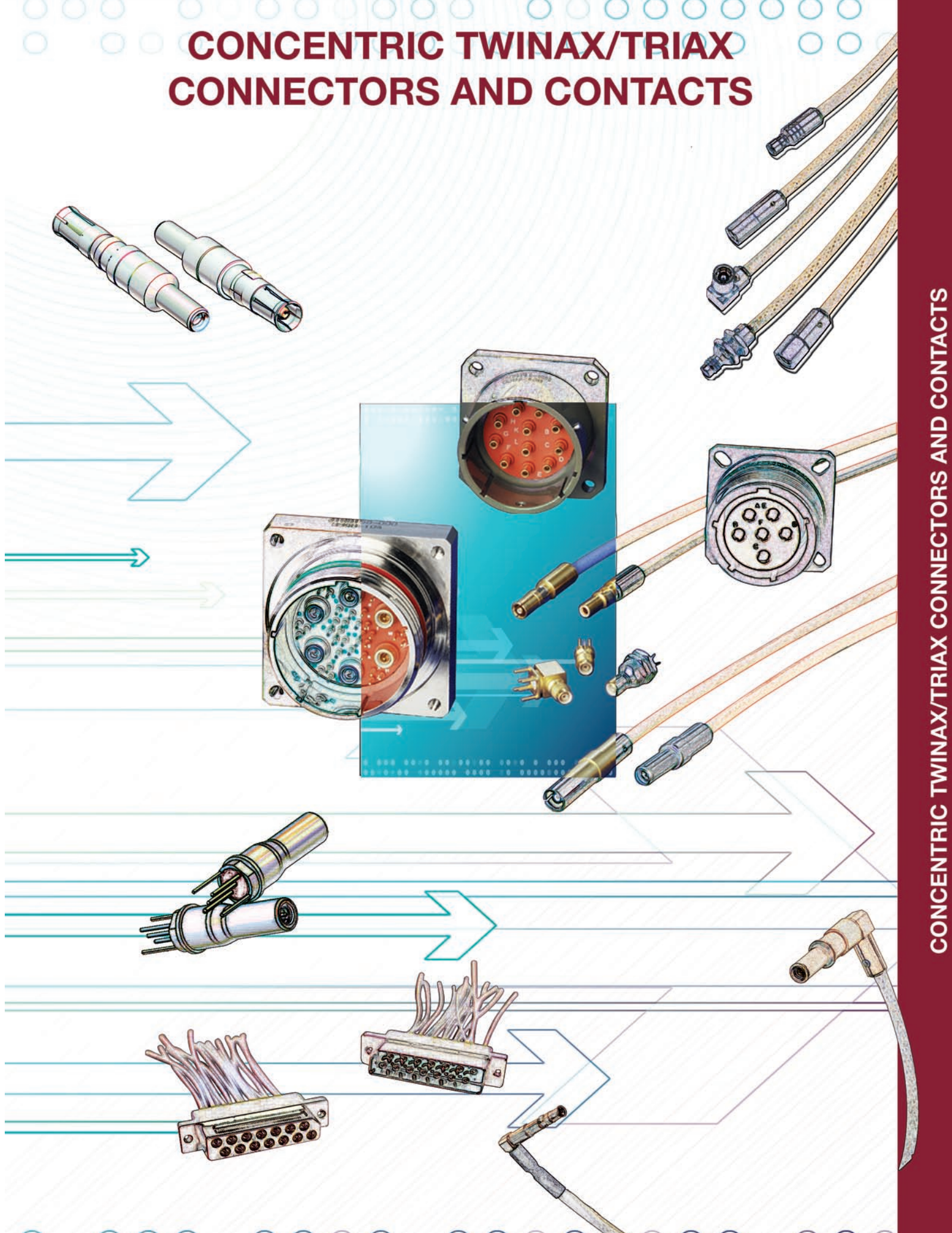


CONCENTRIC TWINAX/TRIAX CONNECTORS AND CONTACTS





Triaxial Connectors and Contacts

Overview

Sabritec offers a full line of triaxial interconnect products including concentric twinax/triax connectors, contacts and cable assemblies.

NDL Connectors

The triax connector line features our ultraminiature NDL connector in both the NDL-T, threaded, and the NDL-Q, quick disconnect. The series includes straight and right angle cable mount and PCB mount connectors, in-series and between series adapters, as well as coax/triax transitional adapters, bulkhead receptacles and cable-bus terminators. The cable mount connectors are designed for numerous Sabritec low-loss twinaxial cables and concentric triaxial cables available in a variety of impedance values. These cables are designed for all types of data-bus and video interconnect systems including MIL-STD-1553B, ARINC 429, 100 Base-T Ethernet, high speed video hot-link and Fibre Channel data links.



NDL Triaxial Connectors

Concentric Twinax/Triax Contacts

Sabritec's extensive triax contact series fit standard MIL-DTL-38999 series size 8, 10, & 12 contact cavities, d-sub size 8, and ARINC size 1, 5, 8, 9 & 12 standard rack & panel connector cavities and MIL-DTL-83527 size 8 cavities. Sabritec offers Qualified Product List (QPL) triax contacts under specifications MIL-C-39029/90-529 and MIL-C-39029/91-530. These rugged, blind mate triaxial contacts have the same outline dimensions as standard coax and power contacts and fit in the same cavities of standard connector types and insert arrangements. Sabritec's triaxial contact line also includes a high speed differential impedance size 8 concentric triax contact for MIL-DTL-38999 and ARINC 600 connectors.



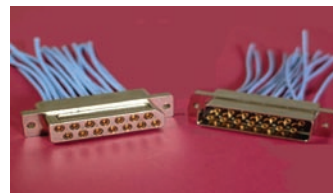
Triaxial Contacts

High Differential Pair Impedance Contacts

Sabritec's high differential impedance triax contacts are designed for ARINC 600 and MIL-DTL-38999 connectors. These contacts are available in 60, 75 and 85 ohm differential pair characteristic impedance for ARINC 600 and 60 ohm differential pair characteristic impedance for MIL-DTL-38999 connectors.

Rugged Multiway D-Sub Connectors

Sabritec's rugged d-subminiature connectors are designed to ground the outer shield of a triax contact directly to the shell of the connector. A multi-finger ground spring, fixed around the triax shell, provides a multi-point contact engagement for superior EMI shielding resulting in extremely low contact resistance when measured from the triax contact outer body to the connector flange.



Multiway D-Sub

Triaxial Cable Assemblies

Sabritec manufactures complete triaxial cable assemblies and data-bus harness networks. Cables, connectors and contacts can be combined into a variety of configurations for today's data-bus networking or high-speed video interconnect requirements.

TRIAx CONNECTORS
QUICK RELEASE
NDL-Q
Pg. 101

TRIAx CONNECTORS
THREADED
NDL-T
Pg. 106

TRIAx CONTACTS
MIL-DTL-38999
Pg 114

TRIAx CONTACTS
MIL-DTL-24308
Pg 116

TRIAx CONTACTS
ARINC 600
Pg 118

TRIAx CONTACTS
MIL-DTL-83527 &
ARINC 404
Pg 120

PC TAIL CONTACTS
Pg 121

HIGH DIFFERENTIAL
IMPEDANCE
CONTACTS
Pg 122

MULTI-WAY TRIAX
CONNECTORS
Pg 125

BLINDMATE & PCB
MOUNT CONNECTORS
Pg 129

CABLE ASSEMBLY
ORDERING
Pg 130

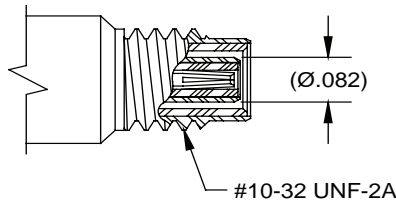
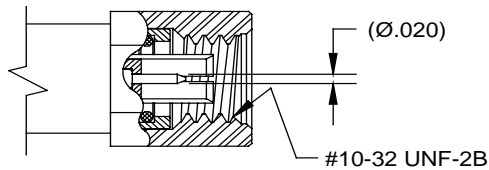
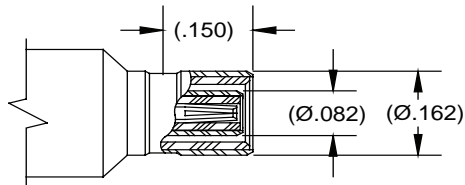
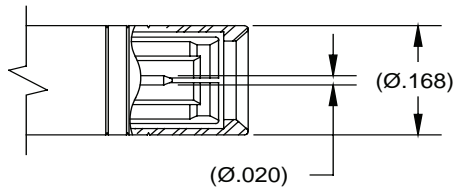
Sabritec provides specialty, enhanced performance connectors and cable assemblies and as such does not currently offer circular, rack and panel, or D-subminiature connectors that are listed on military standard Qualified Products Lists (QPL) per applicable detail specification sheets. Sabritec's connectors are fully interchangeable with applicable QPL products and meet the applicable requirements of all military standards listed in this catalog.



NDL Ultraminiature Triaxial Connectors

Connector Specifications

INTERFACE DIMENSIONS

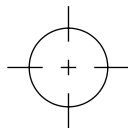


CONNECTOR TYPES Actual O.D. Size

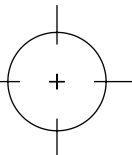
NDL



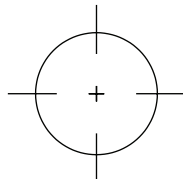
TTM/TRS



TRT/TRB



TRC/TTC



Mechanical & Environmental Specifications

Temperature Rating	-65°C to + 165°C
Corrosion	MIL-STD-202 Method 101, Test Condition B
Shock	MIL-STD-202 Method 213, Test Condition B
Vibration	MIL-STD-202 Method 204, Test Condition B
Thermal Shock	MIL-STD-202 Method 107, Test Condition B
Durability	1000 Mate/Unmate cycles min.
Coupling Nut Torque (NDL-T) Recommended Proof Torque	2.3 in-lbs min 7.0 in-lbs
Jam Nut Recommended Torque	4-5 in-lbs
Mating Torque (NDL-T)	2.5 in-lbs
Engagement Disengagement Force (NDL-Q)	3.0 lbs min

Electrical Specifications

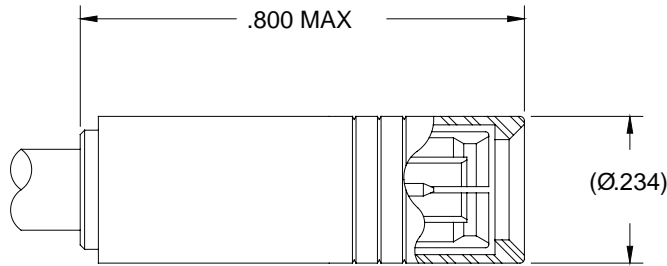
Dielectric Withstanding Voltage	Center contact to intermediate contact: 1000 Vrms min Intermediate contact to outer contact: 400 Vrms min.
Insulation Resistance	5.000 Mega-Ohms min. Center contact to intermediate contact: 250 VDC Intermediate contact to outer contact: 125 VDC
Contact Current Rating	2.0 Amps max.
RF Hi Potential Withstanding Voltage	Center contact to intermediate contact: 500 vrms @ 5MHz Intermediate contact to outer contact: 125 vrms @ 5 MHz
Corona Level @ 70,000 ft	Center contact to intermediate contact: 125 VAC
Permeability	2.0 max.
Risetime Degradation (Mated Pair)	800 ps @ 1MHz

Material & Finishes

Shell & Center/ Intermediate Contacts	Brass per ASTM-B16, Alloy UNS C36000 or BeCu per ASTM-B196, Alloy UNS C17200, C17300 Gold plate per MIL-DTL-45204, Type II, Class 1
Insulators	PTFE per ASTM-D 1710
O-Ring (NDL-T)	Silicone rubber per A-A-59588

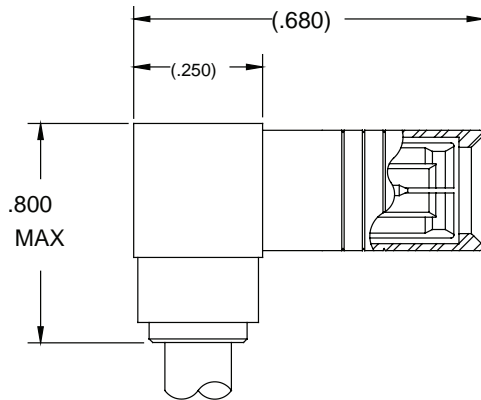
All specifications subject to change without notice.

NDL-Q Cable Plug



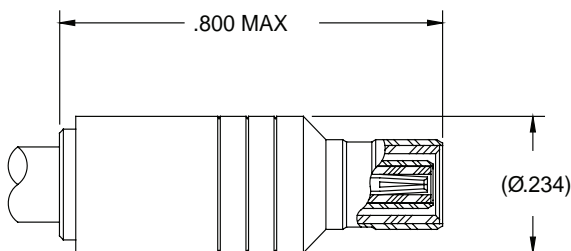
Part Number	Cable Type	Cable
016028-2001	Flexible Twinax	M17/176-00002
016028-2012	Flexible Twinax	540-1086-000
016028-2013	Flexible Triax	RG-403
016028-2014	Flexible Triax	540-1050-000
016028-2031	Flexible Triax	540-1081-000

NDL-Q Right Angle Cable Plug



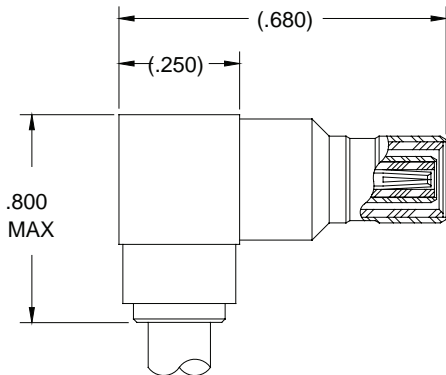
Part Number	Cable Type	Cable
016028-1001	Flexible Twinax	M17/176-00002
016028-1012	Flexible Twinax	540-1086-000
016028-1013	Flexible Triax	RG-403
016028-1014	Flexible Triax	540-1050-000
016028-1031	Flexible Triax	540-1081-000

NDL-Q Cable Jack



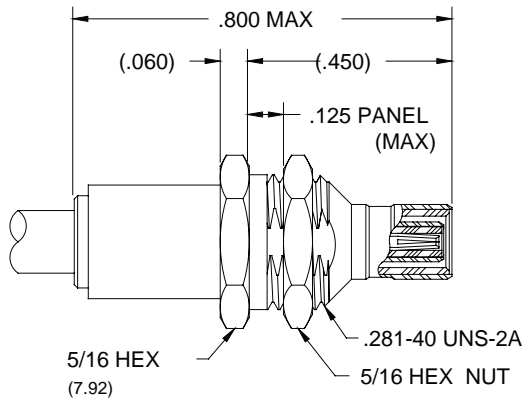
Part Number	Cable Type	Cable
016128-2001	Flexible Twinax	M17/176-00002
016128-2012	Flexible Twinax	540-1086-000
016128-2013	Flexible Triax	RG-403
016128-2014	Flexible Triax	540-1050-000
016128-2031	Flexible Triax	540-1081-000

NDL-Q Right Angle Cable Jack



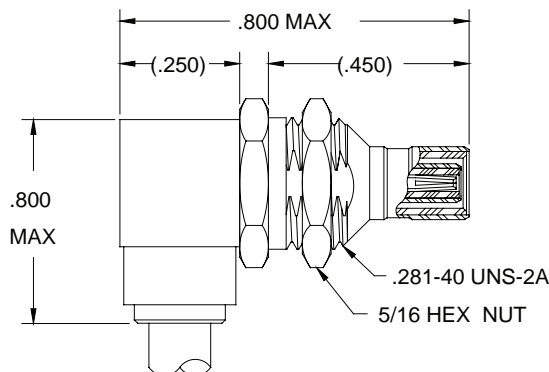
Part Number	Cable Type	Cable
016128-1001	Flexible Twinax	M17/176-00002
016128-1002	Flexible Twinax	540-1086-000
016128-1003	Flexible Triax	RG-403
016128-1004	Flexible Triax	540-1050-000
016128-1031	Flexible Triax	540-1081-000

NDL-Q Bulkhead Cable Jack



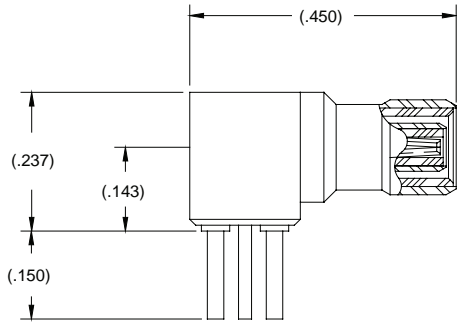
Part Number	Cable Type	Cable
016128-5000	Flexible Twinax	M17/176-00002
016128-5012	Flexible Twinax	540-1086-000
016128-5013	Flexible Triax	RG-403
016128-5014	Flexible Triax	540-1050-000
016128-5031	Flexible Triax	540-1081-000

NDL-Q Right Angle Bulkhead Cable Jack



Part Number	Cable Type	Cable
016128-1101	Flexible Twinax	M17/176-00002
016128-1102	Flexible Twinax	540-1086-000
016128-1103	Flexible Triax	RG-403
016128-1104	Flexible Triax	540-1050-000
016128-1131	Flexible Triax	540-1081-000

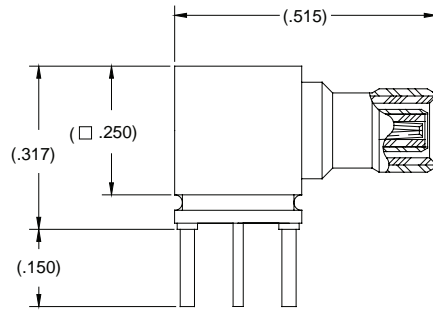
NDL-Q Right Angle PCB Jack



P/N 016100-1001

Mounting for .100 Centers

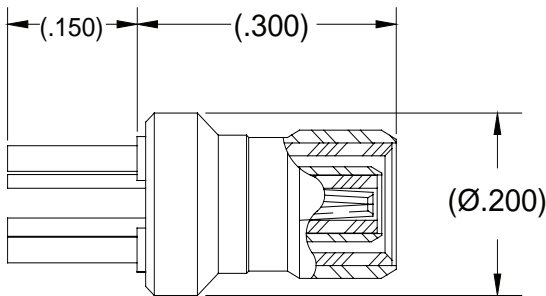
NDL-Q Right Angle PCB Jack



P/N 016100-1002

Mounting for .200 Centers

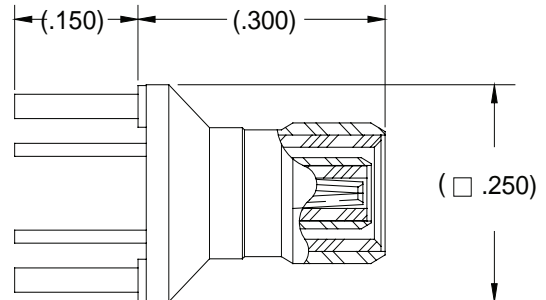
NDL-Q Straight PCB Jack



P/N 016100-3000

Mounting for .100 Centers

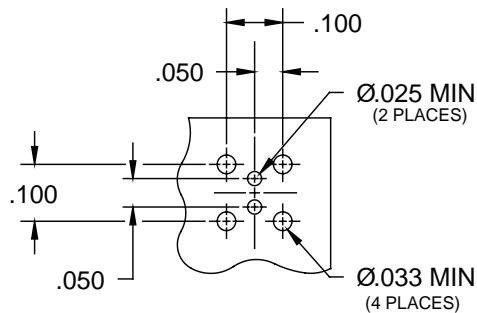
NDL-Q Straight PCB Jack



P/N 016100-3002

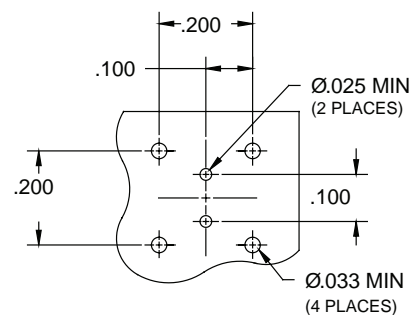
Mounting for .200 Centers

Mounting for PCB Connectors



PCB Pattern for .100 Centers

Mounting for PCB Connectors



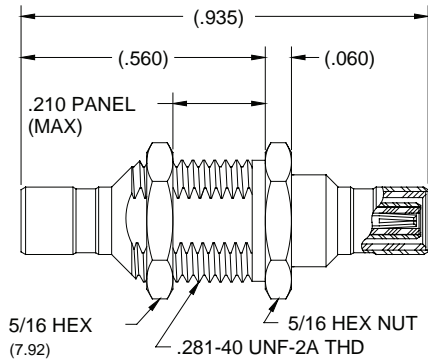
PCB Pattern for .200 Centers



NDL-Q

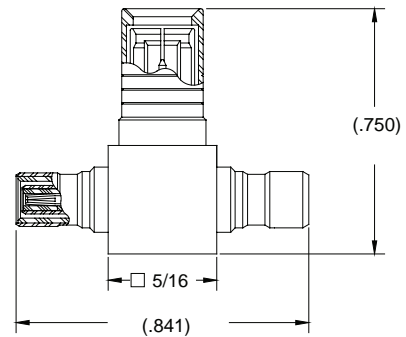
IN-SERIES ADAPTERS

NDL-Q Feed-Thru Jack Adapter



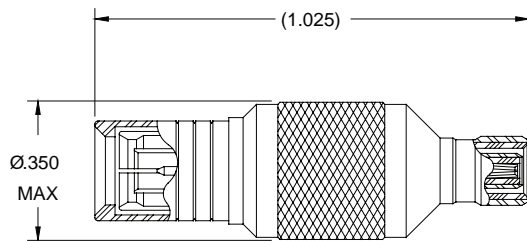
P/N 016100-5004

NDL-Q "Tee" Adapter



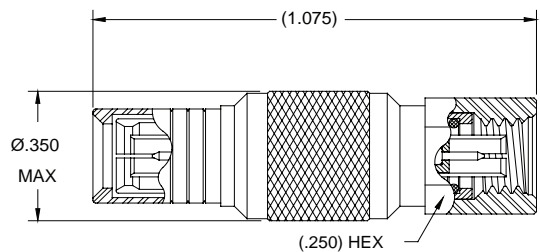
P/N 016000-4000

NDL-Q Plug to NDL-Q Jack



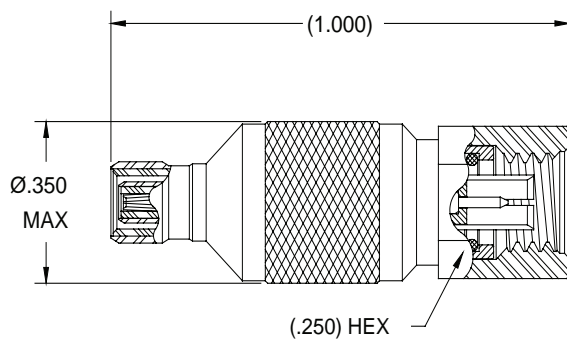
P/N 016000-4001

NDL-Q Plug to NDL-T Plug



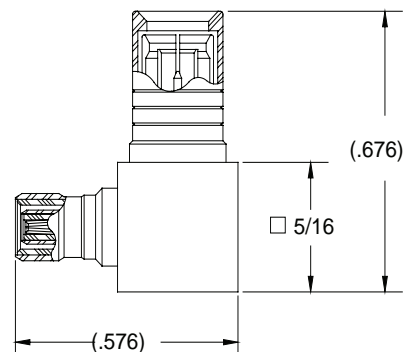
P/N 016000-4007

NDL-Q Jack to NDL-T Plug



P/N 016100-4001

NDL-Q Right Angle Plug to NDL-Q Jack



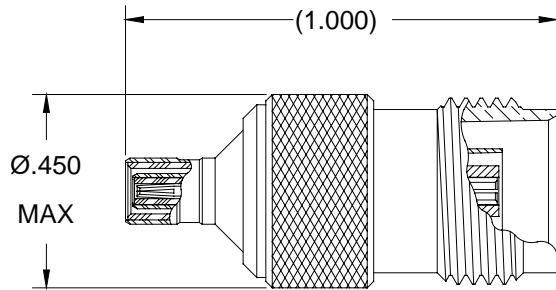
P/N 016000-1000



NDL-Q

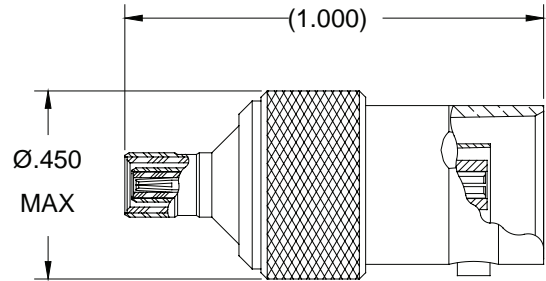
Between Series Adapters

NDL-Q Jack to TRT Jack



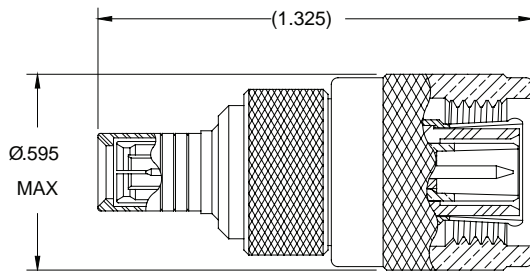
P/N 016100-4002

NDL-Q Jack to TRB Jack



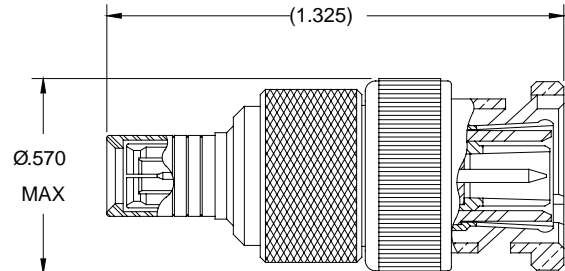
P/N 016100-4003

NDL-Q Plug to TRT Plug



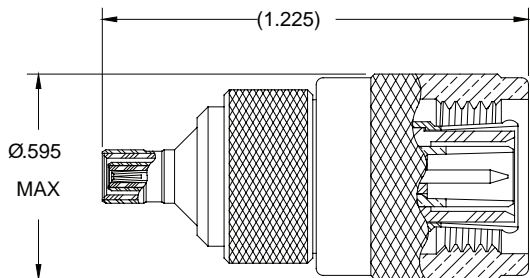
P/N 016000-4003

NDL-Q Plug to TRB Plug



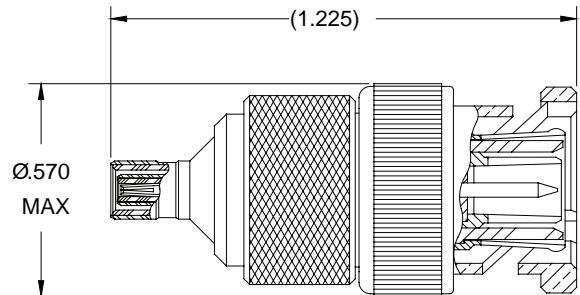
P/N 016000-4004

NDL-Q Jack to TRT Plug



P/N 016100-4004

NDL-Q Jack to TRB Plug



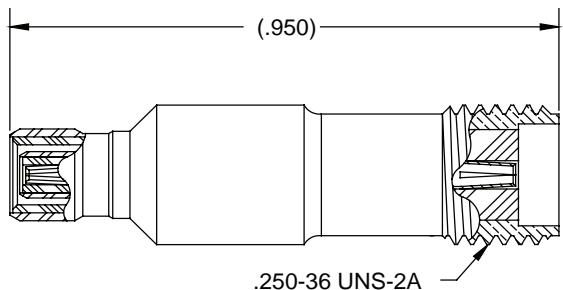
P/N 016100-4005



NDL-Q

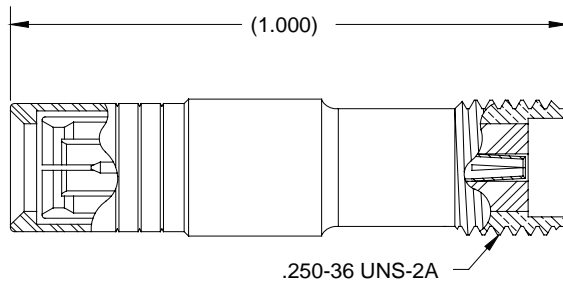
Ultraminiature Triaxial Connectors

NDL-Q Jack to SMA Jack



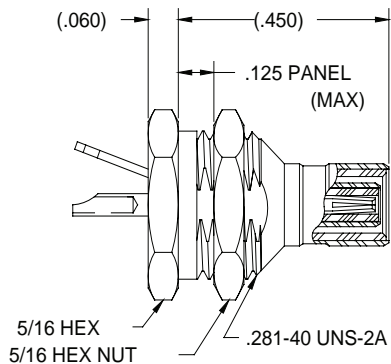
P/N 016100-4010

NDL-Q Plug to SMA Jack



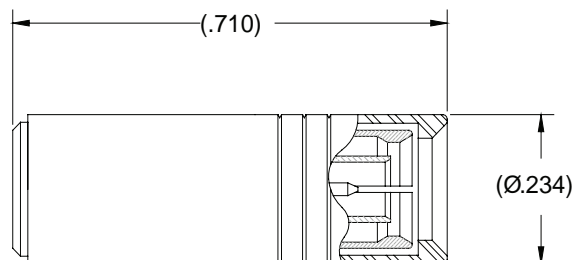
P/N 016000-4010

NDL-Q Bulkhead Jack



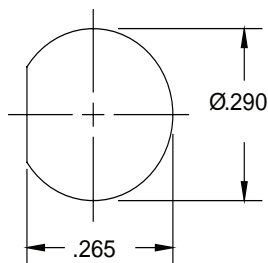
P/N 016100-5001

NDL-Q 75 Ohm Terminator

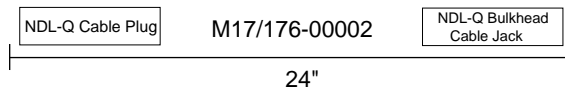
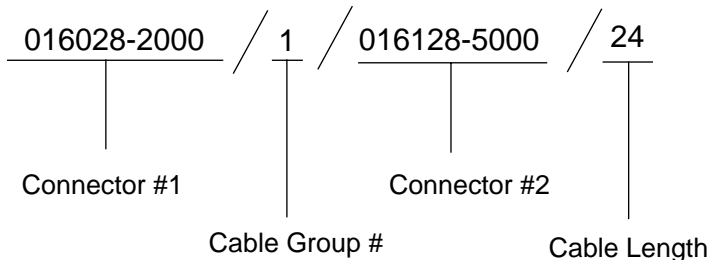


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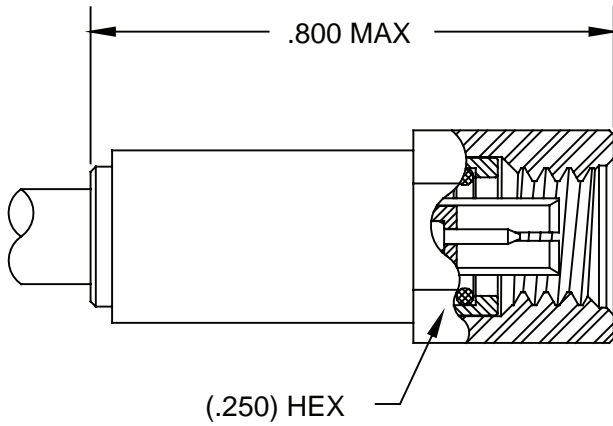
Mounting D-Hole Configuration



NDL-Q CABLE ASSEMBLY ORDERING INFORMATION

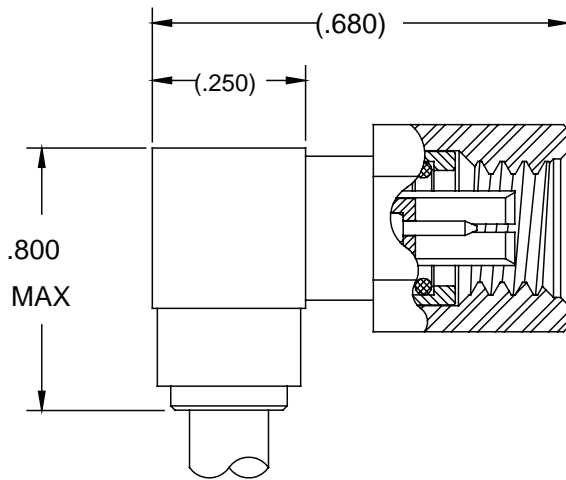


NDL-T Cable Plug



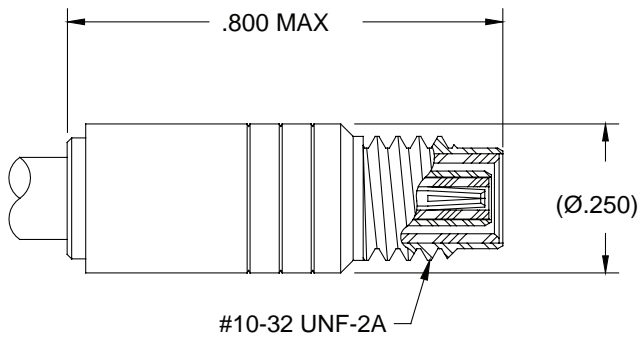
Part Number	Cable Type	Cable
015028-2000	Flexible Twinax	M17/176-00002
015028-2012	Flexible Twinax	540-1086-000
015028-2013	Flexible Triax	RG-403
015028-2014	Flexible Triax	540-1050-000
015028-2031	Flexible Triax	540-1081-000

NDL-T Right Angle Cable Plug



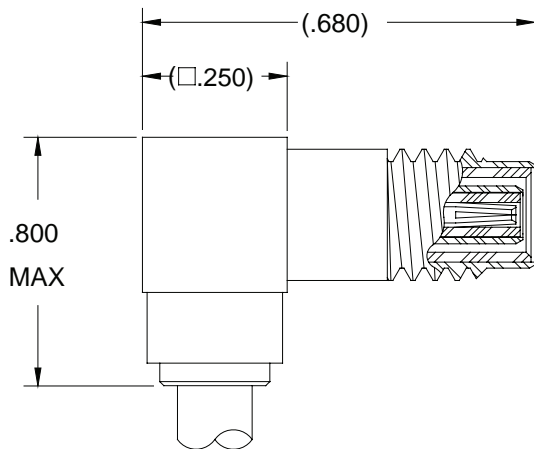
Part Number	Cable Type	Cable
015028-1001	Flexible Twinax	M17/176-00002
015028-1012	Flexible Twinax	540-1086-000
015028-1013	Flexible Triax	RG-403
015028-1014	Flexible Triax	540-1050-000
015028-1031	Flexible Triax	540-1081-000

NDL-T Cable Jack



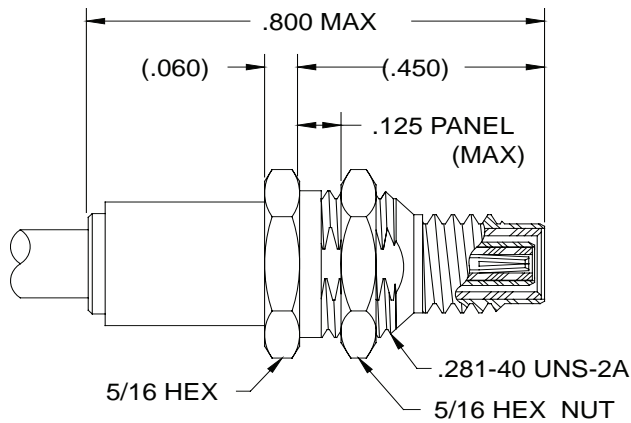
Part Number	Cable Type	Cable
015112-2001	Flexible Twinax	M17/176-00002
015112-2012	Flexible Twinax	540-1086-000
015112-2013	Flexible Triax	RG-403
015112-2014	Flexible Triax	540-1050-000
015112-2031	Flexible Triax	540-1081-000

NDL-T Right Angle Cable Jack



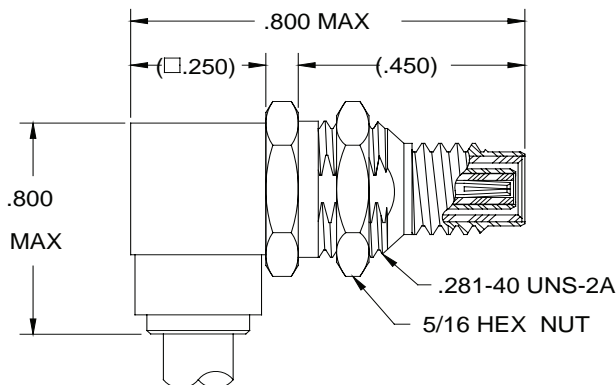
Part Number	Cable Type	Cable
015112-1001	Flexible Twinax	M17/176-00002
015112-1012	Flexible Twinax	540-1086-000
015112-1013	Flexible Triax	RG-403
015112-1014	Flexible Triax	540-1050-000
015112-1031	Flexible Triax	540-1081-000

NDL-T Bulkhead Cable Jack



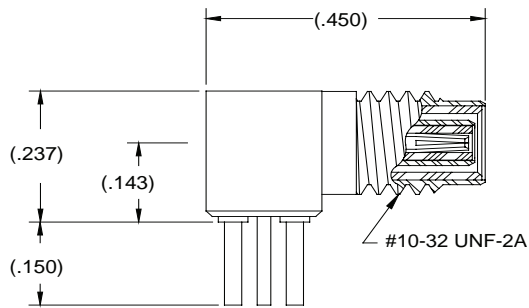
Part Number	Cable Type	Cable
015112-5000	Flexible Twinax	M17/176-00002
015112-5012	Flexible Twinax	540-1086-000
015112-5013	Flexible Triax	RG-403
015112-5014	Flexible Triax	540-1050-000
015112-5031	Flexible Triax	540-1081-000

NDL-T Right Angle Bulkhead Cable Jack



Part Number	Cable Type	Cable
015112-1101	Flexible Twinax	M17/176-00002
015112-1102	Flexible Twinax	540-1086-000
015112-1103	Flexible Triax	RG-403
015112-1104	Flexible Triax	540-1050-000
015112-1131	Flexible Triax	540-1081-000

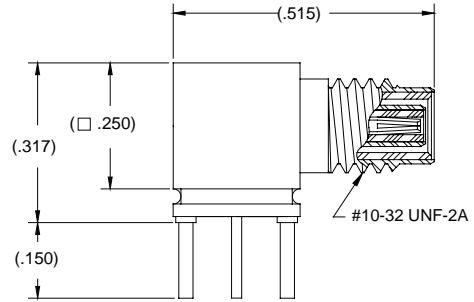
NDL-T Right Angle PCB Jack



P/N 015100-1011

Mounting for .100 Centers

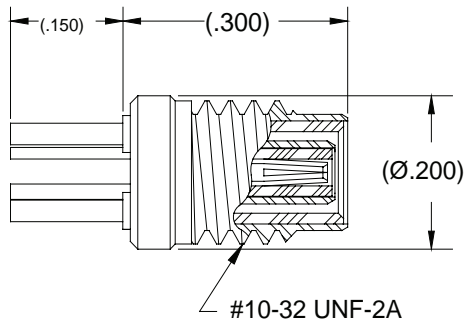
NDL-T Right Angle PCB Jack



P/N 015100-1012

Mounting for .200 Centers

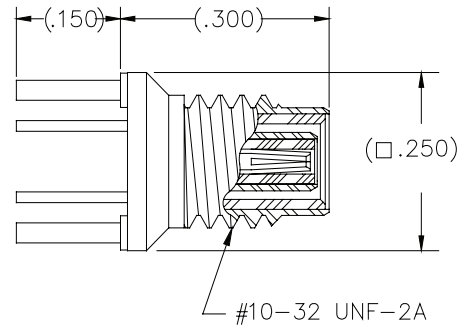
NDL-T Straight PCB Jack



P/N 015100-3010

Mounting for .100 Centers

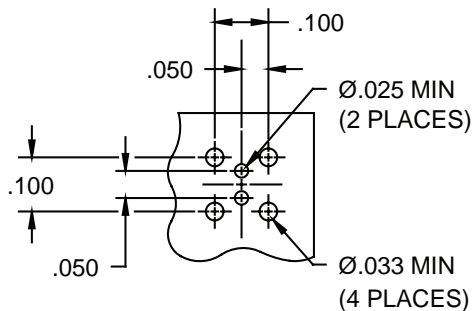
NDL-T Straight PCB Jack



P/N 015100-3012

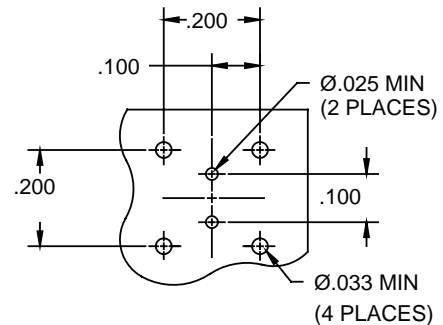
Mounting for .200 Centers

Mounting for PCB Connectors



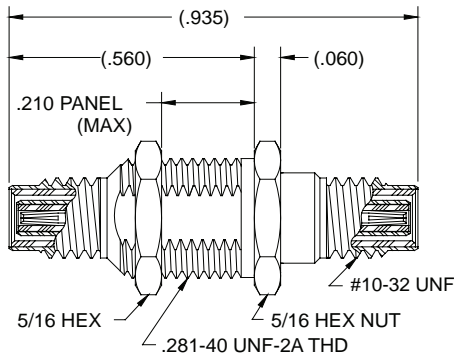
PCB Pattern for .100 Centers

Mounting for PCB Connectors



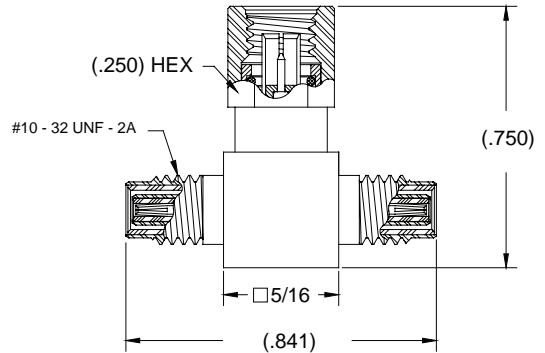
PCB Pattern for .200 Centers

NDL-T Feed-Thru Jack Adapter



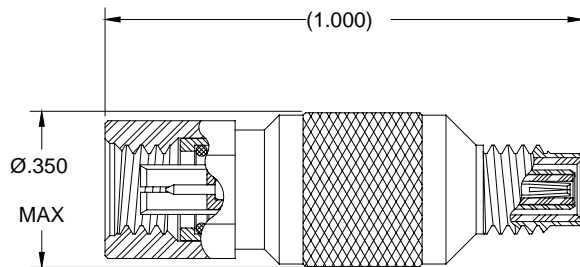
P/N 015100-5024

NDL-T "Tee" Adapter



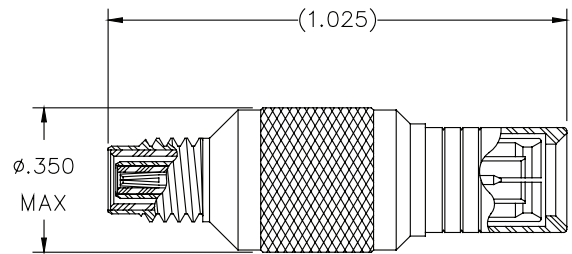
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NDL-T Plug to NDL-T Jack



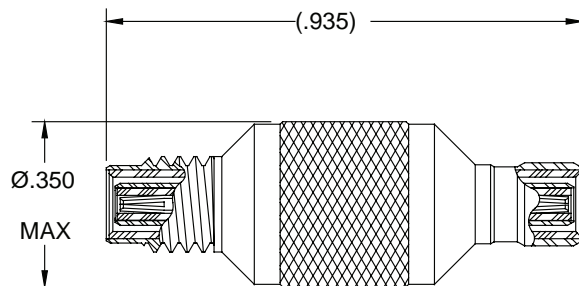
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NDL-T Jack to NDL-Q Plug



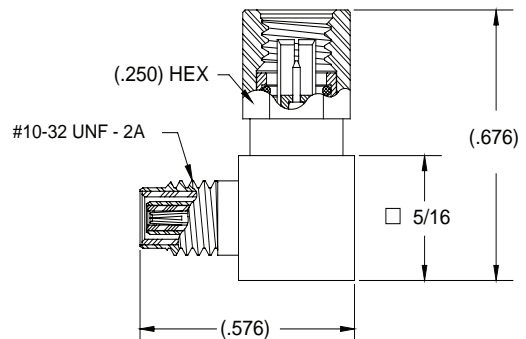
P/N 015100-4015

NDL-T Jack to NDL-Q Jack



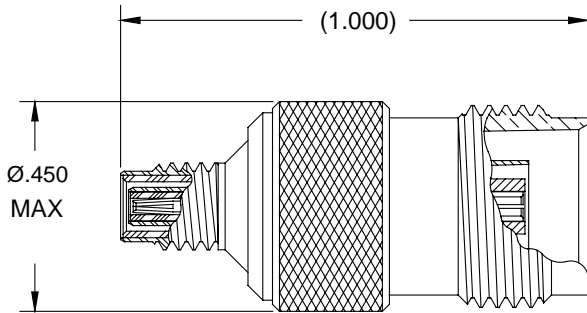
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NDL-T Right Angle Plug to NDL-T Jack



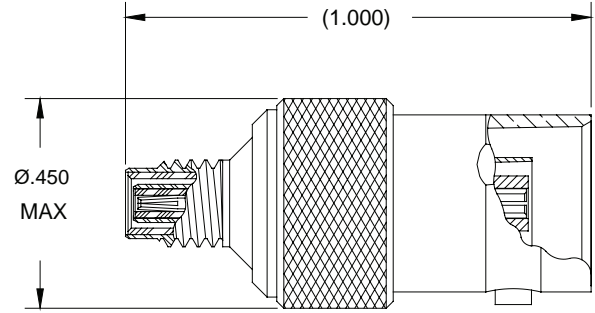
P/N 015000-1001

NDL-T Jack to TRT Jack



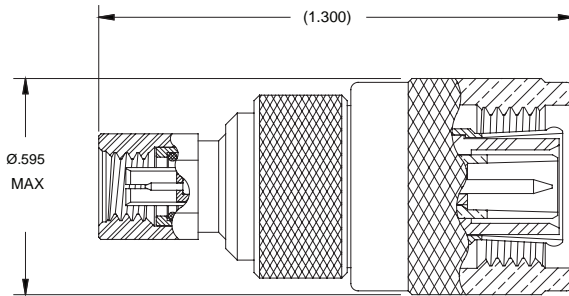
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NDL-T Jack to TRB Jack



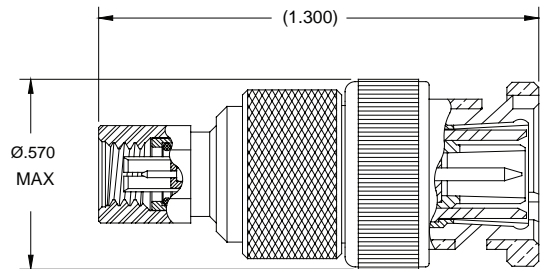
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NDL-T Plug to TRT Plug



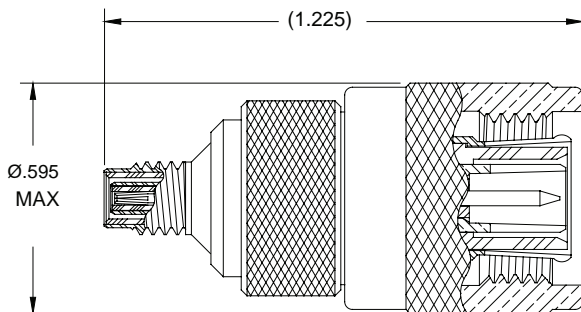
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NDL-T Plug to TRB Plug



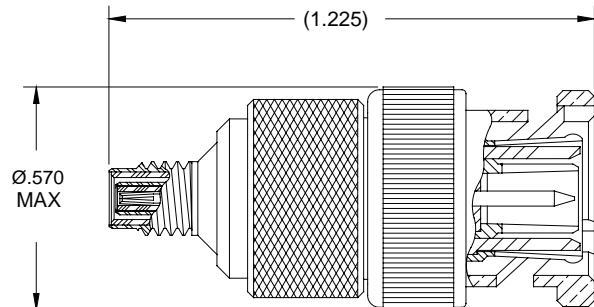
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NDL-T Jack to TRT Plug



P/N 015100-4013

NDL-T Jack to TRB Plug



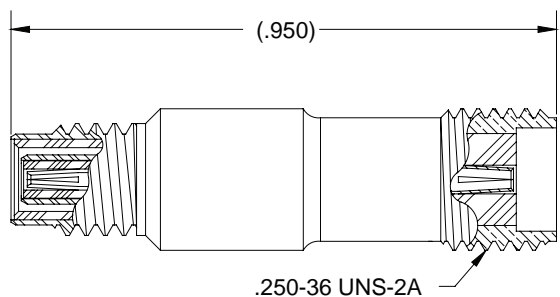
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NDL-T

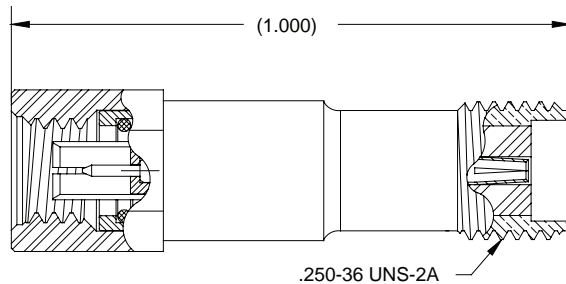
Ultraminiature Triaxial Connectors

NDL-T Jack to SMA Jack



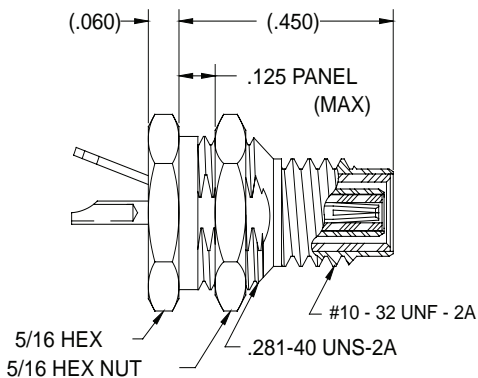
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NDL-T Plug to SMA Jack



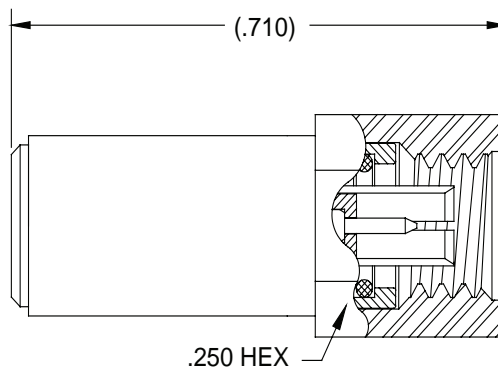
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NDL-T Bulkhead Jack



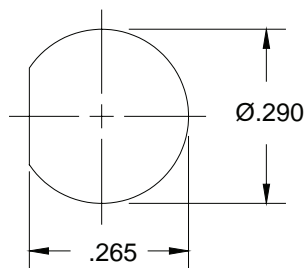
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NDL-T 75 Ohm Terminator

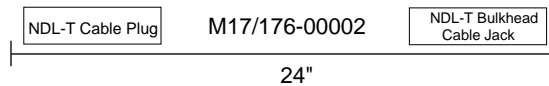
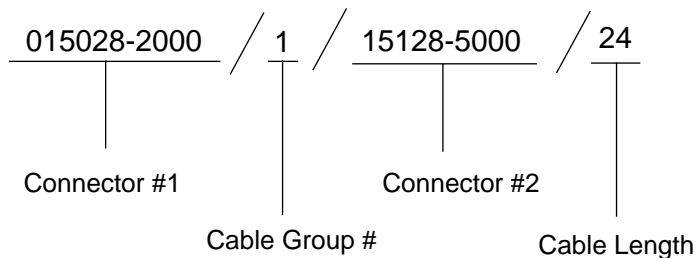


P/N 015000-0000

Mounting D-Hole Configuration



NDL-T CABLE ASSEMBLY ORDERING INFORMATION





Triaxial Contact Series

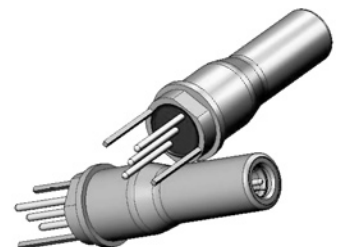
Sabritec's concentric twinax/triax contacts provide flexibility in the design of high speed data systems. The contacts, including the unique sizes 10 and 12, have the same outline dimensions as traditional coax and power contacts and fit various insert arrangements for d-sub, circular, and rack and panel connectors. The triaxial cable type connectors and contacts are designed for low-loss concentric 50, 75 and 95 ohm cable types.

An innovative design of triax/twinax contacts opens a whole new world of design options. These small, rugged contacts fit standard connector contact cavities for MIL-DTL-38999, MIL-DTL-83527, ARINC, and d-sub connector types.

Sabritec also manufactures a complete line of stand-alone triax connectors including the ultraminiature NDL connector series as well as other specific application configurations.

FEATURES

- Fits standard MIL-DTL-38999 size 8, 10 & 12 contact cavities, MIL-DTL-83527 size 8, d-sub size 8, and ARINC size 1, 5, 8, 9 & 12 standard rack & panel connector cavities.
- Designed for MIL-C-17/176 Data Bus networks and high speed Ethernet and Fibre Channel system
- Suitable for high speed video applications, 50, 75 & 95 ohm impedances
- Upgrade coax harnesses to triax capability
- Small size for high density packaging
- Includes high speed Fibre Channel hot-link product line series

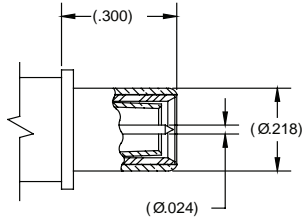
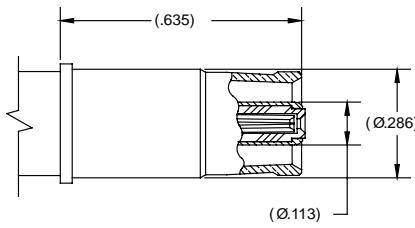




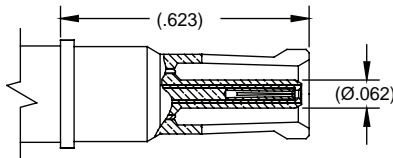
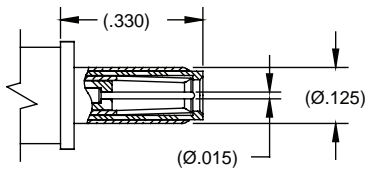
Concentric Twinax/Triax Contacts

Contact Specifications

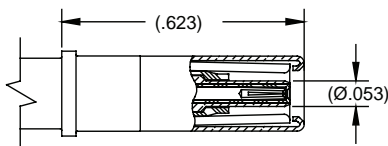
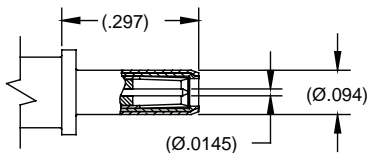
INTERFACE DIMENSIONS



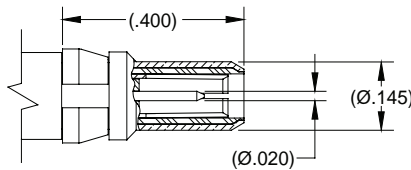
SIZE 8, MIL-C-39029/90 & /91



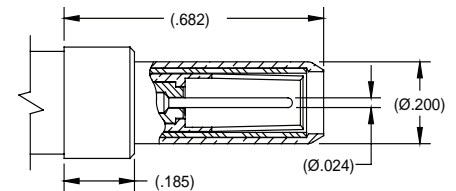
SIZE 10, MIL-DTL-38999



SIZE 12, MIL-DTL-38999



SIZE 8, MIL-PRF-24308

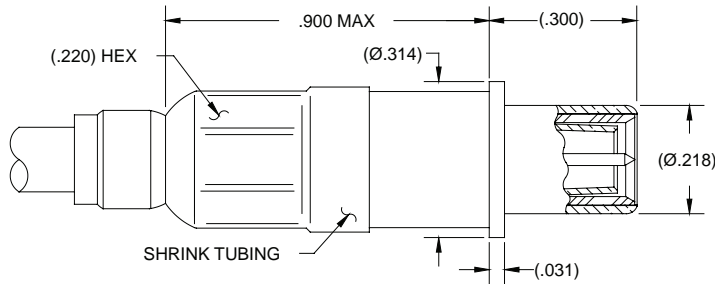


SIZE 9, MIL-C-81659 (ARINC 404)

Mechanical & Environmental Specifications	
Temperature Rating	-65°C to + 165°C
Corrosion	MIL-STD-202 Method 101, Test Condition B
Shock	MIL-STD-202 Method 213, Test Condition B
Vibration	MIL-STD-202 Method 204, Test Condition B
Thermal Shock	MIL-STD-202 Method 107, Test Condition B
Durability	1000 Mate/Unmate cycles min.
Electrical Specifications	
Dielectric Withstanding Voltage	Center contact to intermediate contact: 1000 Vrms min. Size 12: 500 Vrms min. Intermediate contact to outer contact: 400 Vrms min. Size 12: 200 Vrms min
Insulation Resistance	5000 Mega-Ohms min. @ 200 VDC
Contact Current Rating	3.0 Amps D.C. max.: Size 12: 1.5 Amps D.C. max.
Voltage Rating	500 Vrms @ sea level: Size 12: 200 Vrms @ sea level
Material & Finishes	
Shell & Center/Intermediate Contacts	Brass per ASTM-B16, Alloy UNS C36000 or BeCu per ASTM-B196, Alloy UNS C17200, C17300 or Leaded Nickel Copper, Alloy UNS C19500, C19600 Gold plate per MIL-DTL-45204, Type II, Class 1
Insulators	PTFE per ASTM-D 1710 or equivalent
Hood	305 CRES per ASTM-A240, passivated per ASTM-A967

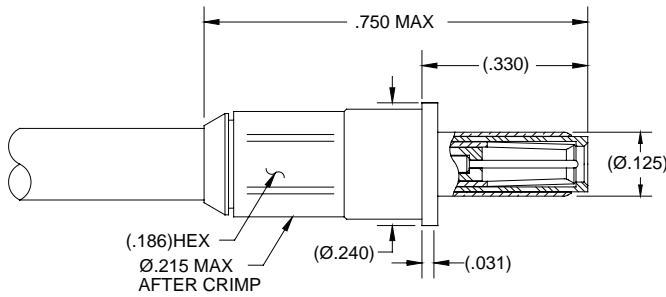
All specifications subject to change without notice.

Size 8 MIL-C-39029/90 Twinax/Triax Pin Contact



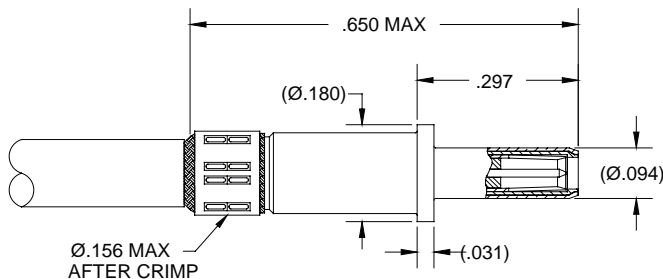
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019612-2001	Flexible Twinax	M17/176-00002
019612-2002	Flexible Twinax	540-1086-000
019612-2003	Flexible Triax	RG-403
019612-2004	Flexible Triax	540-1050-000
019612-2031	Flexible Triax	540-1081-000

Size 10 MIL-DTL-38999 Twinax/Triax Pin Contact



Part Number	Cable Type	Cable
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018812-2002	Flexible Twinax	540-1086-000
018812-2003	Flexible Triax	RG-403
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Size 12 MIL-DTL-38999 Twinax/Triax Pin Contact



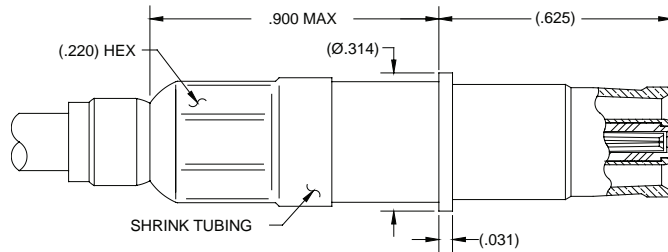
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018612-2004	Flexible Triax	540-1050-000
018612-2041	Flexible Triax	540-1081-000



Concentric Twinax/Triax Contacts

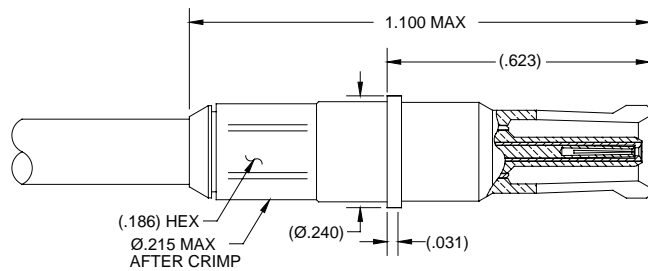
MIL-DTL-38999 Socket Contacts

Size 8 MIL-C-39029/91 Twinax/Triax Socket Contact



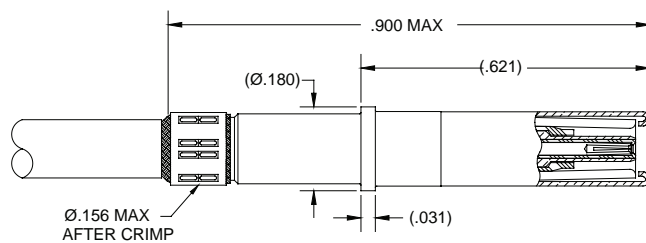
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019512-2004	Flexible Triax	540-1050-000
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Size 10 MIL-DTL-38999 Twinax/Triax Socket Contact



Part Number	Cable Type	Cable
018912-2001	Flexible Twinax	M17/176-00002
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018912-2003	Flexible Triax	RG-403
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Size 12 MIL-DTL-38999 Twinax/Triax Socket Contact

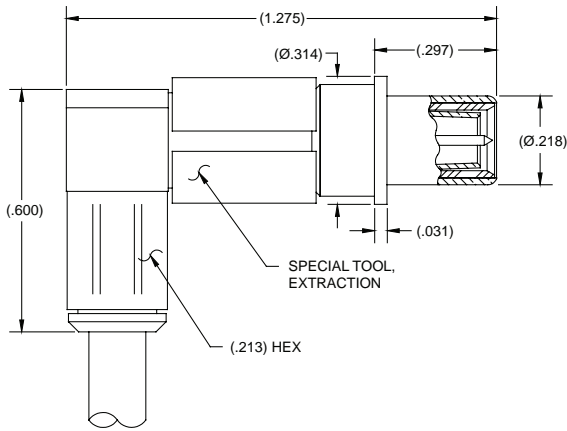


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Concentric Twinax/Triax Contacts

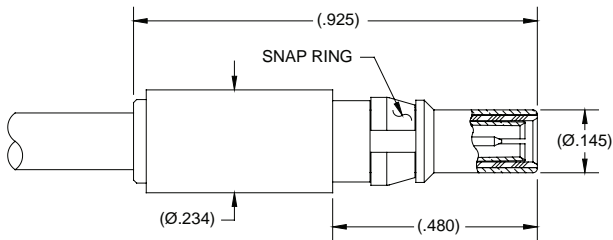
MIL-DTL-38999/MIL-PRF-24308 Twinax/Triax Pin Contacts

Size 8 MIL-C-39029/90 Twinax/Triax Right Angle Pin Contact



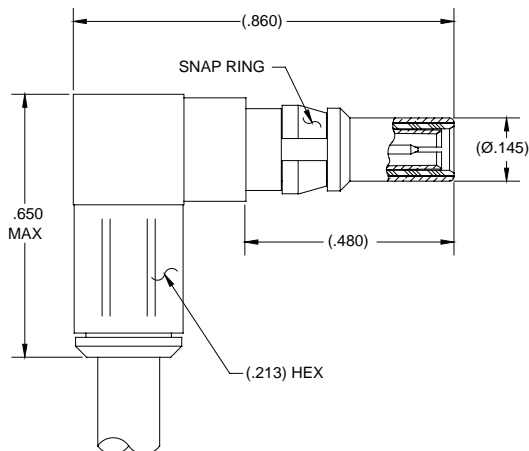
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Size 8 MIL-PRF-24308 Twinax/Triax Pin Contact



Part Number	Cable Type	Cable
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Size 8 MIL-PRF-24308 Twinax/Triax Right Angle Pin Contact



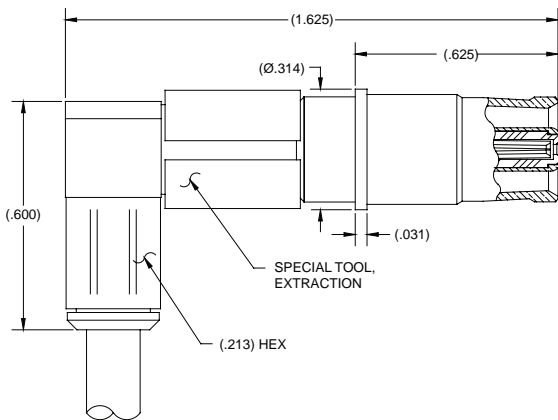
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Concentric Twinax/Triax Contacts

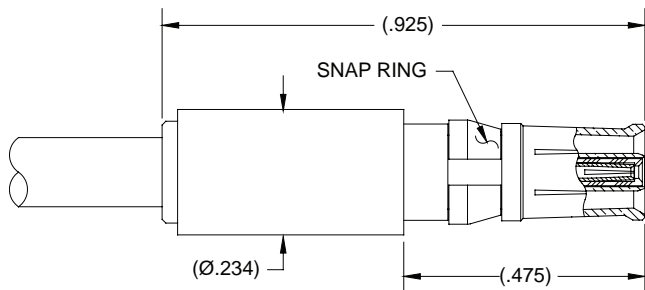
MIL-DTL-38999/MIL-PRF-24308 Twinax/Triax Socket Contacts

Size 8 MIL-C-39029/91 Twinax/Triax Right Angle Socket Contact



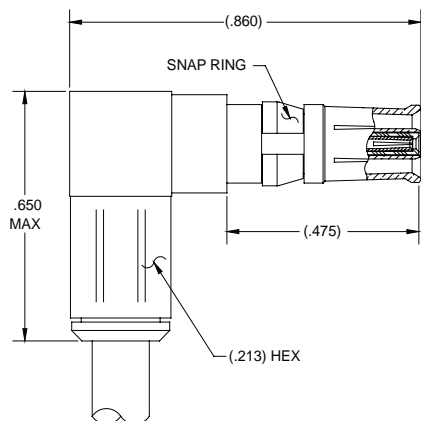
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Size 8 MIL-PRF-24308 Twinax/Triax Socket Contact



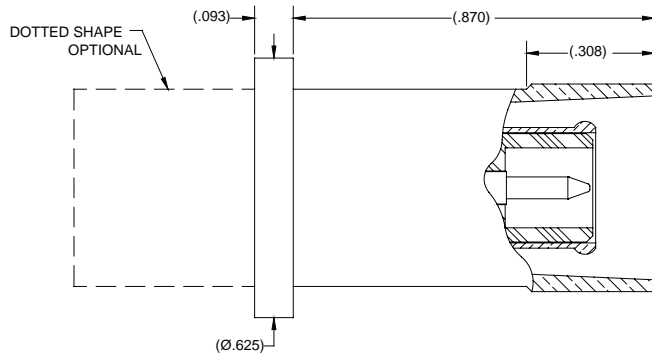
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Size 8 MIL-PRF-24308 Twinax/Triax Right Angle Socket Contact



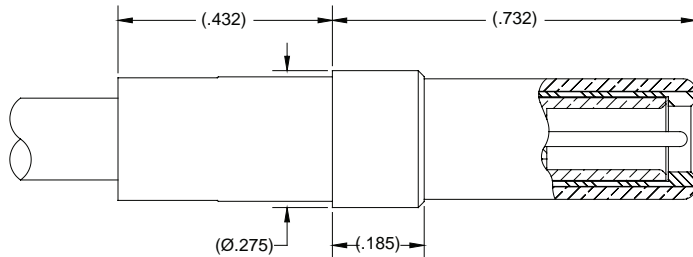
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019712-1016	Flexible Triax	540-1081-000

Size 1 ARINC 600 Twinax/Triax Pin Contact



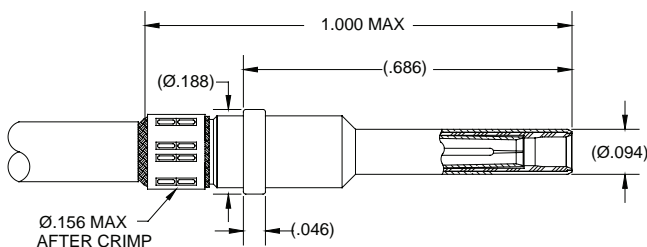
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018012-2112	Flexible Triax	RG-403
018012-2113	Flexible Triax	540-1050-000
018012-2114	Flexible Triax	540-1081-000

Size 5 ARINC 600 Twinax/Triax Pin Contact



Part Number	Cable Type	Cable
019412-2110	Flexible Twinax	M17/176-00002
019412-2111	Flexible Twinax	540-1086-000
019412-2112	Flexible Triax	RG-403
019412-2113	Flexible Triax	540-1050-000
019412-2116	Flexible Triax	540-1081-000

Size 12 ARINC 600 Twinax/Triax Pin Contact



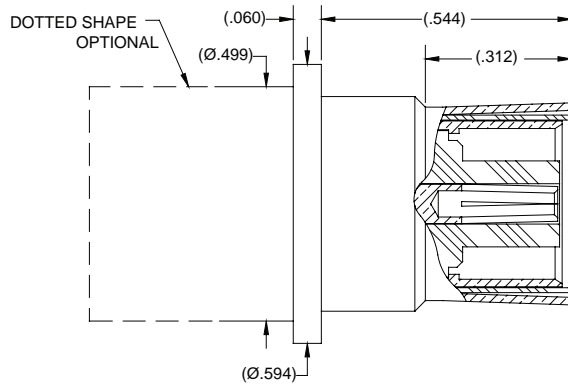
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018612-2112	Flexible Triax	RG-403
018612-2113	Flexible Triax	540-1050-000
018612-2116	Flexible Triax	540-1081-000



Concentric Twinax/Triax Contacts

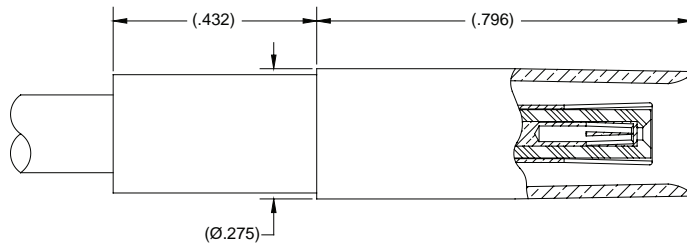
ARINC 600 Socket Contacts

Size 1 ARINC 600 Twinax/Triax Socket Contact



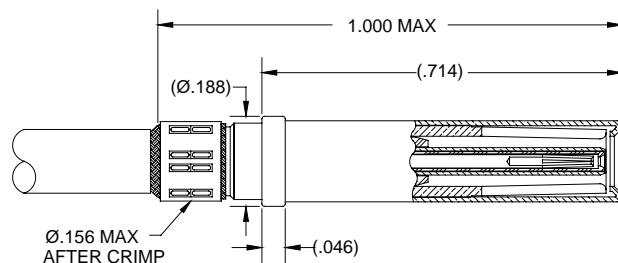
Part Number	Cable Type	Cable
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018112-2111	Flexible Twinax	540-1086-000
018112-2112	Flexible Triax	RG-403
018112-2113	Flexible Triax	540-1050-000
018112-2114	Flexible Triax	540-1081-000

Size 5 ARINC 600 Twinax/Triax Socket Contact



Part Number	Cable Type	Cable
019312-2110	Flexible Twinax	M17/176-00002
019312-2111	Flexible Twinax	540-1086-000
019312-2112	Flexible Triax	RG-403
019312-2113	Flexible Triax	540-1050-000
019312-2116	Flexible Triax	540-1081-000

Size 12 ARINC 600 Twinax/Triax Socket Contact



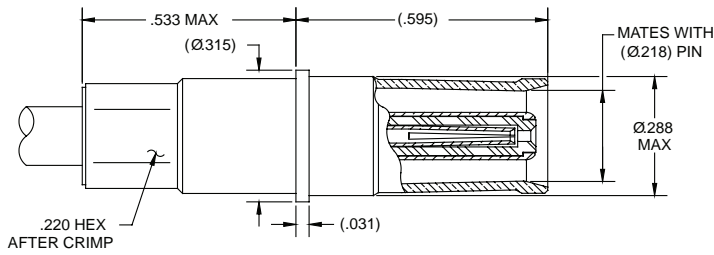
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018712-2116	Flexible Triax	540-1081-000



Concentric Twinax/Triax Contacts

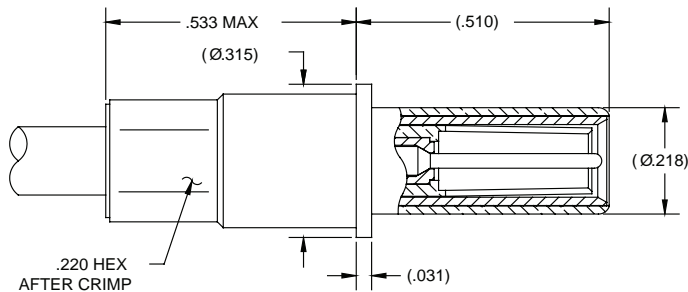
MIL-DTL-83527/ARINC 404 Contacts

Size 8 MIL-DTL-83527 Twinax/Triax Socket Contact



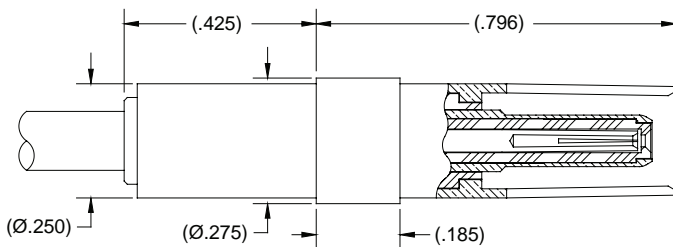
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Size 8 MIL-DTL-83527 Twinax/Triax Pin Contact



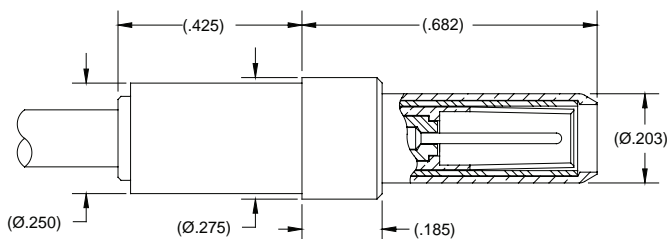
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Size 9 ARINC 404 Twinax/Triax Socket Contact



Part Number	Cable Type	Cable
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019112-2002	Flexible Twinax	540-1086-000
019112-2003	Flexible Triax	RG-403
019112-2004	Flexible Triax	540-1050-000
019112-2031	Flexible Triax	540-1081-000

Size 9 ARINC 404 Twinax/Triax Pin Contact



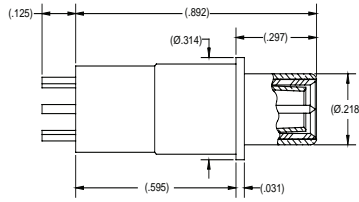
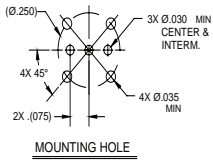
Part Number	Cable Type	Cable
019212-2001	Flexible Twinax	M17/176-00002
019212-2002	Flexible Twinax	540-1086-000
019212-2003	Flexible Triax	RG-403
019212-2004	Flexible Triax	540-1050-000
019212-2031	Flexible Triax	540-1081-000



MIL-DTL-38999 PC Tail Triax Contacts

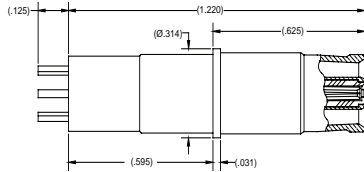
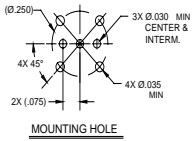
Size 8, 10 and 12 Twinax/Triax PC Tail Contacts

Size 8 MIL-C-39029/90 PC Tail Twinax/Triax Pin Contact



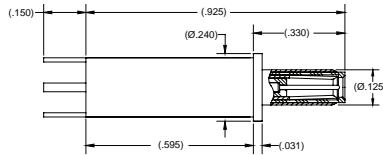
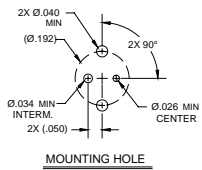
P/N 019617-2100

Size 8 MIL-C-39029/91 PC Tail Twinax/Triax Socket Contact



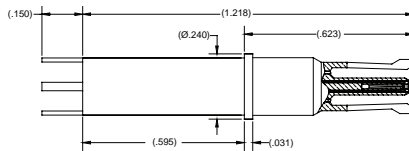
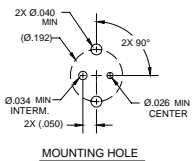
P/N 019517-2100

Size 10 MIL-DTL-38999 PC Tail Twinax/Triax Pin Contact



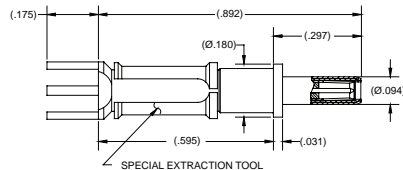
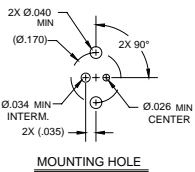
P/N 018817-2100

Size 10 MIL-DTL-38999 PC Tail Twinax/Triax Socket Contact



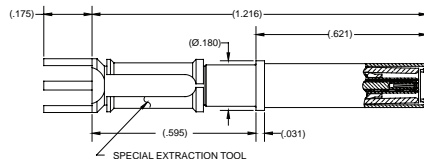
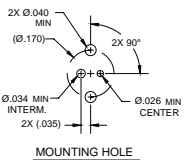
P/N 018917-2100

Size 12 MIL-DTL-38999 PC Tail Twinax/Triax Pin Contact



P/N 018617-2100

Size 12 MIL-DTL-38999 PC Tail Twinax/Triax Socket Contact



P/N 018717-2100

Note:

Sabritec Twinax/Triax PC Tail Contacts are only available installed into an applicable Sabritec connector. These items are not sold separately.



High Differential Impedance Triax Contacts

Connector Specifications

Sabritec's high differential impedance triax contacts are designed for ARINC 600 and MIL-DTL-38999 connectors. These contacts are available in 60, 75 and 85 ohm differential pair characteristic impedance for ARINC 600 and 60 ohm differential pair characteristic impedance for MIL-DTL-38999 connectors.

Size 8 concentric twinax/triax contacts have the same outline dimensions as standard coax and power contacts for both MIL-DTL-38999 and ARINC 600 connectors with 60 ohm differential pair impedance. For high data rate applications such as 1000 Base Tx, Sabritec offers a special ARINC 600 size 8 triax pin and socket contact that is designed to fit into a special insulator cavity for ARINC 600.

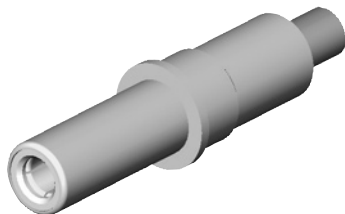
These special high differential pair impedance contacts are also available in 75 ohm and 85 ohm impedance values.

High differential pair impedance contacts have special interfaces that are radically optimized for a balanced characteristic impedance to the outer shell while providing maximum differential impedance between middle and center conductors. Polarization is not required since the triax interface has concentric conductors. This also allows free rotation of cable entry for multi-directional routing of cable.

High speed Ethernet data signals can be routed through triaxial interface interconnects, thus eliminating the need for anti-rotational quad and twinax connector and contact types. Triaxial contacts are ideal for blindmate rack and panel and circular interconnect requirements.

Mechanical & Environmental Specifications	
Temperature Rating	-65°C to + 165°C
Corrosion	MIL-STD-202 Method 101, Test Condition B
Shock	MIL-STD-202 Method 213, Test Condition B
Vibration	MIL-STD-202 Method 204, Test Condition B
Thermal Shock	MIL-STD-202 Method 107, Test Condition B
Durability	1000 Mate/Unmate cycles min.
Mating/Unmating Force	1 lb. min.
Float Mount Constraints	0.15" full radial & axial misalignment max.
Electrical Specifications	
Dielectric Withstanding Voltage	500 Vrms @ sea level with 70% relative humidity
Insulation Resistance	5000 Mega-Ohms min. @ 200 VDC
Contact Current Rating	1.5 Amps D.C. max.
Characteristic Impedance	60 Ohms, 75 Ohms or 85 Ohms
Material & Finishes	
Shell & Center/Intermediate Contacts	Brass per ASTM-B16, alloy UNS C36000 or BeCu per ASTM-B196, alloy UNS C17200, C17300 or Leaded Nickel Copper, alloy UNS C19500, C19600 Gold plate per MIL-DTL-45204, Type II, Class 1
Insulators	PTFE per ASTM-D1710 or equivalent
Hood	305 CRES per ASM-A240, passivated per ASTM-A967

All specifications subject to change without notice.



#8 Triaxial Socket Contact



#8 Triaxial Pin Contact

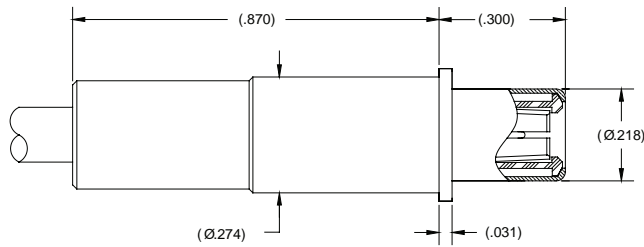
Sabritec provides specialty, enhanced performance connectors and cable assemblies and as such does not currently offer circular, rack and panel, or D-subminiature connectors that are listed on military standard Qualified Products Lists (QPL) per applicable detail specification sheets. Sabritec's connectors are fully intermateable with applicable QPL products and meet the applicable requirements of all military standards listed in this catalog.



High Differential Impedance Triax Contacts

MIL-DTL-38999/ARINC 600 Contacts

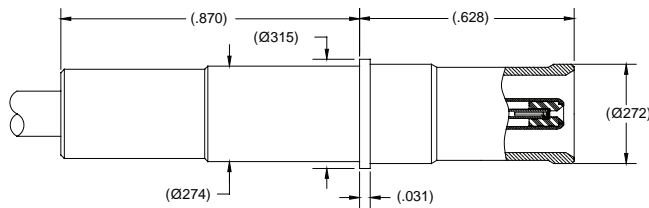
Size 8 MIL-DTL-38999 Twinax/Triax Pin Contact 60 Ohms



Part Number	Cable Type	Cable
019612-2115	Flexible Twinax	540-1161-000
019612-2116	Flexible Twinax	540-1086-000

Intermountable In Standard Size 8 MIL-DTL-38999 Cavities

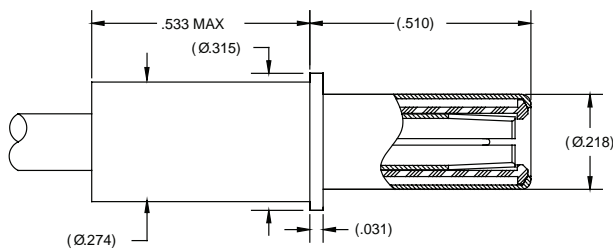
Size 8 MIL-DTL-38999 Twinax/Triax Socket Contact 60 Ohm



Part Number	Cable Type	Cable
019512-2115	Flexible Twinax	540-1161-000
019512-2116	Flexible Twinax	540-1086-000

Intermountable In Standard Size 8 MIL-DTL-38999 Cavities

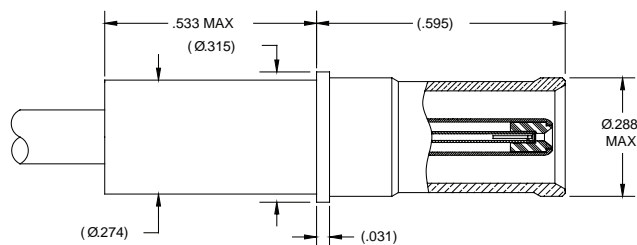
Size 8 ARINC 600 Twinax/Triax Pin Contact 60 Ohms



Part Number	Cable Type	Cable
019612-2119	Flexible Twinax	540-1161-000
019612-2120	Flexible Twinax	540-1086-000

Intermountable In Standard Size 8 ARINC 600 Cavities

Size 8 ARINC 600 Twinax/Triax Socket Contact 60 Ohms



Part Number	Cable Type	Cable
019512-2119	Flexible Twinax	540-1161-000
019512-2120	Flexible Twinax	540-1086-000

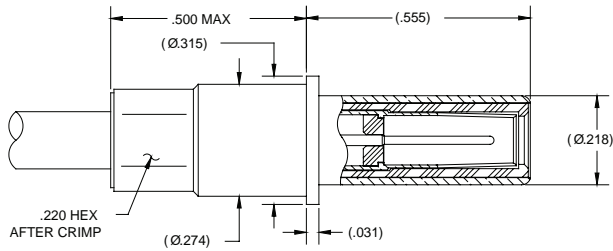
Intermountable In Standard Size 8 ARINC 600 Cavities



High Differential Impedance Triax Contacts

ARINC 600 Contacts

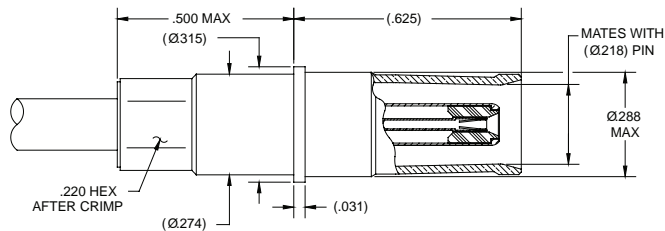
Size 8 ARINC 600 Twinax/Triax Pin Contact 75 Ohms



Part Number	Cable Type	Cable
019612-2117	Flexible Twinax	540-1050-000

Intermountable In Standard Size 8 ARINC 600 Cavities

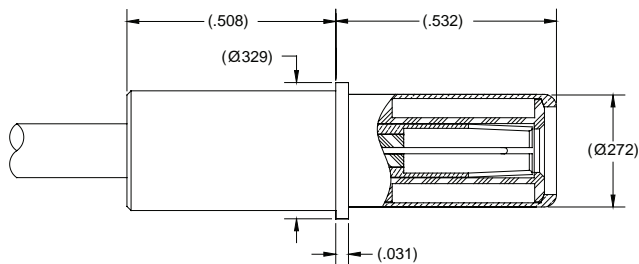
Size 8 ARINC 600 Twinax/Triax Socket Contact 75 Ohms



Part Number	Cable Type	Cable
019512-2117	Flexible Twinax	540-1050-000

Intermountable In Standard Size 8 ARINC 600 Cavities

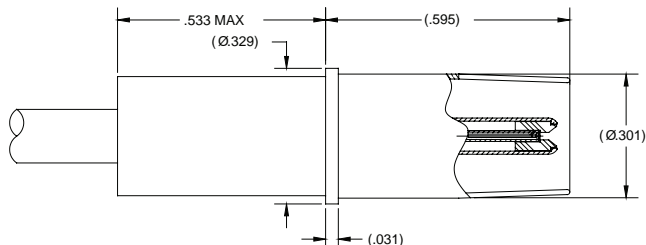
Size 8 ARINC 600 Twinax/Triax Pin Contact Special 85 Ohms



Part Number	Cable Type	Cable
019612-2121	Flexible Twinax	540-1161-000

Contacts Fit Into Special Size 8 ARINC 600 Cavities

Size 8 ARINC 600 Twinax/Triax Socket Contact Special 85 Ohms



Part Number	Cable Type	Cable
019512-2121	Flexible Twinax	540-1161-000

Intermountable In Standard Size 8 ARINC 600 Cavities



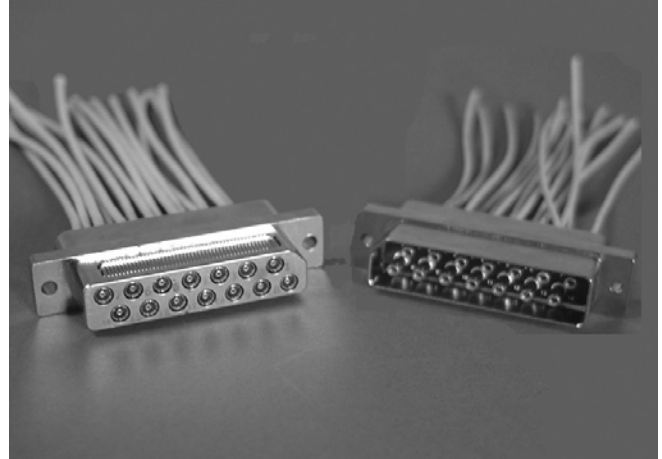
Size 10 D-Subminiature Connectors

Size 10 Triax Connectors and Contacts

Sabritec's rugged d-subminiature multiway connectors are designed to ground the outer shield of a triax contact directly to the shell of the connector. A multi-finger ground spring, fixed around the triax shell, provides a multi-point contact engagement for superior EMI shielding. The result is an extremely low contact resistance when measured from the triax contact outer body to the connector flange.

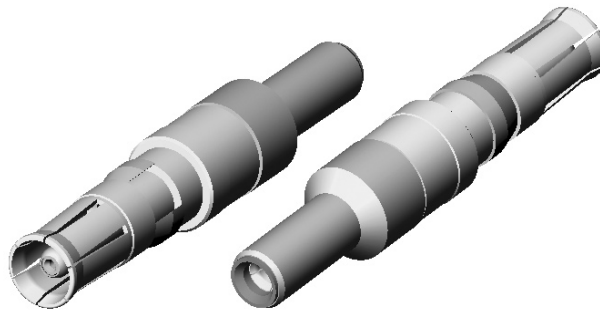
Up to the present day, the transmission of data in satellite applications has sufficed with the use of 50 ohm coax cable and connector interfaces. However, digital signal processors now used in commercial and military satellite installations require data to be transmitted for 100 Base-T and higher data rate formats. This makes the use of standard 50 ohm coax incompatible.

Sabritec's solution to this problem is a size 10 triax interface to transmit data at 100 ohms differential pair impedance packaged in a compact rugged connector. We took the design for the triax and manufactured a suitable package to be able to mate up to fourteen (14) of these contacts in a single connector interface. We added features such as a polarizing shell to prevent any mismatching and a scoop proof concentric triax interface that allows the repeatability and durability of mating the fourteen (14) Triax contacts.



Material & Finishes	
Shell & Center/Intermediate Contacts	Brass per ASTM-B16, alloy UNS C36000 or BeCu per ASTM-B196, alloy UNS C17200, C17300 or Leaded Nickel Copper, alloy UNS C19500, C19600 Gold Plate per MIL-DTL-45204, Type II, Class 1
Ground Spring	BeCu per ASTM-B194, alloy UNS C17200 Gold Plate per MIL-DTL-45204, Type II, Class 1 or Nickel Plate per SAE AMS-QQ-N-290
Snap Ring	BeCu per ASTM-B196, alloy UNS C17200, C17300 Nickel Plate per SAE AMS-QQ-N-290
Insulators	PTFE per ASTM-D1710 or ULTERM 1000
Connector Plug/Receptacle Shell	Aluminum per ASTM-B211/221, 6061-T6 Electroless Nickel plate per SAE AMS-C-26074
Data Rate	Up to 500 Mbits/second

All specifications subject to change without notice.



Size 10 Triaxial Pin to Socket Adapter and Triaxial Socket Contact

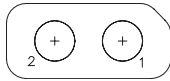


Multi-Way Triax Insert Arrangements

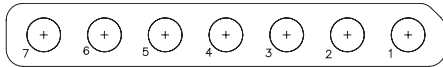
Adapters/Plugs/Receptacles

Insert Arrangements

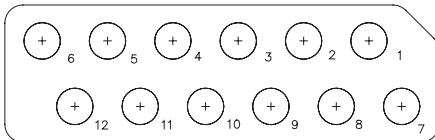
Shell Size 1
Arrangement 1-2
2 # 10 Triax/Twinax Contacts



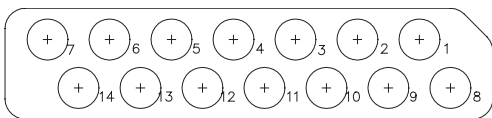
Shell Size 2
Arrangement 2-7
7 # 10 Triax/Twinax Contacts



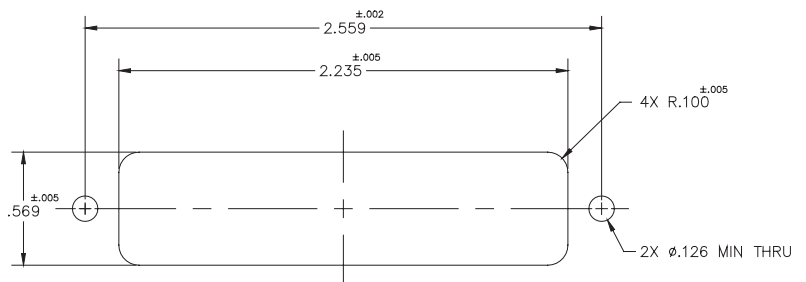
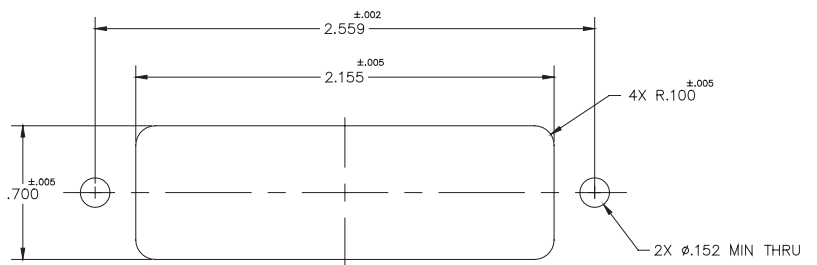
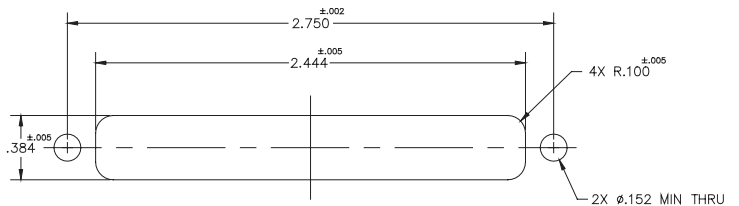
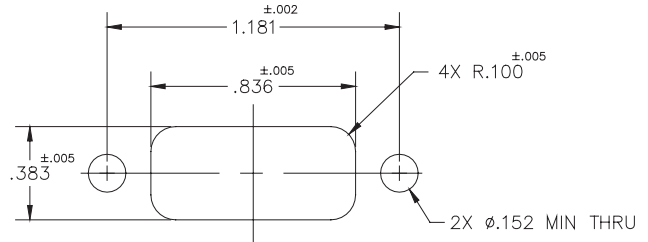
Shell Size 3
Arrangement 3-12
12 # 10 Triax/Twinax Contacts



Shell Size 4
Arrangement 4-14
14 #10 Triax/Twinax Contacts



Panel Cut-Out For Multiway Connector Assemblies

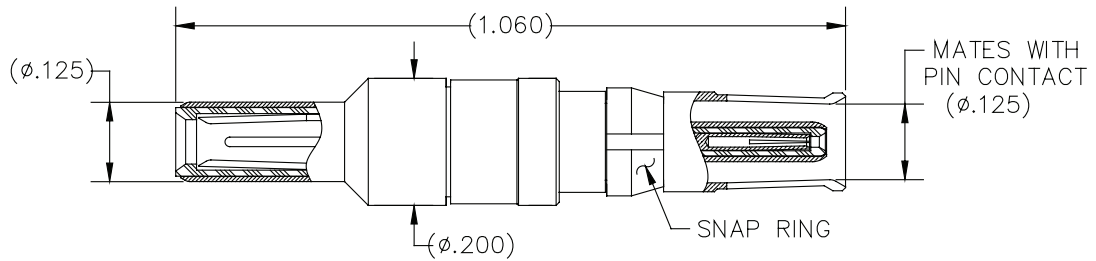




Multiway Triax/Twinax Contacts

Size 10 Triax/Twinax Contacts

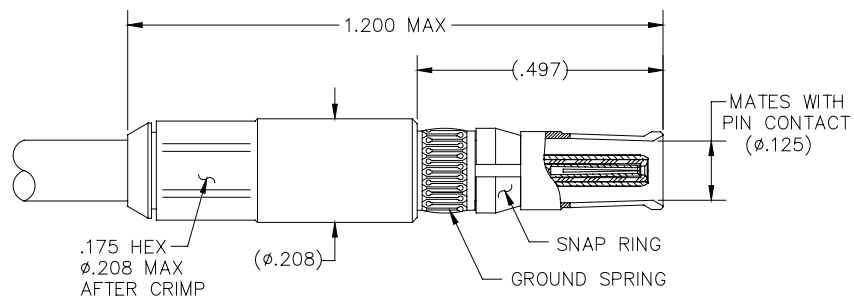
Size 10 Triaxial Pin to Socket Contact



P/N: 018800-4003

Contact Fits Sabritec Rugged D-Subminiature Adapter P/N: 012900-4005 Thru 012900-4008

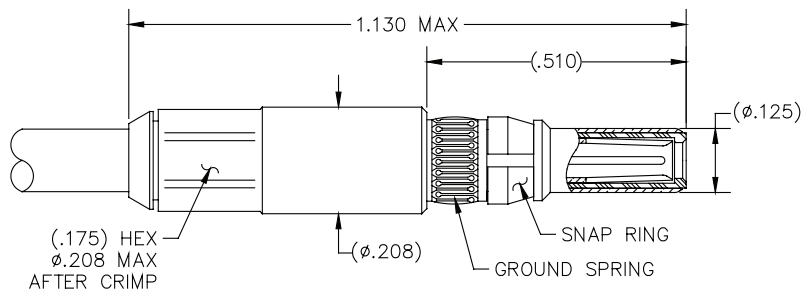
Size 10 Triaxial Socket Contact



Part Number	Cable Type	Cable
018912-2033	Flexible Twinax	540-1172-000

Contact Fits Sabritec Rugged D-Subminiature Plug P/N: 012900-2027 Thru 012900-2030

Size 10 Triaxial Pin Contact



Part Number	Cable Type	Cable
018812-2034	Flexible Twinax	540-1172-000

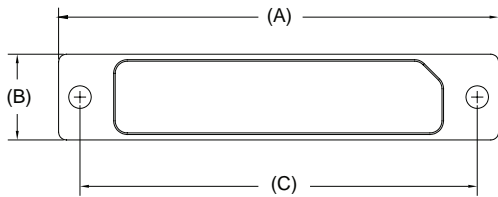
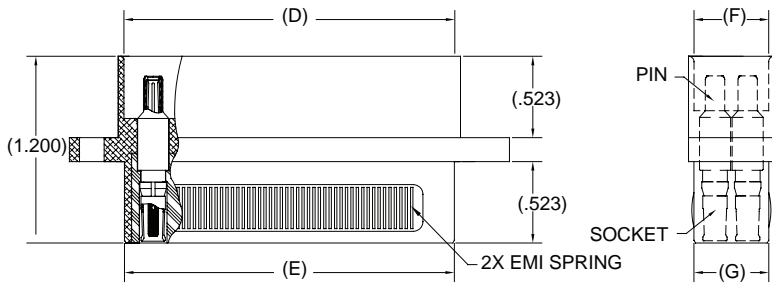
Contact Fits Sabritec Rugged D-Subminiature Receptacle P/N: 012900-3002 Thru 012900-3005



Multiway Triax/Twinax Connectors (MTC)

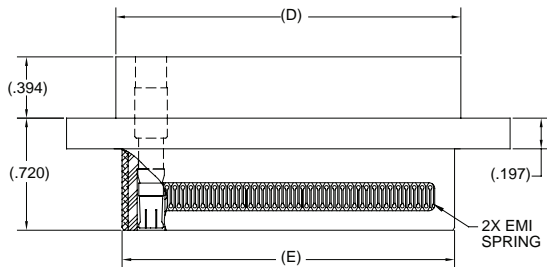
Adapters/Plugs/Receptacles

Rugged Multi-Way Triax/Twinax Adapter



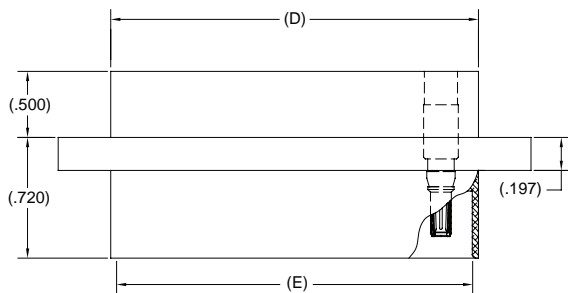
Part Number	Contacts	A	B	C	D	E	F	G
012900-4008	2	1.575	0.383	1.181	0.738	0.728	0.341	0.331
012900-4007	7	3.050	0.384	2.750	2.325	2.315	0.341	0.331
012900-4006	12	2.834	0.741	2.559	2.165	2.125	0.681	0.671
012900-4005	14	2.834	0.551	2.559	2.135	2.125	0.491	0.481

Rugged Multi-Way Triax/Twinax Plug



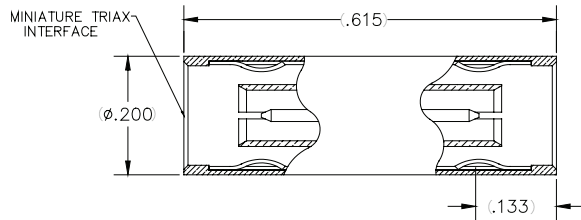
Part Number	Contacts	A	B	C	D	E	F	G
012900-2030	2	1.575	0.472	1.181	0.807	0.728	0.354	0.331
012900-2029	7	3.050	0.400	2.750	2.415	2.315	0.355	0.331
012900-2028	12	2.834	0.741	2.559	2.125	2.125	0.671	0.671
012900-2027	14	2.834	0.551	2.559	2.205	2.125	0.540	0.481

Rugged Multi-Way Triax/Twinax Receptacle



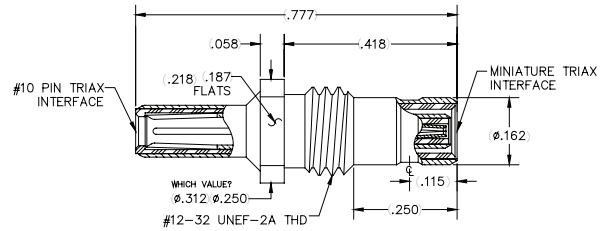
Part Number	Contacts	A	B	C	D	E	F	G
012900-3005	2	1.575	0.472	1.181	0.807	0.738	0.354	0.341
012900-3004	7	3.050	0.400	2.750	2.415	2.325	0.355	0.341
012900-3003	12	2.834	0.741	2.559	2.125	2.135	0.671	0.681
012900-3002	14	2.834	0.551	2.559	2.205	2.135	0.540	0.491

Miniature Triax Blind Mate Plug



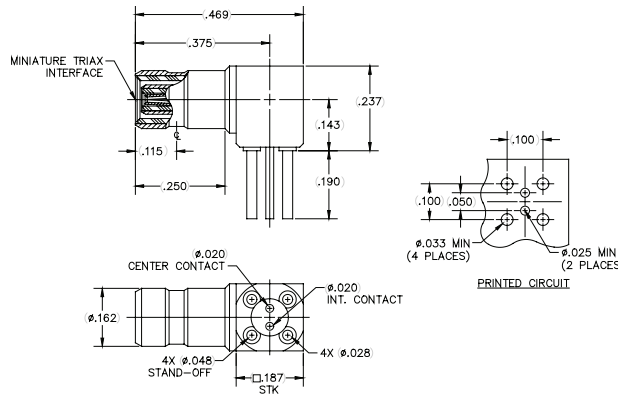
P/N: 014500-4001

Miniature Triax Receptacle to #10 Triax Pin



P/N: 014500-4002

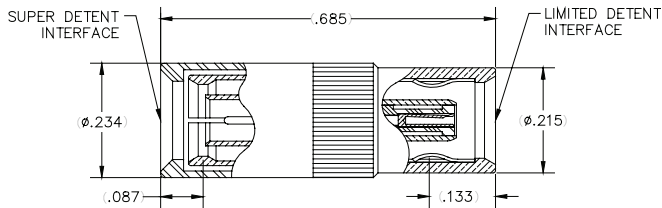
Miniature Triaxial Right Angle Receptacle PCB Mount



P/N: 014517-1001

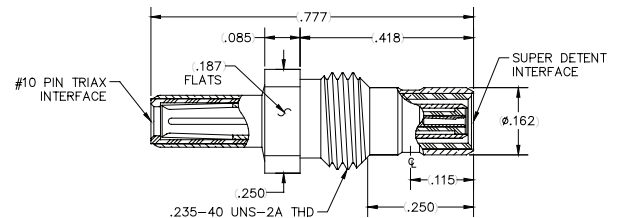
PCB Mount Triax Connectors

Triax Blindmate Plug Full to Limited Detent



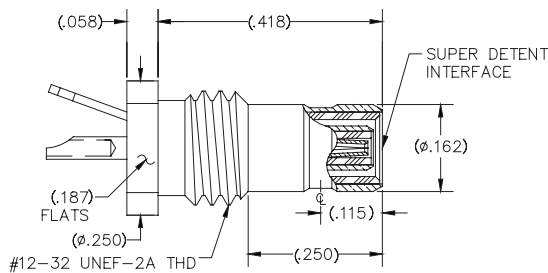
P/N: 014500-4003

Triax Receptacle Full Detent to #10 Pin



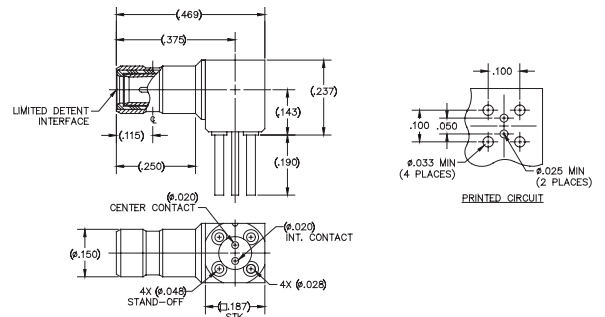
P/N: 014500-4004

Triax Bulkhead Mount Solder Tab Detent



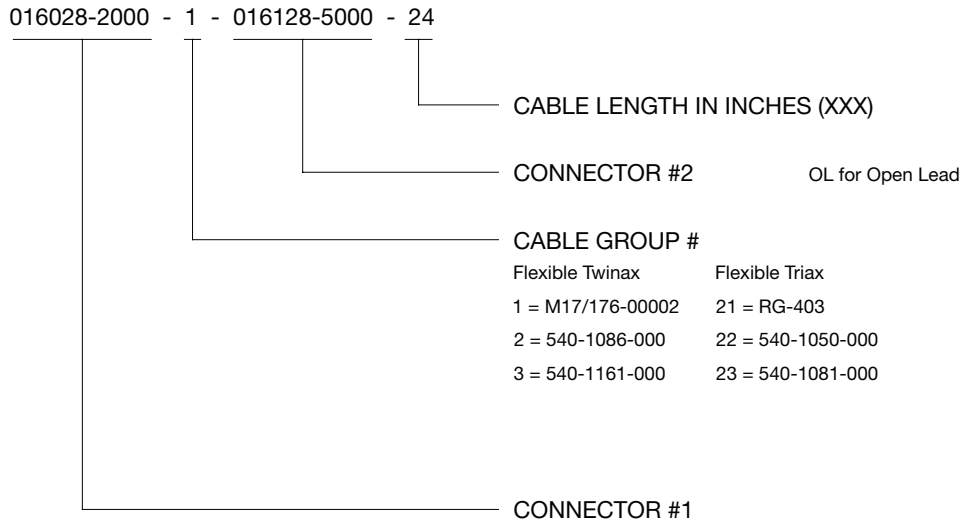
P/N: 014500-5002

Limited Detent R/A Receptacle PCB Mount

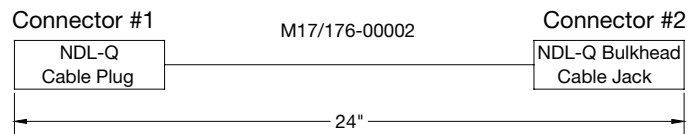


P/N: 014517-1002

Cable Part Number Description Table



Sample Part Number Code: 016028-2000 / 1 / 016128-5000 / 24



Flexible Twinax Cables					
Cable Group	Cable Designation	Manufacturer	Impedance (Ohms)	Jacket	Conductor (DIA)
1	M17/176-00002	Mil-Spec	77	0.129"	0.024"
2	540-1086-000	Sabritec	98	0.143"	0.019"
3	540-1161-000	Sabritec	100	0.130"	0.024"



Flexible Triax Cables					
Cable Group	Cable Designation	Manufacturer	Impedance (Ohms)	Jacket	Conductor (DIA)
21	RG-403	Mil-Spec	50	0.116"	0.012"
22	540-1050-000	Sabritec	75	0.125"	0.012"
23	540-1081-000	Sabritec	95	0.125"	0.008"