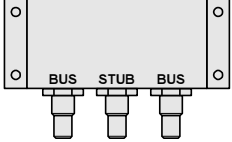




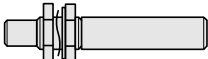
Connectorized System


Dematable Bus Terminator
Threaded and Bayonet, Sealed,
1000hr Salt Spray Resistant, D-621-04XX
(Ref USAF 8912009)


Box Coupler with D-621 Discrete Connector,
1- to 8-Stub, Sealed, 1000hr Salt Spray
Resistant, D-500-0255-5XX-X
(Ref USAF 8912007, 8912008)



DK-621-04XX-X Discrete Connectors
Threaded and Bayonet, Sealed,
1000hr Salt Spray Resistant
(Ref USAF 8340709, 8340711)



MIL-DTL-38999 Size 8 Cavity Triaxial Contacts
D-602-1108/1109, D-602-1112/1113
(Ref USAF 8340712, 8340713)
DK-602-0156/0157, DK-602-0169/0170
(Ref USAF 8912019, 8912010)


Dematable Stub Terminator
D-621-04XX, Threaded and Bayonet,
Sealed, 1000hr Salt Spray Resistance
(Ref USAF 8421525, 8912010)


Box Coupler with Dematable Bus Terminator
D-500-0255-XXX


Spliced or In Line Components


Spliced in Lightweight Bus Terminator,
Sealed, D-500-0463-XXX


Spliced-in, Lightweight Bus Coupler,
1- or 2-Stub, Sealed, D-500-04XX
(Ref USAF 8912026)


SolderShield Splice with MiniSeal Crimp or
SolderShield Splice With In-Line Splice Kit,
Sealed, D-150-0708-X (Ref USAF 8340708)


Spliced-in, Flat-Pack Bus Coupler
D-500-F4XX-X


Spliced-in, Lightweight Bus Coupler,
3- or 4- Stub, Sealed, D-500-04XX


Spliced-in, Coupler with Internal Terminator,
Sealed, D-500-04XX

Raychem Data Bus Cables
24AWG Single Shield 10612
(Ref USAF 8421526)
24AWG Double Shield 10613
(Ref USAF 8421527)
24AWG EMP Hardened 10614
(Ref USAF 8421528)

BUS
CONTROLLER

R/T

R/T

R/T

R/T

Microcouplers

Raychem

Compact, in-line, splice-terminated data bus microcouplers, feature lightweight design that meet the MIL-STD-1553B requirements for hardware configuration and performance. The low-profile configuration enables avionics system designers to plan for optimum coupler locations.

Tyco Electronics data bus microcouplers are qualified to Raychem Specification D-6020, European Specification EN-3567, and are specified in the Air Force drawings listed in 8340707. Standard products are supplied with Raychem SPEC 55 data bus cables, including EMP-hardened versions.

All of these products are available assembled with other components into a complete data bus harness without splices.

The Raychem data bus microcoupler features:

- Environmental sealing
- No connectors
- Very small size, light weight
 - 1 stub: 10 g (max.)
 - 2 stub: 15 g (max.)(Lighter weight versions are available)
- In-line profile to enable wire bundle mounting
- 360° continuous low-impedance cable shield terminations
- Reliable solder termination of all components
- Potted circuit elements for maximum durability and in-use reliability
- Ease of installation
- Altitude immersion resistance
- Optional eyelet configurations for bulkhead mounting
- MTBF > 1,000,000 hours.
- 150°C temperature rating



Microcoupler Part Numbering System

D-500-04 XX-X-YYY-ZZZ

Standard Cable Length

012 = 12 in (1 ft)
 078 = 78 in (6.5 ft)
 079 = 79 in (2 m)
 120 = 120 in (10 ft)
 236 = 236 in (6 m)
 240 = 240 in (20 ft)
 360 = 360 in (30 ft)

Cable Type

612 = 10612 24 AWG single optimized shield
 613 = 10613 24 AWG double optimized shield
 614 = 10614 24 AWG EMP hardened

Number of Stubs

1 or 2

Design

5 = Without internal terminator
 6 = Same as 5 but with reverse bus
 7 = With internal terminator
 8 = Same as 7 but with reverse bus

Boot

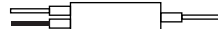
5 = Without mounting eyelet
 6 = With mounting eyelet

In-Line Microcouplers: One- and Two Stub

Single Stub

Double Stub

D-500-0455-1-YYY-ZZZ



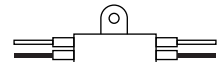
D-500-0455-2-YYY-ZZZ



D-500-0465-1-YYY-ZZZ



D-500-0465-2-YYY-ZZZ



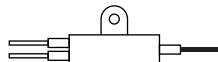
D-500-0456-1-YYY-ZZZ



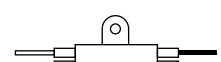
D-500-0456-2-YYY-ZZZ



D-500-0466-1-YYY-ZZZ



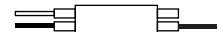
D-500-0466-2-YYY-ZZZ



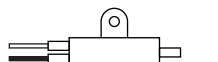
D-500-0457-1-YYY-ZZZ



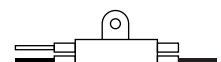
D-500-0457-2-YYY-ZZZ



D-500-0467-1-YYY-ZZZ



D-500-0467-2-YYY-ZZZ



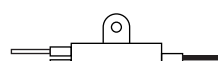
D-500-0458-1-YYY-ZZZ



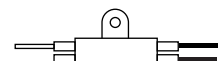
D-500-0458-2-YYY-ZZZ





D-500-0468-1-YYY-ZZZ



D-500-0468-2-YYY-ZZZ

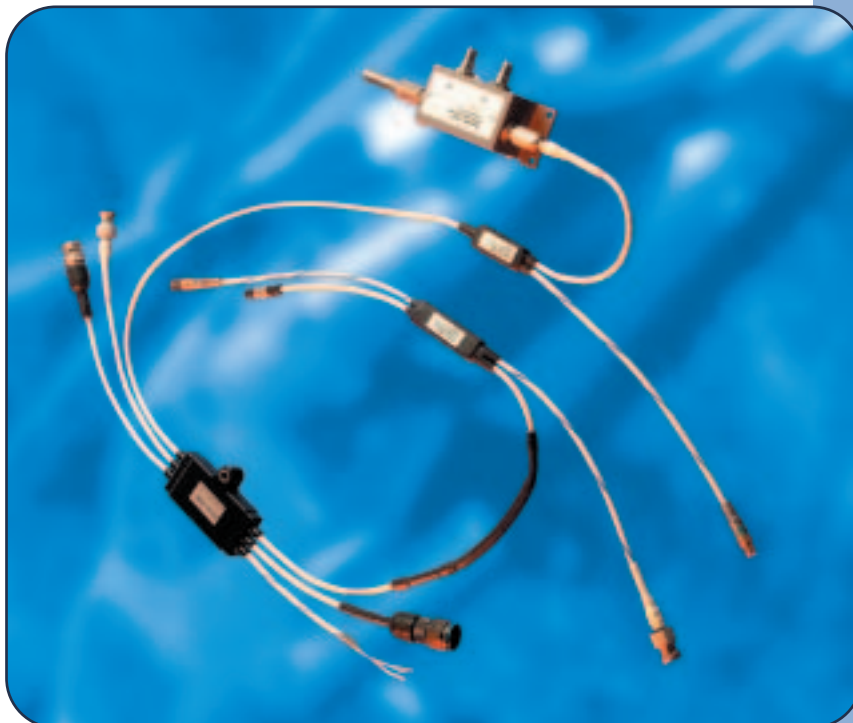


Note:

1. Bus cable 
 2. Stub cable 

Ultra Lightweight In-Line Microcouplers 1- through 6- Stub

Raychem



Applications

Building on over 20 years of experience and continuous improvement in data bus, including pioneering in-line microcouplers, Tyco Electronics introduces a new family of ultra light- weight in-line Raychem Microcouplers, available in 1- through 6-stub configurations.

These couplers offer the same high performance and reliability as Raychem current microcouplers, but their weight is further reduced. They are available in configurations up to 6-stub. There is no option with a mounting eyelet.

Combined with Raychem 24 AWG data bus cables, these ultra light couplers allow designers to significantly reduce weight. An unfilled flat braid cable is available for additional weight savings.

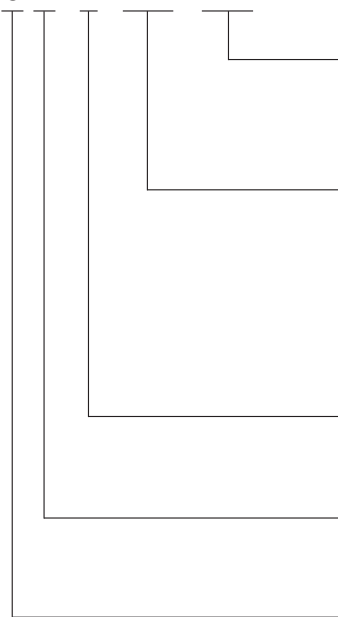
They are also available assembled with other customer specified components into a complete factory-built and tested data bus harness.

Specifications/approvals

Series	Military	Raychem
D-500-L4xx	MIL-STD-1553B	D-6020 (same as current microcouplers)

Lightweight In-Line Couplers Part Numbering System

D-500-L4 5 W -X -YYY -ZZZ

**Cable Length**

012 = 12 in 079 = 79 in 236 = 236 in
078 = 78 in 120 = 120 in 240 = 240 in
360 = 360 in

Cable Type

612 = 10612 (24 AWG single optimized shield)
613 = 10613 (24 AWG double optimized shield)
614 = 10614 (24 AWG EMP hardened)
H06 = 7724H0664 (24 AWG flat shield, unfilled)
Lightest cable

Number of Stubs

1, 2, 3, 4, 5 or 6

Design

5 = Without internal terminator
7 = With internal terminator

Style













5 = Without eyelet

Ultra Lightweight In-Line Microcouplers 1- through 6- Stub













Raychem

Product Selection













D-500-L455-X-YYY-ZZZ

End View Left Side		End View Right Side
	1 stub	
	2 stub	
	3 stub	
	4 stub	
	5 stub	
	6 stub	













D-500-L456-X-YYY-ZZZ

End View Left Side		End View Right Side
	1 stub	
	2 stub	
	3 stub	
	4 stub	
	5 stub	
	6 stub	

D-500-L457-X-YYY-ZZZ

End View Left Side		End View Right Side
	1 stub	
	2 stub	
	3 stub	
	4 stub	
	5 stub	
	6 stub	

D-500-L458-X-YYY-ZZZ

End View Left Side		End View Right Side
	1 stub	
	2 stub	
	3 stub	
	4 stub	
	5 stub	
	6 stub	

Legend
Bus cable □
Stub cable ●



Raychem brand data bus box couplers provide lightweight, robust coupler modules with connector versatility.

Up to eight stub connectors can be arrayed on the “face” of the box coupler. The bus connectors can also be on the “face” or on the “side” of the box.

Designed with Raychem brand D-621 series corrosion-resistant threaded or bayonet-type connectors. Box couplers are qualified to Raychem Specification D-6021.

Customized data bus box couplers are available upon request.

Data Bus Box Couplers

Coupler Type	Part No.			
	Threaded	Bayonet A*	Bayonet B*	Bayonet C*
Face - 1 Stub	D-500-0255-511-1	D-500-0255-513-1	D-500-0255-515-1	D-500-0255-517-1
Face - 2 Stub	D-500-0255-521-1	D-500-0255-523-1	D-500-0255-525-1	D-500-0255-527-1
Face - 3 Stub	D-500-0255-531-1	D-500-0255-533-1	D-500-0255-535-1	D-500-0255-537-1
Face - 4 Stub	D-500-0255-541-1	D-500-0255-543-1	D-500-0255-545-1	D-500-0255-547-1
Face - 5 Stub	D-500-0255-551-1	D-500-0255-553-1	D-500-0255-555-1	D-500-0255-557-1
Face - 6 Stub	D-500-0255-561-1	D-500-0255-563-1	D-500-0255-565-1	D-500-0255-567-1
Face - 7 Stub	D-500-0255-571-1	D-500-0255-573-1	D-500-0255-575-1	D-500-0255-577-1
Face - 8 Stub	D-500-0255-581-1	D-500-0255-583-1	D-500-0255-585-1	D-500-0255-587-1
Side - 1 Stub	D-500-0255-512-1	D-500-0255-513-2	D-500-0255-515-2	D-500-0255-517-2
Side - 2 Stub	D-500-0255-522-1	D-500-0255-523-2	D-500-0255-525-2	D-500-0255-527-2
Side - 3 Stub	D-500-0255-532-1	D-500-0255-533-2	D-500-0255-535-2	D-500-0255-537-2
Side - 4 Stub	D-500-0255-542-1	D-500-0255-543-2	D-500-0255-545-2	D-500-0255-547-2
Side - 5 Stub	D-500-0255-552-1	D-500-0255-553-2	D-500-0255-555-2	D-500-0255-557-2
Side - 6 Stub	D-500-0255-562-1	D-500-0255-563-2	D-500-0255-565-2	D-500-0255-567-2
Side - 7 Stub	D-500-0255-572-1	D-500-0255-573-2	D-500-0255-575-2	D-500-0255-577-2
Side - 8 Stub	D-500-0255-582-1	D-500-0255-583-2	D-500-0255-585-2	D-500-0255-587-2

*The bayonet polarization listed is for the bus connector. All stub connectors are Bayonet D polarization. Polarizations are depicted as follows (jack view):

1 = A



2 = B



3 = C



4 = D



Data Bus Cables

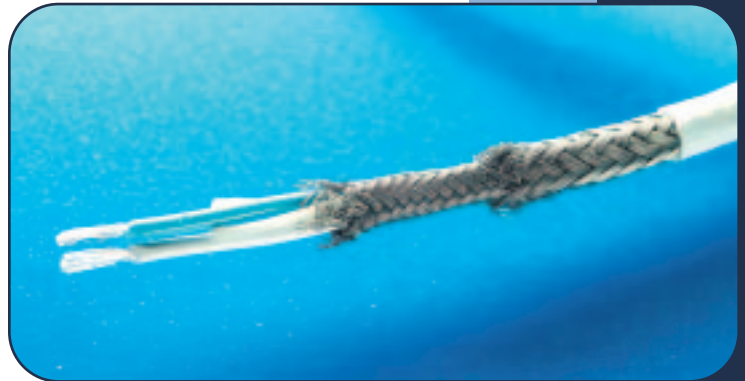
Raychem

SPEC 55 data bus cables meet or exceed the performance requirements of MIL-STD-1553B. SPEC 55 insulation is a high-temperature, radiation-cross-linked, modified ETFE material that can be used in wire constructions rated up to 200°C. This insulation is qualified to MIL-W-22759/32-/35 and 41-/46.

The cables are:

- Lightweight
- Highly flexible
- Flame-resistant
- Chemical-resistant to all known aircraft fluids
- Solder-iron-resistant

Made with optimized shielding providing three standard levels of defined EMI/EMP protection. Other shielding options and cable constructions are available.



Data Bus Discrete Connectors

Raychem Brand D-621 and DK-621 series connectors are designed specifically for MIL-STD-1553B data bus applications. In addition to utilizing Tyco Electronics heat-shrink technology, the D-621 and DK-621 series connectors also feature:

- Compliance to MIL-STD-1553B hardware requirements
- Light weight
- Removable pin or socket contacts
- Termination with Raychem MILSPEC and MIL-STD-1553B data bus cables, including EMP-hardened versions
- Continuous 360° shield coverage
- Rugged constructions
- Termination time of 1 to 2 minutes
- Inspectable solder terminations
- Low-skill assembly
- Reworkable and repairable terminations
- Strain relief built into the design
- Low voltage drop and high reliability due to precisely controlled solder terminations
- Threaded coupling, with safety wire holes and bayonet coupling styles
- Low total installed cost
- 1000-hour salt spray resistance



Connector Kit Part
Numbering System

DK-621-04 XX-XX

Contact (supplied in DK-621 kits only)

P = Pin

S = Socket

Polarization (bayonet styles only) (jack view)

1 = A



2 = B



3 = C



4 = D

**Basic Connector Configurations***Threaded styles*

11 = Plug

12 = Jack

Bayonet styles

33 = Plug, A polarization

34 = Jack, A polarization

35 = Plug, B polarization

36 = Jack, B polarization

37 = Plug, C polarization

38 = Jack, C polarization

39 = Plug, D polarization

40 = Jack, D polarization

D-621 connector, kitted with accessories**Example:**

DK-621-0434-1P = D-621
connector, kitted with
accessories, jack bayonet
style with A polarization and
pin contact.

Triaxial Connectors for 1553B Data Bus Cable

Raychem

Data Bus Discrete Connectors & Terminator Mating Guide

Panel Thickness	Connector	Contact	Connector Reference	Connector	Mate with 77 Ohm bus Terminator	3K Ohm stub Terminator
Bayonet Connectors						
Polarity A						
	Plug	Pin	DK-621-0433-1P	DK-621-0434-1S	D-621-0461(-L)	D-621-0465(-L)
	Plug	Socket	DK-621-0433-1S	DK-621-0434-1P	D-621-0477(-L)	D-621-0481(-L)
Standard	Jack	Pin	DK-621-0434-1P	DK-621-0433-1S	D-621-0469(-L)	D-621-0473(-L)
2.4mm max	Jack	Socket	DK-621-0434-1S	DK-621-0433-1P	D-621-0453(-L)	D-621-0457(-L)
Long reach	Jack	Pin	DK-621-0550-1P	DK-621-0433-1S	D-621-0469(-L)	D-621-0473(-L)
12.5mm max	Jack	Socket	DK-621-0550-1S	DK-621-0433-1P	D-621-0453(-L)	D-621-0457(-L)
Polarity B						
	Plug	Pin	DK-621-0435-2P	DK-621-0436-2S	D-621-0462(-L)	D-621-0474(-L)
	Plug	Socket	DK-621-0435-2S	DK-621-0436-2P	D-621-0478(-L)	D-621-0458(-L)
Standard	Jack	Pin	DK-621-0436-2P	DK-621-0435-2S	D-621-0470(-L)	D-621-0474(-L)
2.4mm max	Jack	Socket	DK-621-0436-2S	DK-621-0435-2P	D-621-0454(-L)	D-621-0458(-L)
Long reach	Jack	Pin	DK-621-0448-2P	DK-621-0435-2S	D-621-0470(-L)	D-621-0467(-L)
12.5mm max	Jack	Socket	DK-621-0448-2S	DK-621-0435-2P	D-621-0454(-L)	D-621-0483(-L)
Polarity C						
	Plug	Pin	DK-621-0437-3P	DK-621-0438-3S	D-621-0463(-L)	D-621-0467(-L)
	Plug	Socket	DK-621-0437-3S	DK-621-0438-3P	D-621-0479(-L)	D-621-0483(-L)
Standard	Jack	Pin	DK-621-0438-3P	DK-621-0437-3S	D-621-0471(-L)	D-621-0475(-L)
2.4mm max	Jack	Socket	DK-621-0438-3S	DK-621-0437-3P	D-621-0455(-L)	D-621-0459(-L)
Long reach	Jack	Pin	DK-621-0446-3P	DK-621-0437-3S	D-621-0471(-L)	D-621-0475(-L)
12.5mm max	Jack	Socket	DK-621-0446-3S	DK-621-0437-3P	D-621-0455(-L)	D-621-0459(-L)
Polarity D						
	Plug	Pin	DK-621-0439-4P	DK-621-0440-4S	D-621-0464(-L)	D-621-0468(-L)
	Plug	Socket	DK-621-0439-4S	DK-621-0440-4P	D-621-0480(-L)	D-621-0484(-L)
Standard	Jack	Pin	DK-621-0440-4P	DK-621-0439-4S	D-621-0472(-L)	D-621-0476(-L)
2.4mm max	Jack	Socket	DK-621-0440-4S	DK-621-0439-4P	D-621-0456(-L)	D-621-0460(-L)
Long reach	Jack	Pin	DK-621-0551-4P	DK-621-0439-4S	D-621-0472(-L)	D-621-0476(-L)
12.5mm max	Jack	Socket	DK-621-0551-4S	DK-621-0439-4P	D-621-0456(-L)	D-621-0460(-L)
Threaded Connectors						
Polarity E						
	Plug	Pin	DK-621-0411-P	DK-621-0412-S	D-621-0406(-L)	D-621-0424(-L)
	Plug	Socket	DK-621-0411-S	DK-621-0412-P	D-621-0418(-L)	D-621-0423(-L)
Standard	Jack	Pin	DK-621-0412-P	DK-621-0411-S	D-621-0415(-L)	D-621-0407(-L)
2.4mm max	Jack	Socket	DK-621-0412-S	DK-621-0411-P	D-621-0413(-L)	D-621-0417(-L)
Long reach	Jack	Pin	DK-621-0412-P	DK-621-0411-S	D-621-0415(-L)	D-621-0407(-L)
12.5mm max	Jack	Socket	DK-621-0412-S	DK-621-0411-P	D-621-0413(-L)	D-621-0417(-L)

Triaxial Connectors and Terminators to European NORME EN3716 for 1553B Data Bus Cable

Triaxial Connectors

Panel Thickness	Connector	Contact	Connector Reference	Connector	Mate with	
					77 Ohm bus Terminator	3K Ohm stub Terminator
Standard 2.4mm max	Plug	Pin	DK-3716-F101-TP	DK-621-E102-TS	D-621-E077-S	D-621-E03K-S
	Plug	Socket	DK-3716-F101-TS	DK-621-E102-TP	D-621-E077-P	D-621-E03K-P
	Plug	Pin	DK-3716-F201-TP	DK-621-E202-TS	D-621-E077-S	D-621-E03K-S
	Plug	Socket	DK-3716-F201-TS	DK-621-E202-TP	D-621-E077-P	D-621-E03K-P
	Jack	Pin	DK-3716-E102-TP	DK-621-F101-TS	D-621-F077-S	D-621-F03K-S
	Jack	Socket	DK-3716-E102-TS	DK-621-F101-TP	D-621-F077-P	D-621-F03K-P
	Jack	Pin	DK-3716-E202-TP	DK-621-F201-TS	D-621-F077-S	D-621-F03K-S
	Jack	Socket	DK-3716-E202-TS	DK-621-F201-TP	D-621-F077-P	D-621-F03K-P
Long reach 12.5mm max	Jack	Pin	DK-3716-E112-TP	DK-621-F101-TS	D-621-F077-S	D-621-F03K-S
	Jack	Socket	DK-3716-E112-TS	DK-621-F101-TP	D-621-F077-P	D-621-F03K-P
	Jack	Pin	DK-3716-E212-TP	DK-621-F201-TS	D-621-F077-S	D-621-F03K-S
	Jack	Socket	DK-3716-E212-TS	DK-621-F201-TP	D-621-F077-P	D-621-F03K-P

Terminators

Panel Thickness	Connector	Contact	Terminator Reference	Standard Connector	Mate with	
					Long Reach Connector	
77 Ohm bus terminator	Plug	Pin	DK-3716-F077-P	DK-3716-E#02-TS	DK-3716-E#12K-TS	
	Plug	Socket	DK-3716-F077-S	DK-3716-E#02-TP	DK-3716-E#12K-TP	
	Jack	Pin	DK-3716-F077-P	DK-3716-E#01-TS		
	Jack	Socket	DK-3716-F077-S	DK-3716-E#01-TP		
3K Ohm stub terminator	Plug	Pin	DK-3716-E03K-P	DK-3716-E#02-TS	DK-3716-E#12K-TS	
	Plug	Socket	DK-3716-E03K-S	DK-3716-E#02-TP	DK-3716-E#12K-TP	
	Jack	Pin	DK-3716-E03K-P	DK-3716-E#01-TS		
	Jack	Socket	DK-3716-E03K-S	DK-3716-E#01-TP		

MIL-DTL-38999-Type Triaxial Contacts for Data Bus Applications

Raychem

Now, both high-density packaging and full shield coverage are available with a simple, quick and reliable termination system. AWG24 twisted-pair data bus cables are terminated to triaxial SolderTacts contacts, which fit size 8 cavities of MIL-DTL-38999, Series I, III, or IV connectors.

Raychem brand triaxial 38999-type data bus contacts deliver the signals with:

- One-step termination
- Termination time of 1 to 2 minutes
- No needed special termination tools
- No requirements for special skills
- Reworkable and repairable terminations
- Strain relief that is built into the design
- Continuous 360° shield coverage
- Triaxial mating face for least susceptibility to damage
- Rugged construction
- Inspectable solder terminations
- Low voltage drop and high reliability due to precisely controlled solder termination.

Raychem size 8 triaxial data bus contacts for MIL-DTL-38999 connectors have interfaces that comply with MIL-C-39029/90 and /91 to provide intermatability with crimp contacts.

These contacts provide a fast and convenient method of implementing MIL-STD-1553B connections in MIL-STD-1760 applications.



MIL-DTL-38999-Type Triaxial Contacts for Data Bus Applications

Specifications/Approval

Series	Raychem
Size 8	D-6002

Product Selection

Cable Type	Pin	Socket
10612	DK-602-0156-N-1	DK-602-0157-N-1
10613	DK-602-0156-N-2	DK-602-0157-N-2
10614	DK-602-0156-N-3	DK-602-0157-N-3



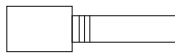
Data Bus Accessories



Tyco Electronics manufactures all the Raychem products needed to build a MIL-STD-1553B data bus network. In addition to the main components the following accessory components that may be necessary to complete a data bus system are also available:

- Bus and stub terminators spliced-in and connectorized (D-621 series)
- Cable splice kits
- EMI/environment-resistant connector caps
- Braid terminators and strain relief tubing for rework applications

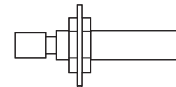




D-621 Plug







Spliced-in



D-621 Jack

Bus and Stub Terminators

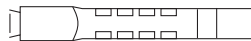
Spliced-in	12-inch Cable				
77-ohm 10612 cable	D-500-0463-612				
77-ohm 10613 cable	D-500-0463-613				
77-ohm 10614 cable	D-500-0463-614				
77-ohm 7724E2664 cable	D-500-0463-E26				
D-621 Series—Plug	Threaded	Bayonet A	Bayonet B	Bayonet C	Bayonet D
77-ohm pin contact	D-621-0413	D-621-0453	D-621-0454	D-621-0455	D-621-0456
77-ohm socket contact	D-621-0415	D-621-0469	D-621-0470	D-621-0471	D-621-0472
3000-ohm pin contact	D-621-0417	D-621-0457	D-621-0458	D-621-0459	D-621-0476
3000-ohm socket contact	D-621-0407	D-621-0473	D-621-0474	D-621-0475	D-621-0460
D-621 Series—Jack	Threaded	Bayonet A	Bayonet B	Bayonet C	Bayonet D
77-ohm pin contact	D-621-0418	D-621-0477	D-621-0478	D-621-0479	D-621-0480
77-ohm socket contact	D-621-0406	D-621-0461	D-621-0462	D-621-0463	D-621-0464
3000-ohm pin contact	D-621-0423	D-621-0481	D-621-0482	D-621-0483	D-621-0484
3000-ohm socket contact	D-621-0424	D-621-0465	D-621-0466	D-621-0467	D-621-0468
D-621 Series—L	Lanyard 7"	—	—	—	—



Connector Caps

D-621 Series	Threaded	Bayonet A	Bayonet B	Bayonet C	Bayonet D
Plug cap for jack connector Supplied with 7" Lanyard	D-600-0083	D-600-0068	D-600-0068	D-600-0068	D-600-0065

Cable Splice Kits



Cables	Flexible Crimp
All data bus cables	D-150-0708-5



Tyco Electronics Authorized Distributors

To locate a Tyco Electronics Authorized Distributor near you, visit:
<http://www.tycoelectronics.com> and select "Find a Distributor"; or
call Customer Service as listed below.

Technical Support

USA: 1-800-522-6752 • Canada: 1-905-470-4425 • Mexico: 01-800-733-8926 •
Central America: 52-55-5-729-0425 • South America: 55-11-3611-1514 • Other
Latin/South American Countries: 57-1-240-9396

Our Technical Support Specialists provide information on distributor locations,
drawing/prints, application/product specifications, PCB layouts, technical
information, plating, electrical characteristics, dimensions, value added capabilities,
and 3D modeling/simulation.

Customer Service

USA: 1-800-522-6752 • Canada: 1-905-475-6222 • Mexico: 01-800-733-8926 •
Central America: 52-55-5-729-0431 • South America: 55-11-3611-1311 • Other
Latin/South American Countries: 57-1-240-9396

Receive price and delivery information immediately. You can also place new orders, change
or expedite existing orders, and request product samples and literature through the Customer
Service Department.