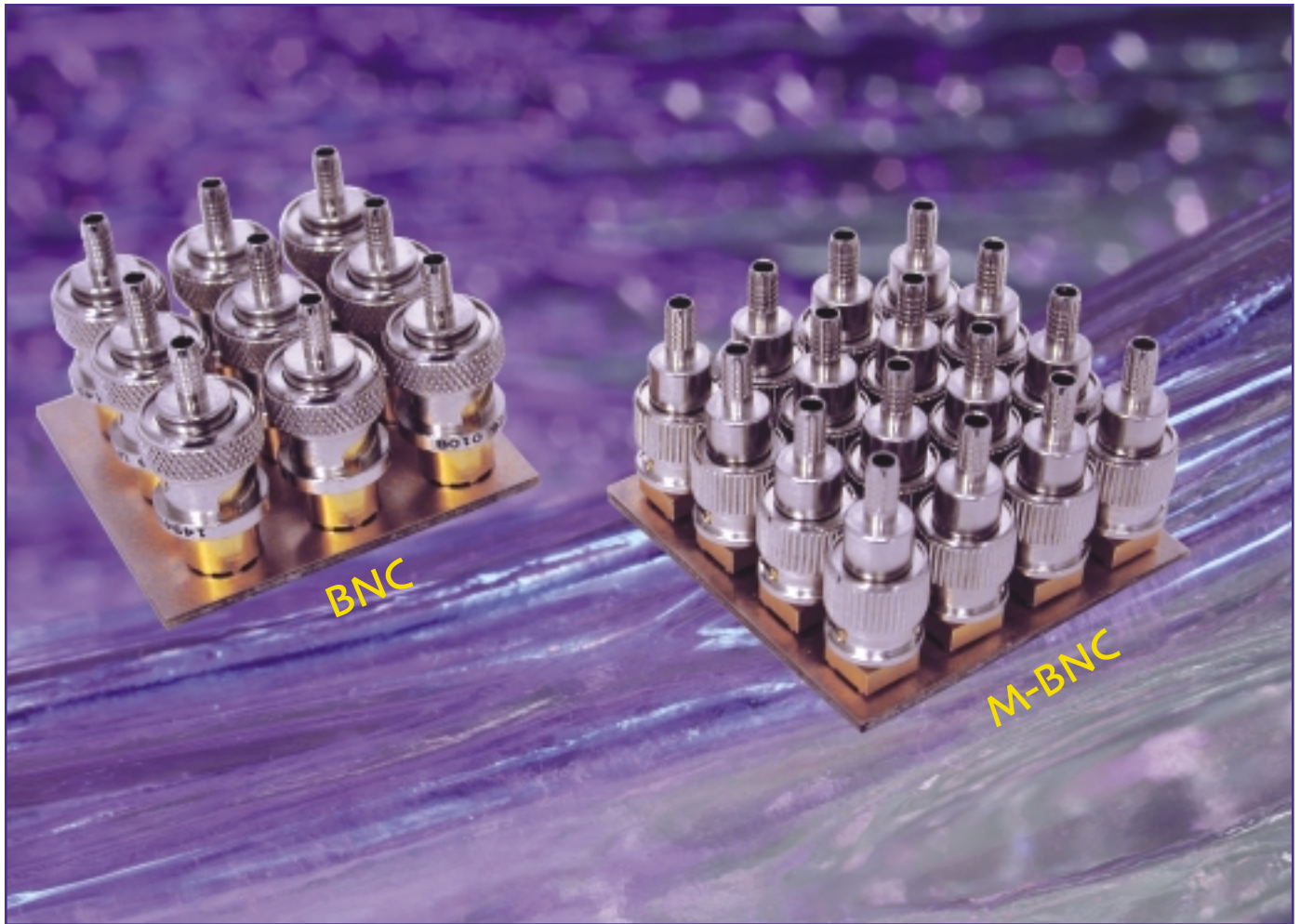


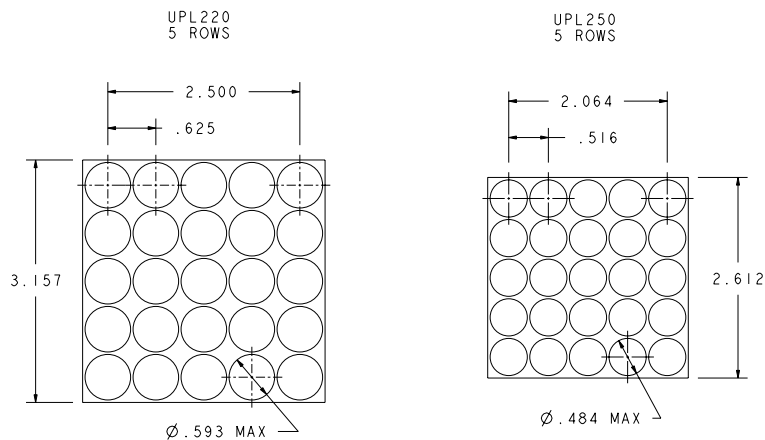
# The Next Generation Telco Central Office DS3 Coaxial Connector

## 250 SERIES MINI-BNC (M-BNC)



Same as the telco standard BNC except smaller.  
This allows 40% more interconnects in the same area.

### Spacing Comparison BNC vs M-BNC



Dimensions are Plug Outer Diameter



# The Next Generation Telco Central Office DS3 Coaxial Connector

## 250 SERIES MINIATURE BNC (M-BNC)

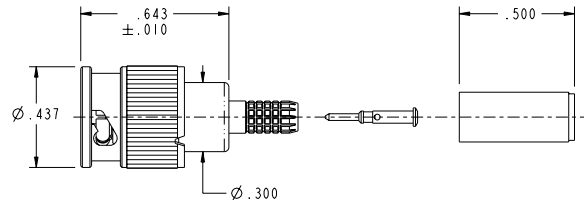
The mini-BNC 250 RF connector series from Trompeter was designed specifically for DS3 telco coaxial central office applications to allow higher interconnect density while preserving the positive characteristics of the Trompeter full size BNC. In fact, the 250 series provides for higher density of interconnects in a given area.

Alternative products such as the SMB, while sometimes offered in true 75 ohm, do not have bayonet locking features. Some have no interface locking feature at all and some use “posilock” technology, which is quite expensive and not nearly so well known in the telco space as the bayonet locking system. Also, SMB connectors were not typically designed to be field-terminated while the BNC was and this smaller version 250 series, the Mini-BNC is.

In researching this next-generation RF connector series, Trompeter canvassed many of the mainstream service providers and visited several central office facilities to determine clear goals for this new connector. The design objective became very clearly one of maintaining all the characteristic of the Trompeter BNC while allowing higher density. At Trompeter, we rank the importance of trained and well-equipped installers at least equal in value to the connector itself with the Mini-BNC there is no need for retraining field installers and no need for new tooling for those installers.

The elements of the Trompeter design that were specifically targeted for inclusion are:

1. **Same crimp/crimp design** – the Trompeter BNC and the Trompeter miniature BNC are field terminated with the exact same cable strip tools, contact crimp tools, and crimp sleeve crimp tools. The effectiveness of a crimp/crimp connector has been proven over 30 years of use in the telco DS3 application involving an estimated 50 million connectors.
2. **Same installation tooling** – the Trompeter tooling for the telco DS3 cable termination assignment is truly best-in-class and is widely used by the wide base of trained telco installers. With field tooling already deployed and installers already trained, the use of the UPL250-xxx will be easily implemented. The tools are the same, the strip dimensions are the same and the installation is the same.
3. **Same footprint on the jack side** – since many high density applications such as routers use SMB or SMZ jacks to achieve interconnect density, the 250 series jacks have been carefully designed to use the same footprint on the printed circuit board, allowing easy implementation of this innovative technology.
4. **75 ohm** – the DS3 line in the telco central office is 75 ohm and the mini-BNC is as well. Further, this characteristic is tightly designed and manufactured to stay at this impedance over the frequencies of interest and beyond. This allows RF “head room” and presents a matched impedance condition to the electromagnetic field that is so important to return loss performance.
5. **Bayonet locking coupling mechanism** – the primary advantage of the BNC over threaded alternatives is a quick-connect feature enabled by the pair of lugs on the jack side interface and the J-slots on the plug side interface. This mechanism is positive and can be sensed to be fully mated when engaged. In the case of the Trompeter product, the bayonet is held in a positive force condition under load for the life of the part (typically 30 or 40 years) by a beryllium copper wave washer that does not deform over time (lower cost connector products now available on the market may use alternative materials in lieu of beryllium copper for this function.)
6. **Visual inspection** – because the mated condition is so important to flawless signal processing over long periods of time, the bayonet coupling can be visually inspected to determine if the plug is fully engaged to the jack. This is unique to the BNC and mini-BNC product since threaded parts do not have a positive stop representing full engagement. The Trompeter design facilitates this inspection process by a mark on the plug coupling sleeve that can be aligned and shown to be fully engaged.



# The Next Generation Telco Central Office DS3 Coaxial Connector

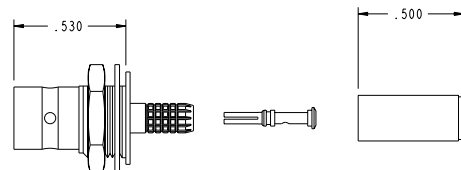
## 250 SERIES MINIATURE BNC (M-BNC)



7. **Mate/De-mate tool** – Trompeter has designed and manufactured a removal tool that is uniquely fitted to enable installation and removal of the mini-BNC in tight spaces without resorting to pulling on the cable itself. This tool is modeled after the BNC-removal tool and uses the same materials and design.

8. **Attention to long term signal quality** – the 250 series mini-BNC maintains the same high attention to quality in design and materials that the Trompeter BNC is famous for including:

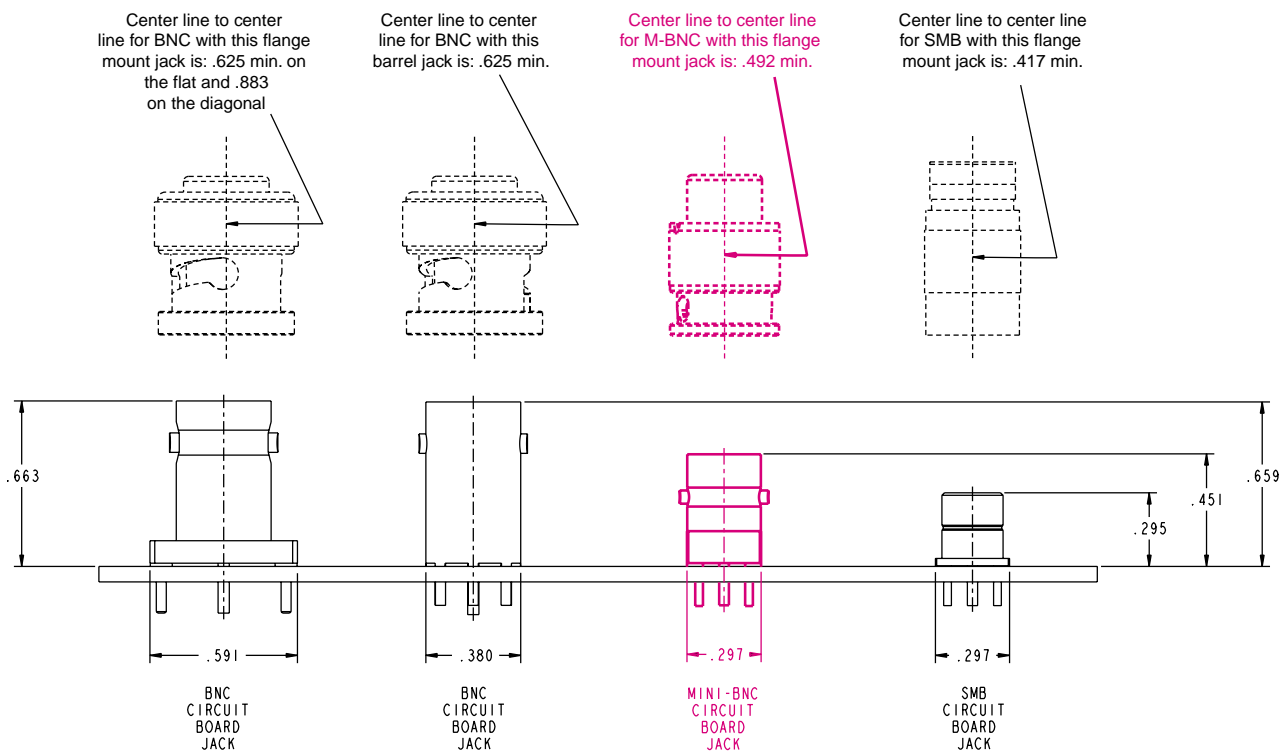
- Fully enclosed spring fingers
- 50 millionths of gold plating on the center contact, with a nickel barrier layer as well
- Solid PTFE (Teflon™) dielectric material
- Identical proven ferrule design for maximum cable retention
- Tapered lead in for the center wire into the rear of the center contact
- Tapered lead end to allow positioning the braid over that the foil under the ferrule itself
- Lot traceability on each part
- Plating weep hole in center contact
- Nail head feature in center contact
- Center contact engages dielectric with positive tactile snap



# The Next Generation Telco Central Office DS3 Coaxial Connector

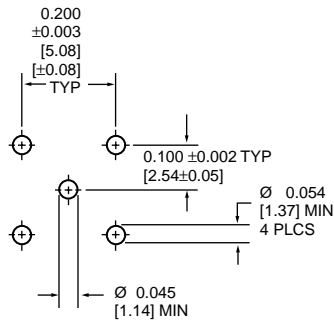
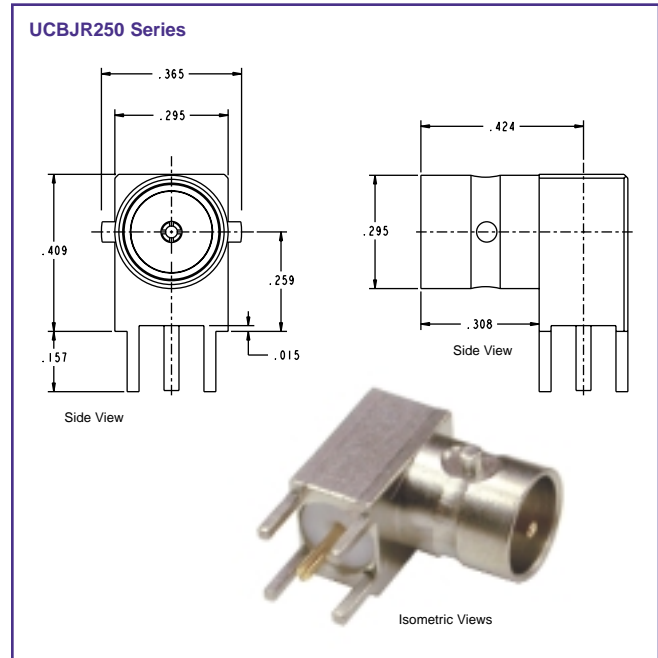
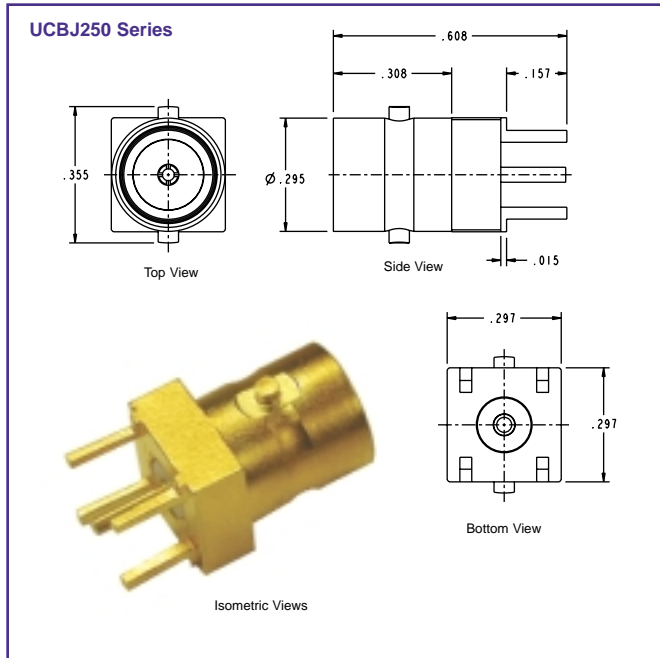
## 250 SERIES MINIATURE BNC (M-BNC)

All products in the M-BNC 250 series are 75 ohm		final plate	bulkhead mount	PCB OA thickness
<b>UPL250-026</b>	Straight plug M-BNC series	ni	n/a	
<b>UPL250-025</b>	Straight plug M-BNC series	ni	n/a	
<b>UPL250-014</b>	Straight plug M-BNC series	ni	n/a	
<b>UPL250-009</b>	Straight plug M-BNC series	ni	n/a	
<b>UPLR250-026</b>	Right angle plug M-BNC series	ni	n/a	
<b>UPLR250-025</b>	Right angle plug M-BNC series	ni	n/a	
<b>UBJ250-026</b>	Bulkhead cable jack	ni	yes	
<b>UBJ250-025</b>	Bulkhead cable jack	ni	yes	
<b>UCBJ250-G</b>	Straight PCB-mounted jack	au	no	
<b>UCBJ250-N</b>	Straight PCB-mounted jack	ni	no	
<b>UCBBJ250-G</b>	Straight PCB-mounted jack	au	yes	
<b>UCBBJ250-N</b>	Straight PCB-mounted jack	ni	yes	
<b>UCBJR250-G</b>	Right angle PCB-mounted jack	au	no	
<b>UCBJR250-N</b>	Right angle PCB-mounted jack	ni	no	
<b>UCBBJR250-G</b>	Right angle PCB-mounted jack	au	yes	
<b>UCBBJR250-N</b>	Right angle PCB-mounted jack	ni	yes	
<b>UCBJE250-1</b>	PCB-edge mounted SMT jack	au	no	0.032
<b>UCBJE250-2</b>	PCB-edge mounted SMT jack	au	no	0.064
<b>UCBBJE250-1</b>	PCB-edge mounted SMT jack	au	yes	0.032
<b>UCBBJE250-2</b>	PCB-edge mounted SMT jack	au	yes	0.064
<b>UAD258</b>	M-BNC jack to M-BNC jack adapter Barrel adapter	ni	yes	



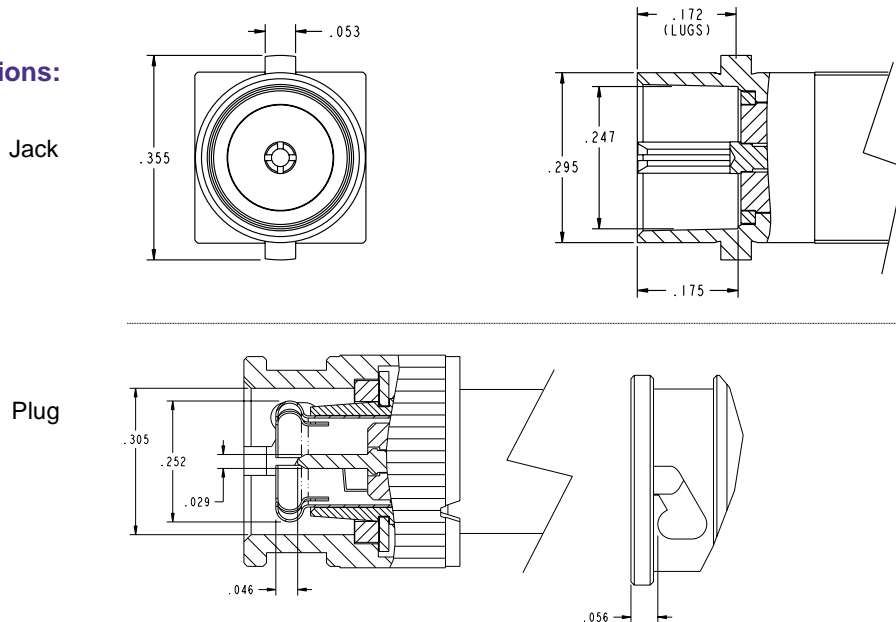
# The Next Generation Telco Central Office DS3 Coaxial Connector

## 250 SERIES MINIATURE BNC (M-BNC)



The PCB “footprint” for the 250 Series jack is the same as typically for SMB products. Dimensions shown are “as plated”.

### Interface Dimensions:



# The Next Generation Telco Central Office DS3 Coaxial Connector

## 250 SERIES MINIATURE BNC (M-BNC)

### CABLE CUTTING TOOL

**700-0024**

Designed to cut Coax cables without compressing dielectric or damaging center conductor



This powerful, low-cost, portable hand-held (less than 2.25 lbs.) cable stripper delivers, production quality performance, and gives you up to 250 strips per charge (7.2V Ni-Cad battery without memory effect). The replaceable, 3-level cutter head, is preset to strip your coax cable for Trompeter's 220 Series and 250 Series, Tool Crimp BNC Connectors. The cutter head has adjustable depth cutter blades for precision tuning. Precision ground, tool steel blades (hardened to Rockwell 64) give you up to 15,000 strips! Rapid Charger/Reconditioner recharges your Ni-Cad in only 1.5 hours! 1 Year Warranty.

### POWERED CABLE STRIPPER KITS

Comes with: 1 Drive, 1 Ni-Cad Battery Pak, 1 Cutter Head, 1 Rapid Charger/Reconditioner and 1 Carrying Case. Part Number Example: Stripper/Cutter Head  
**BCWS/C26T3D**  
**BCWS/C26T3I**

### CUTTER HEAD GUIDE

Cable Outside Diameter Cut	3-Blade Cut	Cable Group
.235-.270	<b>C26T3D</b>	<b>-014/-025</b>
.110-.160	<b>C26T3I</b>	<b>-009/-026</b>

Cable	Cable Group	Cutter Head	Crimp Die	Cable OD Range (Inches)
734 Type	<b>-025</b>	C26T3D	CD3-19	0.235 - 0.270
735 Type	<b>-026</b>	C26T3I	CD3-19	0.110 - 0.160
Belden 8212	<b>-014</b>	C26T3D	CD3-19	0.235 - 0.270
Belden YR23023	<b>-009</b>	C26T3I	CD3-19	0.110 - 0.160
Belden YR23930	<b>-014</b>	C26T3D	CD3-19	0.235 - 0.270
Belden YR28314	<b>-009</b>	C26T3I	CD3-19	0.110 - 0.160
Belden YR39667	<b>-009</b>	C26T3I	CD3-19	0.110 - 0.160

### CENTER CONTACT CRIMP TOOL

#### 12-Point Crimp Tool

BNC/M-BNC/Patch Plug

(Green/Yellow Handle)

**010-0098**



### CRIMP TOOL

#### CT4L

Ergonomic Frame only

(Die not included, for crimp die see below)



### CRIMP DIE

75 Ohm Outer Sleeve

	A	EMBOSESSES	B	EMBOSESSES
<b>CD3-19</b>	.178	178	.255	.255

\* Note: Dies imprint either cavity (A/B) or hex size onto crimp sleeve. Custom dies are available for special imprints.

#### Initialized Embossed Dies....

Trompeter offers a personalized embossed CD3-19 die. One side of the die face embosses 734 and 735 respectively. The other die face embosses up to 4 pre-selected letters/numbers of your choosing. The base part number is 010-0129-xx\* and is accompanied by your personalized "dash number". Call factory for availability. (xx = replace with dash number) Requires a one time setup charge.