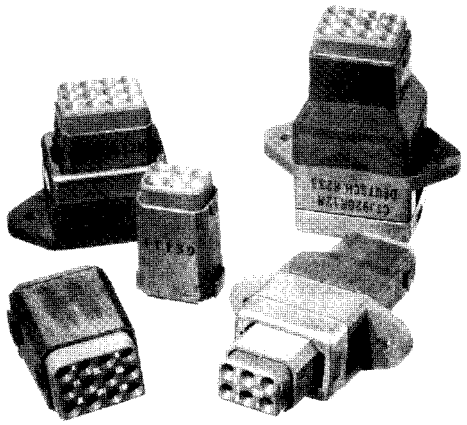
DEUTSCH CONNECTORS A Step Ahead

Composite Termination System

CTJ6 Series Plugs
CTJ9 Series Receptacles

Small, Lightweight Modules Designed for Flange Mounting or In-Line Mounting for Simultaneous Connect/Disconnect of Many Wires.



The Deutsch CTJ6 series junction plug module mates with the CTJ9 series junction receptacle module to accept flexible circuitry, printed circuit boards, discrete wires, etc.

The receptacle module presents a cork-in-a-bottle interfacial seal between the mating halves and is environment resistant when mated with the matching CTJ6 plug module. Receptacle is available with mounting flanges for mounting to a structure or black box. The module is also available in a lightweight inline configuration to allow inline connection to a wire bundle. Contacts are locked into the modules with dielectric retention fingers. Removal of the contacts is accomplished with a simple MIL-Spec insertion/removal tool.

Deutsch ECD
Defense/Aerospace Operations
5733 W. Whittier Avenue
Hemet, CA (USA) 92545
Phone 909/765-2200
FAX 909/922-1544

Dielectric Withstanding Voltage
(Meets AFLC 8027520, paragraph 3.10)
At sea level: 1500 Volts AC (RMS)
At 100,000 ft.: 200 Volts AC (RMS)

Insulation Resistance
(Meets AFLC 8027520, paragraph 3.9)
5000 megohms min. at 25°C.

Contact Resistance at 25°C
(Meets MIL-C-39029 paragraph 3.5.4)

Wire (AWG)	Test Current (Amps)	Millivolt Drop (*)
22	5	102
26	2	53
22	5	73
20	7.5	55
16	13	50
12	23	42

(*) less drop through wire

Thermal Shock
(Meets AFLC 8027520, paragraph 3.7)
After cycling the module between -55°C and +200°C it will meet all applicable electrical and mechanical requirements.

Current Rating
(Meets MIL-C-39029)

Contact Size	Max. Amps
22	5
20	7.5
16	13
12	23

Temperature
(Meets AFLC 8027520, paragraph 1.2.1)
Operative at temperatures from -65°C to +200°C.

Corrosion
(Meets AFLC 8027520, paragraph 3.11)
No decrease in performance or exposure of base metal after 48 hours of salt spray.

Vibration
(Meets AFLC 8027520, paragraph 3.19)
Maintains continuity and exhibits no mechanical or physical damage during or after the following vibration levels.

Level I—duration: 34 minutes per axis

20-90	Hz at 6dB/oct. rise
90-300	Hz at 1.0g²/Hz
300-2000	Hz at 6dB/oct. fall

Level II—duration: 14 minutes per axis

20-40	Hz at 6dB/oct. rise
40-350	Hz at 0.5g²/Hz
350-2000	Hz at 6dB/oct. fall

No discontinuities greater than 1 microsecond.

Usable Wire Size
(Meets AFLC 8027520, paragraph 3.4.3.1)

Contact Size	Accepts (AWG)
22	22-26
20	20-24
16	16-20
12	12 & 14

SPECIFICATIONS

Fluid Compatibility
Designed to function in most fluids encountered in many modern military or aerospace environment. Available with options to operate in the following fluid environments.
(AFLC 8027520, paragraph 1.2.9)

Classification	Fluid*
MIL-H-5606	Aircraft Hydraulic Fluid
MIL-T-5624	JP-5 Jet Fuel
MIL-L-7808	Lubricating Oil
MIL-L-23699	Lubricating Oil
MIL-A-8243	Defrosting Fluid
MIL-C-25769	Alkaline Cleaning Compound
MIL-G-3056	Gasoline

*Also: Isopropyl Alcohol, Mineral Spirits, 1-1-1 Trichloroethane, Freon TMC.

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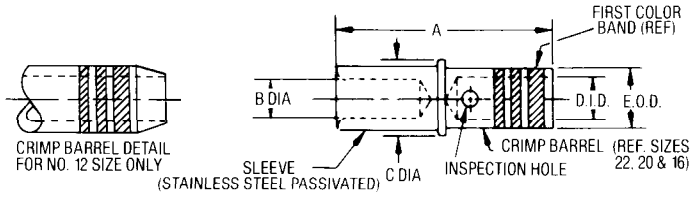
DEUTSCH ECD

CTJ6 Series Plugs
CTJ9 Series Receptacles

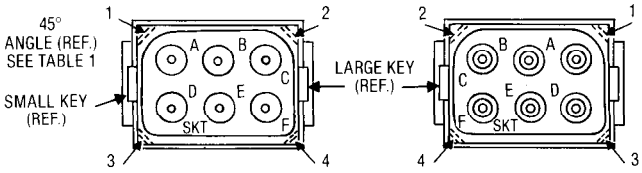
CONTACT DIMENSIONS



Size	Contact Part No.	Equivalent Military Part No.	Color Bands 1st	2nd	3rd	A Max.	B Dia.	C Max.	D Min.	E Max.	Weight (Lbs.)
20	CTS-S20/20	M39029/22-192	Brown	White	Red	.358	.044/.042	.094	.046	.070	.00027
12	CTS-S12/12	M39029/22-605	Blue	Black	Green	.455	.100/.097	.171	.096	.152	.00145

Size	Wire Gauge	Crimp Tool	Crimp Tool Positioner	Strip Length	Insertion & Extraction Tool	Unwired Removal Tool
20	20-24	MH860 (M22520/7-01)	86-20 (M22520/7-12)	.207 ±.030	M15570-20	M15574-20
12	12 & 14	AF8 (M22520/1-01)	M22520/1-16	.225 ±.020	81515-12	M15574-16

ALTERNATE CLOCKING DIMENSIONS



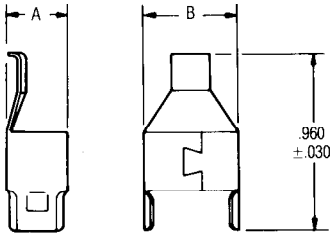
VIEW OF GROMMET SIDE OF PLUG SHOWN

VIEW OF RECEPTACLE SIDE

Table 1

Keying Position	45° Angle Locations
N	1 & 2
1	3 & 4
2	1 & 3
3	2 & 4

STRAIN RELIEF



Part No.	Used On	B ± .030	A ± .030
1629-01-06117	6 Contact Module	.490	.320
1629-01-12117	12 Contact Module	.630	.470

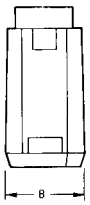
Sold separately. Adapts to all plugs. Adapts to receptacles with rear package only.

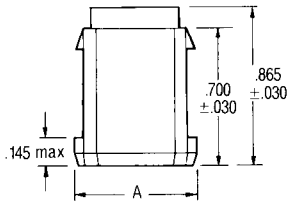
ORDERING INFORMATION

CTJ 6 20 E *** *-***

- Basic Identifier
- Plug Module = 6
  Receptacle Module = 9
- Contact Size (20)
- E — Standard
  R — Rear package available only on receptacle.
- Number Contacts
  02 = 2 #12
  06 = 6 #20
  12 = 12 #20
- Keying Position. Provided with two 45° corners (ref dashed lines) in place of 90° corners, at indicated location of grommet view and table 1, alternate clocking dimensions
  N = standard
  1 thru 3, alternate (consult factory)
- Modifications as required

PLUG OUTLINE DIMENSIONS*

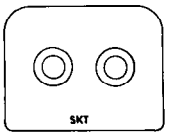




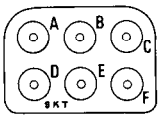
Part Number	A ± .010	B ± .010	No. of Contacts
CTJ612E02	.652	.510	2
CTJ620E06*	.530	.360	6
CTJ620E12*	.652	.510	12

LAYOUT ARRANGEMENTS*

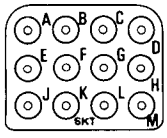
VIEW FROM GROMMET SIDE (Plug)



02



06



12

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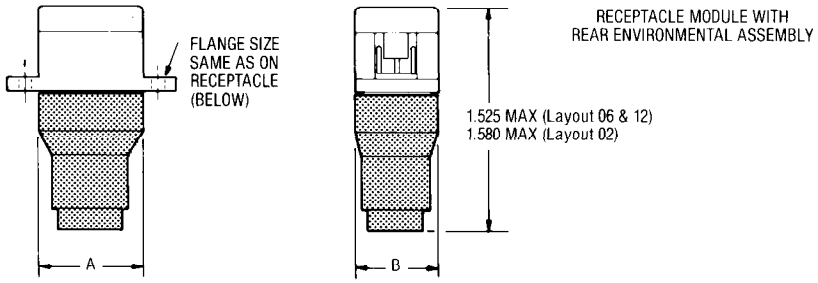
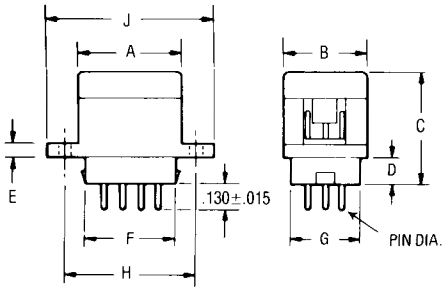
RECEPTACLE CONFIGURATION (With rear package)



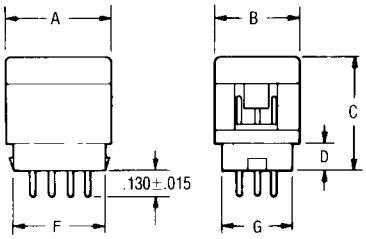
MOUNTING DIMENSIONS

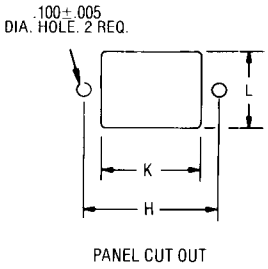
FLANGE MOUNT RECEPTACLE



INLINE MOUNT RECEPTACLE

ORDER P/N 65002*** FOR STANDARD EXTENDED PINS
P/N 65003*** FOR REAR ENVIRONMENTAL ASSEMBLY



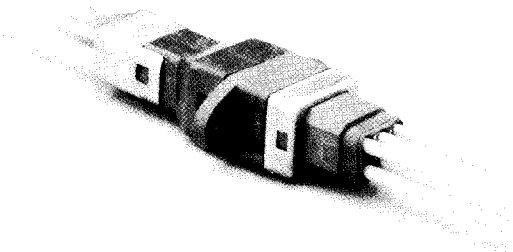


PANEL CUT OUT

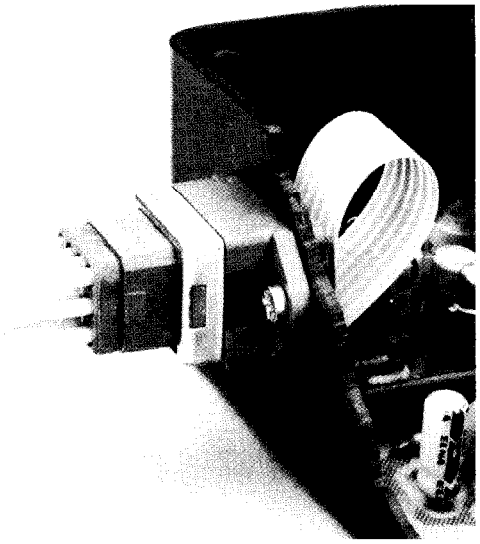
OUTLINE AND MOUNTING DIMENSIONS

Layout	Number of Contacts	A ± .030	B ± .030	C ± .030	D ± .010	E ± .010	F ± .015	G ± .015	H ± .005	J ± .030	K ± .005	L ± .005
02	2 #12	.770	.620	.750	.200	.100	.670	.510	1.000	1.300	.750	.530
06	6 #20	.650	.470	.750	.200	.100	.550	.360	.880	1.180	.600	.380
12	12 #20	.770	.620	.750	.200	.100	.670	.510	1.000	1.300	.750	.530

APPLICATIONS



Standard bulkhead



Flex tape

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Composite Termination System

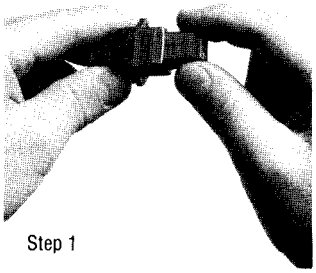
CTJ6 Series
CTJ9 Series

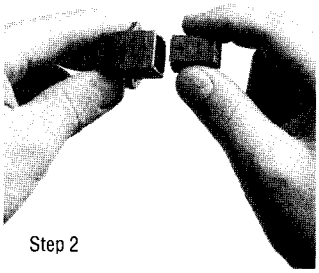
MATING/UNMATING PROCEDURE

Deutsch CTJ6 plug mates with CTJ9 receptacle as follows:

Step 1. With plug engaging surface facing toward receptacle face, and with plug 45° keying surfaces aligned with receptacle keying, insert plug into receptacle. Make sure pins of receptacle properly align with plug socket holes.

Step 2. Press firmly until audible "clicks" are heard. Plug is then correctly engaged and locked in position with receptacle.

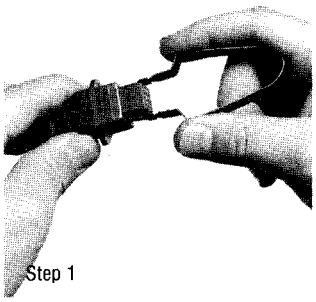

Step 1

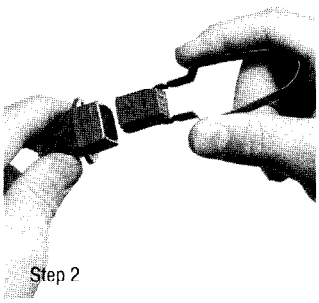

Step 2

To disengage plug and receptacle:

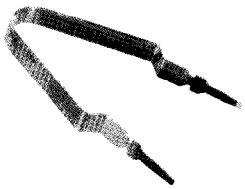
Step 1. Insert module extraction tool into spaces on both sides of receptacle. Push tool in until module locking fingers are disengaged.

Step 2. Pull extraction tool and plug out simultaneously.


Step 1


Step 2

Module extraction tool Part No. CTJ-R06 sold separately



ASSEMBLY TOOLS

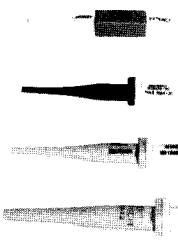
Wire/contact assembly tools are standard military type insertion/removal tools found in most assembly areas.

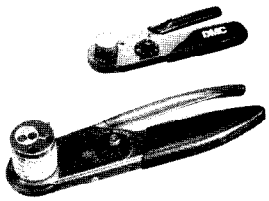
Size 22

Size 20

Size 16

Size 12





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Contact Size	Insertion/ Removal Tool	Crimp Tool	Crimp Tool Positioner	Sealing Plug	Modular Extraction Tool
22	81515-23	M22520/7-01	M22520/7-11	1613-03-2205	CTJ-R06
20	M15570-20 M81969/14-11	M22520/7-01	M22520/7-12	81539-20	
16	M15570-16 M81969/14-03	M22520/7-01	M22520/7-13	81539-16	
12	81515-12	M22520/1-01	M22520/1-16	81539-12	

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Mouser Electronics

Authorized Distributor

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TE Connectivity:
CTJ620E12N-513