

PEI-Genesis Standard-K® Connectors (formerly ITT Cannon)



RUGGED CONNECTORS FOR A RANGE OF APPLICATIONS

PEI-Genesis Standard K® connectors are rugged, reliable, lightweight and easy to use. Standard K® connectors were developed as aircraft connectors or for use in TV cameras and instrumentation, but are now used in applications as diverse as oil field equipment, shipboard circuit breakers, concert audio snakes, mass transit applications, and MRI machines. Standard K® connectors are chemical-resistant and corrosion-resistant and have excellent electrical insulating properties and dimensional stability. The Standard K® series is available in common layouts including 2 pin connectors, 4 pin connectors and 6 pin connectors, all the way up to 110 pins. The Standard K® connector was originally an ITT Cannon plug and is now manufactured by Sure Seal Connections, a division of PEI-Genesis. For full details on PEI-Genesis Standard K® connectors, see the product specifications below.

APPLICATIONS

- Multi-pin power/signal connections
- Test equipment & systems
- Industrial machinery & automation
- Instrument panels
- Motion control & robotics
- Power supplies & generators
- Ground support for aircraft & satellites
- Refrigeration equipment
- Oil field equipment
- Television cameras
- Professional audio equipment
- Medical equipment
- Transportation equipment
- Food processing equipment
- Security systems

FEATURES

PROVEN DESIGN

Over 60 years of service in rugged, harsh environments.

SUPERIOR MATERIALS

Standard-K insulators are made of diallyl phthalate or phenolic, offering near perfect resistance to chemicals, superior electrical insulating properties, and excellent dimensional stability. Aluminum housings with a heavy, clear plating ensure a rugged corrosion-resistant interconnection.

QUICK CONNECT & DISCONNECT

Special Acme threads lock the connector halves together and allow rapid mating and unmating of the connector halves.

VARIETY OF SHELL STYLES

Straight or right angle cable-mounted plugs mate with two flange sizes of panel-mounted receptacles. All configurations are available with male or female contacts. Rotational polarization is a standard option to avoid mis-mating connector pairs when more than one connector with the same layout is used on the same system.

SIMPLE ASSEMBLY & TERMINATION

Standard-K has no complicated parts, special tooling, or demanding wire preparation requirements. Assembly of the connector is simple and fool-proof using a soldering iron and a screw driver.

WIDE RANGE OF WIRE GAUGES AND CURRENT CARRYING CAPABILITIES

Wire sizes from 26 through 4 AWG can be accommodated. Contacts are rated from 5 amps for a size #20 contact up to 80 amps for a size #4 contact.

TECH SPECS

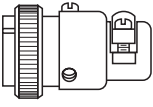
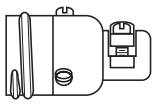
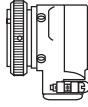
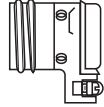
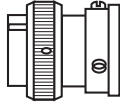
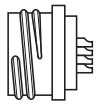
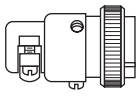
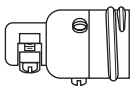
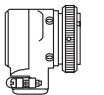
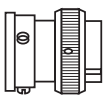
MATERIALS & FINISHES

Shell	Aluminum alloy, solid shell
Shell Plating	Clear chromate over cadmium per QQ-P-416 Type II class 3 thickness or electroless nickel
Insulator	Diallyl phthalate, fabricated phenolic or mineral-filled glass
Contacts	Copper alloy
Contact Plating	Silver plate, (gold plate optional)

ELECTRICAL DATA

Operating Voltage/Test Voltage	There shall be no evidence of breakdown when the test voltages indicated in the chart on ➔ page 92 are applied, for a period of one minute between the contacts and between the shell and the contacts.
Laboratory Conditions	Ambient Temperature 23°C to 27°C
	Relative Humidity 69% to 73%
	Barometric Pressure 29.70" to 9.75"
	Insert Material Phenolic XXX-P or molded diallyl phthalate
Current Rating	See chart on ➔ page 92

MATING GUIDE

	 K-21	 K-22	 K-23	 K-24	 K-31	 K-32
 K-21		●		●		●
 K-22	●		●		●	
 K-23		●		●		●
 K-24	●		●		●	
 K-31		●		●		
 K-32	●		●		●	

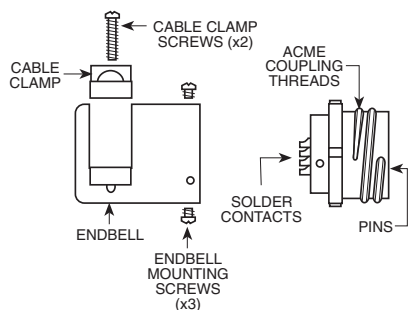
TECH SPECS

MECHANICAL

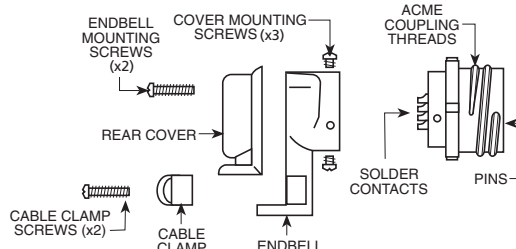
Operating Temperature	-67°F to +257°F (-55°C to +125°C)
Mating Life	500 cycles minimum
Contact Type	Solder pot or crimp, mini coax
Number of Circuits	2 to 110
Polarization	Key and keyway plus optional rotational polarization
Color	Silver. Insulators are brown or black.

EXPLODED VIEW

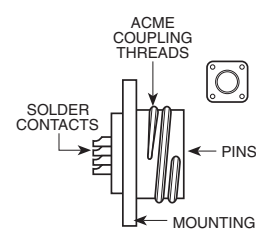
STRAIGHT RECEPTACLE



90° RECEPTACLE

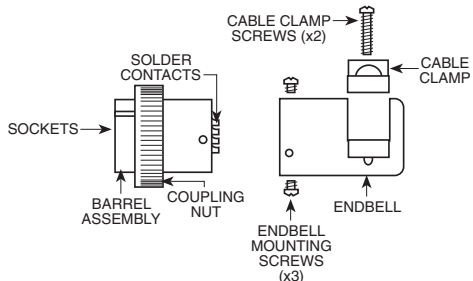


FLANGE RECEPTACLE

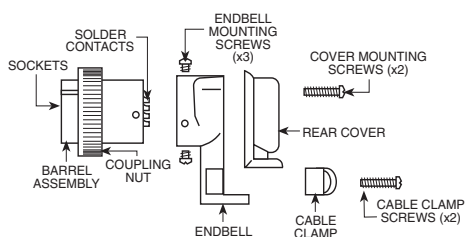


Mates with

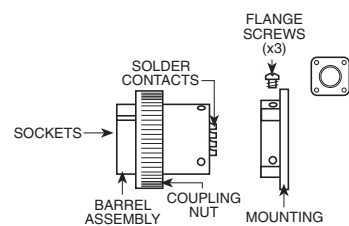
STRAIGHT PLUG



90° PLUG



FLANGE PLUG



THREADED BARRELS

Please contact us.



CREATE PART NUMBER BY USING THESE 5 STEPS

1	2	3	4	5
WK-4	21C	1/2	W	EN
SHELL SIZE LAYOUT	SHELL STYLE	CABLE CLAMP	ROTATION Omit for Normal	SHELL PLATING

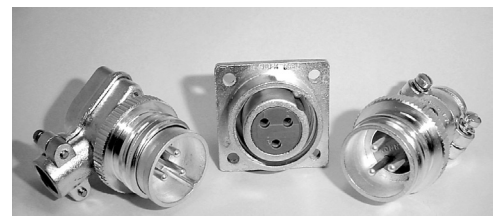
STEP 1: CHOOSE THE SHELL SIZE LAYOUT BY NUMBER OF CONTACTS

LAYOUT NUMBER	HOT PRODUCTS	CONTACTS								AMPS	TEST VOLTAGE 60 CPS (AC RMS)	OPTIONAL ROTATIONS
		TOTAL	20*	16*	14	10	8	6	4			
WK-M2	✓	2		2						10	2350	W, X
SK-S2		2							2	80	2050	-
GK-V2		2			2					15	3450	-
GK-C3		3			1			2		15/60	1300	V, X, Y
NK-E3		3							3	80	2350	-
WK-C3	✓	3		1		2				10/30	1300	W
WK-3	✓	3			3					15	1700	V, W, X, Z
WK-4	✓	4		4						10	1300	V, W, Z
NK-P4		4						4		60	2350	W, X, Y, Z
GK-4	✓	4				4				30	1300	-
WK-S4		4		2		2				10/30	1300	W, Z
WK-5	✓	5		5						10	1300	V, W, X, Y, Z
SK-5		5				5				30	2050	-
WK-S5		5		4		1				10/30	1300	-
SK-6	✓	6				6				30	1700	W
WK-6	✓	6		6						10	1300	V, W, X, Y, Z
WK-A7	✓	7		7						10	1300	V, W, X, Y, Z
GK-R7		7		5	2					10/15	3050 (7) 1300 (1-6)	V, X, Y
SK-M7		7		3		4				10/30	2050	-
NK-M8		8				8				30	2050	-
WK-8	✓	8	8							5	2050	V, W, X, Y, Z
NK-L8	✓	8			4		4			15/40	2050	V, X, Y
GK-8		8			8					15	1300	-
GK-S8	✓	8		4		4				10/30	1300	-
NK-D8		8			8					15	2600	-
GK-9		9		9						10	1700	V, W, X, Y, Z
SK-M10		10		8		2				10/30	2050	V, W, Z
NK-L11	✓	11		1	8	2				10/15/30	2050	-
GK-12	✓	12		12						10	1300	V, W, X, Y, Z
NK-12		12		12						15	2050	V, W, X, Y, Z
SK-D12		12		8		4				10/30	1300	W, X, Y
NK-L15		15			15					15	1700	-
SK-C16	✓	16		14		2				10/30	1300	W, X, Y, Z
SK-19	✓	19		19						10	1300	W, X, Y, Z
FK-L20		20	-	13		7				5	2050	-
FK-W20	✓	20	Uses coax contacts (sold separately)**								1000	-
NK-L23	✓	23		19	2	2				10/15/30	1300	-
SK-24	✓	24	24							5	1700	-
NK-27	✓	27		27						10	1300	V, W, X, Y, Z
FK-32		32		32						10	2900 (1-2) 1700 (3-32)	-
FK-37	✓	37		37						10	1300	V, W, X, Y, Z
FK-46	✓	46		46						10	1300	V, W, X, Y, Z
FK-75	✓	75	75							10	1300	W, X, Y, Z
LK-81		81		81						10	1300	V, W, X, Y, Z
LK-110		110	110							5	1000	V, W, X, Y, Z

* Size 20 contacts are gold-plated. Size 16 are standard silver-plated, optional gold-plated (add -A95 suffix to part number). All other sizes silver-plated.

** Contact us for more information.

✓ Indicates most popular layouts.



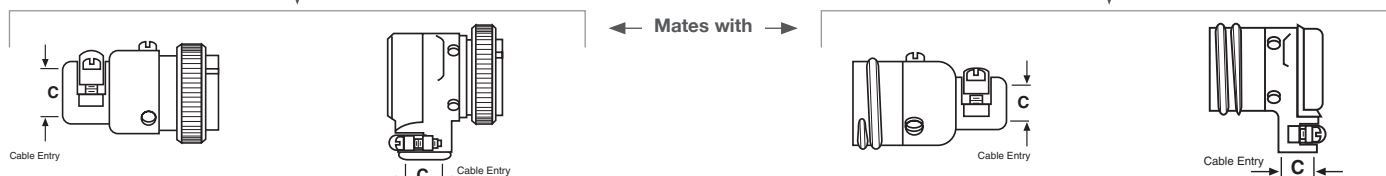
R*K REVERSE STANDARD K CONNECTOR

Please contact us.

STEP 2: CHOOSE SHELL STYLE

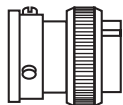
PLUGS

RECEPTACLES



21C

Straight plug, socket contacts with cable clamp.



31S

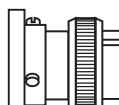
Small flange plug, socket contacts. LK size not available



Threaded Barrels
Please contact us.

23C

90° plug, socket contacts with cable clamp.



31SL

Large flange plug, socket contacts.

22C

Straight receptacle, pin contacts with cable clamp.

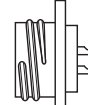


32S

Small flange receptacle, pin contacts.

24C

90° receptacle, pin contacts with cable clamp.



32SL

Large flange receptacle, pin contacts.

STEP 3: CHOOSE CABLE CLAMP

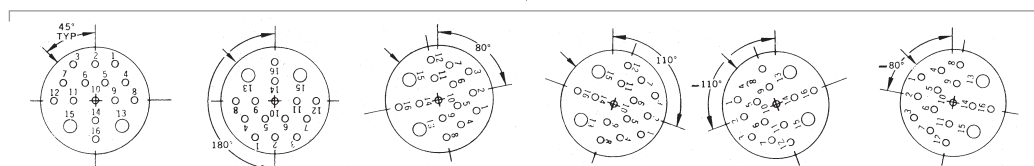
(Insert the capacity in inches for standard clamps, insert the suffix code for straight sealed endbells).

STRAIGHT ENDBELLS 21C/22C DIMENSION C: (MAXIMUM CABLE CLAMP CAPACITY)									
INCHES	1/4	5/16	3/8	1/2	5/8	3/4	7/8	1	1-1/2
WK	✓	✓	✓	✓	✓				
GK				✓	✓				
SK				✓	✓				
NK				✓	✓				
FK							✓	✓	
LK								✓	

RIGHT ANGLE ENDBELLS 23C/24C DIMENSION C: (MAXIMUM CABLE CLAMP CAPACITY)							
INCHES	3/8	1/2	5/8	7/8	11/16	3/4	1
WK	✓						
GK		✓	✓				
SK		✓	✓				
NK					✓		
FK			✓	✓			
LK	Not available in 23C or 24C						

STEP 4: CHOOSE OPTIONAL ROTATIONS

Choose a rotation (omit for normal orientation). Refer to chart on ➡ page 92 for rotations for your layout.



POSITION N

POSITION V

POSITION W

POSITION X

POSITION Y

POSITION Z

Notes:

1. Shell polarizing means is indicated by arrow at 45° and will remain constant regardless of insert rotation.
2. Insert to be rotated within the shell to the required position as viewed from engaging end of pin insert, wire side of socket insert.
3. Contact us for alternate positions available for each layout or for alternate positions not shown.

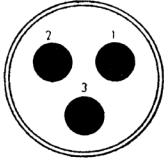
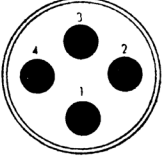
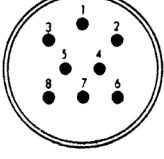
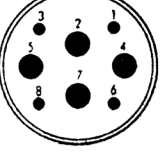
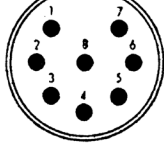
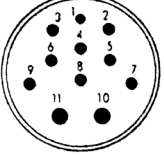
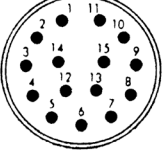
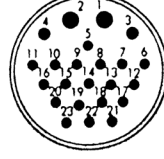
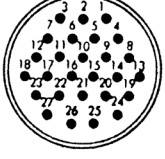
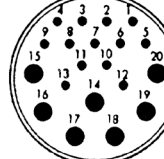
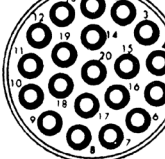
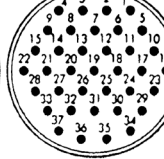
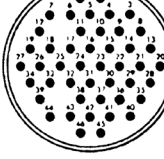
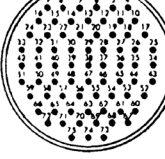
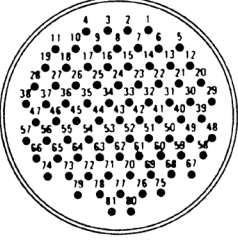
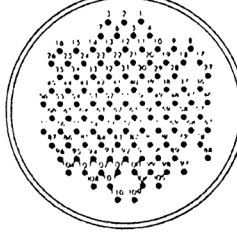
STEP 5: CHOOSE SHELL PLATING

Omit for Clear Chromate over Cadmium

EN = Electroless Nickel (RoHS)

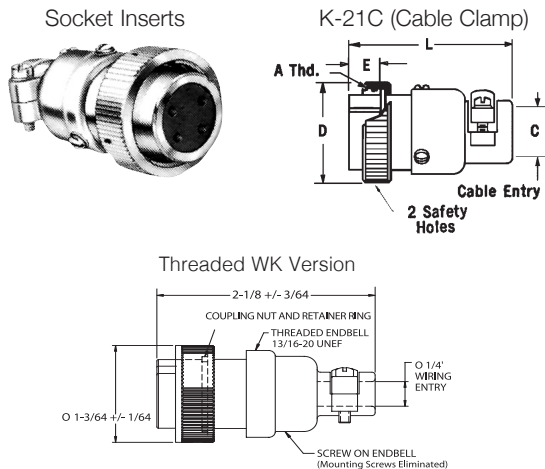
LAYOUTS BY NUMBER OF CONTACTS

	2	3		4	
SHELL SIZE WK	WK-M2	WK-3	WK-C3	WK-4	WK-S4
Contacts	2	3	3	4	4
Wires	2-#16	3-#14	1-#16 (3) 2-#10 (1 & 2)	4-#16	2-#16 (1 & 3) 2-#10 (2 & 4)
	5	6	7	8	
SHELL SIZE WK	WK-5	WK-S5	WK-6	WKA7	WK-8
Contacts	5	5	6	7	8
Wires	5-#16	4-#16 (1-4) 1-#10 (5)	6-#16	7-#16	8-#20
	2	3	4	7	
SHELL SIZE GK	GK-V2	GK-C3	GK-4	GK-R7	
Contacts	2	1-#14 (1)	4	7	
Wires	2-#14	2-#6 (2 & 3)	4-#10	5-#16 (1, 2, 5, 6, 7) 2-#14 (3 & 4)	
	8		9	12	
SHELL SIZE GK	GK-8	GK-S8	GK-9	GK-12	
Contacts	8	8	9	12	
Wires	8-#14	4-#16 (2, 3, 5, 6) 4-#10 (1, 4, 7, 8)	9-#16	12-#16	
	2	5	6	7	10
SHELL SIZE SK	SK-S2	SK-5	SK-6	SK-M7	SK-M10
Contacts	2	5	6	7	10
Wires	2-#4	5-#10	6-#10	3-#16 (2, 6, 7) 4-#10 (1, 3, 4, 5)	8-#16 (2, 4-10) 2-#10 (1 & 3)
	12	16	19	24	
SHELL SIZE SK	SK-D12	SK-C16	SK-19	SK-24	
Contacts	12	16	19	24	
Wires	8-#16 (1, 3, 5, 7, 9-12) 4-#10 (2, 4, 6, 8)	14-#16 (1-12, 14, 16) 2-#10 (13 & 15)	19-#16	24-#20	

	3	4		8	
					
SHELL SIZE NK	NK-E3	NK-P4	NK-D8	NK-L8	NK-M8
Contacts	3	4	8	8	8
Wires	3-#4	4-#6	8-#14	4-#14 (1, 3, 6, 8) 4-#8 (2, 4, 5, 7)	8-#10
	11	15	23	27	
					
SHELL SIZE NK	NK-L11	NK-L15	NK-L23	NK-27	
Contacts	11	15	23	27	
Wires	1-#16 (1) 8-#14 (2-9) 2-#10 (10-11)	15-#14	19-#16 (5-23) 2-#14 (3,4) 2-#10 (1, 2)	27-#16	
	20	32	37	46	75
					
SHELL SIZE FK	FK-L20	FK-W20	FK-32	FK-46	FK-75
Contacts	20	20	32	46	75
Wires	13-#16 (1-13) 7-#10 (14-20)	20 min. coax. Call for contacts	32-#16	46-#16	75-#20
	81	110			
					
SHELL SIZE LK	LK-81	LK-110			
Contacts	81	110			
Wires	81- #16	110- #20			

K-21C STRAIGHT PLUG

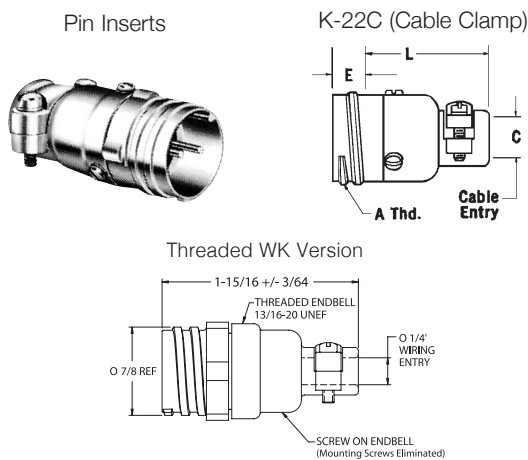
SOCKET CONTACTS



PART NUMBER	D DIA +1/64	E +1/64	L +3/64	A THD	C
WK-(*)-21C	1-3/64	7/16	2-3/32	7/8-6	See chart on → page 92
GK-(*)-21C	1-23/64	7/16	2-3/16	1-3/16-6	
SK-(*)-21C	1-15/32	7/16	2-3/16	1-5/16-6	
NK-(*)-21C	1-47/64	7/16	2-5/32	1-9/16-6	
FK-(*)-21C	2-1/64	7/16	2-5/16	1-13/16-6	
LK-(*)-21C	2-7/8	1/2	3-1/8	2-1/2-6	

K-22C STRAIGHT RECEPTACLE

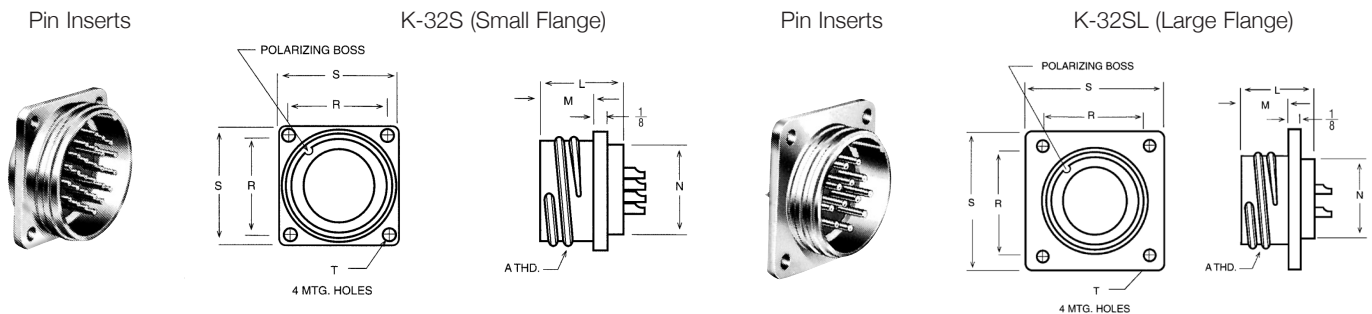
PIN CONTACTS



PART NUMBER	E +1/64	L +3/64	A THD	C
WK-(*)-22C	7/16	1-29/32	7/8-6	See chart on → page 92
GK-(*)-22C	7/16	2	1-3/16-6	
SK-(*)-22C	7/16	2	1-5/16-6	
NK-(*)-22C	7/16	1-31/32	1-9/16-6	
FK-(*)-22C	7/16	2-5/32	1-13/16-6	
LK-(*)-22C	1/2	2-15/16	2-1/2-6	

K-32S & K-32SL WALL MOUNT RECEPTACLES

PIN CONTACTS



ORDER NUMBER	FOR K-32S AND K-32SL				FOR K-32S			FOR K-32SL		
	L +3/64	N +.005	M +1/64	A THD.	R +.005	S +1/64	T +.005	R +.005	S +1/64	T +.005
WK-(*)-32S	3/4	3/4	7/16	7/8-6	.729	15/16	.120	.972	1-5/16	.144
GK-(*)-32S	3/4	1	7/16	1-3/16-6	.972	1-1/4	.120	1.193	1-9/16	.169
SK-(*)-32S	3/4	1-1/8	7/16	1-5/16-6	1.038	1-3/8	.120	1.282	1-11/16	.169
NK-(*)-32S	3/4	1-3/8	7/16	1-9/16-6	1.259	1-5/8	.144	1.503	1-15/16	.169
FK-(*)-32S	3/4	1-5/8	7/16	1-13/16-6	1.503	1-7/8	.144	1.679	2-1/8	.169
LK-(*)-32S	27/32	2-1/4	1/2	2-1/2-6	2.077	2-9/16	.169	2.210	2-7/8	.169

* Add contact arrangement. For K-32SL (large flange), add "L" to nomenclature, e.g., WK-(*)-32S becomes WK-(*)-32SL. Large flange most popular.

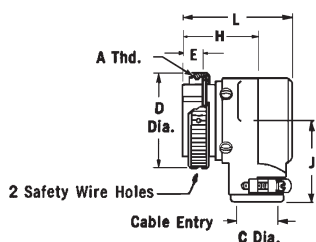
K-23C 90° ANGLE PLUG

SOCKET CONTACTS

Socket Inserts



K-23C (Cable Clamp)

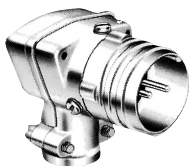


PART NUMBER	C +1/64	D +1/64	E +1/64	H +3/64	J +1/64	L +1/16	A THD
WK-(*)-23C-3/8"	13/32	1-3/64	7/16	1-23/64	1	1-3/4	7/8-6
GK-(*)-23C-1/2"	17/32	1-23/64	7/16	1-7/16	1-9/32	1-15/16	1-3/16-6
GK-(*)-23C-5/8"	21/32	1-23/64	7/16	1-9/16	1-9/32	2-5/32	1-3/16-6
SK-(*)-23C-1/2"	17/32	1-15/32	7/16	1-29/64	1-7/16	1-15/16	1-5/16-6
SK-(*)-23C-5/8"	21/32	1-15/32	7/16	1-17/32	1-7/16	2-3/32	1-5/16-6
NK-(*)-23C-11/16"	23/32	1-47/64	7/16	1-35/64	1-9/16	2-1/8	1-9/16-6
FK-(*)-23C-5/8"	21/32	2-1/64	7/16	1-33/64	1-23/32	2-1/16	1-13/16-6
FK-(*)-23C-7/8"	29/32	2-1/64	7/16	1-11/16	1-23/32	2-23/64	1-13/16-6

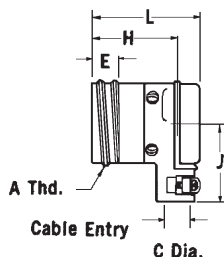
K-24C 90° ANGLE RECEPTACLE

PIN CONTACTS

Pin Inserts



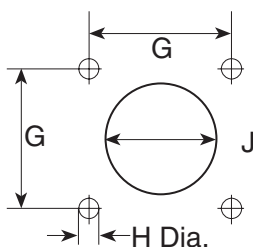
K-24C (Cable Clamp)



PART NUMBER	C +1/64	E +1/64	H +3/64	J +1/64	L +1/16	A THD
WK-(*)-24C-3/8"	13/32	7/16	1-11/64	1	1-9/16	7/8-6
GK-(*)-24C-1/2"	17/32	7/16	1-1/4	1-9/32	1-3/4	1-3/16-6
GK-(*)-24C-5/8"	21/32	7/16	1-3/8	1-9/32	1-31/32	1-3/16-6
SK-(*)-24C-1/2"	17/32	7/16	1-17/64	1-7/16	1-3/4	1-5/16-6
SK-(*)-24C-5/8"	21/32	7/16	1-11/32	1-7/16	1-29/32	1-5/16-6
NK-(*)-24C-11/16"	23/32	7/16	1-23/64	1-9/16	1-15/16	1-9/16-6
FK-(*)-24C-5/8"	21/32	7/16	1-23/64	1-23/32	1-7/8	1-13/16-6
FK-(*)-24C-7/8"	29/32	7/16	1-17/32	1-23/32	2-13/64	1-13/16-6

* Add contact arrangement.

PANEL CUTOUTS



SHELL SIZE	G+/- .005		H MIN.		J MIN.
	31S 32S	31SL 32SL	31S 32S	31SL 32SL	
WK	.729	.972	.134	.154	.785
GK	.972	1.193	.134	.177	1.040
SK	1.038	1.282	.134	.177	1.160
NK	1.259	1.503	.154	.177	1.410
FK	1.503	1.679	.154	.177	1.660
LK	2.077	2.210	.177	.177	2.330

DIMENSIONS

K-31S & K31SL WALL MOUNT PLUG

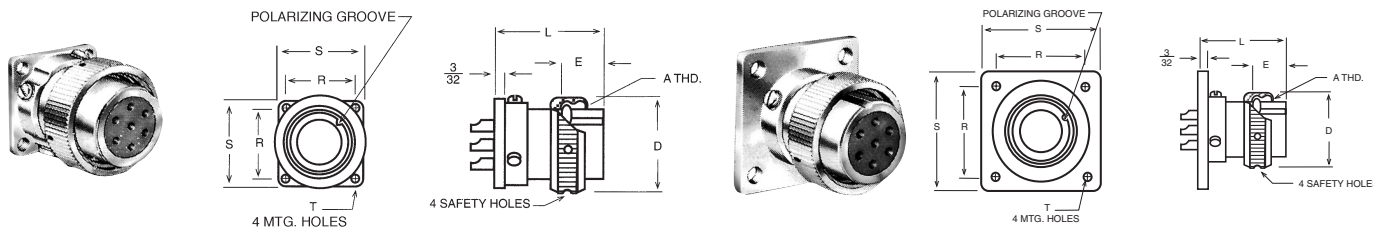
SOCKET CONTACTS

Socket Inserts

K-31S (Small Flange)

Socket Inserts

K-31SL (Large Flange)



ORDER NUMBER	FOR K-31S AND K-31SL				FOR K-31S			FOR K-31SL		
	D +1/64	E +1/64	L +3/64	A THD.	R +.005	S +1/64	T +.005	R +.005	S +1/64	T +.005
WK-(*)-31S	1-3/64	7/16	1-3/16	7/8-6	.730	15/16	.120	.972	1-5/16	.144
GK-(*)-31S	1-23/64	7/16	1-7/32	1-3/16-6	.972	1-1/4	.120	1.192	1-9/16	.169
SK-(*)-31S	1-15/32	7/16	1-7/32	1-5/16-6	1.038	1-3/8	.120	1.280	1-11/16	.169
NK-(*)-31S	1-47/64	7/16	1-7/32	1-9/16-6	1.259	1-5/8	.169	1.500	1-15/16	.169
FK-(*)-31S	2-1/64	7/16	1-1/4	1-13/16-6	1.502	1-7/8	.169	1.678	2-1/8	.169
LK-(*)-31S	2-7/8	1/2	1-13/32	2-1/2-6	2.077	2-9/16	.169	2.210	2-7/8	.169

* Add contact arrangement. For K-31SL (large flange), add "L" to nomenclature, e.g., WK-(*)-31S becomes WK-(*)-31SL. Large flange most popular.

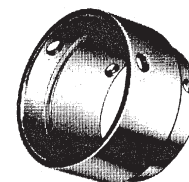
ACCESSORIES

DUST CAPS

Metal-threaded dust caps with chain or cost-effective press-fit plastic dust caps are available.

SHELL SIZE	FOR PLUGS		FOR RECEPTACLES	
	METAL W/CHAIN	PLASTIC	METAL W/CHAIN	PLASTIC
WK	WK-59A-2	WK-P	WK-60A-2	WK-R
GK	GK-59A-2	GK-P	GK-60A-2	GK-R
SK	SK-59A-2	SK-P	SK-60A-2	SK-R
NK	NK-59A-2	NK-P	NK-60A-2	NK-R
FK	FK-59A-2	FK-P	FK-60A-2	FK-R
LK	LK-59A-2	LK-P	LK-60A-2	LK-R

BARREL EXTENSIONS



SHELL SIZE	PART NUMBER	LENGTH
SK	019961-0001	1 7/32"
NK	019961-0014	1/2"
	019961-0021	3/4"
	019961-0006	1 1/8"
FK	019961-0003	1 7/32"
	019961-0016	1"
LK	019961-0012	1"