

# BNC

## 75 $\Omega$ Cable Connectors



NEUTRIK introduces BNC 75 $\Omega$  cable connectors in push-pull, rear twist and tiny rear twist versions. Featuring a true 75 $\Omega$  design that meets the stringent requirements of HDTV/DVD these connectors sustain consistent impedance at high frequencies up to 3GHz; are easy to handle in high density applications such as video patchbays and switchers; shows excellent return loss and VSWR; consist of machined parts that are precisely made to our high standards; and offer a center pin assembly with a snug fit to provide tactile indication when the contact is snapped into position.

### Push-Pull

- Unique push-pull locking system is ideal for ultra high density applications, patching, etc.
- Assembly is fast and easy and requires only a standard center contact crimp after cable prep.
- Use of standard crimp size eliminates the need for different crimp dies and facilitates field repair.
- Innovative screw lock cable retention with the jacket providing superior pull strength.
- Accessories include color coded boots in 10 standard and 3 transparent colors.

### Rear Twist/Rear Twist Tiny

- "Rear Twist Principle" locking/unlocking using the easily accessible soft touch boot (patent pending).
- Ideal for recessed bulkheads where access to the "head" of the connector might be an issue. These connectors turn from the back not the front.
- Shield and jacket crimp technology prevents the problem of an exposed grounding braid on cable assemblies.
- Accessories include color coded boots in 10 standard colors, crimp tool and dies.

 **NEUTRIK**  
CONNECTING THE WORLD

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# TECHNICAL DATA

## ELECTRICAL

|                                  |                               |                |                 |                             |
|----------------------------------|-------------------------------|----------------|-----------------|-----------------------------|
| Impedance:                       | 75Ω                           | PUSH-PULL<br>X | REAR TWIST<br>X | REAR TWIST-TINY<br>X        |
| Rated voltage:                   | 500 Volts rms                 | X              | X               | 250 Volts RMS               |
| Insulation resistance:           | > 5 • 10 <sup>9</sup> Ω       | X              | X               | X                           |
| Dielectric withstanding voltage: | 1500 V ac                     | X              | X               | 750 Volts RMS               |
| VSWR / Return Loss:              | ≤ 1.05 / >32 dB up to 1 GHz   | X              | X               | ≤ 1.10 / >26 dB up to 1 GHz |
|                                  | ≤ 1.065 / > 30 dB up to 2 GHz | X              | X               | ≤ 1.14 / >24 dB up to 2 GHz |
|                                  | ≤ 1.10 / > 26 dB up to 3 GHz  | X              | X               | ≤ 1.22 / >20 dB up to 3 GHz |
| Inner contact resistance:        | ≤ 3mΩ (initial)               | X              | X               | X                           |
| Outer contact resistance:        | ≤ 2mΩ (initial)               | X              | X               | X                           |

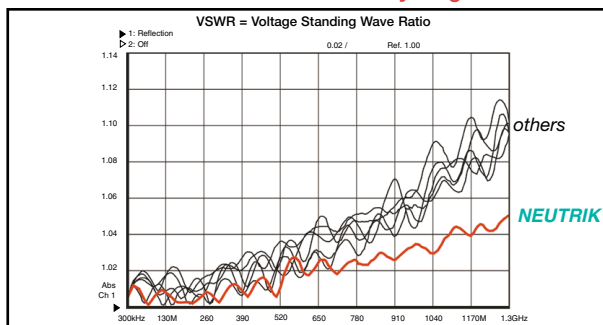
## MECHANICAL

|                                |                                           |   |   |   |
|--------------------------------|-------------------------------------------|---|---|---|
| Cable Anchoring:               | NEUTRIK® chuck principle<br>Crimp ferrule | X | X | X |
| Durability:                    | 500 cycles minimum                        | X | X | X |
| Center contact retention:      | > 30 N                                    | X | X | X |
| Engagement force:              | < 20 N                                    | X | X | X |
| Solderability:                 | complies with IEC 68-2-20                 | X | X | X |
| Contact crimpability:          | complies with IEC 60803 & IEC 60352-2     | X | X | X |
| Crimp tool for center contact: | HX-BNC / DIE-BNC-P                        | X | X | X |

## MATERIALS

|                    |                                                                                                                                                                                                                                                                                                                                                       |                                                                                  |                                                                                                                      |                                                                                                  |
|--------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------|
| Shell:             |                                                                                                                                                                                                                                                                                                                                                       | Brass CuZn39Pb3,<br>OPTALLOY® coated<br>Polyamid PA<br>Gr50, PVZ 3H              | Brass CuZn39Pb3,<br>OPTALLOY® coated<br>Grilon PVZ<br>15H/PU 95 Sh                                                   | Brass CuZn39Pb3,<br>OPTALLOY® coated<br>Grilon PVZ<br>15H/PU 95 Sh                               |
| Ground contact:    |                                                                                                                                                                                                                                                                                                                                                       | Brass CuSn6, 0.2 μm<br>AuCo over 2μm NiP15<br>(TRIBOR®)                          | Bronze CuSn6, 0.2 μm<br>AuCo over 2μm NiP15<br>(TRIBOR®)<br>Brass CuZn39Pb3,<br>OPTALLOY® coated                     | Bronze CuSn6, 0.2 μm<br>AuCo over 2μm NiP15<br>(TRIBOR®)<br>Brass CuZn39Pb3,<br>OPTALLOY® coated |
| Center contact:    | Pin 0.6: Brass CuZn35Pb2, 0.2 μm AuCo (Duor®)<br>Pin 0.7: Brass CuZn35Pb2, 0.2 μm AuCo (Tribor®)<br>Pin 0.9: Brass CuZn35Pb2, 0.2 μm AuCo (Redgold)<br>Pin 1.1: Brass CuZn35Pb2, 0.2 μm Palladium<br>Pin 1.2: Brass CuZn35Pb2, 0.2 μm AuCo (Tribor®)<br>Pin 0.4: Brass CuZn35Pb2, 0.2 μm Palladium<br>Pin 0.5: Brass CuZn35Pb2, 0.2 μm AuCo (Redgold) | Coding Ring:<br>Brown/Beige<br>Red<br>Orange<br>Blue<br>Yellow<br>Black<br>Green | See ordering information for specifics.<br>Contacts now available as separate items.<br>Contact factory for details. |                                                                                                  |
| Chuck:             | Polyacetal POM                                                                                                                                                                                                                                                                                                                                        | X                                                                                |                                                                                                                      |                                                                                                  |
| Insulator:         | Teflon PTFE                                                                                                                                                                                                                                                                                                                                           | X                                                                                | X                                                                                                                    | X                                                                                                |
| Temperature range: |                                                                                                                                                                                                                                                                                                                                                       | -30°C to +40°C                                                                   | -30°C to +85°C                                                                                                       | -30°C to +85°C                                                                                   |

Technical Data can only be guaranteed for use with cable shown on ordering chart.



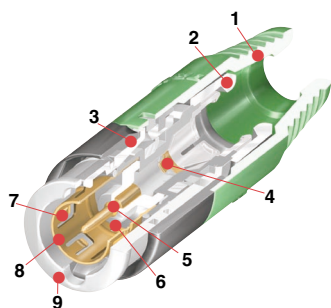
## Comparison between NEUTRIK BNC and 5 competitive products

NEUTRIK BNC shows excellent VSWR data of max. 1.05 @ 1.3 GHz. Test results obtained with BNC plugs on each end of 1 m RG59 B/U cable, terminated with 75Ω load.

NOTE: Uncompressed HDTV signals result in data rates of up to 1.5 Gb/s. This corresponds to a serial data stream with fundamental frequency of 750 MHz maximum. Taking into account the third harmonic an effective Bandwidth of 2.4 GHz is specified according to SMPTE 292M.

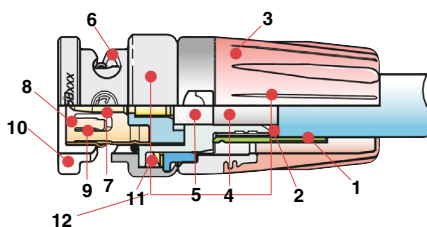
## CROSS-SECTION DETAIL

### PUSH-PULL



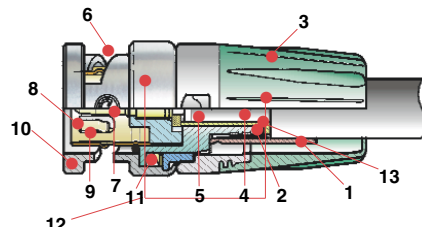
1. Push-Pull Sleeve for easy handling in high density applications and excellent cable protection.
2. Unique strain relief with the proven NEUTRIK chuck principle, no crimping is necessary.
3. Axial spring, accommodates tolerances and assures seal.
4. Rear gold plated screen contact.
5. Machined center contact is gold plated, optimizing contact performance.
6. Gold plated screen contact minimizes electrical resistance.
7. Locking latch allows quick "push-pull" connections.
8. Protruding spring fingers at the ideal contact position are well protected against mechanical damage.
9. Machined brass shell provides outstanding durability.

### REAR TWIST



1. Screen and cable jacket - crimp instead of screen crimp. Machined sleeve with grooved inner surface fixes the cable jacket and prevents tearing braids.
2. Specially designed area for foil shielded cables to be easily inserted.
3. Boot in 10 resistor colors acts as "Rear Twist". (9 colors for "Rear Twist Tiny")
4. Cable foil shield.
5. Cable dielectricum.
6. "Bayonet twist" connection.
7. Gold plated machined center contact optimizes contact performance.
8. Gold plated screen contact minimizes electrical resistance.
9. Protruding spring fingers at the ideal contact position are well protected against mechanical damage.
10. Machined brass shell provides outstanding durability.
11. Axial spring compensates tolerances and assures seal.
12. Precise design assures that the continuation of the 75Ω impedance is guaranteed.
13. A leading ferrule.

### REAR TWIST TINY



## ACCESSORIES

### Bushing

Part #: BSB-COLOR  
Standard bushing in black  
10 coding & 3 translucent colors available

B-Black  
BR-Brown  
R-Red  
O-Orange  
Y-Yellow  
GN-Green  
BL-Blue  
V-Violet  
GR-Gray  
WT-White  
TR-Translucent Red  
TBL-Translucent. Blue  
TGN-Translucent Green



### Bushing

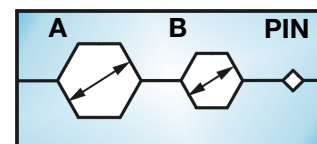
Part #: BST-COLOR  
Standard sleeve in black  
10 coding colors available

B-Black  
BR-Brown  
R-Red  
O-Orange  
Y-Yellow  
GN-Green  
BL-Blue  
V-Violet  
GR-Gray  
WT-White



### Crimp Tool

- Frame HXBNC
- Die DIE-BNC\*\*



\*\* See crimp die column under ordering information on back page.

## ORDERING INFORMATION

| N       | B   | N                  | C                    | 75        | P                                          | L            | S            | 9             |
|---------|-----|--------------------|----------------------|-----------|--------------------------------------------|--------------|--------------|---------------|
| NEUTRIK | BNC | N=Normal<br>T=Tiny | C=Cable<br>Connector | IMPEDANCE | P=Push-<br>Pull<br>B=Bayonet<br>Rear Twist | A<br>to<br>Z | A<br>to<br>Z | 4<br>to<br>12 |

Dimensional drawings are available at  
[www.neutrik.com](http://www.neutrik.com) (head office) in the PRODUCTS section under CONNECTORS

# ORDERING INFORMATION - PUSH-PULL BNC

| Part No.    | Center Contact Plating | Cable Type     |          |        |         |                                |                                    |                        |                                                |
|-------------|------------------------|----------------|----------|--------|---------|--------------------------------|------------------------------------|------------------------|------------------------------------------------|
|             |                        | Belden         | Canare   | Cmscpe | Gepco   | Nokia/Draka                    | Sommer                             | Suhner                 | Others                                         |
| NBNC75PDE6  | G                      | 1855A          |          | 7538   |         |                                |                                    |                        | Cordial CVI 4(5...)                            |
| NBNC75PFE6  | G                      |                |          |        |         |                                |                                    |                        | Kansai 3C-5S                                   |
| NBNC75PFE7  | G                      | 46899          |          |        |         | 0.6/2.8AF<br>SDV-S-LFH, SDV-75 | 600-0101M<br>600-0104M             |                        | Cordial CVI 06-28                              |
| NBMNC75PGE7 | G                      |                | V*-3C    |        |         |                                |                                    |                        | Kansai 0.5M3C-2V                               |
| NBNC75PIE9  | R                      | 1506A          |          | 2065V  |         |                                |                                    |                        |                                                |
| NBNC75PLE9  | R                      |                | V*-4 CFB |        |         |                                |                                    |                        |                                                |
| NBNC75PLS9  | R                      | 1505A<br>1426A | L-4 CFB  | 5565   | VPM2000 | 0.8/3.7 AF                     | 600-0451                           | S04263                 |                                                |
| NBNC75PNS7  | G                      | 8241           | LV-61S   | 5563   |         | 0.6/3.7                        | 600-0051(M,L,S)<br>600-0054(M,L,S) | G04233D                | RG59B/U,BBC PSF 1/3<br>Cordial CVI (CVM) 06-37 |
| NBNC75PNS9  | R                      |                |          |        |         |                                |                                    |                        | Helix 734                                      |
| NBNC75PQS11 | P                      | 1695A          |          | 2279V  |         |                                |                                    |                        |                                                |
| NBNC75PTS9  | R                      |                |          |        |         |                                |                                    |                        | Hirschmann KOKA<br>712Cu                       |
| NBNC75PTS11 | P                      | 1694A          |          | 5765   | VSD2001 | 1.0/4.8 AF                     |                                    | S05133-07<br>S05163-02 | Eupen 705 CRT 5V-HS<br>ELF Inc. Cable          |
| NBNC75PVS9  | R                      |                | V*-5C    |        |         |                                |                                    |                        |                                                |
| NBNC75PVS11 | P                      |                | V*-5 CFB |        |         | SDV-L                          |                                    |                        |                                                |
| NBNC75PVS12 |                        |                |          |        |         |                                |                                    |                        | Wisi MK 99 A (ORF)                             |

\*(3-5)

# ORDERING INFORMATION - REAR TWIST BNC

| Part No.:   | Center Contact Plating |                    |           |          |                   |     | Inner Conductor |           |                | Cable Type |         |        |         |                                 |                                    |                        |                                    |  |
|-------------|------------------------|--------------------|-----------|----------|-------------------|-----|-----------------|-----------|----------------|------------|---------|--------|---------|---------------------------------|------------------------------------|------------------------|------------------------------------|--|
|             | Crimp Die:             | Cable Jacket Crimp |           |          |                   |     |                 | Insulator | Cable OD       | Belden     | Canare  | Cmscpe | Gepco   | Nokia/Draka                     | Sommer                             | Suhner                 | Others                             |  |
|             |                        | A                  | B         | Pin      | A                 | B   | Pin             |           |                |            |         |        |         |                                 |                                    |                        |                                    |  |
| NBNC75BDD6  | G                      | DIE-BNC-JD         | 5.41/4.53 | 1.60 mm  | [.213/.178/.063"] | 0.6 | 2.6             | 4.0 mm    | 1855A          |            |         | 7538   |         |                                 |                                    |                        | Cordial CVI 4(5...)                |  |
| NBNC75BFG7  | G                      | DIE-BNC-PG         | 6.47/5.00 | 1.60 mm  | [.255/.197/.063"] | 0.6 | 2.9             | 4.6 mm    | 46899          |            |         |        |         | 0.6/2.8 AF SDV<br>-S-LFH,SDV-75 | 600-0101M<br>600-0104M             |                        | Cordial CVI 06-28                  |  |
| NBNC75BFH6  |                        |                    |           |          |                   |     |                 |           |                |            |         |        |         |                                 |                                    |                        | Kansai 3C-5S                       |  |
| NBNC75BGG7  | G                      | DIE-BNC-PG         | 6.47/5.00 | 1.60 mm  | [.255/.197/.063"] | 0.6 | 2.9             | 4.6 mm    |                |            | V*-3C   |        |         |                                 |                                    |                        |                                    |  |
| NBNC75BIJ9  | R                      | DIE-BNC-JD         | 5.41/4.53 | 1.60 mm  | [.213/.178/.063"] | 0.8 | 3.4             | 5.0 mm    | 1506A          |            |         | 2065V  |         |                                 |                                    |                        |                                    |  |
| NBNC75BIJ9  | R                      | DIE-BNC-JD         | 5.41/4.53 | 1.60 mm  | [.213/.178/.063"] | 0.8 | 3.7             | 5.0 mm    |                |            | LV-4CFB |        |         |                                 |                                    |                        |                                    |  |
| NBNC75BLP7  | G                      | DIE-BNC-PG         | 6.47/5.00 | 1.60 mm  | [.255/.197/.063"] | 0.6 | 3.7             | 6.1 mm    | 8241           |            | LV-61S  | 5563   |         | 0.6/3.7                         | 600-0051(M,L,S)<br>600-0054(M,L,S) |                        | RG59B/U<br>Cordial CVI (CVM) 06-37 |  |
| NBNC75BLP9  | R                      | DIE-BNC-PG         | 6.47/5.00 | 1.60 mm  | [.255/.197/.063"] | 0.8 | 3.7             | 6.1 mm    | 1505A<br>1426A |            | LV-4CFB | 5565   | VPM2000 | 0.8/3.7 AF                      | 600-0451                           | S04263<br>S04233       | RG59 B/U                           |  |
| NBNC75BLS7  | G                      | DIE-BNC-CS         | 4.06/7.01 | 1.60 mm  | [.160/.276/.063"] | 0.6 | 3.7             | 6.7 mm    |                |            |         |        |         |                                 |                                    | G04233D<br>(PTT 6010)  | BBC PSF 1/3                        |  |
| NBNC75BNP9  | R                      | DIE-BNC-PG         | 6.47/5.00 | 1.60 mm  | [.255/.197/.063"] | 0.8 | 3.8             | 6.0 mm    |                |            |         |        |         |                                 |                                    |                        | Helix 734                          |  |
| NBNC75BQP11 | P                      | DIE-BNC-PG         | 6.47/5.00 | 1.60 mm  | [.255/.197/.063"] | 1.0 | 4.3             | 6.0 mm    | 1695A          |            |         | 2279V  |         |                                 |                                    |                        |                                    |  |
| NBNC75BRS9  | R                      | DIE-BNC-CS         | 4.06/7.01 | 1.60 mm  | [.160/.276/.063"] | 1.0 | 4.9             | 6.8 mm    |                |            | V*-5C   |        |         |                                 |                                    |                        |                                    |  |
| NBNC75BTS9  | R                      | DIE-BNC-CS         | 4.06/7.01 | 1.60 mm  | [.160/.276/.063"] | 1.0 | 4.9             | 6.8 mm    |                |            |         |        |         |                                 |                                    |                        | Hirschmann KOKA 712Cu              |  |
| NBNC75BTS11 | P                      | DIE-BNC-CS         | 4.06/7.01 | 1.60 mm  | [.160/.276/.063"] | 1.0 | 4.9             | 6.8 mm    |                |            |         |        |         |                                 |                                    |                        | Eupen 705 CRT 5V-HS                |  |
| NBNC75BTU11 | P                      | DIE-BNC-U          | 7.36/     | /1.60 mm | [.290/ /063"]     | 1.0 | 4.6             | 7.0 mm    | 1694A          |            |         | 5765   | VSD2001 |                                 |                                    | S05133-07<br>S05163-02 |                                    |  |
| NBNC75BUU11 | P                      | DIE-BNC-U          | 7.36/     | /1.60 mm | [.290/ /063"]     | 1.0 | 4.7             | 7.2 mm    |                |            |         |        |         | 1.0/4.8 AF                      |                                    |                        |                                    |  |
| NBNC75BWS11 | P                      | DIE-BNC-CS         | 4.06/7.01 | 1.60 mm  | [.160/.276/.063"] | 1.0 | 4.9             | 6.8 mm    |                |            | V*-5CFB |        |         | SDV-L                           |                                    |                        | ELF Inc. Cable                     |  |
| NBNC75BWS12 | G                      | DIE-BNC-CS         | 4.06/7.01 | 1.60 mm  | [.160/.276/.063"] | 1.0 | 4.9             | 6.8 mm    |                |            |         |        |         |                                 |                                    |                        | Wisi MK 99 A (ORF)                 |  |
| NBNC75BXY9  | R                      | DIE-BNC-Y          | 8.23/     | /1.60 mm | [.324/ /063"]     | 0.8 | 5.0             | 7.8 mm    | 8281           |            |         |        |         | 0.8/4.9DZ                       |                                    |                        |                                    |  |
| NBNC75BY11  | P                      | DIE-BNC-Y          | 8.23/     | /1.60 mm | [.324/ /063"]     | 1.0 | 4.9             | 7.7 mm    |                |            | L-5CFB  |        |         |                                 |                                    |                        |                                    |  |

Bold print indicates die size.

\*(3-5)

# ORDERING INFORMATION - REAR TWIST TINY

| Part No.:  | Center Contact Plating |                    |           |         |                   |        | Inner Conductor |           |                        | Cable Type |        |          |                                              |        |         |                                     |  |
|------------|------------------------|--------------------|-----------|---------|-------------------|--------|-----------------|-----------|------------------------|------------|--------|----------|----------------------------------------------|--------|---------|-------------------------------------|--|
|            | Crimp Die:             | Cable Jacket Crimp |           |         |                   |        |                 | Insulator | Cable OD               | Belden     | Canare | Cmscpe   | Nokia/<br>Draka                              | Sommer | Suhner  | Others                              |  |
|            |                        | A                  | B         | Pin     | A                 | B      | Pin             |           |                        |            |        |          |                                              |        |         |                                     |  |
| NBTC75BF14 | P                      | DIE-BNC-CS         | 4.06/7.01 | 1.60 mm | [.160/.276/.063"] | 0.3-35 | 1.55            | 2.55 mm   | 1520A,<br>1521A, 1522A |            |        |          | 0.23/1.5                                     |        | G 02233 |                                     |  |
| NBTC75BL14 | P                      | DIE-BNC-CS         | 4.06/7.01 | 1.60 mm | [.160/.276/.063"] | 0.3    | 1.42            | 2.59 mm   |                        | L-1.5C2VS  |        |          | 600-025*-03(05)                              |        | S 02223 | CM14B kroschu<br>(341 270, 341 280) |  |
| NBTC75BL15 | R                      | DIE-BNC-CS         | 4.06/7.01 | 1.60 mm | [.160/.276/.063"] | 0.45   | 1.8             | 2.7 mm    |                        |            |        |          | 600-0701<br>600-020*-03(05), 600-025*-03(05) |        |         | Procom                              |  |
| NBTC75BNN5 | R                      | DIE-BNC-JD         | 5.41/4.53 | 1.60 mm | [.213/.178/.063"] | 0.45   | 1.95            | 2.8 mm    |                        |            |        | 755-1103 |                                              |        |         | Extron (BNC 5HR<br>(P) Bulp)        |  |
| NBTC75BSS5 | R                      | DIE-BNC-JD         | 5.41/4.53 | 1.60 mm | [.213/.178/.063"] | 0.42   | 2.1             | 3.22 mm   |                        |            |        |          |                                              |        |         | AT&T 735, Comm-tech<br>RGBHV        |  |
| NBTC75BVV5 | R                      | DIE-BNC-PG         | 6.47/5.00 | 1.60 mm | [.255/.197/.063"] | 0.48   | 2.29            | 3.71 mm   | 1406A,<br>1407B, 1417B |            |        |          |                                              |        |         |                                     |  |
| NBNC75BVX6 | G                      | DIE-BNC-PG         | 6.47/5.00 | 1.60 mm | [.255/.197/.063"] | 0.51   | 2.3             | 3.7 mm    |                        |            |        |          | 755-1001                                     |        |         |                                     |  |
| NBTC75BXX5 | R                      | DIE-BNC-PG         | 6.47/5.00 | 1.60 mm | [.255/.197/.063"] | 0.53   | 2.34            | 3.81 mm   | 8218                   |            |        |          |                                              |        |         |                                     |  |
| NBTC75BXX6 | G                      | DIE-BNC-PG         | 6.47/5.00 | 1.60 mm | [.255/.197/.063"] | 0.43   | 2.39            | 3.81 mm   | 1865A                  |            |        | 7536**   |                                              |        |         |                                     |  |

Chart is constantly updated. Go to [www.neutrik.com](http://www.neutrik.com) (head office). Look in the PRODUCTS section under CONNECTORS for BNC CONNECTORS. There you will find a section for CABLE OVERVIEW.