Twinaxial Connectors - Twinax

Amphenol twinaxial connectors are used with 78 and 95 ohm twin conductor cables. Due to the improved shielding characteristic (>30dB), these connectors are used in balanced low level and high sensitivity circuits. Twinaxial connectors are used widely in computer and process equipment applications and networks. Two constructions are available:

Twinax - These large threaded connectors feature polarized key and keyway construction and operate in the 0-200 MHz range with a 500v peak voltage rating.

Twin-BNC - This miniature style of connectors has a polarized contact design (one female, one male in each connector) and a two stud bayonet coupling mechanism, operating in the 0-100 MHz range. See pages 40-42 for Twin-BNC connectors.

In mating polarized connector types, the plug must be properly indexed for polarization with the mating receptacle before completing the coupling operation.

TWINAX SPECIFICATIONS*

ELECTRICAL

Impedance	Used with 78 ohm and 95 ohm twin conductor cables.
Frequency range	Keyway polarization: 0-200 MHz, 0-500 MHz with caution.
Voltage rating	Keyway polarization: 500 volts peak.

ENVIRONMENTAL

Temperature range	Copolymer of Styrene: - 55°C to +85°C Noryl: - 45°C to +121°C
Weatherproof	All Twinax Contact connectors are weatherproof when mated.

* These characteristics are typical and may not apply to all connectors.

MECHANICAL

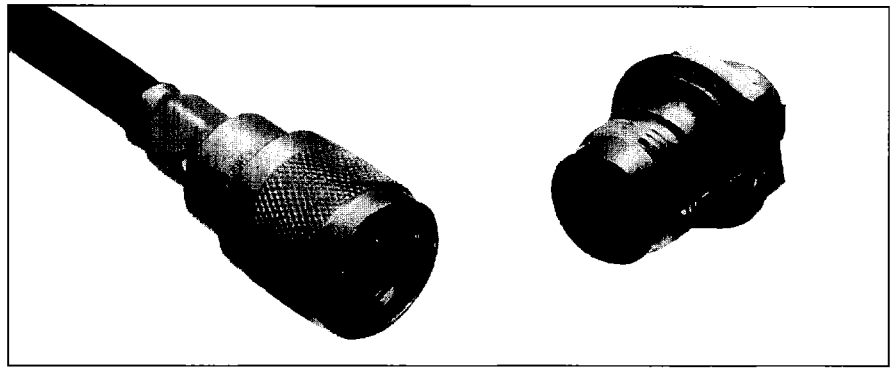
Mating	Keyway polarization: 3/4-20 threaded coupling keyed 90°
Cable affixment	Braid clamp, "V" groove gasket and clamp nut mechanism.

MATERIAL

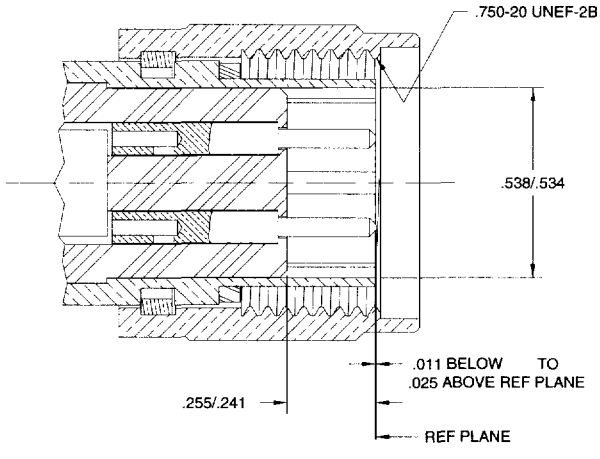
Contacts	Male: brass Female: beryllium copper. Silver plated.
Other metal parts	Brass: ASTROplate® finish
Insulators	Copolymer of styrene, Noryl, or polyester, as listed.
Clamp gaskets	Silicone rubber or synthetic rubber

MILITARY SPECIFICATIONS

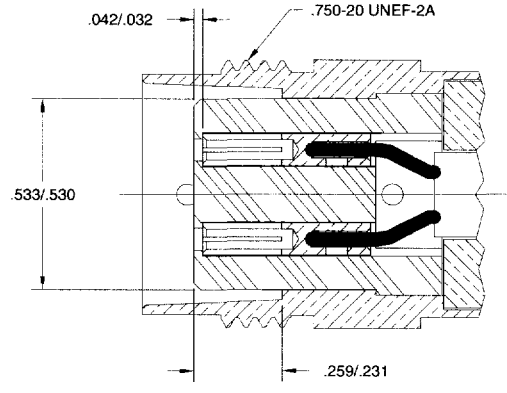
Amphenol twinaxial connectors, polarized key and keyway construction, meet applicable sections of MIL-C-3655.



.750-20 TWINAX PIN

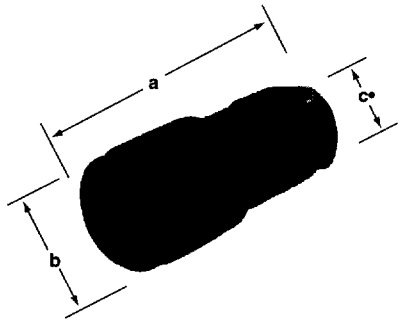


.750-20 TWINAX SOCKET



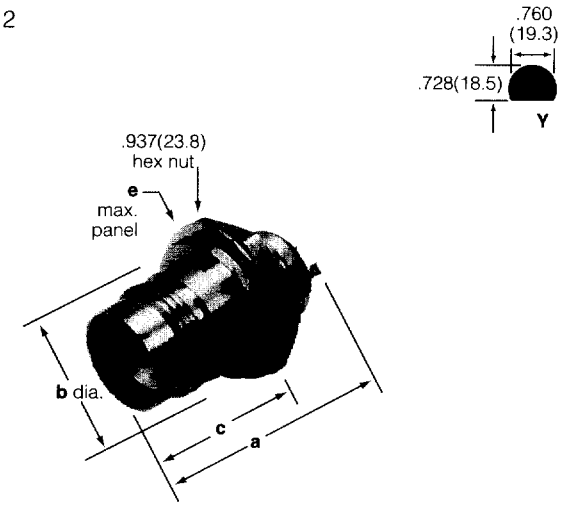
Twinax Connectors

Fig. 1



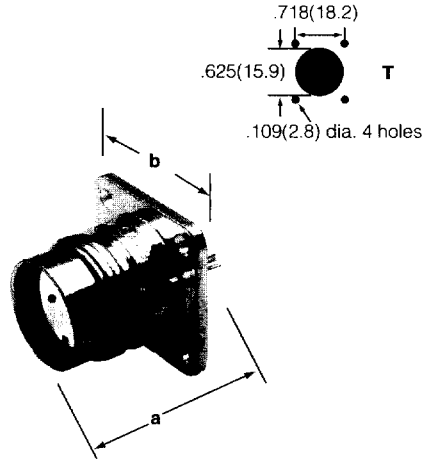
Clamp Twinax Plugs
32225
82-5589
82-5589-RFX1

Fig. 2



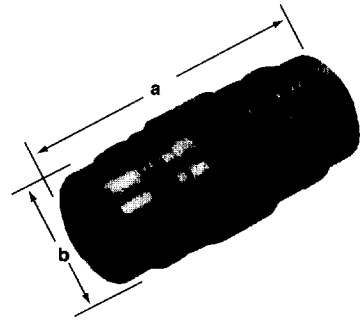
Twinax Receptacle, Front Mounted
82-5590-RFX

Fig. 3



Twinax Panel Receptacle
6225

Fig. 4



Twinax Barrel Adapter Jack-Jack
82-5588
82-5588-RFX

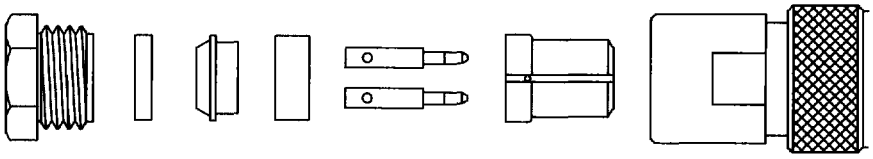
TWINAX CONNECTORS

Cable/ Description		Cable Attachment		Dimensions, inches (millimeters)				Notes			Mtg. Hole	IBM Ref. Number	Amphenol Number	Fig.	
		Outer	Inner	a	b	c	e	CAI	Plt.	Ins.					
RG-22	Plug	Clamp	Solder	1.75(44.5)	.875(22.2)	.444(11.3)•	—	C19	P4	D6	—	5052750	**32225**	1	
Times AA-6026, AA6076, AA-6079 Brand Rex T8756A Belden 8227, 9207 IBM 7362211	Plug	Clamp	Solder or Crimp	1.89(48.0)	.890(22.6)	.340(8.7)•	—	C19	P1	D12	—	7362229	**82-5589**	1	▲
				1.89(48.0)	.890(22.6)	.340(8.7)•	—	C19	P1	D22	—	—	**82-5589-RFX1**	1	▲
Receptacle, Front Mount, Solder Cup Terminals				1.58(40.1)	.945(24.0)	.787(20.0)	.295(7.5)	—	P7	D25	Y	—	**82-5590-RFX**	2	▲
Panel Receptacle —				1.19(30.2)	1.00(25.4)	—	—	—	P4	D6	T	—	**6225**	3	▲
Barrel Adapter, Jack-Jack				1.67(42.4)	.768((19.5)	—	—	—	P1	D12	—	—	**82-5588**	4	▲
Barrel Adapter, Jack-Jack				1.67(42.4)	.768((19.5)	—	—	—	P7	D25	—	—	**82-5588-RFX**	4	▲
Pkg of 50 Male Contacts for 82-5589				.740(18.8)	.090(2.3)	.043(1.1)•	—	—	P27	—	—	—	**82-10588**	‡	

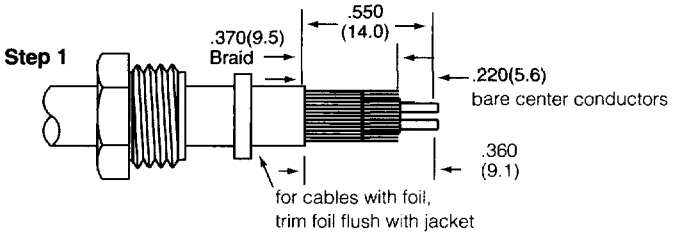
• Accommodates cable diameter ‡ not illustrated ▲ distributor stocked

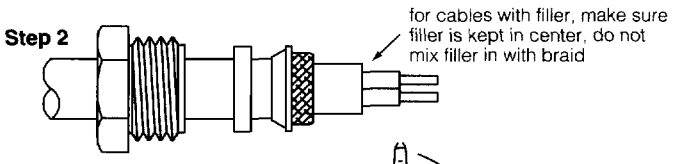
Twinax Assembly Instructions - C19

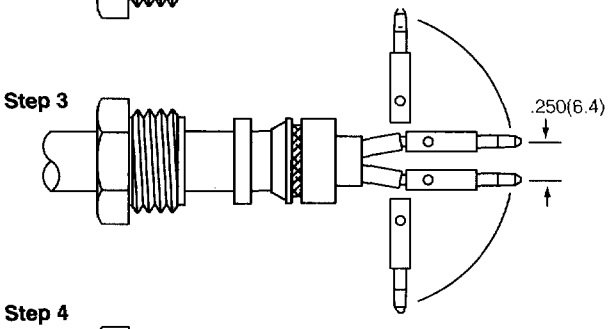
CLAMP PLUGS

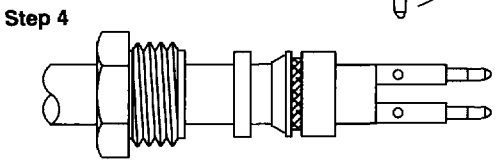


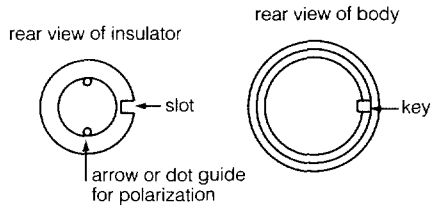
clamp nut | clamp gasket | braid clamp | sleeve | male contacts | insulator | plug body **82-5589** **82-5589-RFX1** **32225**

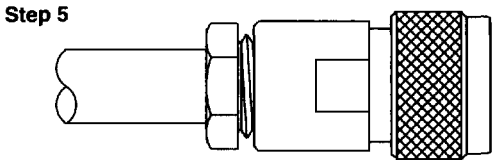












Step 1 Slide clamp nut and clamp gasket over cable end. V-groove in clamp gasket faces toward connector body. Strip cable to dimensions shown. **Important:** Do not nick insulation around center conductors. For solid core cables, lay braid back out of way while trimming core; then lay braid down again to facilitate Step 2.

Step 2 Slide braid clamp over braid until inner shoulder butts against jacket. (Note: sharp edge of braid clamp goes toward V-groove in clamp gasket.) Fold braid back evenly over braid clamp as shown.

Step 3 Slide sleeve over cable so that braid bottoms inside sleeve. Solder contacts to conductors, using minimum heat. Remove any excess solder. Alternative method: Crimp center contacts using CTL Series tool number CTL-4 cavities B & C; or by using Die Set 227-1414 cavities B & C in tool frame 227-944 or in Pneumatic Crimp Tool 227-60. Bend conductors and contacts out and back to obtain .250(6.4) spacing between contacts.

Step 4 Insert contacts into rear of insulator. (Note: for Belden 9207 and similar solid core cables, contact on bare copper conductor [or for Belden 8227 and similar air dielectric cables, the contact on white insulated conductor] goes into hole with dot next to it.) Slide insulator to butt against sleeve as shown.

Step 5 Insert assembly into connector body, aligning slot of insulator with polarizing key in body. Tighten clamp nut to 50 lbf-in.(5.7 N·m) torque. Do not twist connector body.