

# **Miniature Circular Connectors**

Bayonet Type, Designed to MIL-C-26482

KPT/KSP/KPTM/KSPM/KPSE/KSSE/KPTH

DEVERELL ASSOCIATES
WELLINGTON
REC. 16 SEP 1971
ANSD.

SOURTAL 851

CANNON ELECTRIC

3208 HUMBOLDT ST., LOS ANGELES, CALIF. 90031

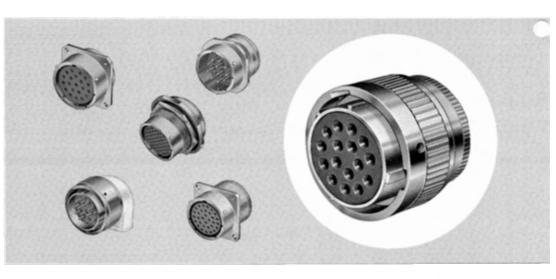
A DIVISION OF INTERNATIONAL TELEPHONE AND TELEGRAPH CORPORATION



## **CASA Modular Systems**

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## **KPT/KSP Series**



## KPT/KSP General Purpose, Solder Contact Connectors

#### KPT CONNECTORS

- general purpose
- closed-entry socket contacts
- solder termination

#### KSP CONNECTORS

- · hard, black anodize Alumilite, non-conductive finish
- large flange with #6 mounting holes (receptacles)

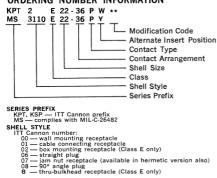
KPT general purpose miniature circular connectors are

widely used in commercial, industrial and deep-space applications. Utilizing solder terminated contacts, KPT connectors feature closed-entry sockets for positive mating.

KSP connectors are identical to KPT connectors except for a hard anodic, non-conductive finish. Receptacles have a larger flange with #6 mounting holes for rear panel mounting.

KPT and KSP connectors mate with all 26482 connectors.

#### ORDERING NUMBER INFORMATION



# MS Designation: 3110 — wall mounting receptacle 3111 — cable connecting plus (Class E only) 3112 — box mounting receptacle (Class E only) 3114 — jam nut receptacle 3119 — thru-bulkhead receptacle (Class E only) CLASS A — general duty B — general duty with strain relief (may be used for potting when strain relief is desired) 02 and 3112 (MS specification) F — grommet seal with strain relief (MS specification) G — gland seal for jacketed cable J — gland seal for jacketed cable J — 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 CONTACA ARRANGEMENT CONTACT TYPE P — pin: S — socket

ALTERNATE INSERT POSITION
W, X, Y and Z. (Omit for normal.) See page 11.
MODIFICATION CODE

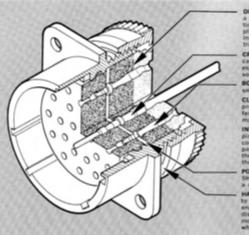
Consult factory. Omit first digit (0) of shell style indication when using modification code. See page 8 for modification codes.

C	ONTENTS
N	IIL-C-26482 Connectors
	KPT/KSP (Solder) Series
	KPTM/KSPM (Crimp) Series
	KPSE/KSSE (High Performance, Crimp) Series
	KPTH (Hermetic) Series
٨	lounting Data
C	omponents and Accessories
٩	ssembly Instructions

## **Quick Selector Chart**

SERIES	DESCRIPTION	PAGE
KPT/KSP	General Purpose, Solder Contact Connector  KPT — General purpose connector with solder pot contacts, resilient insulator, and conductive oflive drab over chromate shell finish.  KSP — Same as KPT, but with hard anodic, non-conductive finish. Receptacles have a large flange with #6 mtg. holes for rear panel mounting.	4
KPTM/KSPM	General Purpose, Crimp Contact Connector  KPTM — General purpose connector with crimp snap-in contacts in DUAL-SHORE® insulator. Features closed-entry socket contacts and interfacial sealing.  Shell finish is conductive offive drab over chromate.  KSPM — Same as KPTM, but with hard anodic, non-conductive finish. Receptacles have a large flange with #6 mtg, holes for rear panel mounting.	5
KPSE/KSSE	High Performance, Crimp Contact Connector  KPSE — Environment-resistant, high performance connector with front-release, crimp snap-in contacts in an integrally molded insulator. Shell finish is conductive olive drab over chromate.  KSSE — Same as KPSE, but with hard anodic, non-conductive finish. Receptacles have a large flange with #6 mtp. holes for rear panel mounting.	6
КРТН	Hermetically Sealed, Solder Contact Connectors  KPTH — Hermetically sealed KPT receptacles with pin contacts in lead-free compression glass web. Leak rate not in excess of .001 micron cu. ft./hr. Contacts and shells are steel with electrodeposited tin over cadmium finish.	7

## KPTM/KSPM Series



DUAL SHORE INSULATOR is integrally molded polychloroprene with a firm (80 shore) front section and a resilient (50 shore) rear section that provides a moistureproof seal around each wire. A hard plastic web is molded within the 80 shore section to prevent over-insertion of the contacts. This construction eliminates the moisture traps characteristic of other types of insulators.

CRIMP, SNAP-IN CONTACTS are to MIL-C-23216 specification and can be crimped with the standard MS3191 crimp tool. They are especially suited to quick and easy field service by unskilled per-

BOWSPRING CONTACTS increase pin/socket contact area, provide oth insertion and prolong connector life

CLOSED-ENTRY SOCKETS eliminate damage from abuse by test probes and automatically correct misaligned pins. Lead-in chamfers around the socket permit up to .060" misalignment or splay of

INTERFACIAL SEALING is assured by raised barriers around each pin contact that compress into the lead in chamfers at each socket contact. This method provides such a positive seal around each pair of mated contacts that, if several contacts are removed from the insert, there will be no leakage to the remaining contacts when the connector is immersed in water

POSITIVE STOP, a tough thermoplastic web molded into the DUAL-SHORE insulator, prevents over-insertion of contacts by providing a close fitting seat for the shoulder of each pin or socket

HARDWARE is aluminum alloy, finished to QQ P-416, and conform to MIL-C26482 Five key polarization assures correct hardware engagement, and three-point bayonet lock provides quick connect/ disconnect. To aid further in sealing, a peripheral neoprene ring is mounted in the receptacle and is compressed by the plug barrel while engaged.

## KPTM/KSPM **General Purpose, Crimp Contact Connectors**

#### KPTM CONNECTORS

- unique DUAL-SHORE insulator
- · crimp snap-in contacts
- closed-entry BOWSPRINGTM socket contacts
- interfacial sealing
- · positive stop to prevent over-insertion of contacts

#### KSPM CONNECTORS

- · hard, black anodize Alumilite, non-conductive finish
- large flange with #6 mounting holes (receptacles)

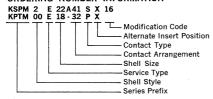
KPTM connectors offer reliability with efficiency and simplicity. The KPTM is a version of the KPT with a DUAL-SHORE insulator and crimp snap-in contacts. High reliability is achieved by using a minimum number of components in the insulator assembly. The DUAL-SHORE insulator is a simple, compact unit with no retaining clips or rings to move or obstruct and no glued joints to loosen or serve as moisture entry paths. A tough thermoplastic web molded into the insulator prevents over-insertion of contacts. Closed-entry socket contacts assure positive alignment.

Interfacial sealing is assured by raised barriers around each pin contact that compress into the lead-in chamfers at each socket contact. This provides such a positive seal around each pair of mated contacts that, if several contacts are removed from the connector, there will be no leakage to the remaining contacts when the connector is immersed in water.

KSPM connectors are identical to KPTM connectors except for a hard, black anodize Alumilite, non-conductive finish. Receptacles also have a larger flange with #6 mounting holes for rear panel mounting.

KPTM and KSPM connectors mate with all 26482 connectors

#### ORDERING NUMBER INFORMATION



#### SERIES PREFIX KPTM, KSPM, — ITT Cannon prefix SHELL STYLE

00 — wall mounting receptacle 01 — cable connecting receptacle 02 - box mounting receptacle

06 — straight plug 07 — jam nut receptacle 08 — 90° angle plug

#### SERVICE TYPE

ERVICE TYPE
A — general duty
A — general duty
general duty with strain relief
E — grommet seal
F — grommet seal with strain relief
G — gland seal for jacketd cable
J — gland seal with strain relief for jacketed cable
P — potted

Outside diameter of mating portion of shell in 1/16" increments. CONTACT ARRANGEMENT

#### See pages 10 and 11, CONTACT TYPE

P — pin S — socket

ALTERNATE INSERTION POSITION
W, X, Y, and Z. (Omit for normal.) See page 11.

#### MODIFICATION CODE

Consult factory. Omit first digit (0) of shell style indication when using modification code. See page 8 for modification codes.

## **KPT/KSP Series**



## KPT/KSP **General Purpose, Solder Contact Connectors**

#### KPT CONNECTORS

- · general purpose
- closed-entry socket contacts
- solder termination

#### KSP CONNECTORS

- . hard, black anodize Alumilite, non-conductive finish
- . large flange with #6 mounting holes (receptacles)

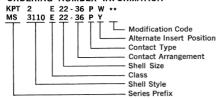
KPT general purpose miniature circular connectors are

widely used in commercial, industrial and deep-space applications. Utilizing solder terminated contacts, KPT connectors feature closed-entry sockets for positive mating.

KSP connectors are identical to KPT connectors except for a hard anodic, non-conductive finish. Receptacles have a larger flange with #6 mounting holes for rear panel mounting.

KPT and KSP connectors mate with all 26482 connectors.

#### ORDERING NUMBER INFORMATION



SERIES PREFIX
KPT, KSP — ITT Cannon prefix
MS — complies with MIL-C-26482

- MS complies with MIL-C-26482

  SHELL STYL EMBER:

  ITT Cannon number:
  00 wall mounting receptacle
  01 cable connecting receptacle
  02 box mounting receptacle (Class E only)
  06 straight plug
  07 Jam nut receptacle (available in hermetic version also)
  08 90° angle plug
  0 Hur-buikhead receptacle (Class E only)

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)

LASS
A — general duty
B — general duty
B — general duty with strain relief (may be used for potting when
strain relief is desired)
E — grommet seal except on 02 and 3112 (MS specification)
F — grommet seal with strain relief (MS specification)
G — gland seal for jacketed cable
J — 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

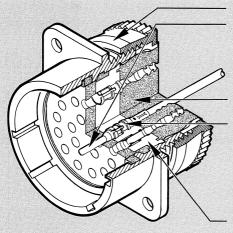
CONTACT ARRANGEMENT See pages 10 and 11.

CONTACT TYPE
P—pin; S—socket
ALTERNATE INSERT POSITION
W, X, Y and Z. (Omit for normal.) See page 11.

MODIFICATION CODE

Consult factory. Omit first digit (0) of shell style indication when using modification code. See page 8 for modification codes.

## **KPSE/KSSE** Series



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

CRIMP, SNAP-IN CONTACTS are designed to MIL-C-23216 and can be crimped with the standard MS3191 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 connector.

UNIQUE INTEGRALLY-MOLDED INSULATOR eliminates separate bonding operations to form a single voidless part with no moisture traps or interface voids.

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

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 multiple 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.

## KPSE/KSSE

## **High Performance, Crimp Contact Connectors**

#### KPSE 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 dielectric
- positive insert-to-shell mechanical retention

#### KSSE CONNECTORS

- hard, black anodize Alumilite non-conductive finish
- large flange with #6 mounting holes (receptacles)

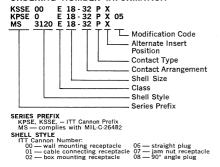
KPSE environment-resistant miniature circular connectors are designed for the exacting requirements of space and missile applications. The KPSE features a unique unitized insulator, integrally molded into a single voidless part. This insulator is mechanically retained in the shell by a positive, hard plastic-to-metal lock retention. Complete moisture sealing is achieved by four seals: shell, peripheral, interfacial and wire seals.

Crimp snap-in contacts are retained in clips that are completely encased in a tough hard dielectric wafer, thus protecting the clip tines from damage. Closed-entry socket contacts facilitate positive mating.

KSSE connectors are identical to KPSE connectors except for a hard, black anodize Alumilite non-conductive finish. Receptacles have a larger flange with #6 mounting holes for rear panel mounting.

KPSE and KSSE connectors mate with all 26482 connectors

#### ORDERING NUMBER INFORMATION



MS Designation: 3120 — wall mounting receptacle 3121 — cable connecting plug 3122 — box mounting receptacle 3124 — jam nut receptacle 3126 — straight plug

general duty

A — general duty with strain relief
E — grommert seal (MS specification)
F — grommet seal with strain relief (MS specification)
G — gland seal for jacketed cable
J — gland seal with strain relief for jacketed cable
P — potted (MS specification)

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

CONTACT ARRANGEMENT

See pages 10 and 11 CONTACT TYPE

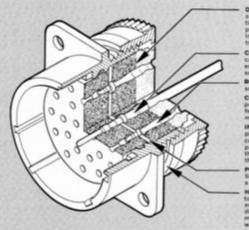
P — pin S — socket

ALTERNATE INSERT POSITION
W, X, Y, and Z. (Omit for normal.) See page 11.

MODIFICATION CODE

Consult factory. Omit first digit (0) of shell style indication when using modification code. See page 8 for modification codes.

## KPTM/KSPM Series



DUAL-SHORE INSULATOR is integrally molded polychloroprene with a firm (80 shore) front section and a resilient (50 shore) rear section that provides a moistureproof seal around each wire. A hard plastic web is molded within the 80 shore section to prevent overinsertion of the contacts. This construction eliminates the moisture traps characteristic of other types of insulators

CRIMP, SNAP-IN CONTACTS are to MIL-C-23216 specification and can be crimped with the standard MS3191 crimp tool. They are especially suited to quick and easy field service by unskilled per

BOWSPRING CONTACTS increase pin/socket contact area, provide smooth insertion and prolong connector life.

CLOSED-ENTRY SOCKETS eliminate damage from abuse by test probes and automatically correct misaligned pins. Lead in cham-fers around the socket permit up to .060" misalignment or splay of mating pins

INTERFACIAL SEALING is assured by raised barriers around each pin contact that compress into the lead in chamfers at each socket contact. This method provides such a positive seal around each pair of mated contacts that, if several contacts are removed from the insert, there will be no leakage to the remaining contacts when the connector is immersed in water

POSITIVE STOP, a tough thermoplastic web molded into the DUAL SHORE insulator, prevents over-insertion of contacts by providing a close fitting seat for the shoulder of each pin or socket.

HARDWARE is aluminum alloy, finished to QQ.P.416, and conforms to MIL-C-26482. Five key polarization assures correct hardware and three-point buyonet lock provides quick connect/disconnect. To aid further in sealing, a peripheral neoprene ring is mounted in the receptacle and is compressed by the plug barrel while engaged.

## KPTM/KSPM **General Purpose, Crimp Contact Connectors**

#### KPTM CONNECTORS

- unique DUAL-SHORE insulator
- · crimp snap-in contacts
- closed-entry BOWSPRING™ socket contacts
- interfacial sealing
- positive stop to prevent over-insertion of contacts

#### KSPM CONNECTORS

- · hard, black anodize Alumilite, non-conductive finish
- · large flange with #6 mounting holes (receptacles)

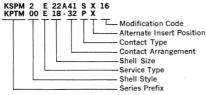
KPTM connectors offer reliability with efficiency and simplicity. The KPTM is a version of the KPT with a DUAL-SHORE insulator and crimp snap-in contacts. High reliability is achieved by using a minimum number of components in the insulator assembly. The DUAL-SHORE insulator is a simple, compact unit with no retaining clips or rings to move or obstruct and no glued joints to loosen or serve as moisture entry paths. A tough thermoplastic web molded into the insulator prevents over-insertion of contacts. Closed-entry socket contacts assure positive alignment

Interfacial sealing is assured by raised barriers around each pin contact that compress into the lead-in chamfers at each socket contact. This provides such a positive seal around each pair of mated contacts that, if several contacts are removed from the connector, there will be no leakage to the remaining contacts when the connector is

KSPM connectors are identical to KPTM connectors except for a hard, black anodize Alumilite, non-conductive finish. Receptacles also have a larger flange with #6 mounting holes for rear panel mounting,

KPTM and KSPM connectors mate with all 26482 con-

#### ORDERING NUMBER INFORMATION



#### KPTM, KSPM, — ITT Cannon prefix

SHELL STYLE

00 — wall mounting receptacle
01 — cable connecting receptacle
02 — box mounting receptacle

06 — straight plug 07 — jam nut receptacle 08 — 90° angle plug

#### SERVICE TYPE

— general duty — general duty with strain relief

- grommet seal

E — grommet seal
F — grommet seal with strain relief
G — gland seal for jacketed cable
J — gland seal with strain relief for jacketed cable
P — potted

#### SHELL SIZE

utside diameter of mating portion of shell in 1/16" increments. CONTACT ARRANGEMENT See pages 10 and 11,

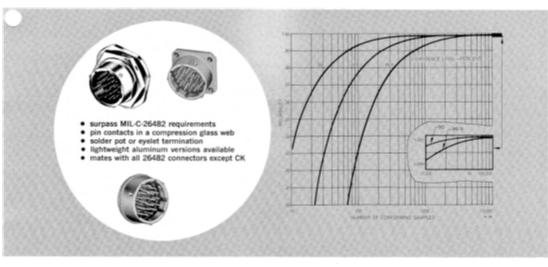
#### CONTACT TYPE

P — pin S — socket

ALTERNATE INSERTION POSITION
W, X, Y, and Z. (Omit for normal.) See page 11.

MODIFICATION CODE

Consult factory. Omit first digit (0) of shell style indication when using modification code. See page 8 for modification codes.



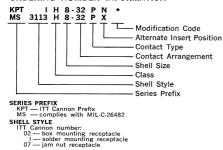
# KPTH Hermetically Sealed, Solder Contact Connectors

Hermetically sealed KPT receptacles fulfill the high reliability requirements of space age applications and environments. Far surpassing the requirements of MIL-C-26482, these receptacles have proven statistically reliable in leakage tests 100 times as severe as required by MIL-C-26482 with a reliability of .9995 at a confidence level of 95% with these results:

- . Leak rate not in excess of .001 micron cu. ft./hr.
- 100 psi differential causes no detectable leakage in excess of .001 cu. ft./hr.
- . 100 g shock with no loss of hermeticity
- Thermal shock from -70° to +200°C without affecting leakage rate

These receptacles are available with pin contacts only in three shell styles: a box mounting receptacle, KPT02H; a solder mounting receptacle, KPTIH; and a jam nut receptacle, KPT07H. Contact arrangements are tooled in a full lead-free compression glass web.

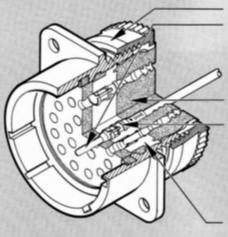
#### ORDERING NUMBER INFORMATION



MS Designation:
3113 — solder mounting receptacle
3113 — solder mounting receptacle
CLASS
H hermetic seal (MS specification applies to KPTIH and
KPTO7/H only)
SHELL SIZE
8, 10, 12, 14, 16, 18, 20, 22, and 24
CONTACT ARRANGEMENT
See pages 10 and 11.
CONTACT TYPE
P — pin
ALTERNATE INSERT POSITION
N (normal), W, X, Y, and Z
MODIFICATION CODE

Consult factory. See page 8 for modification codes.

## **KPSE/KSSE Series**



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

CRIMP, SNAP-IN CONTACTS are designed to MIL-C-23216 and can

rimped with the standard MS3191 crimp tool. CLOSED ENTRY SOCKET CONTACTS eliminate damage from abuse by test probes and help to correct any misaligned pins

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 connector

UNIQUE INTEGRALLY-MOLDED INSULATOR eliminates separate bonding operations to form a single voidless part with no mois-ture traps or interface voids.

CONTACT RETAINING CLIP is completely encased in a tough plastic er 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

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 receptable are mated. WIRE SEAL is accomplished by a multiple ripple design, exceed

ing the wire sealing requirements of MILC 26482 POSITIVE INSERT-TO-SHELL MECHANICAL RETENTION with hard plastic wafer firmly locked into a groove in the shell.

## KPSE/KSSE

## **High Performance, Crimp Contact Connectors**

#### KPSF 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 dielectric
- positive insert-to-shell mechanical retention

#### KSSE CONNECTORS

- hard, black anodize Alumilite non-conductive finish
- large flange with #6 mounting holes (receptacles)

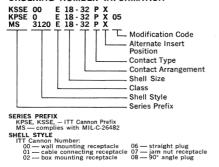
KPSE environment-resistant miniature circular connectors are designed for the exacting requirements of space and missile applications. The KPSE features a unique unitized insulator, integrally molded into a single voidless part. This insulator is mechanically retained in the shell by a positive, hard plastic-to-metal lock retention. Complete moisture sealing is achieved by four seals: shell, peripheral, interfacial and wire seals.

Crimp snap-in contacts are retained in clips that are completely encased in a tough hard dielectric wafer, thus protecting the clip tines from damage, Closed-entry socket contacts facilitate positive mating.

KSSE connectors are identical to KPSE connectors except for a hard, black anodize Alumilite non-conductive finish. Receptacles have a larger flange with #6 mounting holes for rear panel mounting.

KPSE and KSSE connectors mate with all 26482 connectors.

#### ORDERING NUMBER INFORMATION



MS Designation:
3120 — wall mounting receptacle
3121 — cable connecting plug
3122 — box mounting receptacle 3124 — jam nut receptacle 3126 — straight plug

CLASS

LASS
A — general duty
B — general duty
B — general duty with strain relief
E — grommet seal (MS specification)
F — grommet seal with strain relief (MS specification)
G — gland seal for jacketed cable
J — gland seal with strain relief for jacketed cable
P — potted (MS specification)

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

CONTACT ARRANGEMENT

See pages 10 and 11.

CONTACT TYPE

P — pin S — socket

ALTERNATE INSERT POSITION
W, X, Y, and Z. (Omit for normal.) See page 11.

MODIFICATION CODE

Consult factory. Omit first digit (0) of shell style indication when using modification code. See page 8 for modification codes.

## KPT/KPTM/KPSE/KPTH Series

#### **MODIFICATION CODES**

Preferred Modification Code	Description	Intended Usage
A106	Clean chromate coating over cadmium per QQ-P-416, type II, Class 3	Commercial, decorative hardware finish
A105	Gold over copper per FS-4456, Class A, and per MiL-G-45204, type 2 Class 2 over .00005 min. copper per MIL-C-14550	High reliability finish for contacts
FO	Connectors less contacts (contacts purchased separately)	Applicable to all crimp removable connectors (KPTM, KPSE, KSPM, KSSE)

#### STANDARD DATA

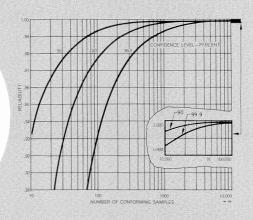
Standard Materials and Finishes		KPT/KSP				M/KSPI		
SHELL	KPT/KPTM — alum KSP/KSPM — alam							631
INSULATOR		D aftere gray polyc	Жаспроння			m pallychian		
GROWINET AND SEAL		polychloropenne				m gallychian	ademan	
CONTACTS	Cre	oper affiny, gold or	ner silbaner pliafte p	er MIL-G-45204 tes	e III. CI	less I	3500	-
fechanical Features					1117	111111	19-10	
SMELL STYLES	00 — well mounting 01 — cabbe connect 02 — box mounting 05 — atracight plug	fing plug c mongdadie		07 — jem nut s 08 — 50° engle 8 — thru-build	mine		T anly5	34
SHILL SIZES	to - souther had		1.	hrs 24	-	_	-	
POLARIZATION/COUPLING	-	-		hree point heyonet	_	_		-
SURVICE CLASSES	A — general duty  B — general duty  C — grommet seal  F — grommet seal		me mywey 2	G — gland nut J — gland nut P — patted			r jacketed co	eh/ie
Sectrical Data			200.000				1.11	
NUMBER OF CONTACTS		2 thru 61		1	-	thru 61	1000	
WIRE SIZE, AMG		16 thru 24	E 200 2 - 2			thru 24		
CONTACT TERMINATION		mother				no street or		
CONTACT RATING	5026	and an	9479	D AMPS	47/91		CURRENT	-
PRINCIPLE MATERIAL	20	-		7.5		1531	7.5	
	16			7.5		-	13.0	
STRUCT BARRIES	TEST WOLT		ENVICE				13.0 BC	-
SERVICE MATING	TEST VOLT.	- 1	THATCH.	AC (mir	4	-		
	Sea Level	-	1	1500			2100	
	414.5141		2	2300			3200	
	76,000 m.		1	375			535	
	14/404 195		2	550			770	
COAXIAL CONTACTS				BIG.	55/U, 8 195/	NG-5/9/U, R U, and RG-1	221/0	
itandard Materials and Finishes		KPSE/F					PTH	9.00
DHITT	KPSE — aluminum finish per KSSE — aluminum	OO-P-416				nell offection ferrium	deposited tir	ii dynaii.
INSULATOR	60 share great paly	othisespenie			- OR	mgression ;	charge	100
GROWWET AND SEAL	60 shore great poly	emegrenish	9. S. W. P. G. S.		100	-		
CONTACTS	capper allay, gold o	over silver plate				sel, electro čmium	deposited to	n over
fechanical Features				7.86	-	-		
SHELL STYLES	1 00 - wall mountain	e mondanne	06 str	Butte stigit	- 1	- salider	mounting m	новайы
	\$1 - cable connect	SINE BONE	07 - jan	eitseft menegfintlin	012	- box mo	MINISTER WATER	attacle
SHELL SIPES	CC — box mounting			artifie phing	07		it mercegflarche	
POLARIZATION / COUPLING		10 thru				8.0	hrs. 24	-
STRVICE CLASSES	A — general duty B — general duty E — grammet seal F — grammet seal		C - gland m	of for jacketed cable of with strain relief ried cable		H-	hermetic	
Dectrical Data	T . — frammer new	WHEN BUILDING DESIGN	- presed			-	-	-
NUMBER OF CONTACTS	1	3 thru	41		1	7.0	tina 61	-
MURE SIZE AMIG		35 thru				- 41	nes de	-
CONTACT TYRMINATION		grinnp an				-	elider	-
CONTACT RATING	CONTACT	Crimity in	10-11		-	RATED	TEST	Mr
CONTACT MATING	SIZE	WILLINGET	DROP		5025	AMPS	CURRENT	DRO
	200	less than			210	7.5	5.0	70
	16	fiers, than			16	22.0	13.0	75
SERVICE AKTING	MAXIMUM OPERATING VOLTAGE	SERVICE	AC (rms)	pc pc	TEST	SERVICE	AC (rmg)	00
	The second second second	- SEMESTER	(inter)	850	Sea	STATES.	15/00	210
	Ses Louel		1000	1275	Laurel	-	2500	320





- surpass MIL-C-26482 requirements
- pin contacts in a compression glass web
- solder pot or eyelet termination
- · lightweight aluminum versions available
- mates with all 26482 connectors except CK





#### **KPTH**

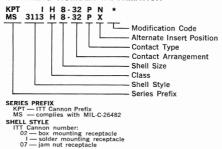
#### **Hermetically Sealed, Solder Contact Connectors**

Hermetically sealed KPT receptacles fulfill the high reliability requirements of space age applications and environments. Far surpassing the requirements of MIL-C-26482, these receptacles have proven statistically reliable in leakage tests 100 times as severe as required by MIL-C-26482 with a reliability of .9995 at a confidence level of 95% with these results:

- . Leak rate not in excess of .001 micron cu. ft./hr.
- 100 psi differential causes no detectable leakage in excess of ,001 cu, ft./hr.
- . 100 g shock with no loss of hermeticity
- Thermal shock from -70° to +200°C without affecting leakage rate

These receptacles are available with pin contacts only in three shell styles: a box mounting receptacle, KPT02H; a solder mounting receptacle, KPTIH; and a jam nut receptacle, KPT07H. Contact arrangements are tooled in a full lead-free compression glass web.

#### ORDERING NUMBER INFORMATION



MS Designation:

3113 — solder mounting receptacle
3114 — Jam nut receptacle
CLASS
LAS — hermetic seal (MS specification applies to KPTIH and
KPTOTH only)
SHELL SIZE
8, 10, 12, 14, 16, 18, 20, 22, and 24
CONTACT ARRANGEMENT
See pages 10 and 11.
CONTACT TYPE
P — pin
ALTERNATE INSERT POSITION
N (normal), W, X, Y, and Z
MODIFICATION CODE
Consult factory. See page 8 for modification codes.

## KPT/KPTM/KPSE/KPTH Series

#### **MODIFICATION CODES**

Preferred Modification Code	Description	Intended Usage
A106	Clean chromate coating over cadmium per QQ-P-416, type II, Class 3	Commercial, decorative hardware finish
A105	Gold over copper per FS-4456, Class A, and per MIL-G-45204, type 2 Class 2 over .00005 min. copper per MIL-C-14550	High reliability finish for confacts
FO	Connectors less contacts (contacts purchased separately)	Applicable to all crimp removable connectors (KPTM, KPSE, KSPM, KSSE)

#### STANDARD DATA

Standard Materials and Finishes		KPT/KSP		3 67 562	KP	TM/KSP	M	
SHELL	KFT/KFTM — alum KSP/KSPM — alum	onem alling, condu	ctive office drai	b chromate over cal Alumitite finish	Design file	ish per QQ-I	F-416	173
INSULATOR		D altigree great mallys			shire tre	en polychier	rigrene	
CROMMET AND SEAL	5/0 shore gray	polychiaragenne	2000	50	shore gre	en polychian	rigreen	
CONTACTS	Cop	oper alloy, gold ov	ver silver plate	per MIL G-45204	type II, C	Date I	11100	
Mechanical Features	Manage State of the last of th		02202	252550	3000	7/29/11	3433	760
SMILL STYLES	00 — well mounting 01 — cable connect 00 — box mounting 05 — straight plug	ting play	例題	07 — Jam nu 08 — 90° an 8 — Shru-bu	gie gilaig		T andyb	
SMELL SIZES		1.72543		thru 24	200	5987		
POLARIZATION / COUPLING	500571076	10000	flier keywey /	thme point beyone	6	10000	Park In	
SERVICE CLASSES	A — general duty  B — general duty  L — grammet seal  y — grammet seal		47284	G — gland no J — gland no P — potted			r jacketed o	ati/le
Electrical Data	277995552	17710000	10.0711	23700276				
NUMBER OF CONTACTS	THE PARTY	2 thru 61	NO PER			3 they 61		1
WIRE SIZE, AND	THE REPORT OF	16 thru 24				6 thru 24		
CONTACT TERMINATION	THE RESERVED	saliter	STORY SHOP	The State of the last	604	ing snag-in		
CONTACT RATING	5121	MARKET STATE	R(A)	TO AMPS		TEST	CURRENT	
	20			7.5			7.5	
	16	ALC: UNKNOWN	10000	22.0			12.0	1
SERVICE RATING	TEST VOLT	- 1	ERVICE	AC (r			DC	
	See Level		1	150		-	2100	
	Out then		2	230		-	3200	
	70.000 m.		19-65	37		1000	535	
	7,000		2	10		AC 44 10 4	770	-
CONTIAL CONTACTS	CEPT COLD	-			RIG-195/	RG-59/U. R U. and RG-1	223/0	
Standard Materials and Finishes	DESCRIPTION OF	KPSE/F					PTH	
SMILL	KFSE — aluminum finish per KSSE — aluminum	00 P-416			68	teel, electron stream	Regionited to	I GWEIT
INSULATOR	60 shore green pely		100000	SECREC S	100	impression (	(fans	
GROMMET AND SEAL	60 shore green poly	chlorogresse	ASSESSED AND	MATERIAL STREET		100		
CONTACTS	capper alloy, gold o	mes zilves byese			- 61	teel, electro scenium	deposited to	n over
Mechanical Features	PRESIDEN		30000	25132023	0.00		1000	100
SMELL STYLES	00 — wall mounting 01 — cable contest 02 — bes mounting	time after	67 1	freight plug am nuf receptable O' angle plug	0.0	7 — bus me 7 — jam nu	it receptacle	eptacle
SHELL SIZES	TRANSPORTER	10 thry		ASSESSED BY		8.0	hru 24	
POLARIZATION COUPLING		us kerway / three			100		1000	
SERVICE CLASSES	A — general duly a  B — general duly a  E — general seal  F — general seal		J grand	met her jocketed cal met with attrain nelli thetsed cathle	eff.		hermetic	
Electrical Data		THE PERSON NAMED IN	40000	THE SECOND IN	2794		3-5	
NUMBER OF CONTACTS	DESCRIPTION OF THE PARTY OF THE	3 thre		DESERVED.		2.0	hry 61	
WIRE SIZE AMG	MARCH STATE	36 thru			1000	33.00		
CONTACT TERMINATION	4000000	Crimp sh	NO-ON				eliter	-
CONTACT MATING	CONTACT SAZE 20	MILLIVOLT		12111111	512E	AMPS 7.5	TEST CURRENT % 0	DROP 76
	16	less than			16	22.0	13.0	75
SERVICE RATING	MAXIMUM OPERATING VOLTAGE	SERVICE	AC (rms)	DC DC	TEST	17994	AC (mg)	DC.
	Sea	1	600	850	Sea	1	1500	2100
	Level				Livel		2100	3200

#### **BOX MOUNTING RECEPTACLES**

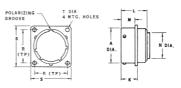
KPT02/KSP02/MS3112 KPT02/KSPM02 KPSE02/KSSE02/MS3122

#### RECEPTACLE ASSEMBLY





SOLDER KPT02/KSP02/MS3112



CRIMP KPTM02/KSPM02 KPSE02/KSSE02

		KSP/K			KPT/	KPTM/I	KPSE		KPT`		KSP/	KSPM/I	KSSE		KSP
Shell Size*	A Dia. ±.003	Max.	N Dia.	<b>K</b> ±.010	<b>M</b> ±.005	R (TP)	S Max.	±.005	Z Max.	<b>K</b> ±.010	<b>M</b> ±.005	R (TP)	S Max.	<b>T</b> ±.005	X Max.
48	.471	.832	.436	.530	.457	.594	.828	.120	.483	.524	.467	.734	1.057	.150	.542
10	.588	.832	.562	.530	.457	.719	.954	.120	.483	.524	.467	.812	1.135	.150	.542
12	.748	.832	.687	.530	.457	.812	1.047	.120	.483	.524	.467	.938	1.260	.150	.542
14	.873	.832	.812	.530	.457	.906	1.141	.120	.483	.524	.467	1.031	1.354	.150	.542
16	.998	.832	.936	.530	.457	.969	1.234	.120	.483	.524	.467	1.125	1.448	.150	.542
18	1.123	.832	1.061	.530	.457	1.062	1.328	.120	.483	.524	.467	1.203	1.526	.150	.542
20	1.248	.895	1.186	.650	.561	1.156	1.453	.120	.427	.650	.561	1.297	1.682	.150	.500
22	1.373	.895	1.311	.650	.561	1.250	1.578	.120	.427	.650	.561	1.375	1.760	.150	.500
24	1.498	.895	1.436	.683	.594	1.375	1.703	.147	.393	.683	.594	1.500	1.885	.150	.467

## THRU-BULKHEAD RECEPTACLES KPTB/KSPB/MS3119







SOLDER KPTB/KSPB/MS3119

			PTB/KSPI	3			KPTB			KSPB	
Shell Size	A Dia. ±.003	±.020	L Max.	<b>M</b> ±.010	T Max.	R (TP)	S Max.	±.005	R (TP)	S Max.	±.005
8	.471	.634	1.125	.572	.188	.594	.828	.120	.734	1.057	.150
10	.588	.634	1.125	.572	.188	.719	.954	.120	.812	1.135	.150
12	.748	.634	1.125	.572	.188	.812	1.047	.120	.938	1.260	.150
14	.873	.634	1.125	.572	.188	.906	1.141	.120	1.031	1.354	.150
16	.998	.634	1.125	.572	.188	.969	1.234	.120	1.125	1.448	.150
18	1.123	.634	1.125	.572	.188	1.062	1.328	.120	1.203	1.526	.150
20	1.248	.792	1.255	.698	.312	1.156	1.453	.120	1.297	1.682	.150
22	1.373	.792	1.255	.698	.312	1.250	1.578	.120	1.375	1.760	.150
24	1.498	.792	1.255	.698	.312	1.375	1.703	.147	1.500	1.885	.150

#### STRAIGHT PLUGS

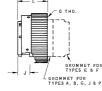
KPT06/KSP06/MS3116 KPTM06/KPSM06 KPSE06/KSSE06/MS3126

#### RECEPTACLE ASSEMBLY







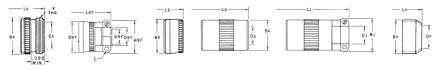


SOLDER KPT06/KSP06/MS3116

CRIMP KPTM06/KSPM06 KPSE06/KSSE06/MS3126

4.77 F	TEST STATE OF	KPT/KS	P/KPTM/KSPM/KPSE/KS		KPT/KSI
Shell Size*	G Was	±.005	Met.	Q Thread Class 2A	Was.
48	.730	354	.844	7/16-28UMEF	.641
10	.45/0	358	.844	9/16-24UMEF	.641
12	1.010	358		11/16-24UMEF	.641
14	1.130	.354	.864	13/16-20UMEF	.641
16	1.260	354	.844	15/16-200MEF	.641 .641 .584
18	1.380	.358	.844	1- 1/16-18UMEF	.641
20	1.510	.420	.909	1- 3/16-18UMEF	.584
22	1.630	.420	.989	1- 5/16-18UN(F	.584
24	1.760	420	.900	1- 7/16-18UMEF	.584

#### TERMINATION ASSEMBLIES



TYPE A

TYPE B AND F

TYPE E

TYPE G

TYPE J

TYPE P

300		TYPE A		700 12 EQ. 700 MA	100000		TYPE I	and F		
Shell Size*	Ba Mex.	Da Min.	Mes.	V Thread Class 2A	Bur. Max.	C This.	Dur With	Gar Min.	Har Max.	Lav. Max.
48	-590	-335	1.440	1/2-29UMEF	.552	6-32	.234	.115	.760	1.77
10	.717	ALLE	1.440	5/8-24UNEF	.677	6-32	.297	.178	.820	1.77
12	334	.591	1.440	3/4-20UNDF	.802	6-32	.422	.102	.960	1.77
14	.970	.705	1.460	778-20UMEF	927	6-32	.547	.365	1.070	1.77
16	1.088	.830	1.440	1 -2SUMEF	1.052	6-32	.609	.490	1.130	1.8%
18	1.216	.948	1.440	1-3/16-18UMEF	1.161	8-32	.740	.415	1.3/90	1.890
20	1.332	1.073	1.662	1-3/16-18UMEF	1.296	8-32	.740	.415	1.390	1.904
22	1.060	1.198	1.662	1-7/16-18UNEF	1.411	8-32	.928	740	1.570	1.90
24	1.585	1.323	1.672	1-7/16-18UMEF	1.536	8-32	.584	.790	1.700	1.904

SAST	TYP	EE		TYP	E G		100	TYP	EJ.			TYPE P	100
Shell Size*	Be Max	La Max.	Bo ±.005	Dis Min.	Do Max	Mer.	Met.	Do With	D; Max.	Max.	Br Mar.	Di- Wits.	Max.
48	557	1.281	.502	.168	230	1.720	.828	.168	.230	2.270	.602	327	3.450
10	5.77	1.281	712	205	312	1.720	.891	.205	.312	2.270	.691	.444	1.450
12	.802	1.281	.851	.338	:442	1.850	1.016	.338	.442	2.410	.852	.558	1.450
14	.920	1.291	.995	.416	5.119	2.050	1.141	.416	.539	2.600	956	.683	1.450
16	1.045	1.281	1.080	.5/5/0	616	2.270	1.203	.550	.616	2.880	1.088	.808	3.450
18	1.165	1.291	1.200	.600	.672	2.500	1.469	.600	672	3.170	1.220	.909	1.450
20	1.290	1.294	1.325	.615	747	2.900	1.463	636	747	3.510	1.369	1.034	1.600
22	1.415	1.794	1.450	676	806	3.055	1.456	670	916	3.670	1.461	1 159	1.600

\* Net available in NP3E/K33E

WITH TERMINATION ASSEMBLIES

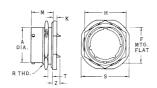
## KPI/KPIM/KPSE Series

#### JAM NUT RECEPTACLES

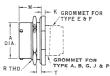
KPT07/KSP07/MS3114 KPTM07/KSPM07 KPSE07/KSSE07/MS3124

#### RECEPTACLE ASSEMBLY





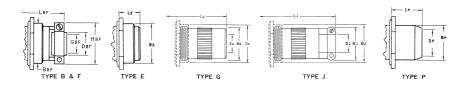




CRIMP KPTM07/KSPM07 KPSE07/KSSE07/MS3124 TYPE A

10.00		KPT/KSP/KPTM/KSPM/KPSE/KSSE											
Shell Size*	m.000	±.005	H ±.005	±.010	±.005	R Thread Class 2A	=.010	T Partel Min.	Thick.	Mar.			
48	.471	.525	,750	.125	.696	9/16-24UMEF	.938	.062	.125	.312			
10 12 14	.181	.650	.875	.125	.696	11/16-24UMEF	1,062	.062	.125	.312			
12	.748	.813	1.062	.125	.696	7/8 -20UMEF	1.250	.042	.125	312			
14	.873	.937	1.188	.125	.696	1 -20UMDF	1.375	.062	-125	.312			
16	.998	1.061	1.312	.125	.696	1- 1/8 -18UMEF	1.500	.062	.125	312			
18	1.123	1.186	1.438	.125	.696	1- 1/4 -18UMEF	1.625	.062	.125	312			
20	1.248	1.311	1.562	.156	.884	1- 3/8 -18UM(F	1.812	.062	210	.187			
22	1.373	1.436	1.688	.156	.854	1- 1/2 -18UMEF	1.938	.062	.250	187			
24	1.458	1.561	1.812	.156	.917	1- 5/8 -18UMEF	2.062	.062	250	.150			

#### TERMINATION ASSEMBLIES



		TYP	EBa	nd F		TYP	E.E	10.00		TYPE	G	SILIFA	17:11		TYPE	1		1	YPE P	
Shell Size*	Mar.	Dur- Min	Gun	Hat Wat	Lar-	B: Man.	Man.	Max.	Dis Max.	Min.	Es Miss	Mar.	Mar.	Max.	D)	Max.	Max.	Max.	Min.	Mes.
48	.717	.234	1115	.760	1.766	.717	.638	.5/9/2	.717	.168	22.00	1.750	.717	230	168	.760	2.250	.402	327	.625
10	.863	,297	.178	.820	1.766	.862	/63(8	.712	243	2105	.312	1.750		.312	.2105	.#2tb	2.250	.691	.446	JE25
12	368	422	302	.953	1.766	368	.638	.837	.968	.338	.442	1.890	.968	.442	_338	.960	2.390	.852	-558	.625
14	1,093	547	365	1.670	1.766	1.093	638	.955	1.093	.416	.539	2.180	1.093	.5.319	/416	3.070	2.680	3/56	.683	.625
16	1.218	609	490	1.130	1.906	1.218	.638	1.080	1.218	1500	.616	2.300	1.218	616	.550	1.130	2.920	1.088	BIB	(625
18	1.343	.740	.615	1.390	1.906	1.343	.618	1.200	1.343	.600	.672	2.770	1.343	.672	.600	1.390	3.390	1.220	.509	.625
210	1.500	.740	515	1.390	1.980	1.500	.654	1.325	1.500	675	.747	2.980	1.500	.747	615	1.290	3.500	1.349	1.034	.746
22	1.675	528	.740	1.548	1.980	1.625	.654	1.45/0	1.625	.670	206.	3.130	1.425	.546	.670	1.570	3.750	1.461	1.159	.746
24	1.750	.304	.790	1.700	1.580	1.750	.621	1.575	1.750	.740	.894	3.350	1.750	300	.740	1.700	3.970	1.593	1.284	.716
ies pap	ms 4, 5	ered & f	er ente	ring mu	nder lief	sirmell'sir	R.	200	4000	371	2960.7	8		050	200	27.7	* Net	aveilable	in APSE	/M.55

## TEST DATA

Test Name and MIL-C-26482 Ref. Paragraph		KPT/KSI	P/KPTM/I	(SPM			KPSE/F	(SSE		
MAINTENANCE AGING Para. 4.7.5	Engaging and disengaging to	orque (in.,	'lbs.) limits	were sat	isfactory	within	those spe	cified for	shell siz	es involved.
	Shell Size	8	10	12	14	16	18	20	22	24
	Engaging Torque (Max.)	8	12	16	20	24	28	32	36	44
	Disengaging Torque (Max.)	1	1	2	4	4	5	6	7	7
	Contact insertion forces mea and size 16 contacts, do not	sured on exceed 20	20% of co lbs. at the	ntacts, bu ninth ins	it not les ertion.	ss than 3	contacts	of each	connector	for size 20
THERMAL SHOCK Para. 4.7.6	There was no evidence of cra temperature change from —	cking or o 55°C to -	ther damag +125°C, 1	e detrime hour per	ntal to o	onnector	operation ually bety	after exp veen temp	osure to erature ex	5 cycles of tremes.
INSULATION RESISTANCE (elev. temp) Para. 4.7.3	While applying 500 VDC for adjacent contact pairs, shell, for 1000 hrs.									
DIELECTRIC WITHSTANDING VOLTAGE (sea level) Para. 4.7.4	There was no evidence of bro contacts and between contact manner for Service Rating 2.									
DURABILITY Para 4.7.9	There was no evidence of mas in service.	echanical	or electrica	l damage	to conne	ectors aft	er 500 en	gagements	and diser	ngagements
VIBRATION Para. 4.7.11	With contacts wired in series continuity greater than 10 range of 10 cps to 2K cps fo 15g's max.	nicrosecor	ids. Connec	tors mou	nted an	d mated	as in se	rvice and	vibrated	through a
SHOCK Para. 4.7.12	With contacts wired in series continuity greater than 10 n shock in each of three major a	nicrosecon	itored for d ds while th	continuity e connec	, there v tor was	vas no m subjected	echanical I to an 1	damage a 1 millisect	ind no ele ond, 50g	ectrical dis- mechanical
INSULATION RESISTANCE (after vib. & shock) Para. 4.7.13	With 500VDC applied to mat pair of adjacent contacts and	ed connec I between	tors, insula	ition resis	stance w t contact	as great s.	er than 5	5,000 meg	ohms bet	ween each
MOISTURE RESISTANCE Para. 4.7.13.2	With 500VDC applied, insulat 100 megohms while mated c each, in humidity chamber ad	onnectors	were expos	ed to the	followin	g high hi	ımiditv en	and the sh vironment	iell was n ; 10 cycle:	o less than s, 24 hours
SOLVENT IMMERSION Para. 4.7.14	Engaging and disengaging to after unmated connectors had free air.	rques and d been im	dielectric mersed in a	withstand aviation h	ing volta ydraulic	iges were fluid for	within to 20 hours	he limits followed	previously by 1 hou	y indicated r drying in
CONTACT RESISTANCE Para. 4.7.2	For size 16 contacts, minimu size 20 contacts, the corresp accordance with MIL-STD-202	onding vo	tage drop							
INSERT RETENTION Para. 4.7.15	Inserts within wired connector psi on each insulator face fo	rs (less g r a period	rommets a of 5 secor	nd endbe ids.	lls) did	not dislo	dge when	subjected	to press	ures of 75
HIGH ALTITUDE IMMERSION (per MIL-C-26500B)	Wires and mated connectors Pressure reduced to 6,000 ft for 30 minutes prior to me still immersed in salt solution found to be less than 100 me	. altitude asurement on. In no	(5.41 cm H of insulati	g.) and r on resista	naintaine ance whi	d le	Not	applicabl	e to KPS	E.
CONTACT RETENTION (5 min. test) Para. 4.7.16	In no case did axial contact cation of 15 lbs. and 25 lbs. measured after a minimum of	axial load	at engagin	g end of	size 20	and 16	contacts	respective	elv. Displa	acement is
SALT SPRAY MIL-STD-202B, Method 101A, Condition B	No damage or unacceptable i	ncrease in	contact re	sistance a	after mai	ted samp	le subject	ed to 48	hours of	salt spray.
AIR LEAKAGE	30 psi differential at —67°F	(KPT only)	less th	an 1 atm	osphere	cubic inc	h per hou	Γ		
TEMPERATURE RANGE			55	°C to +	125°C					
CONTACT INSERTION AND EXTRACTION	Insertion force does not excee	d 20 lbs. E	extraction fo	rce does	not excee	ed 20 lbs.				

ITT CANNON ELECTRIC

#### **JULIUS**

#### CONTACT ARRANGEMENTS

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



**▲** ★ □ 8-2 2-#20

12A3 2-#16

(c A) **▲** ★ □ 8-3 3-#20 1

• A \* ^ 8-33 3-#20

 $\Delta\Box$ 12-3 3-#16 2

\* ▲ □ 8-4

4-#20

1

0 0  $0.0 \, \odot$ Œ 0

◆ △ □ 14-5 5-#16 2





10-6 6-#20 1



1

16-8

 $\Delta \Box$ 8-#16 2



7-RG-195/U 7-RG-55/U

24A8 1-#20 7-RG-59/U or -62/U 7-RG -223/U

24A9 1-#20

CONTACTS SERVICE

CONTACTS

SERVICE

CONTACTS

SERVICE

1



12-10 10-#20 1



18-11 11-#16 2



14-12 8-#20 4-#16 1



14-#20 1-#16 1

◆ △ □ 20-16

2

16-#16



18 Contacts

18-#20

14-19 19-#20



16-23 22-#20



16A99 21·#20 2·#16

20-24 24-#20

CONTACTS SERVICE

2

1

32 Contacts

16-26

CONTACTS 26-#20 SERVICE 1



26-#20 2-#16



1

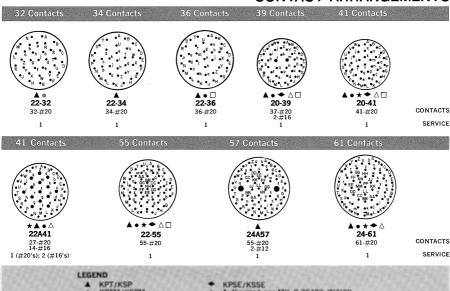


1

18-32 32-#20 1

## KPT/KPTM/KPSE/KPTH Series

#### CONTACT ARRANGEMENTS



- KPTM/KSPM KPTH (hermetic)
- - Authorized per MIL-C-26482 (NAVY)
  - Authorized per SCL-6019 (SIGNAL CORPS)

NOTE: Red symbols indicate partial tooling. Consult factory for availability.





SHELL	NO. OF CON- TACTS	ARR. NO.	٧	DEGREES W	X	ROTATION Y	z
	2	8-2	_	58	122		
8	3	8-3	_	60	210	_	_
•	3	8-33		90		_	_
	4	8-4	_	45	_		_
10	6	10-6		90	_		
10	6	10-98		90	180	240	270
	2	12A3		_	_		
12	3	12-3		_	_	180	
12	8	12-8	_	90	112	203	292
	10	12-10		60	155	270	295
	5	14-5		40	92	184	273
	12	14-12		43	90		
14	15	14-15		17	110	155	234
	18	14-18		15	90	180	270
	19	14-19	_	30	165	315	
	8	16-8		54	152	180	331
10	23	16-23	_	158	270		_
16	23	16A99		66	156	223	340
	26	16-26		60	_	275	338

#### ALTERNATE INSERT POSITIONS

The diagram at the left indicates alternate insert positions. The six positions (V, W, X, Y, Z and Normal) differ in degree of rotation for various sizes and arrangements. For the exact degree of rotation, and for the list of contact arrangements and alternate positions available, refer to the tabulation below.

SHELL SIZE	NO. OF CON- TACTS	ARR. NO.	. y	DEGREE	S OF RO	TATION	z
	11	18-11	_	62	119	241	340
18	28	18A28		_	_		
10	30	18-30		180	193	285	350
	32	18-32		85	138	222	265
	16	20-16	_	238	318	333	347
20	24	20-24	_	70	145	215	290
20	39	20-39	-	63	144	252	333
	41-	20-41		45	126	225	_
	21	22-21		16	135	175	349
	32	22-32		72	145	215	288
22	34	22-34		62	142	218	298
22	36	22-36	_	72	144	216	288
	41	22-41	_	39	73	149	196
	55	22-55	_	30	142	226	314
	8	24A2			_		
	8	24A4	_	_			-
	8	24A8		_		_	_
24	8	24A9	_				-
24	31	24A31	_	90	225		-
	57	24A57		90	180	270	324
	61	24-61		90	180	270	324
	Red num	bers indica	te position	s are not	to MIL-C	-26482	

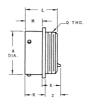
#### WALL MOUNTING RECEPTACLES

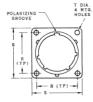
KPT00/KSP00/MS3110 KPTM00/KSPM00

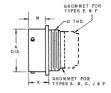
KPSE00/KSSE00/MS3120

#### RECEPTACLE ASSEMBLY







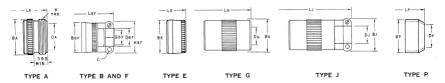


SOLDER KPT00/KSP00/MS3110

CRIMP KPTM00/KSPM00 KPSE00/KSSE00/MS3120

Shell .	KPT/KPT	M/KSP/	SPM/KPSE/KSSE O Thread	K	w K	PT/KPT	M/KPS	E y	KPT	×	w K	SP/KSI	M/KSS	E T	KSP
Sitell Size*	+.003	Man.	Clien 2A	+.010	+.005	(TP)	Max.	±.005	Max.	±.010	+.005	(TP)	Max.	±.005	Max
*8	.471	.941	7/16-28UMEF	.530	A57	.594	.828	.120	.483	.524	.457	.734	1.057	.150	.542
10	.588	.161	9/16-24UNEF	.530	.457	.719	.954	.120	.483	.524	.467	.812	1.135	-150	.543
12	.748	.842	11/16-24UMEF	.530	.457	.812	1.047	.120	.483	.524	.467	.938	1.240	-150	.543
14	.871	.848	13/16-20UMEF	.530	.457	.906	1.141	-129	.483	.524	.467	1.031	1.354	.150	.54)
16	.998	.048	15/16-20UNEF	.530	.45.7	.969	1.234	.120	.483	.524	.467	1.125	1.668	.150	.543
18	1.123	.848	1- 1/16-18UMEF	.530	.457	1.062	1.328	.120	.483	.524	.467	1.203	1.526	.150	.547
210	1.248	1.055	1- 3/16-18UN(F	.450	.561	1.156	1.453	.120	.427	.450	.561	1.297	1.682	.150	.500
22	1.373	1.055	1- 5/16-18UM(F	.450	.561	1.250	1.578	.120	.427	.650	.541	1.375	1.760	.150	.500
24	1.498	1.055	1-7/16-18UNEF	.683	.594	1.375	1.703	.147	.393	.683	.594	1.500	1.885	.150	.467

#### TERMINATION ASSEMBLIES



-	1	TYPE A			_	-			T	TPE B a	nd F		
Shell Size*	B. Max.	Da. Min.	La Mex.		V Thre	ad A	Bni Mat.	Thd.	No.	in.	Ger Min.	Har Mas.	Lar Wax.
48	.590	_335	1.444	200	1/2-280	INDE	.552	6-32		34	.115	.760	1.776
10	.717	456	1.444		5/8-240	INEF	.477	6-32		97	.178	.820	1.776
12	.834	.591	1.444		3/4-200	IMEF		6-32		22	-3112	.960	1.776
14	.970	.705	1.464		7/9-200	INEF	.927	6-32		47	.365	1.070	1.776
16	1.098	.830	1.444		1 -240	IMEF	1.052	6-32		(09	490	1.130	1.895
18	1.216	.948	1.444		1-3/16-18	INDE	1.161	8-32		40	.615	1.330	1.896
20	1.332	1.073	1.728		1-3/16-18	OMER	1.286	8-32		40	.415	1.390	1.970
22	1.460	1.198	1.728		1-7/16-18	UNIF	1.411	8-32	.9	28	.740	1.570	1.970
24	2.585	1.323	2.738		1-7/16-180	mark.	1.536	8-12	-	194	.790	1.700	1.970
	1.503	1.023	1.736		1-7/10-10	one, I	1.574	911	.,			1.700	
	TYP	E E		TYP	£ G			TYP	£)			TYPE P	
Shell	12/3		Bo Mar.	TYP Do Win		Lo Max.	B <sub>2</sub> Max.	911		Li Mar.	Br Mass.		L. Mari.
Shell Size*	TYP	£ £	8.	Do	€ G Ds	Lo		TYP	E J	Max. 2.270	Br Max.	TYPE P D- Min.	Mes. 1.450
Shell Size*	Br Men.	E E La Mass.	Bo Mer.	Min.	E G Dis Wax.	Lo Max.	B <sub>J</sub> Max.	TYP Or Min.	E J Di Was.	Max. 2.270 2.270	Mass. .6402 .651	TYPE P Do Min.	Mes. 1.450
Shell Size* *8	Be Men.	La Mas.	Bo Mer. 552	Min.	E G Dis Max.	Lo Mer. 1.720	Mat.	TYP D <sub>2</sub> 96m .168 .295 .338	E J Du Wass. 230	Li Mar. 2.270 2.270 2.410	May, 6/02 ,6/91 ,8/92	TYPE P Do Min. .327 .664 .558	Man. 1.450 1.450
Shell Size*	TYP B: Mes. .557 .677	La Mas. 1.281	Bo Max. 5/52 ,712	Dis Min. 168 205 338 416	E G Dis Marx. .23(0) .312	Lo Max. 1.720 1.720	B <sub>2</sub> Mas. .828 .891	TYP Di Min. 168 246	E J D <sub>2</sub> Max. 230	Max. 2.270 2.270	Mass. .6402 .651	TYPE P Do Min.	Mes. 1.450
Shell Size* 48 10 12 14	TYP Bs Men. .557 .877 .812	E E La Mas. 1.281 1.281 1.281	Bo Mar. 5/52 -712 -837	Dis Min. .168 .205 .338	E G Ds Max. .230 .312 .442	Lo Man. 1.720 1.720 1.860	Most. -828 891 1.016	TYP D <sub>2</sub> Wim. .16/8 .24/6 .33/8 .41/6 .55/0	D <sub>J</sub> Miss. 230 312 442 439 416	Mas. 2.270 2.270 2.410 2.600 2.880	80r Mas. 602 691 852 956 1.088	TYPE P D Win. .327 .664 .558 .683 .808	Mas. 1.450 1.450 1.450 1.450
Shell Size* *8 10 12	177 Bis Minn	L2 Mas. 1.281 1.281 1.281 1.281	Mar. 5/02 -712 -837 -915	Dis Min. 168 205 338 416	E G Os Max. .230 .312 .442 .533	Lo Max. 1.720 1.720 1.860 2.050	B <sub>2</sub> Max. .823 .891 1.016 1.141	TYP D <sub>2</sub> Wim. .16/8 .246 .338 .416	D <sub>J</sub> Miss. 230 312 442 439	Max. 2.270 2.270 2.410 2.600	Br Mass. 6002 691 852 956	TYPE P D- Min. .327 .684 .558 .683 .808 .509	Mes. 1.450 1.450 1.450 1.450 1.450 1.450
Shell Size* 48 10 12 14 16	1 TYP Bs Men. 587 A77 A82 529 1 045	La Mas. 1.291 1.291 1.291 1.291 1.291	860 Mar. 5/32 -712 -837 -915 1.080	De Win. .168 .205 .338 .416 .550	E G Os Max. 230 312 442 539 416	Lo Mas. 1.720 1.720 1.860 2.050 2.270 2.500 2.360	B <sub>2</sub> Ntas. .823 .891 1.016 1.141 1.203 1.469	TYP D <sub>2</sub> Wim. .16/8 .24/6 .33/8 .41/6 .55/0	E J Dy Wass. 2300 312 442 439 416 472 747	Mas. 2.270 2.270 2.410 2.800 2.880 3.170 3.170	Br Mass .602 .691 .852 .956 3.088 1.220 1.349	TYPE P Do Min. .327 .664 .554 .663 .808 .909 1.034	Man. 1.450 1.450 1.450 1.450 1.450 1.450
Shell Size* *8 10 12 14 16	### Be Men	E E. La Was. 1.281 1.281 1.281 1.281	Mar. 592 .712 .837 .995 1.080 1.200	Do Min. .168 .305 .318 .416 .550 .600	© G Os Was. .230 .312 .442 .533 .416 .672	Ls Mas. 1.720 1.720 1.660 2.050 2.270 2.500	B <sub>2</sub> Mat. .828 .891 1.016 1.141 1.203 1.469	TYP D <sub>2</sub> Win. .168 .216 .338 .416 .550 .600	E J Do Wass. 2300 3312 442 439 436 672	La Mass. 2.270 2.270 2.410 2.800 2.880 3.170	Br Mas. 602 691 852 956 1.088 1.220	TYPE P D- Min. .327 .684 .558 .683 .808 .509	Men. 1.450 1.450 1.450 1.450 1.450

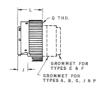
#### RIGHT ANGLE PLUGS

KPT08/KSP08 KPTM08/KSPM08 KPSE08/KSSE08

#### PLUG ASSEMBLY









SOLDER KPT08/KSP08

CRIMP KPTM08/KSPM08 KPSE08/KSSE08

		KPT/KS	P/KPTM/KSPM/KPSE/K		KPT/KS/
Shell Size*	Mas.	±.005	Mar	Q Thread Class 2A	Mar.
AB	.730	.358	.844	7/16-28UNEF	.641
10	.850	.353	.844	9/16-24UNEF	.641
12	1.010	.358	.844	11/16-24UNEF	.641
14	1.130	.358	.844	13/16-20UNEF	.641
16	1.260	258	.844	15/16-20UN(F	.641
18	1.380	358	.844	1- 1/16-18UMDF	.641
20	1.510	420	9379	1- 3/16-18UMDF	.641
22	1.630	.420	909	1: 5/16-18UNEF	584
24	1.760	ALTO .	.909	1- 7/16-18UNEF	-5/84

#### TERMINATION ASSEMBLIES







TYPE A and E

TYPE B AND F

TYPE P

	T	YPE A and	E		T	TPE B and			TYPE P	
Shell Size*	Black Mar.	LAE Max.	Dat Max.	V Thread Cless 2A	But Max.	Dur - Max.	Lar Max.	Ar Max	Max.	Cir Min.
48	.612	1.421	A22	1/2-29UNDF	.612	1.238	1.421	1.000	1.320	.252
10	.742	1.494	.853	5/8-24UNEF	.742	1.269	1.484	1.030	1.320	.252 .252 .283
12	.835	1.546	.916	3/4-20UMEF	.835	1.395	1.546	1.030	1.507	.252
14	.976	1.577	.978	7./B-2:0UMEF	.976	1.519	1.577	1.030	1.507	.283
16	1.090	1.609	1.041	1 -20UMEF	1.090	1.582	1.609	1.280	1.507	.355
18	1.215	1.734	1.103	1-3/16-18UNDF	1.235	1.644	1.734	1.280	1.695	.355 .530
20	1.367	1.879	1.166	1-3/16-18UNEF	1.367	1.707	1.879	1.530	1.752	.542 .542 .610
22	1.452	2.035	1.245	1-7/16-18UNEF	1.452	1.884	2,035	1.530	1.752	.542
24 ee pages	1.616	2.035	1.322	1-7/16-18UMEF	1.616	1.963	2.035	1.780	2.027	.610

## **KPTH Series**

# BOX MOUNTING RECEPTACLES KPT02H







SOLDER KPT02H

Shell Size*	+.001 —.005	B Dia.	F Max.	ĸ	L	+.001 —.005	R	S	T Dia.	٧
8	.473	1.062	.344	.438	.546	.562	.594	.812	.120	.06
10	.590	1.250	.344	.438	.546	.672	.719	.938	.120	.06
12	.750	1.375	.344	.438	.546	.781	.812	1.031	.120	.06
14	.875	1.500	.344	.438	.546	.906	.906	1.125	.120	.06
16	1.000	1.625	.344	.438	.546	1.031	.969	1.219	.120	.06
18	1.125	1.750	.344	.438	.546	1.156	1.062	1.312	.120	.06
20	1.250	1.875	.344	.468	.608	1.250	1.156	1.438	.120	.09
22	1.375	2.000	.344	.468	.608	1.375	1.250	1.562	.120	.09
24	1.500	2.250	.320	.500	.673	1.500	1.375	1.687	.147	.09

# SOLDER MOUNTING RECEPTACLES

KPTIH/MS3113H







SOLDER KPTIH/MS3113H

Shell Size®	+.001005	F Max.	L	+.001005	Р	S Dia.	V
8	.473	.370	.546	.562	.031	.631	.421
10	.590	.370	.546	.672	.031	.756	.421
12	.750	.370	.546	.781	.031	.850	.421
14	.875	.370	.546	.906	.031	.975	.421
16	1.000	.370	.546	1.031	.031	1.100	.421
18	1.125	.370	.546	1.156	.031	1.224	.421
20	1.250	.370	.608	1.250	.031	1.318	.485
22	1.375	.370	.640	1.375	.031	1.444	.485
24	1.500	.340	.673	1.500	.031	1.569	.518

## **KPTH Series**

# JAM NUT RECEPTACLES

KPT07H/MS3114H





SOLDER KPT07H/MS3114H



Shell Size*	±.003	±.005	G Max.	+.001016	± 015	Min. P	Max.	S Max.	٧
	.471	.525	1.078	.094	.711	.062	.12%	.954	9/16-24UMEF-2A
10	.588	.450	1.203	.094	.711	.062	.125	1.078	11/16-24UMEF-2A
12	.748	.813	1.391	.054	.711	.062	.125	1.266	7/8-20UNEF-2A
14	.873	.937	1.516	.094	.711	.062	125	1.391	1-20UMEF-2A
16	.938	1.061	1.641	.094	.711	.062	.125	1.516	1-1/8-18UMEF-2A
18	1.123	1.186	1.766	.0194	.711	.062	.125	1.641	1-1/4-18UNEF-2A
210	1.248	1.311	1.954	.125	.800	.062	250	1.828	1-3/8-18UNEF-2A
22	1.373	1.436	2.078	125	.839	.062	250	1.954	1-1/2-18UNEF-2A
24	1.498	1.561	2.200	.125	927	.062	.250	2.078	1-5/3-18UNIF-2A

ITT CANNON ELECTRIC 19

## **Mounting Data**

#### **PANEL CUTOUTS**

#### FLANGE MOUNTING RECEPTACLE

Shell	KPT/KPT	M/KPSE	KSP/KSP	M/KSSE	KPT02H/I	KPT1H
Size	A		A	100 8 100	A	E.
48	.649	.594	.543	.724	.545	.594
10	.573	.719	.680	.812	.675	.714
12	.639	.812	.859	.938	784	.81.
14	.823	.906	.984	1.031	.909	.500
16	.949	.569	1.108	1.125	1.034	.56
18	1.073	1.062	1.233	1.203	1.159	1.06
20	1.199	1.156	1.358	1.297	1.253	1.150
22	1.373	1.250	1.481	1.375	1.378	1.250
24	1.449	1.375	1.610	1.500	1.503	1.371

- Not evaluable in KPSE/KSSE connectors. Applicable for back mounting. Not used in KPTIM connectors.

Shell	KPT/KPT	M/KPSE	KSP/KSI	PM/KSSE	KPT	02H
Size	ct: 005	SCREW	生 005	SCREW	± 005	SCREW
418	.125	#4	.155	256	.125	224
10	.125	#4	.155	276	.125	22.4
12	.125	#4	.155	276	.125	#4
14	.125	22.4	.155	276	.125	274
16	.125	224	155	276	.125	277.4
18	.125	224	.155	#16	.125	#14
20	.125	#4	.155	2016	.325	:#14
22	.125	27.4	.155	27.6	.125	##4



#### JAM NUT RECEPTACLE

Shell	KPT/KSP/I	(PTM/KSPM /KSSE	кртолн		
Size	A		A	8.	
48	.578	.542	.567	.531	
10	703	550	.692	.454	
12	890	.830	.880	.819	
14	1.015	.955	1.005	.94)	
16	1.140	1.084	1.130	1.067	
18	1.265	1.208	1.255	1.192	
20	1:390	1.333	1.380	1.317	
22	1.515	1.459	1.505	1.442	
24	1.640	1.584	1.630	1.567	

- Net available in KPSE/KSSE connectors.
   Selectories belongers for KPTG7W is +.010/-.000.

## **Components and Accessories**



Connector Series	TOOL
(PTM/KSPM (PSE/KSSE	MS3191-3* or CCT-2016-20

#### INSERTION/EXTRACTION TOOLS





KPSE/KSSE Extraction



#### KPTM/KSPM

Contact Size	Insertion	Extraction
20 without insulation support	CIT-20-18	CET-20-4
20 with insulation support	CIT-20-5A	CET-20-4
16	CIT-16-1	CET-16-3A

#### KPSE/KSSE

Contact	Insertion	Extrac	tion
Size	MS	MS	ITT Cannor
20	MS24256A20	MS24256R20	CET-20-9A
16	MS24256A16	MS24256R16	CET-16-11/

#### CONTACTS



Size/Type	KPTM/KPSE MS	KSPM/KSSE ITT CANNON
20 socket	MS3193A20A	031-9074-002
20 pin	MS3192A20A	030-9036-000
16 socket	MS3193-16A	031-9095-003
16 pin	MS3192-16A	031-9032-003
12 socket		
12 pin		

#### WIRE HOLE FILLERS/ GROMMET SEALING PLUGS

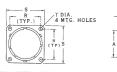


Contact Size	Color Code	KPTM/KSPM KPSE/KSSE
22	White	
20	Red	MS3187A20
16	Blue	MS3187-16
12	Yellow	MS3187-12

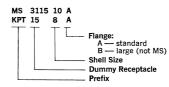
ITT CANNON ELECTRIC 21

## **Components and Accessories**

#### **DUMMY RECEPTACLES**

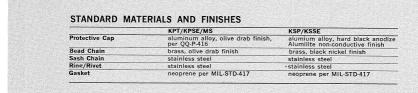


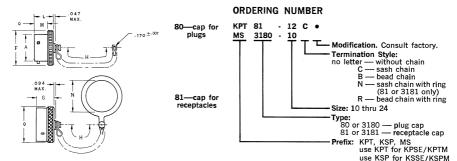
#### ORDERING NUMBER



		T)	PE A and	В	TYPE	A - Std. F	ange	TYPE I	3 — Large F	lange
Shell TYPE A	I Size TYPE B	<b>A</b> ±.003	<b>K</b> ±.016	+.015 016	R (TP)	S Max.	T Dia.	R (TP)	S Max.	T Dia
°- 8A	- 8B	.471	.062	.478	.594	.828	.120	.734	1.063	.150
*-10A	-10B	.588	.062	.478	.719	.954	.120	.812	1.141	.15
*-12A	-12B	.748	.062	.478	.812	1.047	.120	.938	1.266	.15
*-14A	-14B	.873	.062	.478	.906	1.141	.120	1.031	1.360	.15
*-16A	-16B	.998	.062	.478	.969	1.234	.120	1.125	1,454	.15
°-18A	-18B	1.123	.062	.478	1.062	1.328	.120	1.203	1.532	.15
*-20A	-20B	1.248	.094	.572	1.156	1.453	.120	1.297	1.688	.15
°-22A	-22B	1.373	.094	.572	1.250	1.578	.120	1.375	1.766	.15
°-24A	-24B	1,498	.094	.605	1.375	1.703	.147	1.500	1.891	.15

#### PROTECTIVE CAPS

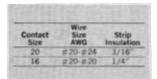




Shell Size¢	±.003	F Max.	G Max.	<b>H</b> ±.250	L Max.	+.015 016	N Min.	Q Max.
°- 8°°	.471	.719	.562	3.000	.562	.384	.578	.719
°-10°°	.588	.844	.562	3.000	.562	.384	.703	.812
°-12°*	.748	1.000	.562	3.500	.562	.384	.891	1.000
°-14°°	.873	1.125	.562	3.500	.562	.384	1.016	1.125
°-16°°	.998	1.250	.562	3.500	.562	.384	1.141	1,250
°-18°*	1.123	1.375	.562	3.500	.562	.384	1.266	1.375
°-20°°	1.248	1.500	.562	4.000	.625	.446	1.391	1.500
°-22**	1.373	1.625	.562	4.000	.625	.446	1.516	1.625
°-24°°	1.498	1.750	.602	4.000	.658	.479	1.641	1.750

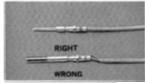
Add prefix: RPI, KSP, or MS and add type:
 80 for plug cap, 81 for receptacle cap; 3180 for MS plug cap, 3181 for MS receptacle cap.
 \*\* Add termination style; see part number explanation above.

## **Assembly Instructions**



CRIMPING CONTACTS

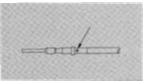
 Strip wires according to the table above taking care not to cut or nick strands.



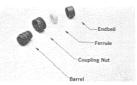
2. Insert stripped wire into contact crimp pot. Wire must be visible thru inspection hole.



3. Using correct crimp tool and locator; cycle the tool once 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.

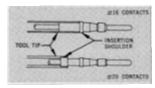


4. Release crimped contact and wire from tool. Be certain the wire is visible thru inspection hole in contact.

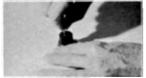


CONTACT INSERTION

5. Remove hardware from plug and receptacle. Slide hardware over wire bundle in proper order for re-



6. Use the proper contact insertion tool, and slide the tool over the terminal end of the contact. The size 15 the tool and the tool tip butts against the tool and the tool tip butts against the size 20 contact butts against an internal shoulder in the tool tip.



7. Beginning from center cavity and working outwards, insert wired contacts into rear of connector by more than 1½ of content of connector securely, from the growment, Holding the connector securely, position tool behind contact. Push tool straight into contact cavity until contact anass into position. A light pull on wire will assure that contact is locked securely. Repeat for remaining contacts.



 Use wire hole fillers or grommet sealing plugs to fill any empty cavities and assemble hardware to rear of plug or receptacle.



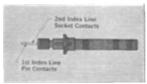
COMPLETION

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



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

KPTM: Make sure reversible tool tip is set for pin or socket contacts. Place tool tip over contact from front of insulator and, with slow and even pressure, push contact out of back of insulator.



KPSE: Use the proper extraction tool. 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 presure against tool body; push plunger forward with thumb and index finger, and push the contact out through the clip, Carefully remove extraction tool from connector. Pull the wire by hand to complete the removal of the contact.

#### INTRODUCTION

This catalog describes CANNON® connectors using MIL-C-26482 type hardware with three-point bayonet coupling and five-key polarization. These miniature circular connectors are grouped into six 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 their fulfillment of requirements ranging from general purpose to space environmental.

In addition to the six basic series, connectors for special applications are also available. They include RFI filtering versions (with low pass integral filter pin contacts), and twiston pull-off couplers for MIL-C-26482 plugs.

All MIL-C-26482 type connectors are intermateable and termination hardware is physically interchangeable with many series shown, making design changes in present equipment easier and less costly.

## **Miniature Circular Connectors**











KPS	E/KS	PM (Crin SE (High	np) Series Perform	s ance, Crim	 o) Series	
Mount	ing Da	ta	<b></b> .			2

# **Quick Selector Chart**

SERIES	DESCRIPTION	PAGE
KPT/KSP	General Purpose, Solder Contact Connector  KPT — General purpose connector with solder pot contacts, resilient insulator, and conductive olive drab over chromate shell finish.  KSP — Same as KPT, but with hard anodic, non-conductive finish. Receptacles have a large flange with #6 mtg. holes for rear panel mounting.	4
KPTM/KSPM	General Purpose, Crimp Contact Connector  KPTM — General purpose connector with crimp snap-in contacts in DUAL-SHORE® insulator. Features closed-entry socket contacts and interfacial sealing. Shell finish is conductive olive drab over chromate.  KSPM — Same as KPTM, but with hard anodic, non-conductive finish. Receptacles have a large flange with #6 mtg. holes for rear panel mounting.	5
KPSE/KSSE	High Performance, Crimp Contact Connector  KPSE — Environment-resistant, high performance connector with front-release, crimp snap-in contacts in an integrally molded insulator. Shell finish is conductive olive drab over chromate.  KSSE — Same as KPSE, but with hard anodic, non-conductive finish. Receptacles have a large flange with #6 mtg. holes for rear panel mounting.	6
КРТН	Hermetically Sealed, Solder Contact Connectors  KPTH — Hermetically sealed KPT receptacles with pin contacts in lead-free compression glass web. Leak rate not in excess of .001 micron cu. ft./hr. Contacts and shells are steel with electrodeposited tin over cadmium finish.	7

# **KPT/KSP Series**



## KPT/KSP **General Purpose, Solder Contact Connectors**

#### **KPT CONNECTORS**

- general purpose
- closed-entry socket contacts
- solder termination

#### KSP CONNECTORS

- hard, black anodize Alumilite, non-conductive finish
- large flange with #6 mounting holes (receptacles)

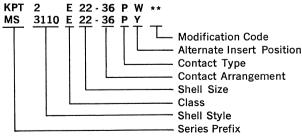
KPT general purpose miniature circular connectors are

widely used in commercial, industrial and deep-space applications. Utilizing solder terminated contacts, KPT connectors feature closed-entry sockets for positive mating.

KSP connectors are identical to KPT connectors except for a hard anodic, non-conductive finish. Receptacles have a larger flange with #6 mounting holes for rear panel mounting.

KPT and KSP connectors mate with all 26482 connectors.

#### ORDERING NUMBER INFORMATION



SERIES PREFIX

KPT, KSP — ITT Cannon prefix
MS — complies with MIL-C-26482

SHELL STYLE

ITT Cannon number:
00 — wall mounting receptacle
01 — cable connecting receptacle
02 — box mounting receptacle (Class E only)
06 — straight plug
07 — jam nut receptacle (available in hermetic version also)
08 — 90° angle plug
B — thru-bulkhead receptacle (Class E only)

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

LASS
A — general duty
B — general duty with strain relief (may be used for potting when strain relief is desired)
E — grommet seal except on 02 and 3112 (MS specification)
F — grommet seal with strain relief (MS specification)
G — gland seal for jacketed cable
J — 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 pages 10 and 11.

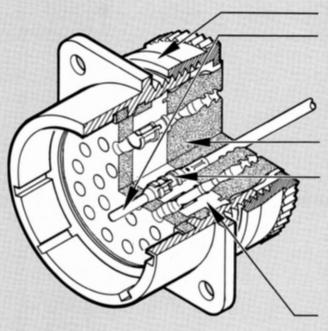
CONTACT TYPE P — pin; S — socket

ALTERNATE INSERT POSITION
W, X, Y and Z. (Omit for normal.) See page 11.

MODIFICATION CODE

Consult factory. Omit first digit (0) of shell style indication when using modification code. See page 8 for modification codes.

# **KPSE/KSSE Series**



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

CRIMP, SNAP-IN CONTACTS are designed to MIL-C-23216 and can. ped with the standard MS3191 crimp tool.

CLOSED-ENTRY SOCKET CONTACTS eliminate damage from abuse by test probes and help to correct any misaligned pins

CONTACT INSERTION is accomplished from the rear of the connector. When the contact is fully inserted, the clip times 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 connector.

UNIQUE INTEGRALLY-MOLDED INSULATOR eliminates separate bonding operations to form a single voidless part with no moisture traps or interface voids.

CONTACT RETAINING CLIP is completely encased in a tough plastic afer 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 multiple ripple design, exceed-ing 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.

## KPSE/KSSE **High Performance, Crimp Contact Connectors**

#### **KPSE 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 dielectric
- positive insert-to-shell mechanical retention

#### KSSE CONNECTORS

- · hard, black anodize Alumilite non-conductive finish
- large flange with #6 mounting holes (receptacles)

KPSE environment-resistant miniature circular connectors are designed for the exacting requirements of space and missile applications. The KPSE features a unique unitized

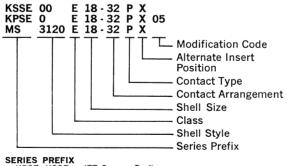
insulator, integrally molded into a single voidless part. This insulator is mechanically retained in the shell by a positive, hard plastic-to-metal lock retention. Complete moisture sealing is achieved by four seals: shell, peripheral, interfacial and wire seals.

Crimp snap-in contacts are retained in clips that are completely encased in a tough hard dielectric wafer, thus protecting the clip tines from damage. Closed-entry socket contacts facilitate positive mating.

KSSE connectors are identical to KPSE connectors except for a hard, black anodize Alumilite non-conductive finish. Receptacles have a larger flange with #6 mounting holes for rear panel mounting.

KPSE and KSSE connectors mate with all 26482 connectors.

#### ORDERING NUMBER INFORMATION



SERIES PREFIX

KPSE, KSSE, — ITT Cannon Prefix

MS — complies with MIL-C-26482

SHELL STYLE
ITT Cannon Number:
00 — wall mounting receptacle
01 — cable connecting receptacle
02 — box mounting receptacle
08 — 90° angle plug

MS Designation:
3120 — wall mounting receptacle
3121 — cable connecting plug
3122 — box mounting receptacle

3124 — jam nut receptacle 3126 — straight plug

CLASS

.— general duty
.— general duty with strain relief
.— grommet seal (MS specification)
.— grommet seal with strain relief (MS specification)
.— gland seal for jacketed cable
.— gland seal with strain relief for jacketed cable

J — gland sear with strain.
P — potted (MS specification)

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

CONTACT ARRANGEMENT See pages 10 and 11.

CONTACT TYPE
P — pin
S — socket

ALTERNATE INSERT POSITION
W, X, Y, and Z. (Omit for normal.) See page 11.

MODIFICATION CODE

Consult factory. Omit first digit (0) of shell style indication when using modification code. See page 8 for modification codes.

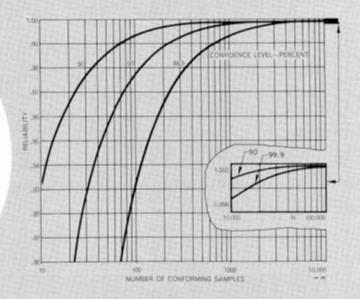
# **KPTH Series**





- surpass MIL-C-26482 requirements
- pin contacts in a compression glass web
- solder pot or eyelet termination
- lightweight aluminum versions available
- mates with all 26482 connectors except CK





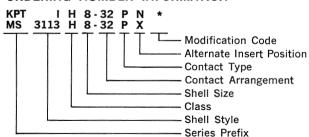
## **KPTH** Hermetically Sealed, Solder Contact Connectors

Hermetically sealed KPT receptacles fulfill the high reliability requirements of space age applications and environments. Far surpassing the requirements of MIL-C-26482, these receptacles have proven statistically reliable in leakage tests 100 times as severe as required by MIL-C-26482 with a reliability of .9995 at a confidence level of 95% with these results:

- Leak rate not in excess of .001 micron cu. ft./hr.
- 100 psi differential causes no detectable leakage in excess of .001 cu. ft./hr.
- 100 g shock with no loss of hermeticity
- Thermal shock from -70° to +200°C without affecting leakage rate

These receptacles are available with pin contacts only in three shell styles: a box mounting receptacle, KPT02H; a solder mounting receptacle, KPTIH; and a jam nut receptacle, KPT07H. Contact arrangements are tooled in a full lead-free compression glass web.

#### ORDERING NUMBER INFORMATION



SERIES PREFIX

KPT — ITT Cannon Prefix
MS — complies with MIL-C-26482

SHELL STYLE

ITT Cannon number:
02 — box mounting receptacle
I — solder mounting receptacle
07 — jam nut receptacle

MS Designation:

3113 — solder mounting receptacle 3114 — jam nut receptacle

CLASS
H — hermetic seal (MS specification applies to KPTIH and KPT07H only)

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

CONTACT ARRANGEMENT See pages 10 and 11.

CONTACT TYPE

ALTERNATE INSERT POSITION N (normal), W, X, Y, and Z

MODIFICATION CODE

Consult factory. See page 8 for modification codes.

# KPT/KPTM/KPSE/KPTH Series

## **MODIFICATION CODES**

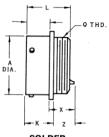
Preferred Modification Code	Description	Intended Usage
A106	Clean chromate coating over cadmium per QQ-P-416, type II, Class 3	Commercial, decorative hardware finish
A105	Gold over copper per FS-4456, Class A, and per MIL-G-45204, type 2 Class 2 over .00005 min. copper per MIL-C-14550	
FO	Connectors less contacts (contacts purchased separately)	Applicable to all crimp removable connectors (KPTM, KPSE, KSPM, KSSE

## STANDARD DATA

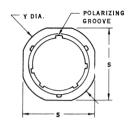
tandard Materials and Finishes		KPT/KSP				M/KSP		
SHELL	KPT/KPTM — alum KSP/KSPM — alum	ninum alloy, conduct ninum alloy, black n	ive olive drab c on-conductive A	hromate over cadmiu lumilite finish	ım finis	h per QQ-P	-416	
INSULATOR	KPT/KSP — 8	O shore gray polych	loroprene		ACCOUNT OF STREET	n polychlor	A CONTRACTOR OF THE PARTY OF TH	
GROMMET AND SEAL		polychloroprene				n polychlor	opreen	
CONTACTS	Co	pper alloy, gold ove	r silver plate p	er MIL-G-45204 type	e II, CI	ass I		
lechanical Features								
SHELL STYLES	00 — wall mountin	g receptacle		07 — jam nut re 08 — 90° angle	ceptacle	1		
	01 — cable connec 02 — box mounting 06 — straight plug	ting plug g receptacle		B — thru-bulkhe	ad rece	ptacle (KP)	only)	
SHELL SIZES	ou diiaigii piag		8 th	iru 24			and the second	
POLARIZATION/COUPLING	STATE OF THE STATE OF		five keyway / th	ree point bayonet				
SERVICE CLASSES	A — general duty B — general duty E — grommet seal F — grommet seal			G — gland nut fo J — gland nut w P — potted	or jacke ith stra	ted cable in relief for	jacketed ca	ible
lectrical Data	3.477			100000000000000000000000000000000000000				
NUMBER OF CONTACTS		2 thru 61				thru 61		
WIRE SIZE, AWG		16 thru 24			**************************************	thru 24		
CONTACT TERMINATION		solder			crin	np snap-in		
CONTACT RATING	SIZE			AMPS		TEST	CURRENT	
	20			7.5			7.5	
	16			2.0	1		13.0	
SERVICE RATING	TEST VOLT.	SE	RVICE	AC (rms)			DC	
	Sea Level		1	1500			2100	
	Sea Level		2	2300			3200	
	70,000 ft.		1	375			535	
	70,000 11.	14,010	2	550			770	
COAXIAL CONTACTS		<u> </u>		RG-	55/U, F G-195/U	RG-59/U, R J, and RG-2	G-62/U, 223/U	
tandard Materials and Finishes		KPSE/K	SSE				PTH	
SHELL	finish per	alloy, conductive of QQ-P-416 alloy, black non-du				el, electrod Imium	leposited tir	over
INSULATOR	60 shore green pol			300000000000000000000000000000000000000	CO	mpression g	lass	
GROMMET AND SEAL	60 shore green pol	ychloroprene					0.034	
CONTACTS	copper alloy, gold	over silver plate				eel, electro	deposited ti	n over
Mechanical Features								
SHELL STYLES	00 wall mounting		06 — stra	night plug nut receptacle	1	— solder	mounting re	eceptac
	01 — cable connec 02 — box mountin	g receptacle	08 — 90°	nut receptacle angle plug	02 07		mounting rece unting rece t receptacle	ptacle
SHELL SIZES		10 thru	Car Scott Calabase Services Continue			8 t	hru 24	
POLARIZATION/COUPLING		five kevway / three						
SERVICE CLASSES	A — general duty B — general duty E — grommet seal F — grommet seal		J - gland nu	t for jacketed cable it with strain relief ited cable		н—	hermetic	
lectrical Data		4470000		TO SCHOOL T				
NUMBER OF CONTACTS		3 thru				2 t	hru 61	
WIRE SIZE, AWG		16 thru				-	-	
CONTACT TERMINATION		crimp sna	p-in				older	
CONTACT RATING	CONTACT	MILLIVOLT			SIZE	RATED AMPS 7.5	TEST CURRENT 5.0	MV DROI
	20	less than			20	Carrier Co.		75
	16	less than	อป		16	22.0	13.0	/5
SERVICE RATING	MAXIMUM OPERATING VOLTAGE	SERVICE	AC (rms)	DC	TEST VOLT	SERVICE	AC (rms)	DC
	Sea	1	600	850	Sea	1	1500	2100
	Level	2	1000	1275	Level	2	2300	3200

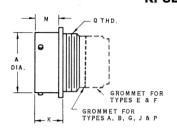
## CABLE CONNECTING PLUGS

KPT01/KSP01/MS3111 KPTM01/KSPM01 KPSE01/KSSE01/MS3121









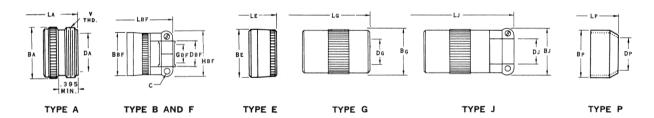
**PLUG ASSEMBLY** 



CRIMP KPTM01/KSPM01 KPSE01/KSSE01/MS3121

				KPT/KS	P/KPTM/KSPM/KPS	SE/KSSE		KPT	KSP
Shell Size*	<b>A</b> ±.003	<b>K</b> ±.010	L Max.	<b>M</b> ±.005	Q Thread Class 2A	S Max.	Y Max.	Z Max.	Max.
<b>▲8</b>	.471	.530	.848	.425	7/16-28UNEF	.828	.958	.483	.574
10	.588	.530	.848	.425	9/16-24UNEF	.954	1.082	.483	.574
12	.748	.530	.848	.425	11/16-24UNEF	1.047	1.176	.483	.574
14	.873	.530	.848	.425	13/16-20UNEF	1.141	1.270	.483	.574
16	.998	.530	.848	.425	15/16-20UNEF	1.234	1.364	.483	.574
18	1.123	.530	.848	.425	1- 1/16-18UNEF	1.328	1.458	.483	.574
20	1.248	.650	1.055	.540	1- 3/16-18UNEF	1.453	1.582	.427	:521
22	1.373	.650	1.055	.540	1- 5/16-18UNEF	1.578	1.708	.427	.521
24	1.498	.683	1.055	.573	1- 7/16-18UNEF	1.703	1.832	.393	.488

#### TERMINATION ASSEMBLIES



4.00		TYPE A	66000		257225		TYPE E	and F		
Shell Size*	B <sub>A</sub> Max.	D <sub>A</sub> Min.	LA Max.	V Thread Class 2A	B <sub>BF</sub> Max.	C Thd.	D <sub>BF</sub> Min.	G <sub>BF</sub> Min.	H <sub>BF</sub> Max.	Ler Max.
<b>≜8</b>	.590	.335	1.444	1/2-28UNEF	.552	6-32	.234	.115	.760	1.776
10	.717	.466	1.444	5/8-24UNEF	.677	6-32	.297	.178	.820	1.776
12	.834	.591	1.444	3/4-20UNEF	.802	6-32	.422	.302	.960	1.77
14	.970	.705	1.444	7/8-20UNEF	.927	6-32	.547	.365	1.070	1.776
16	1.088	.830	1.444	1 -20UNEF	1.052	6-32	.609	.490	1.130	1.896
18	1.216	.948	1.444	1-3/16-18UNEF	1.161	8-32	.740	.615	1.390	1.896
20	1.332	1.073	1.728	1-3/16-18UNEF	1.286	8-32	.740	.615	1.390	1.970
22	1.460	1.198	1.728	1-7/16-18UNEF	* 1.411	8-32	.928	.740	1.570	1.970
24	1.585	1.323	1,738	1-7/16-18UNEF	1.536	8-32	.984	.790	1.700	1.970

	TYF	E E		TYP	EG		4.00	TYF	PE J			TYPE P	9-5-20
Shell Size*	B <sub>E</sub> Max.	L <sub>E</sub> Max.	B <sub>G</sub> Max.	D <sub>G</sub> Min.	D <sub>G</sub> Max.	L <sub>G</sub> Max.	BJ Max.	DJ Min.	DJ Max.	Lı Max.	B <sub>P</sub> Max.	D <sub>P</sub> Min.	L <sub>P</sub> Max.
<b>≜8</b>	.557	1.281	.592	.168	.230	1.720	.828	.168	.230	2.270	.602	.327	1.450
10	.677	1.281	.712	.205	.312	1.720	.891	.205	.312	2.270	.691	.444	1.450
12	.802	1.281	.837	.338	.442	1.860	1.016	.338	.442	2.410	.852	.558	1.450
14	.920	1.281	.995	.416	.539	2.050	1.141	.416	.539	2.600	.956	.683	1.450
16	1.045	1.281	1.080	.550	.616	2.270	1.203	.550	.616	2.880	1.088	.808	1.450
18	1.165	1.281	1.200	.600	.672	2.500	1.469	.600	.672	3.170	1.220	.909	1.450
20	1.290	1.360	1.325	.635	.747	2.960	1.469	.635	.747	3.610	1.349	1.034	1.660
22	1.415	1.360	1.450	.670	.846	3.120	1.656	.670	.846	3.760	1.461	1.159	1.660
24	1.540	1.360	1.575	.740	.894	3,250	1.750	.740	.894	3.900	1.593	1.284	1.730

See pages 4,5 and 6 for ordering number information. ▲ Not available in KPSE/KSSE

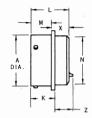
<sup>• (</sup>MMC) located within .005 of (TP).

## **BOX MOUNTING RECEPTACLES**

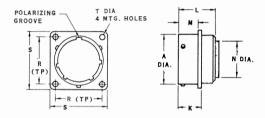
KPT02/KSP02/MS3112 KPT02/KSPM02 KPSE02/KSSE02/MS3122

RECEPTACLE ASSEMBLY





SOLDER KPT02/KSP02/MS3112

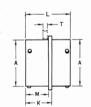


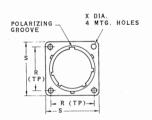
CRIMP KPTM02/KSPM02 KPSE02/KSSE02

		KSP/K /KPSE			KPT/	KPTM/	(PSE		KPT`		KSP/	KSPM/I	KSSE		KSP
Shell Size*	A Dia. ±.003	L Max.	N Dia. Max.	<b>K</b> ±.010	<b>M</b> ±.005	R (TP)	S Max.	<b>T</b> ±.005	Z Max.	<b>K</b> ±.010	<b>M</b> ±.005	R (TP)	S Max.	<b>T</b> ±.005	X Max.
<b>48</b>	.471	.832	.436	.530	.457	.594	.828	.120	.483	.524	.467	.734	1.057	.150	.542
10	.588	.832	.562	.530	.457	.719	.954	.120	.483	.524	.467	.812	1.135	.150	.542
12	.748	.832	.687	.530	.457	.812	1.047	.120	.483	.524	.467	.938	1.260	.150	.542
14	.873	.832	.812	.530	.457	.906	1.141	.120	.483	.524	.467	1.031	1.354	.150	.542
16	.998	.832	.936	.530	.457	.969	1.234	.120	.483	.524	.467	1.125	1.448	.150	.542
18	1.123	.832	1.061	.530	.457	1.062	1.328	.120	.483	.524	.467	1.203	1.526	.150	.542
20	1.248	.895	1.186	.650	.561	1.156	1.453	.120	.427	.650	.561	1.297	1.682	.150	.500
22	1.373	.895	1.311	.650	.561	1.250	1.578	.120	.427	.650	.561	1.375	1.760	.150	.500
24	1.498	.895	1.436	.683	.594	1.375	1.703	.147	.393	.683	.594	1.500	1.885	.150	.467

## THRU-BULKHEAD RECEPTACLES KPTB/KSPB/MS3119







SOLDER KPTB/KSPB/MS3119

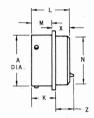
		· ·	PTB/KSPI	3		le de la companya de	KPTB			KSPB	
Shell Size*	A Dia. ±.003	<b>K</b> ±.020	L Max.	<b>M</b> ±.010	T Max.	R (TP)	S Max.	<b>X</b> ±.005	R (TP)	S Max.	±.005
8	.471	.634	1.125	.572	.188	.594	.828	.120	.734	1.057	.150
10	.588	.634	1.125	.572	.188	.719	.954	.120	.812	1.135	.150
12	.748	.634	1.125	.572	.188	.812	1.047	.120	.938	1.260	.150
14	.873	.634	1.125	.572	.188	.906	1.141	.120	1.031	1.354	.150
16	.998	.634	1.125	.572	.188	.969	1.234	.120	1.125	1.448	.150
18	1.123	.634	1.125	.572	.188	1.062	1.328	.120	1.203	1.526	.150
20	1.248	.792	1.255	.698	.312	1.156	1.453	.120	1.297	1.682	.150
22	1.373	.792	1.255	.698	.312	1.250	1.578	.120	1.375	1.760	.150
24	1.498	.792	1.255	.698	.312	1.375	1.703	.147	1.500	1.885	.150

## **BOX MOUNTING RECEPTACLES**

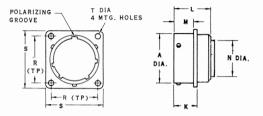
KPT02/KSP02/MS3112 KPT02/KSPM02 KPSE02/KSSE02/MS3122

#### RECEPTACLE ASSEMBLY





SOLDER KPT02/KSP02/MS3112



1.500 1.885

CRIMP KPTM02/KSPM02 KPSE02/KSSE02

.150 .467

(MMC) located within .005 of (TP).

		KSP/K /KPSE			KPT/	KPTM/I	(PSE		KPT`		KSP/	KSPM/I	KSSE		KSP
Shell Size*	A Dia. ±.003	L Max.	N Dia. Max.	<b>K</b> ±.010	<b>M</b> ±.005	R (TP)	S Max.	<b>T</b> ±.005	Z Max.	<b>K</b> ±.010	<b>M</b> ±.005	R (TP)	S Max.	<b>T</b> ±.005	X Max.
<b>48</b>	.471	.832	.436	.530	.457	.594	.828	.120	.483	.524	.467	.734	1.057	.150	.542
10	.588	.832	.562	.530	.457	.719	.954	.120	.483	.524	.467	.812	1.135	.150	.542
12	.748	.832	.687	.530	.457	.812	1.047	.120	.483	.524	.467	.938	1.260	.150	.542
14	.873	.832	.812	.530	.457	.906	1.141	.120	.483	.524	.467	1.031	1.354	.150	.542
16	.998	.832	.936	.530	.457	.969	1.234	.120	.483	.524	.467	1.125	1.448	.150	.542
18	1.123	.832	1.061	.530	.457	1.062	1.328	.120	.483	.524	.467	1.203	1.526	.150	.542
20	1.248	.895	1.186	.650	.561	1.156	1.453	.120	.427	.650	.561	1.297	1.682	.150	.500
22	1.373	.895	1.311	.650	.561	1.250	1.578	.120	.427	.650	.561	1.375	1.760	.150	.500

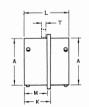
<sup>1.498</sup> .895 1.436 .683 .594 1.375 1.703 \* See pages 4,5 and 6 for ordering number information.

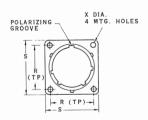
A Not available in KPSE/KSSE

## THRU-BULKHEAD RECEPTACLES









SOLDER KPTB/KSPB/MS3119

.147 .393 .683

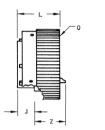
		K	PTB/KSPI	3			KPTB			KSPB	
Shell Size*	A Dia. ±.003	<b>K</b> ±.020	L Max.	<b>M</b> ±.010	T Max.	R (TP)	S Max.	<b>X</b> ±.005	R (TP)	S Max.	±.005
8	.471	.634	1.125	.572	.188	.594	.828	.120	.734	1.057	.150
10	.588	.634	1.125	.572	.188	.719	.954	.120	.812	1.135	.150
12	.748	.634	1.125	.572	.188	.812	1.047	.120	.938	1.260	.150
14	.873	.634	1.125	.572	.188	.906	1.141	.120	1.031	1.354	.150
16	.998	.634	1.125	.572	.188	.969	1.234	.120	1.125	1.448	.150
18	1.123	.634	1.125	.572	.188	1.062	1.328	.120	1.203	1.526	.150
20	1.248	.792	1.255	.698	.312	1.156	1.453	.120	1.297	1.682	.150
22	1.373	.792	1.255	.698	.312	1.250	1.578	.120	1.375	1.760	.150
24	1.498	.792	1.255	.698	.312	1.375	1.703	.147	1.500	1.885	.150

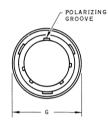
## STRAIGHT PLUGS

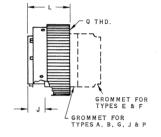
KPT06/KSP06/MS3116 KPTM06/KPSM06 KPSE06/KSSE06/MS3126

#### RECEPTACLE ASSEMBLY









SOLDER KPT06/KSP06/MS3116

CRIMP KPTM06/KSPM06 KPSE06/KSSE06/MS3126

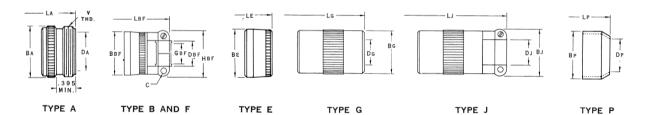
#### **PLUG ASSEMBLY WITHOUT TERMINATION** KPT/KSP/KPTM/KSPM/KPSE/KSSE L Max. KPT/KSP Z Max. Shell Size\* Q Thread Class 2A 7/16-28UNEF **J** +.005 48 .730 .358 .844 .641 10 .850 .358 .844 9/16-24UNFF .641 1.010 .358 844 11/16-24UNEF .641 1.130 .358 .844 13/16-20UNEF .641 16 1.260 358 844 15/16-20UNEF .641 1,380 358 844 1- 1/16-18UNEF .641 1.510 .420 989 1- 3/16-18UNEF .584 1.630 420 989 1- 5/16-18UNEF .584 1.760

.420

#### **TERMINATION ASSEMBLIES**

.584

1- 7/16-18UNEF



.989

		TYPE A					TYPE E	and F		
Shell Size*	B <sub>A</sub> Max.	D <sub>A</sub> Min.	L <sub>A</sub> Max.	V Thread Class 2A	B <sub>BF</sub> Max.	C Thd.	D <sub>BF</sub> Min.	G <sub>BF</sub> Min.	H <sub>BF</sub> Max.	L <sub>BF</sub> Max.
<b>48</b>	.590	.335	1.440	1/2-28UNEF	.552	6-32	.234	.115	.760	1.772
10	.717	.466	1.440	5/8-24UNEF	.677	6-32	.297	.178	.820	1.772
12	.834	.591	1.440	3/4-20UNEF	.802	6-32	.422	.302	.960	1.772
14	.970	.705	1.440	7/8-20UNEF	.927	6-32	.547	.365	1.070	1.772
16	1.088	.830	1.440	1 -20UNEF	1.052	6-32	.609	.490	1.130	1.892
18	1.216	.948	1.440	1-3/16-18UNEF	1.161	8-32	.740	.615	1.390	1.892
20	1.332	1.073	1.662	1-3/16-18UNEF	1.286	8-32	.740	.615	1.390	1.904
22	1.460	1.198	1.662	1-7/16-18UNEF	1.411	8-32	.928	.740	1.570	1.904
24	1.585	1.323	1.672	1-7/16-18UNEF	1.536	8-32	.984	.790	1.700	1.904

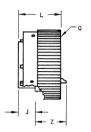
	TYP	EE		TYP	EG		1	TYF	ΈJ			TYPE P	
Shell Size*	Be Max.	L <sub>E</sub> Max.	<b>B</b> ⊜ ±.005	<b>D</b> G Min.	D <sub>G</sub> Max.	L <sub>G</sub> Max.	BJ Max.	DJ Min.	DJ Max.	L) Max.	B <sub>P</sub> Max.	D <sub>P</sub> Min.	L <sub>P</sub> Max.
48	.557	1.281	.592	.168	.230	1.720	.828	.168	.230	2.270	.602	.327	1.450
10	.677	1.281	.712	.205	.312	1.720	.891	.205	.312	2.270	.691	.444	1.450
12	.802	1.281	.851	.338	.442	1.860	1.016	.338	.442	2.410	.852	.558	1.45
14	.920	1.281	.995	.416	.539	2.050	1.141	.416	.539	2.600	.956	.683	1.45
16	1.045	1.281	1.080	.550	.616	2.270	1.203	.550	.616	2.880	1.088	.808	1.45
18	1.165	1.281	1.200	.600	.672	2.500	1.469	.600	.672	3.170	1.220	.909	1.45
20	1.290	1.294	1.325	.635	.747	2.900	1.469	.635	.747	3.510	1.349	1.034	1.60
22	1.415	1.294	1.450	.670	.846	3.055	1.656	.670	.846	3.670	1.461	1.159	1.60
24	1.540	1.294	1.575	.740	.894	3.190	1.750	.740	.894	3.800	1.593	1.284	1.69

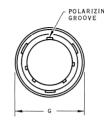
## STRAIGHT PLUGS

KPT06/KSP06/MS3116 KPTM06/KPSM06 KPSE06/KSSE06/MS3126

### RECEPTACLE ASSEMBLY





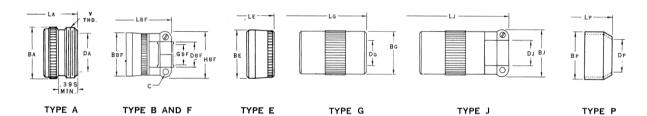


GROMMET FOR TYPES & & F
TYPES A, B, G, J & P

SOLDER KPT06/KSP06/MS3116

CRIMP KPTM06/KSPM06 KPSE06/KSSE06/MS3126

		KPT/KS	P/KPTM/KSPM/KPSE/K	SSE	KPT/KS
Shell Size*	G Max.	<b>.</b> ±.005	L Max.	Q Thread Class 2A	Ż Max.
48	.730	.358	.844	7/16-28UNEF	.641
10	.850	.358	.844	9/16-24UNEF	.641
12	1.010	.358	.844	11/16-24UNEF	.641
14	1.130	.358	.844	13/16-20UNEF	.641
16	1.260	.358	.844	15/16-20UNEF	.641
18	1.380	.358	.844	1- 1/16-18UNEF	.641
20	1.510	.420	.989	1- 3/16-18UNEF	.584
22	1.630	.420	.989	1- 5/16-18UNEF	.584
24	1.760	.420	.989	1- 7/16-18UNEF	.584



		TYPE A					TYPE E	and F		
Shell Size*	B <sub>A</sub> Max.	D <sub>A</sub> Min.	L <sub>A</sub> Max.	V Thread Class 2A	B <sub>BF</sub> Max.	C Thd.	D <sub>BF</sub> Min.	G <sub>BF</sub> Min.	H <sub>BF</sub> Max.	L <sub>BF</sub> Max.
<b>48</b>	.590	.335	1.440	1/2-28UNEF	.552	6-32	.234	.115	.760	1.772
10	.717	.466	1.440	5/8-24UNEF	.677	6-32	.297	.178	.820	1.772
12	.834	.591	1.440	3/4-20UNEF	.802	6-32	.422	.302	.960	1.772
14	.970	.705	1.440	7/8-20UNEF	.927	6-32	.547	.365	1.070	1.772
16	1.088	.830	1.440	1 -20UNEF	1.052	6-32	.609	.490	1.130	1.892
18	1.216	.948	1.440	1-3/16-18UNEF	1.161	8-32	.740	.615	1.390	1.892
20	1.332	1.073	1.662	1-3/16-18UNEF	1.286	8-32	.740	.615	1.390	1.904
22	1.460	1.198	1.662	1-7/16-18UNEF	1.411	8-32	.928	.740	1.570	1.904
24	1.585	1.323	1.672	1-7/16-18UNEF	1.536	8-32	.984	.790	1.700	1.904

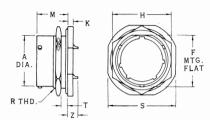
	TYP	E E		TYP	E G		4.5	TYF	E J			TYPE P	
Shell Size*	Be Max.	Le Max.	<b>B</b> ⊝ ±.005	D <sub>G</sub> Min.	D <sub>G</sub> Max.	L <sub>G</sub> Max.	BJ Max.	DJ Min.	DJ Max.	LJ Max.	B <sub>P</sub> Max.	D <sub>P</sub> Min.	L <sub>P</sub> Max.
<b>48</b>	.557	1.281	.592	.168	.230	1.720	.828	.168	.230	2.270	.602	.327	1.45
10	.677	1.281	.712	.205	.312	1.720	.891	.205	.312	2.270	.691	.444	1.45
12	.802	1.281	.851	.338	.442	1.860	1.016	.338	.442	2.410	.852	.558	1.45
14	.920	1.281	.995	.416	.539	2.050	1.141	.416	.539	2.600	.956	.683	1.45
16	1.045	1.281	1.080	.550	.616	2.270	1.203	.550	.616	2.880	1.088	.808	1.45
18	1.165	1.281	1.200	.600	.672	2.500	1.469	.600	.672	3.170	1.220	.909	1.45
20	1.290	1.294	1.325	.635	.747	2.900	1.469	.635	.747	3.510	1.349	1.034	1.60
22	1.415	1.294	1.450	.670	.846	3.055	1.656	.670	.846	3.670	1.461	1.159	1.60
24	1.540	1.294	1.575	.740	.894	3.190	1.750	.740	.894	3.800	1.593	1.284	1.69

# JAM NUT RECEPTACLES

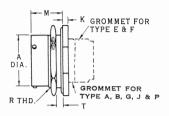
KPT07/KSP07/MS3114 KPTM07/KSPM07 KPSE07/KSSE07/MS3124

### RECEPTACLE ASSEMBLY



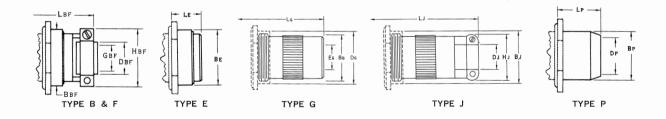






CRIMP KPTM07/KSPM07 KPSE07/KSSE07/MS3124 TYPE A

			KPT/KSI	P/KPTM/KS	PM/KPSE/K	SSE				KPT/KSF
Shell Size*	<b>A</b> ±.003	<b>F</b> ±.005	<b>H</b> ±.005	<b>K</b> ±.010	<b>M</b> ±.005	R Thread Class 2A	<b>S</b> ±.010	T Panel Min.	Thick. Max.	Z Max.
<b>A8</b>	.471	.525	.750	.125	.696	9/16-24UNEF	.938	.062	.125	.312
10	.588	.650	.875	.125	.696	11/16-24UNEF	1.062	.062	.125	.312
12	.748	.813	1.062	.125	.696	7/8 -20UNEF	1.250	.062	.125	.312
14	.873	.937	1.188	.125	.696	1 -20UNEF	1.375	.062	.125	.312
16	.998	1.061	1.312	.125	.696	1- 1/8 -18UNEF	1.500	.062	.125	.312
18	1.123	1.186	1.438	.125	.696	1- 1/4 -18UNEF	1.625	.062	.125	.312
20	1.248	1.311	1.562	.156	.884	1- 3/8 -18UNEF	1.812	.062	.250	.187
22	1.373	1.436	1.688	.156	.884	1- 1/2 -18UNEF	1.938	.062	.250	.187
24	1.498	1.561	1.812	.156	.917	1- 5/8 -18UNEF	2.062	.062	.250	.150



		TYP	E B aı	nd F		TYP	F E			TYPE	G				TYPE	J		1	YPE P	
Shell Size*	B <sub>BF</sub> Max.	D <sub>BF</sub> · Min.	GBF Min.	H <sub>BF</sub> Max	LBF •Max.	B <sub>E</sub> Max.	L <sub>E</sub> Max.	B <sub>G</sub> Max.	D <sub>G</sub> . Max.	Ē <sub>G</sub> Min.	EG Max.	L <sub>G</sub> Max.	BJ Max.	DJ Max.	DJ Min.	HJ Max.	LJ Max.	B <sub>P</sub> Max.	D <sub>P</sub> Min.	L Ma
48	.717	.234	.115	.760	1.766	.717	.638	.592	.717	.168	.230	1.750	.717	.230	.168	.760	2.250	.602	.327	.62
10	.843	.297	.178	.820	1.766	.843	.638	.712	.843	.205	.312	1.750	.843	.312	.205	.820	2.250	.691	.444	.6:
12	.968	.422	.302	.953	1.766	.968	.638	.837	.968	.338	.442	1.890	.968	.442	.338	.960	2.390	.852	.558	.6:
14	1.093	.547	.365	1.070	1.766	1.093	.638	.955	1.093	.416	.539	2.180	1.093	.539	.416	1.070	2.680	.956	.683	.6:
16	1.218	.609	.490	1.130	1.906	1.218	.638	1.080	1.218	.550	.616	2.300	1.218	.616	.550	1.130	2.920	1.088	.808	.6
18	1.343	.740	.615	1.390	1.906	1.343	.638	1.200	1.343	.600	.672	2.770	1.343	.672	.600	1.390	3.390	1.220	.909	.6
20	1.500	.740	.615	1.390	1.980	1.500	.654	1.325	1.500	.635	.747	2.980	1.500	.747	.635	1.390	3.600	1.349	1.034	.7
22	1.625	.928	.740	1.568	1.980	1.625	.654	1.450	1.625	.670	.846	3.130	1.625	.846	.670	1.570	3.750	1.461	1.159	.7
24	1.750	.984	.790	1.700	1.980	1.750	.621	1.575	1.750	.740	.894	3.350	1.750	.894	.740	1.700	3.970	1.593	1.284	.7

# TEST DATA

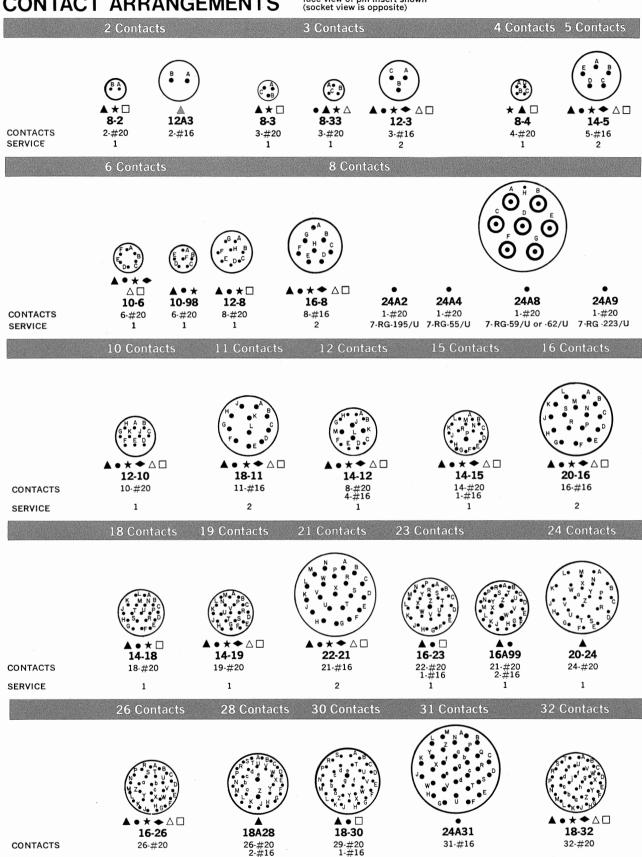
Test Name and MIL-C-26482 Ref. Paragraph	R	(PT/KSP	/KPTM	/KSPM			KPSE/K	SSE		
MAINTENANCE AGING Para. 4.7.5	Engaging and disengaging to	rque (in./l	lbs.) limi	ts were sa	tisfactory	within t	hose spe	cified for	shell siz	es involved.
	Shell Size	8	10	12	14	16	18	20	22	24
	Engaging Torque (Max.)	8	12	16	20	24	28	32	36	44
	Disengaging Torque (Max.)	1	1	2	4	4	5	6	7	7
	Contact insertion forces meas and size 16 contacts, do not o					ss than 3	contacts,	of each o	connector	for size 20
THERMAL SHOCK Para. 4.7.6	There was no evidence of crac temperature change from —5	cking or ot 55°C to +	her dam: -125°C,	age detrim 1 hour pe	ental to r cycle, o	connector divided equ	operation ually betw	after exp veen temp	osure to erature e	5 cycles of xtremes.
INSULATION RESISTANCE (elev. temp) Para. 4.7.3	While applying 500 VDC for 2 adjacent contact pairs, shell, for 1000 hrs.	250 hours and its cl	at 125°( osest co	), the insu ntacts. Ins	lation res ulation re	istance wa esistance w	s greater /as greate	than 50 n er than 25	negohms megohm	between all s at 105°C
DIELECTRIC WITHSTANDING VOLTAGE (sea level) Para. 4.7.4	There was no evidence of bre contacts and between contact manner for Service Rating 2.									
DURABILITY Para 4.7.9	There was no evidence of me as in service.	echanical o	or electri	cal damag	e to conn	ectors afte	r 500 eng	gagements	and dise	ngagements
VIBRATION Para. 4.7.11	With contacts wired in series continuity greater than 10 n range of 10 cps to 2K cps for 15g's max.	nicrosecono	is. Conn	ectors mo	unted ar	ıd mated	as in se	rvice and	vibrated	through a
SHOCK Para. 4.7.12	With contacts wired in series continuity greater than 10 m shock in each of three major a	iicrosecond	tored fo s while	r continuit the conne	y, there ctor was	was no me subjected	chanical to an 1	damage a I milliseco	ind no elo ond, 50g	ectrical dis- mechanical
INSULATION RESISTANCE (after vib. & shock) Para. 4.7.13	With 500VDC applied to mate pair of adjacent contacts and						r than 5	,000 meg	ohms be	tween each
MOISTURE RESISTANCE Para. 4.7.13.2	With 500VDC applied, insulat 100 megohms while mated co each, in humidity chamber adj	nnectors v	were exp	osed to th	e followir	ng high hú	miditv en			
SOLVENT IMMERSION Para. 4.7.14	Engaging and disengaging to after unmated connectors had free air.									
CONTACT RESISTANCE Para. 4.7.2	For size 16 contacts, minimu size 20 contacts, the correspondance with MIL-STD-202	onding volt	tage drop	s less tha p was less	n 50MV than 5	with a DC OMV with	current a DC cu	for 13 an rrent of 7	nps flowi '.5 amps	ng, and for flowing, in
INSERT RETENTION Para. 4.7.15	Inserts within wired connecto psi on each insulator face for				ells) did	not disloc	lge when	subjected	to press	sures of 75
HIGH ALTITUDE IMMERSION (per MIL-C-26500B)	Wires and mated connectors Pressure reduced to 6,000 ft. for 30 minutes prior to mea still immersed in salt solutio found to be less than 100 me	altitude ( surement n. In no o	5.41 cm of insul	Hg.) and ation resis	maintain tance wh	ed ile	Not	applicab	le to KPS	E.
CONTACT RETENTION (5 min. test) Para. 4.7.16	In no case did axial contact cation of 15 lbs. and 25 lbs. measured after a minimum o	axial load	at engag	ing end of	size 20	) and 16	contacts	respective	ely. Displ	acement is
SALT SPRAY MIL-STD-202B, Method 101A, Condition B	No damage or unacceptable i	ncrease in	contact	resistance	after ma	ated sampl	e subject	ed to 48	hours of	salt spray.
AIR LEAKAGE	30 psi differential at —67°F	(KPT only)	less	than 1 atı	nosphere	cubic inch	per hou	T		
TEMPERATURE RANGE			-	55°C to -	+125°C					
CONTACT INSERTION AND EXTRACTION	Insertion force does not exceed	d 20 lbs. E	xtraction	force does	not exce	ed 20 lbs.				

ITT CANNON ELECTRIC

### W/ NF OL/ NI

### CONTACT ARRANGEMENTS

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

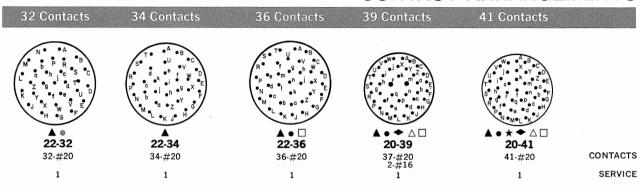


SERVICE

1

# KPT/KPTM/KPSE/KPTH Series

### CONTACT ARRANGEMENTS



22A41

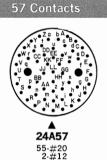
27-#20 14-#16

1 (#20's); 2 (#16's)

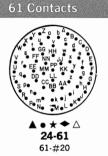
41 Contacts



55 Contacts



1



1

CONTACTS

SERVICE

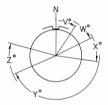
#### LEGEND

- KPT/KSP
- KPTM/KSPM KPTH (hermetic)

- Authorized per MIL-C-26482 (NAVY)
  Authorized per SCL-6019 (SIGNAL CORPS)

NOTE: Red symbols indicate partial tooling. Consult factory for availability.

INSERT POSITION



SHELL	NO. OF CON- TACTS	ARR. NO.	v	DEGREES W	OF X	ROTATION Y	z
	2	8-2		58	122		_
8 -	3	8-3		60	210		
0	3	8-33		90	_		
	4	8-4		45			
10	6	10-6	_	90	_	_	_
10	6	10-98		90	180	240	270
	2	12A3			_		_
12	3	12-3				180	
12	8	12-8		90	112	203	292
	10	12-10	_	60	155	270	295
	5	14-5		40	92	184	273
	12	14-12		43	90	_	_
14	15	14-15	_	17	110	155	234
	18	14-18	_	15	90	180	270
	19	14-19		30	165	315	
	8	16-8		54	152	180	331
16	23	16-23		158	270	_	
. 10	23	16A99		66	156	223	340
	26	16-26		60	_	275	338

### ALTERNATE INSERT POSITIONS

The diagram at the left indicates alternate insert positions. The six positions (V, W, X, Y, Z and Normal) differ in degree of rotation for various sizes and arrangements. For the exact degree of rotation, and for the list of contact arrangements and alternate positions available,

SHELL SIZE	NO. OF CON- TACTS	ARR. NO.	٧	DEGREES W	OF F	ROTATION	z
	11	18-11	_	62	119	241	340
18	28	18A28			_	_	_
18	30	18-30		180	193	285	350
	32	18-32		85	138	222	265
	16	20-16		238	318	333	347
20	24	20-24		70	145	215	290
20 -	39	20-39		63	144	252	333
	41-	20-41	_	45	126	225	
	21	22-21	_	16	135	175	349
	32	22-32		72	145	215	288
22	34	22-34	-	62	142	218	298
22	36	22-36		72	144	216	288
-	41	22-41	_	39	73	149	196
-	55	22-55	_	30	142	226	314
	8	24A2	-	_	-		-
-	8	24A4					
-	8	24A8		****			-
24	8	24A9			-		
24	31	24A31	_	90	225	_	_
-	57	24A57	_	90	180	270	324
	61	24-61		90	180	270	324

Red numbers indicate positions are not to MII -C-26482

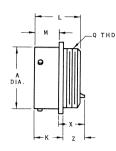
# KPT/KPTM/KPSE Series

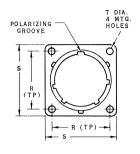
### WALL MOUNTING RECEPTACLES

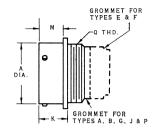
KPT00/KSP00/MS3110 KPTM00/KSPM00 **KPSE00/KSSE00/MS3120** 

#### RECEPTACLE ASSEMBLY







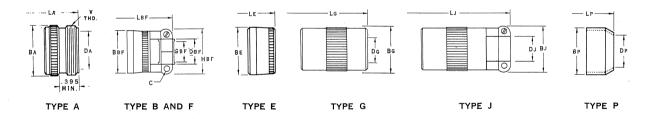


SOLDER KPT00/KSP00/MS3110

CRIMP
KPTM00/KSPM00
KPSE00/KSSE00/MS3120

	KPT/KPT	M/KSP/I	KSPM/KPSE/KSSE		KI	PT/KP1	M/KPS	Ë	KPT		K:	SP/KSF	M/KSS	SE .	KSF
Shell Size*	±.003	L Max.	Q Thread Class 2A	<b>K</b> ±.010	<b>M</b> ±.005	R (TP)	S Max.	<b>T</b> ±.005	Z Max.	<b>K</b> ±.010	<b>M</b> ±.005	R (TP)	S Max.	<b>T</b> ±.005	Max
48	.471	.848	7/16-28UNEF	.530	.457	.594	.828	.120	.483	.524	.467	.734	1.057	.150	.54
10	.588	.848	9/16-24UNEF	.530	.457	.719	.954	.120	.483	.524	.467	.812	1.135	.150	.54
12	.748	.848	11/16-24UNEF	.530	.457	.812	1.047	.120	.483	.524	.467	.938	1.260	.150	.54
14	.873	.848	13/16-20UNEF	.530	.457	.906	1.141	.120	.483	.524	.467	1.031	1.354	.150	.54
16	.998	.848	15/16-20UNEF	.530	.457	.969	1.234	.120	.483	.524	.467	1.125	1.448	.150	.54
18	1.123	.848	1- 1/16-18UNEF	.530	.457	1.062	1.328	.120	.483	.524	.467	1.203	1.526	.150	.54
20	1.248	1.055	1- 3/16-18UNEF	.650	.561	1.156	1.453	.120	.427	.650	.561	1.297	1.682	.150	.50
22	1.373	1.055	1- 5/16-18UNEF	.650	.561	1.250	1.578	.120	.427	.650	.561	1.375	1.760	.150	.50
24	1.498	1.055	1- 7/16-18UNEF	.683	.594	1.375	1.703	.147	.393	.683	.594	1.500	1.885	.150	.46

### **TERMINATION ASSEMBLIES**



### WITH TERMINATION ASSEMBLIES

		TYPE A			200		TYPE E	and F		
Shell Size*	B <sub>A</sub> Max.	D∧ Min.	L <sub>A</sub> Max.	V Thread Class 2A	B <sub>BF</sub> Max.	C Thd.	D <sub>BF</sub> Min.	G <sub>BF</sub> Min.	H <sub>BF</sub> Max.	Lar Max.
<b>≜8</b>	.590	.335	1.444	1/2-28UNEF	.552	6-32	.234	.115	.760	1.776
10	.717	.466	1.444	5/8-24UNEF	.677	6-32	.297	.178	.820	1.776
12	.834	.591	1.444	3/4-20UNEF	.802	6-32	.422	.302	.960	1.776
14	.970	.705	1.444	7/8-20UNEF	.927	6-32	.547	.365	1.070	1.776
16	1.088	.830	1.444	1 -20UNEF	1.052	6-32	.609	.490	1.130	1.896
18	1.216	.948	1.444	1-3/16-18UNEF	1.161	8-32	.740	.615	1.390	1.896
20	1.332	1.073	1.728	1-3/16-18UNEF	1.286	8-32	.740	.615	1.390	1.970
22	1.460	1.198	1.728	1-7/16-18UNEF	1.411	8-32	.928	.740	1.570	1.970
24	1.585	1.323	1.738	1-7/16-18UNEF	1.536	8-32	.984	.790	1.700	1.970

	TYP	ΕE		TYP	E G			TYF	E J			TYPE P	
Shell Size*	B <sub>E</sub> Max.	L <sub>E</sub> Max.	B <sub>G</sub> Max.	De Min.	D <sub>G</sub> Max.	L <sub>G</sub> Max.	BJ Max.	DJ Min.	DJ Max.	Lı Max.	B <sub>P</sub> Max.	D <sub>P</sub> Min.	L <sub>P</sub> Max.
<b>48</b>	.557	1.281	.592	.168	.230	1.720	.828	.168	.230	2.270	.602	.327	1.450
10	.677	1.281	.712	.205	.312	1.720	.891	.205	.312	2:270	.691	.444	1.450
12	.802	1.281	.837	.338	.442	1.860	1.016	.338	.442	2.410	.852	.558	1.450
14	.920	1.281	.995	.416	.539	2.050	1.141	.416	.939	2.600	.956	.683	1.450
16	1.045	1.281	1.080	.550	.616	2.270	1.203	.550	.616	2.880	1.088	.808	1.450
18	1.165	1.281	1.200	.600	.672	2.500	1.469	.600	.672	3.170	1.220	.909	1.450
20	1.290	1.360	1.325	.635	.747	2.960	1.469	.635	.747	3.610	1.349	1.034	1.660
22	1.415	1.360	1.450.	.670	.846	3.120	1.656	.670	.846	3.760	1.461	1.159	1.660
24	1.540	1.360	1.575	.740	.894	3.250	1.750	.740	.894	3.900	1.593	1.284	1.730

<sup>\*</sup> See pages 4,5 and 6 for ordering number information.

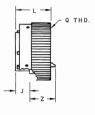
A Not available in KPSE/KSSE

# KPT/KPTM/KPSE Series

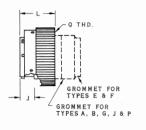
### RIGHT ANGLE PLUGS

KPT08/KSP08 KPTM08/KSPM08 KPSE08/KSSE08

**PLUG ASSEMBLY** 





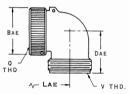




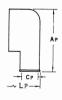
SOLDER KPT08/KSP08

CRIMP KPTM08/KSPM08 KPSE08/KSSE08

		KPT/KS	P/KPTM/KSPM/KPSE/K	SSE	KPT/KSP
Shell Size*	G Max.	<b>j</b> ±.005	L Max.	Q Thread Class 2A	Z Max.
<b>48</b>	.730	.358	.844	7/16-28UNEF	.641
10	.850	.358	.844	9/16-24UNEF	.641
12	1.010	.358	.844	11/16-24UNEF	.641
14	1.130	.358	.844	13/16-20UNEF	.641
16	1.260	.358	.844	15/16-20UNEF	.641
18	1.380	.358	.844	1- 1/16-18UNEF	.641
20	1.510	.420	.989	1- 3/16-18UNEF	.584
22	1.630	.420	.989	1- 5/16-18UNEF	.584
24	1.760	.420	.989	1- 7/16-18UNEF	.584







TYPE A and E

TYPE B AND F

TYPE P

	T'	YPE A and	E		T	YPE B and	F	TYPE P		
Shell Size*	B <sub>AE</sub> Max.	LAE Max.	DAE Max.	V Thread Class 2A	B <sub>BF</sub> Max.	D <sub>BF</sub> - Max.	L <sub>BF</sub> Max.	A <sub>P</sub> Max.	L <sub>P</sub> Max.	CIP Min.
<b>8</b> ≜	.612	1.421	.822	1/2-28UNEF	.612	1.238	1.421	1.030	1.320	.252
10	.742	1.484	.853	5/8-24UNEF	.742	1.269	1.484	1.030	1.320	.252
12	.835	1.546	.916	3/4-20UNEF	.835	1.395	1.546	1.030	1.507	.252
14	.976	1.577	.978	7/8-20UNEF	.976	1.519	1.577	1.030	1.507	.283
16	1.090	1.609	1.041	1 -20UNEF	1.090	1.582	1.609	1.280	1.507	.355
18	1.235	1.734	1.103	1-3/16-18UNEF	1.235	1.644	1.734	1.280	1.695	.530
20	1.367	1.879	1.166	1-3/16-18UNEF	1.367	1.707	1.879	1.530	1.752	.562
22	1.452	2.035	1.245	1-7/16-18UNEF	1.452	1.884	2.035	1.530	1.752	.562
24	1.616	2.035	1.322	1-7/16-18UNEF	1.616	1.963	2.035	1.780	2.027	.610

<sup>\*</sup> See pages 4, 5 and 6 for ordering number information.

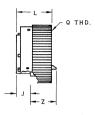
A Not available in KPSE/KSSE

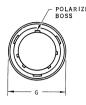
# KPT/KPTM/KPSE Series

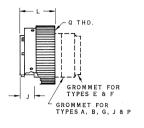
### RIGHT ANGLE PLUGS

KPT08/KSP08 KPTM08/KSPM08 KPSE08/KSSE08

#### **PLUG ASSEMBLY**





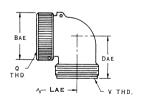


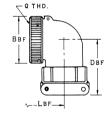


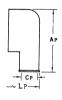
SOLDER KPT08/KSP08

CRIMP KPTM08/KSPM08 KPSE08/KSSE08

	1000	KPT/KS	P/KPTM/KSPM/KPSE/K	SSE	KPT/KSI
Shell Size*	G Max.	±.005	L Max.	<b>Q Thread</b> Class 2A	Z Max.
<b>A8</b>	.730	.358	.844	7/16-28UNEF	.641
10	.850	.358	.844	9/16-24UNEF	.641
12	1.010	.358	.844	11/16-24UNEF	.641
14	1.130	.358	.844	13/16-20UNEF	.641
16	1.260	.358	.844	15/16-20UNEF	.641
18	1.380	.358	.844	1- 1/16-18UNEF	.641
20	1.510	.420	.989	1- 3/16-18UNEF	.584
22	1.630	.420	.989	1- 5/16-18UNEF	.584
24	1.760	.420	.989	1- 7/16-18UNEF	.584







TYPE A and E

TYPE B AND F

TYPE P

	T	YPE A and	E		T'	YPE B and	F		TYPE P	
Shell Size*	BAE Max.	LAE Max.	DAE Max.	V Thread Class 2A	<b>В</b> вғ Мах.	D <sub>BF</sub> - Max.	L <sub>BF</sub> Max.	A <sub>P</sub> Max.	L <sub>P</sub> Max.	C <sub>IP</sub> Min
<b>48</b>	.612	1.421	.822	1/2-28UNEF	.612	1.238	1.421	1.030	1.320	.25
10	.742	1.484	.853	5/8-24UNEF	.742	1.269	1.484	1.030	1.320	.252
12	.835	1.546	.916	3/4-20UNEF	.835	1.395	1.546	1.030	1.507	.25
14	.976	1.577	.978	7/8-20UNEF	.976	1.519	1.577	1.030	1.507	.28
16	1.090	1.609	1.041	1 -20UNEF	1.090	1.582	1.609	1.280	1.507	.35!
18	1.235	1.734	1.103	1-3/16-18UNEF	1.235	1.644	1.734	1.280	1.695	.530
20	1.367	1.879	1.166	1-3/16-18UNEF	1.367	1.707	1.879	1.530	1.752	.562
22	1.452	2.035	1.245	1-7/16-18UNEF	1.452	1.884	2.035	1.530	1.752	.562
24	1.616	2.035	1.322	1-7/16-18UNEF	1.616	1.963	2.035	1.780	2.027	.610

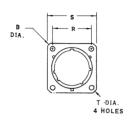
<sup>\*</sup> See pages 4, 5 and 6 for ordering number information.

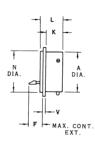
A Not available in KPSE/KSSE

# **KPTH Series**

# BOX MOUNTING RECEPTACLES KPT02H







SOLDER KPT02H

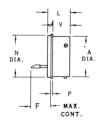
Shell Size*	+.001005	B Dia.	F Max.	K	L	+.001 —.005	R	S	T Dia.	٧
8	.473	1.062	.344	.438	.546	.562	.594	.812	.120	.062
10	.590	1.250	.344	.438	.546	.672	.719	.938	.120	.062
12	.750	1.375	.344	.438	.546	.781	.812	1.031	.120	.062
14	.875	1.500	.344	.438	.546	.906	.906	1.125	.120	.062
16	1.000	1.625	.344	.438	.546	1.031	.969	1.219	.120	.062
18	1.125	1.750	.344	.438	.546	1.156	1.062	1.312	.120	.062
20	1.250	1.875	.344	.468	.608	1.250	1.156	1.438	.120	.094
22	1.375	2.000	.344	.468	.608	1.375	1.250	1.562	.120	.094
24	1.500	2.250	.320	.500	.673	1.500	1.375	1.687	.147	.094

# SOLDER MOUNTING RECEPTACLES

KPTIH/MS3113H







SOLDER KPTIH/MS3113H

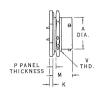
Shell Size*	+.001 —.005	F Max.	L	+.001 —.005	Р	S Dia.	٧
8	.473	.370	.546	.562	.031	.631	.42
10	.590	.370	.546	.672	.031	.756	.42
12	.750	.370	.546	.781	.031	.850	.42
14	.875	.370	.546	.906	.031	.975	.42
16	1.000	.370	.546	1.031	.031	1.100	.42
18	1.125	.370	.546	1.156	.031	1.224	.42
20	1.250	.370	.608	1.250	.031	1.318	.48
22	1,375	.370	.640	1.375	.031	1.444	.48
24	1.500	.340	.673	1.500	.031	1.569	.51

# **KPTH Series**

### JAM NUT RECEPTACLES KPT07H/MS3114H







SOLDER KPT07H/MS3114H

Shell	A	E	G	K	M	Р		S	٧
Size*	$\pm .003$	$\pm .005$	Max.	+.001016	$\pm .015$	Min.	Max.	Max.	
8	.471	.525	1.078	.094	.711	.062	.125	.954	9/16-24UNEF-2A
10	.588	.650	1.203	.094	.711	.062	.125	1.078	11/16-24UNEF-2A
12	.748	.813	1.391	.094	.711	.062	.125	1.266	7/8-20UNEF-2A
14	.873	.937	1.516	.094	.711	.062	.125	1.391	1-20UNEF-2A
16	.998	1.061	1.641	.094	.711	.062	.125	1.516	1-1/8-18UNEF-2A
18	1.123	1.186	1.766	.094	.711	.062	.125	1.641	1-1/4-18UNEF-2A
20	1.248	1.311	1.954	.125	.899	.062	.250	1.828	1-3/8-18UNEF-2F
22	1.373	1.436	2.078	.125	.899	.062	.250	1.954	1-1/2-18UNEF-2A
24	1.498	1.561	2.203	.125	.927	.062	.250	2.078	1-5/8-18UNEF-2A

ITT CANNON ELECTRIC 19

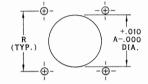
# **Mounting Data**

### PANEL CUTOUTS

### FLANGE MOUNTING RECEPTACLE

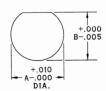
Shell	KPT/KPT	M/KPSE	KSP/KSP	M/KSSE	KPT02H/	KPT1H
Size	Α ΄	R	A*	' R	Α ΄	R•
<b>48</b>	.449	.594	.563	.724	.565	.594
10	.573	.719	.680	.812	.675	.714
12	.699	.812	.859	.938	.784	.812
14	.823	.906	.984	1.031	.909	.906
16	.949	.969	1.108	1.125	1.034	.969
18	1.073	1.062	1.233	1.203	1.159	1.062
20	1.199	1.156	1.358	1.297	1.253	1.156
22	1.323	1.250	1.483	1.375	1.378	1.250
24	1.449	1.375	1.610	1.500	1.503	1.375

- A Not available in KPSE/KSSE connectors.
  \* Applicable for back mounting.
   Not used in KPT1H connectors.



Shell	KPT/KPT	M/KPSE	KSP/KSI	PM/KSSE	KPT	02H
Size	±.005	SCREW	±.005	SCREW	±.005	SCREW
<b>≜</b> †8	.125	#4	.155	.#6	.125	#4
10	.125	.#4	.155	#6	.125	#4
12	.125	#4	.155	#6	.125	#4
14	.125	.#4	.155	.#6	.125	#4
16	.125	.#4	.155	#6	.125	#4
18	.125	.#4	.155	#6	.125	#4
20	.125	#4	.155	#6	.125	#4
22	.125	.#4	.155	.#6	.125	#4
24	.155	#6	.155	#6	.155	#6

### JAM NUT RECEPTACLE



Shell	KPT/KSP/I KPSE	KPTM/KSPM C/KSSE	КРТ	07H
Size	A	В	A	B•
48	.578	.542	.567	.531
10	.703	.669	.692	.656
12	.890	.830	.880	.819
14	1.015	.955	1.005	.943
16	1.140	1.084	1.130	1.067
18	1.265	1.208	1.255	1.192
20	1.390	1.333	1.380	1.317
22	1.515	1.459	1.505	1.442
24	1.640	1.584	1.630	1.567

▲ Not available in KPSE/KSSE connectors.
• B dimension tolerance for KPT07H is +.010/—.000.

# **Components and Accessories**



Connector Series	TOOL
KPTM/KSPM KPSE/KSSE	MS3191-3* or CCT-2016-20

### INSERTION/EXTRACTION TOOLS





KPSE/KSSE Extraction



### KPTM/KSPM

Contact Size	Insertion	Extraction
20 without insulation support	CIT-20-18	CET-20-4
20 with insulation support	CIT-20-5A	CET-20-4
16	CIT-16-1	CET-16-3A

#### KPSE/KSSE

Contact	Insertion	Extrac	tion
Size	MS	MS	ITT Cannon
20	MS24256A20	MS24256R20	CET-20-9A
16	MS24256A16	MS24256R16	CET-16-11A

#### **CONTACTS**



KPTM/KSPM KPSE/KSSE

Size/Type	KPTM/KPSE MS	KSPM/KSSE ITT CANNON
20 socket	MS3193A20A	031-9074-002
20 pin	MS3192A20A	030-9036-000
16 socket	MS3193-16A	031-9095-003
16 pin	MS3192-16A	031-9032-003
12 socket		
12 pin		estatore e -

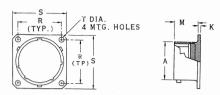
### WIRE HOLE FILLERS/ GROMMET SEALING PLUGS



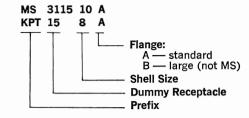
Contact Size	Color Code	KPTM/KSPM KPSE/KSSE
22	White	
20	Red	MS3187A20
16	Blue	MS3187-16
12	Yellow	MS3187-12

# **Components and Accessories**

### **DUMMY RECEPTACLES**



#### ORDERING NUMBER

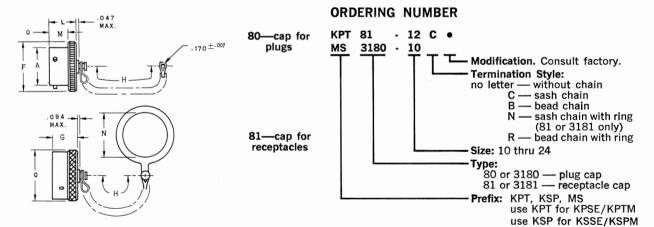


		TYPE A and B			TYPE A — Std. Flange			TYPE B — Large Flange		
Shel TYPE A	I Size TYPE B	<b>A</b> ±.003	<b>K</b> ±.016	+.015 016	R (TP)	S Max.	T Dia.	R (TP)	S Max.	<b>T</b> Dia.
*- 8A	- 8B	.471	.062	.478	.594	.828	.120	.734	1.063	.150
*-10A	-10B	.588	.062	.478	.719	.954	.120	.812	1.141	.150
*-12A	-12B	.748	.062	.478	.812	1.047	.120	.938	1.266	.150
*-14A	-14B	.873	.062	.478	.906	1.141	.120	1.031	1.360	.150
*-16A	-16B	.998	.062	.478	.969	1.234	.120	1.125	1.454	.150
*-18A	-18B	1.123	.062	.478	1.062	1.328	.120	1.203	1.532	.150
*-20A	-20B	1.248	.094	.572	1.156	1.453	.120	1.297	1.688	.150
*-22A	-22B	1.373	.094	.572	1.250	1.578	.120	1.375	1.766	.150
*-24A	-24B	1.498	.094	.605	1.375	1.703	.147	1.500	1.891	.150

### PROTECTIVE CAPS

#### STANDARD MATERIALS AND FINISHES

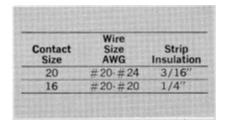
	KPT/KPSE/MS	KSP/KSSE  alumium alloy, hard black anodiz Alumilite non-conductive finish		
Protective Cap	aluminum alloy, olive drab finish, per QQ-P-416			
Bead Chain	brass, olive drab finish	brass, black nickel finish		
Sash Chain	stainless steel	stainless steel		
Ring/Rivet	stainless steel	stainless steel		
Gasket	neoprene per MIL-STD-417	neoprene per MIL-STD-417		



Shell Size*	<b>A</b> ±.003	F Max.	G Max.	<b>H</b> ±.250	L Max.	+.015 016	N Min.	<b>Q</b> Max.
°- 8°°	.471	.719	.562	3.000	.562	.384	.578	.719
*-10**	.588	.844	.562	3.000	.562	.384	.703	.812
*-12**	.748	1.000	.562	3.500	.562	.384	.891	1.000
*-14**	.873	1.125	.562	3.500	.562	.384	1.016	1.125
°-16*°	.998	1.250	.562	3.500	.562	.384	1.141	1.250
*-18**	1.123	1.375	.562	3.500	.562	.384	1.266	1.375
*-20**	1.248	1.500	.562	4.000	.625	.446	1.391	1.500
*-22**	1.373	1.625	.562	4.000	.625	.446	1.516	1.625
*-24 **	1.498	1.750	.602	4.000	.658	.479	1.641	1.750

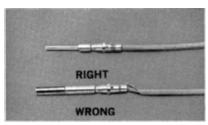
\* Add prefix: KPT, KSP, or MS and add type: 80 for plug cap, 81 for receptacle cap; 3180 for MS plug cap, 3181 for MS receptacle cap. \*\* Add termination style; see part number explanation above.

# **Assembly Instructions**



CRIMPING CONTACTS

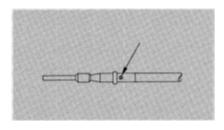
1. Strip wires according to the table above taking care not to cut or nick strands.



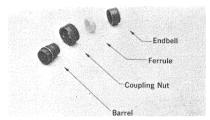
2. Insert stripped wire into contact crimp pot. Wire must be visible thru inspection hole.



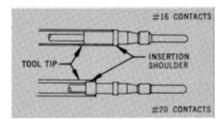
3. Using correct crimp tool and locator; cycle the tool once to be sure the indentors are open. Insert contact and wire into locator. Squeeze tool handles firmly and completely to insure a proper crimp. The tool will not release unless the crimp indentors in the tool head have been fully actuated.



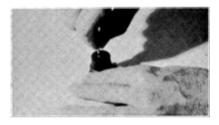
4. Release crimped contact and wire from tool. certain the wire is visible thru inspection hole contact.



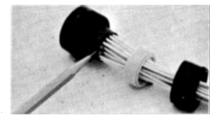
CONTACT INSERTION
5. Remove hardware from plug and receptacle. Slide hardware over wire bundle in proper order for re-



6. 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.



7. Beginning from center cavity and working outwards, insert wired contacts into rear of connector by hand until the front of the contact shoulder is no more than  $\frac{1}{4}$ " from the grommet. Holding the connector securely, 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.



8. Use wire hole fillers or grommet sealing plugs to fill any empty cavities and assemble hardware to rear of plug or receptacle.



COMPLETION

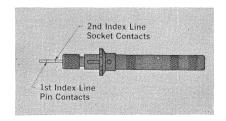
Check face of plug or receptacle for proper contact installation.



CONTACT EXTRACTION

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

KPTM: Make sure reversible tool tip is set for pin or socket contacts. Place tool tip over contact from front of insulator and, with slow and even pressure, push contact out of back of insulator.



KPSE: Use the proper extraction tool. 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 through the clip. Carefully remove extraction tool from connector. Pull the wire by hand to complete the removal of the contact.



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