

CBT-520/530

Tooling, Insertion/Extraction

KPSE Insertion

Contact Size	
20	MS24256A20
16	MS24256A16

KPSE Extraction

Contact Size	
20	MS24256R20
16	MS24256R16

Contacts

#20

Contact Size/Type	Military Part Number	Color Bands 1st	2nd	3rd	ITT Cannon Part Number
20 Socket	M39029/32-259	Red	Green	White	031-9074-002
20 Pin	M39029/31-240	Red	Yellow	Black	030-9036-000
16 Socket	M39029/32-247	Red	Yellow	Violet	031-9095-003
16 Pin	M39029/31-228	Red	Red	Grey	030-9032-003

Contacts for printed circuit applicaitons also available

Wire Hole Fillers/Grommets Sealing Plugs

Contact Size	Part Number Cannon	Military	Color Code
20	225-1012-000	MS3187A20	Red
16	225-1011-000	MS3187-16	Blue

KPSE Assembly Instructions

Contact Size	Wire Size AWG	Strip Insulation
20	#20-#24	3/16"
16	#16-#20	1/4"

Right

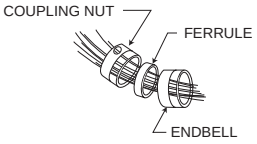
Wrong

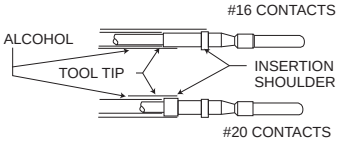
CRIMPING CONTACTS

1. Strip wires according to the table above taking care not to cut or nick strands.

2. Insert stripped wire into contact crimp pot. Wire must be visible thru inspection hole.

3. Using correct crimp tool and locator select proper crimp setting for wire sizer to be crimped; cycle the tool onec to be sure the indentors are open. Insert contact and wire into locator. Squeeze tool handles firmly and completely to insure a proper crimp. The tool will not release unless the crimp indentors in the tool head have been fully actuated. Release crimped contact and wire from tool. Be certain the wire is visible thru inspection hole in contact.
CAUTION: *Check that none of the contacts are bent or damaged in any way after crimping.*



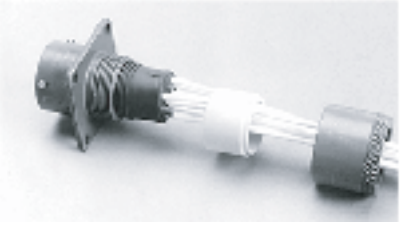


CONTACT INSERTION

1. Remove hardware from plug and receptacle. Slide hardware over wire bundle in proper order for reassembly.

2. Use the proper contact insertion tool and slide the tool over the terminal end of the contact. The size 16 contact lies in the tool and the tool tip butts against the contact shoulder. The rear, or insulation support of the size 20 contact butts against an internal shoulder in the tool tip.
NOTE: *Apply a small amount of isopropyl alcohol to the insertion tool tip while installing contacts.*

3. Begining from center cavity and working outwards in a circular pattern, insert wired contacts into rear of connnector by hand until the front of the contact shoulder is no more than 1/8" from the grommet. Holding the connector horizontally, position tool behind contact. Push tool straight into contact cavity until contact snaps into position. A light pull on wire will assure that contact is locked securely. Repeat for remaining contacts.



Size	Torque in/lbs.
8,10,12 and 14	10-15
16 and 18	15-25
20,22 and 24	25-35

4. Use contacts and grommet sealing plugs to fill any empty cavities.

COMPLETION

1. Check face of plug or receptacle for proper contact installation.

2. Using mating connector with contacts installed, mate both connector halves together.
3. Assemble ferrule over the grommet by hand as far as possible.
4 Assemble endbell over ferrule and loosely tighten endbell. Partiallly loosen (1/4 turn) and retighten to recommended torque limits.

2nd Index Line
Socket Contacts

1st Index Line
Pin Contacts

CONTACT EXTRACTION

1. Slide hardware back over wire bundle. Using proper extraction tool or extraction end of proper insertion/extraction tool, proceed as follows:

KPSE: There are two lines on the clip sleeve which are vital to the contact removal process. The first index line is used for removing pin contacts while the second index line is for removing socket contacts.

Carefully place the tool tip over the contact to be extracted until the tool tip touches the insulator face. Carefully rotate the tool until the index line is slightly below the insulator face. Keep an even pressure against tool body; push plunger forward with thumb and index finger, and push the contact out throught the clip. Carefully remove extraction tool from connnector. Pull wire by hand to compete the removal of the contact.

How to Order - Special Termination Connectors

KPT	03	-	18 - 32	P	W
KPT	04	-	18 - 32	P	W
KPT	05	-	18 - 32	P	W
KPSE	03	-	18 - 32	P	W
KPSE	04	-	18 - 32	P	W
KPSE	05	-	18 - 32	P	W

PREFIX
SHELL STYLE
DASH (No Class required, less rear termination)
SHELL SIZE
CONTACT ARRANGEMENT
CONTACT TYPE
P - PIN
S - Socket
ALTERNATE INSERT POSITION

Contact ITT Cannon for additional Information

Solder Type KPT03/04/05-Supplied less endbell, ferrule and grommet.

KPT03

KPT04

KPT05

Solder Type KPSE03/04/05-Supplied less endbell, ferrule.

KPSE03

KPSE04

KPSE05

Twist Pull Lanyard Release Coupler Plug

KPT06/KPSE06

KPT	6	A	22 - 55	P	W	16
KPSE	6	E	22 - 55	S	Z	16

PREFIX
SHELL STYLE
SERVICE TYPE
SHELL SIZE
CONTACT ARRANGEMENT
CONTACT TYPE
POLARIZATION
MODIFICATION CODE*

***Omit (0) of shell style indication when using this modification code.**
16 = Overall length of connector including lanyard to be 6.0 (152.40) ± .125 (3.18) when measured over a 1.0 (25.40) ± .005 (0.13) diameter mandrel.

Printed Circuit Termination

KPT02E

KPT07