

# Specifications for Twinax

TWINAX series connectors are weatherproof, physically robust, having twin contacts and a threaded coupling mechanism. TWINAX connectors have an independent key and key-way to ensure the correct contact alignment before mating. They have a nominal impedance of 100 ohms and are matched to twinaxial data transmission cables. These connectors are available in standard V-groove compression clamp style which allow a metal to metal contact of the shield resulting in greater strength and superior electrical performance. Crimp versions are available as well. Because of the superior shielding characteristics of the TWINAX connectors and matching cables, they are particularly suitable for use in balanced low level and high sensitivity circuits as in data transmission applications especially on the older IBM 34, 36, 38 and the AS400 systems, as well as current TWINAX applications.

## MATERIALS

| Connector Parts            | Material        |
|----------------------------|-----------------|
| Connector Body and Parts   | Brass           |
| Male Contact Pin           | Brass           |
| Outer Contact              | Brass           |
| Socket Contact             | Phosphor Bronze |
| Crimp Ferrule (Where Uses) | Annealed Copper |
| Insulator Material         | Rexolite        |
| Rubber Gaskets             | Silicone Rubber |
| Plating                    | Nickel          |

## ELECTRICAL

| Requirement                    | Performance     |
|--------------------------------|-----------------|
| Impedance                      | 100 $\Omega$    |
| Frequency Range                | 0-500 MHz       |
| VSWR                           | 1.30 Max.       |
| Test Voltage (At Sea Level)    | 500V rms        |
| Working Voltage (At Sea Level) | 500V rms        |
| Insulation Resistance          | 5000 Meg. Min.  |
| Contact Resistance             | 2 Milliohm Max. |

## MECHANICAL & ENVIRONMENTAL

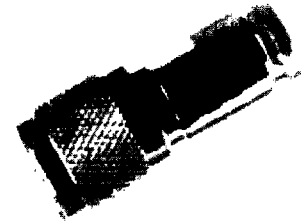
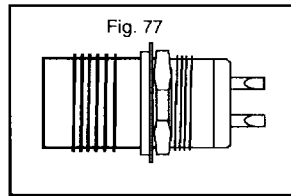
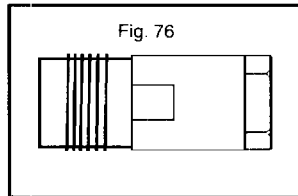
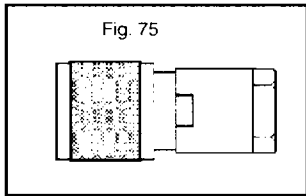
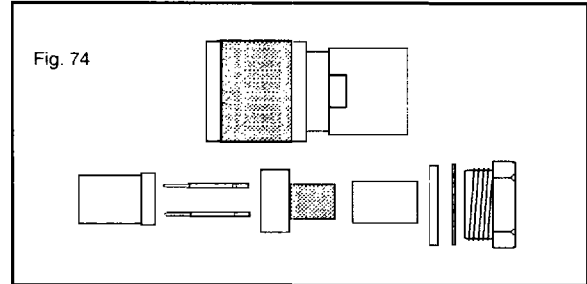
| Requirement                   | Performance                       |
|-------------------------------|-----------------------------------|
| Durability                    | 500 Insertions & Extractions Min. |
| Shock                         | 50 G                              |
| Vibration                     | 20 G from 80-2000 Hz              |
| Cable Retention (Cable Types) | 75 lbs. Minimum (RG108/U)         |
| Coupling Nut                  | 75 lbs. Minimum                   |
| Temperature Range             | Nonyl: -40 to +85 C               |

# Twinax Connectors

## Plugs and Jacks

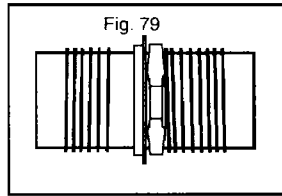
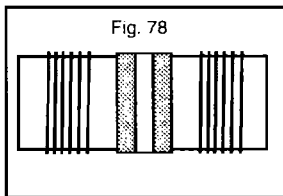
Standard Twinax plugs are IBM style compression, or clamp method attachable. The pins, which are one gold and one silver for external identification, are designed for crimping but also contain a vent hole to facilitate soldering as well. The crimp version design has the crimp mechanism internal to the connector. Once assembled it has the appearance as the standard compression type.

| Part Number | Description                                  | Fig. No. |
|-------------|--|----------|
| 210A104R    | Male Compression Type (Crimp/Solder Pins)    | 75       |
| 210A906R    | Male Internal Crimp Type (Crimp Solder Pins) | 74       |
| 220A106R    | Female Compression Type, Crimp/Solder Pins   | 76       |
| 226A016     | Female Bulkhead Front Mount Solder Jack      | 77       |



## Adapters & Terminator

Standard Twinax adapters are used for joining, splicing, and tapping various cable applications. These adapters are sturdy machined brass with attractive nickel plating. All contacts are gold plated for reliable mating.



| Part Number | Description                      | Fig. No. |
|-------------|----------------------------------|----------|
| 232A006     | Female/Female Inline Splice      | 78       |
| 235A022     | Female/Female Bulkhead           | 79       |
| 243A006     | Female/Male/Female 'T' Adapter   | 80       |
| 245A006     | Female/Female/Female 'T' Adapter | 81       |
| 272A006     | 100 $\Omega$ Male Terminator     | 82       |

