

38999

- III
- HD
- Dualok
- II
- I
- SJT
- Accessories
- Aquacon
- Herm/Seal
- PCB

HIGH SPEED

- Fiber Optics
- Contacts Connectors Cables

EMI Filter Transient

26482 Matrix 2

83723 III Matrix | Pyle

26500 Pyle

5015 Crimp Rear Release Matrix

22992 Class 1

Back-Shells

Options Others

CABLE ASSEMBLY CAPABILITIES

Amphenol provides a large array of cable assemblies with high speed quadax and differential twinax contacts, as well as coax and concentric twinax contacts. This page shows a few examples. The Cable Usage Guide pages that follow list the design possibilities for these high speed contacts.

Amphenol strives to offer customers the widest range of cable assemblies, keeping abreast of the latest cable types in the marketplace. Please consult with the contact product managers at Amphenol Aerospace for assistance in designing the cable assembly that suits your particular needs. From a simple one-cable interconnection, to a multiple cable system, Amphenol can design and supply your cable needs for high frequency contacts and connectors. See the High Frequency Contact Designer's Guide at the end of this catalog section.



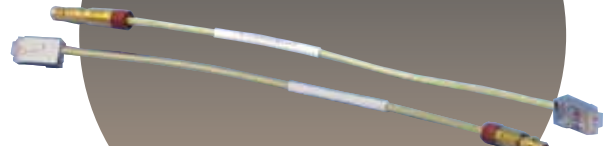
Variety of Quadrax Cable Assemblies

TESTING OF CABLES

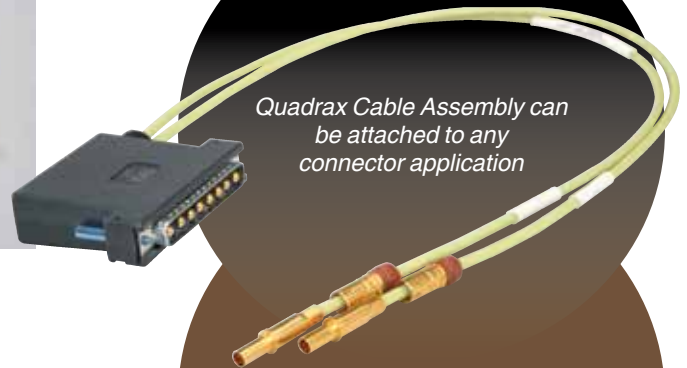
Rigid testing is performed 100% on cable assemblies at Amphenol before they are shipped to make sure they meet customer requirements. These requirements include tests such as DWV, resistance and continuity. Amphenol has the background experience and understanding of harsh environmental testing to assure reliable "end-to-end" interconnect solutions.



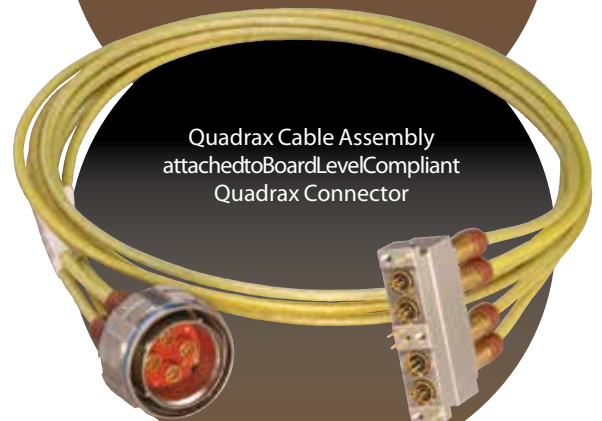
Eight Wire Gigabit Ethernet Assembly



Quadrax Contact with 8P8C "RJ45" Jack Ethernet Assembly



Quadrax Cable Assembly can be attached to any connector application

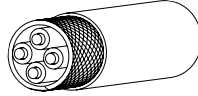


Quadrax Cable Assembly attached to Board Level Compliant Quadrax Connector

Use the Cable Usage Guide on pages 219-222 as follows:

1. Locate the cable you are using in Cable Type column. For cables not listed consult Amphenol Aerospace.
2. Refer to the Amphenol Connector section which features contacts/adapters for this cable. Connector size, performance features and insert pattern availability may influence your choice.
3. Order your connector and contacts or transition adapters by following the procedure given in the section for the connector series selected. These instructions are supplemented by the Amphenol Catalog Section covering the basic connector.

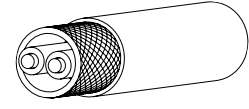
Quadrax Contacts CABLE USAGE GUIDE D38999 Series III* Connectors



Cable Type		Nominal Impedance (ohms)
Draka Fileca	F-4703-3	100
	F-4703-4	
	F-4704-5	
	F-47-4-6	
Filotex	ET2PC236	
	ET2PF870	
PIC Wire	E50424	
	E50426	
	E51424	
Tensolite	NF22Q100	
	NF24Q100	
	NF24Q100-1	
	NF24Q100-01-200C	
	NF26Q100	
	NF26Q100-1	
	NF26-2Q100	
	24443/03130X-4(LD)	
	24443/03166X-4(LD)	
	24443/9P025X-4(LD)	
	23450/04090X-4 (LD)	
	24443/C20714X-4(LD)	
Gore	RCN7688	
	RCN8513	
	RCN8672	
S280W502-4		110
JSF-18-3		
Themax	956-4TN	
	956-5	
	T956-4T200	
	MX100Q-24	
Tensolite	24450/03089X-4(LD)	
Gore	RCN8487	
JSFY02-1		
JSF18		
Tensolite	26473/02006X-4(LD)	150
Gore	RCN8328	

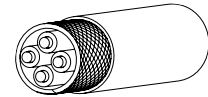
* Requires modified connector to accommodate keyed contacts.

Differential Twinax Contacts CABLE USAGE GUIDE D38999 Series III* Connectors



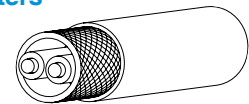
Cable Type		Nominal Impedance (ohms)
Tensolite	26463/70460X-2	98
ST5M1284-003		
Draka Fileca	2709-3	100
PIC Wire	E10224	
Tensolite	NF24T100-200C Space	
	23460/05114X-2(LD)	
	24463/03220T-2(LD)	
	24463/05099X-8(LD)	
	26453/03184X-2(LD)	
	24463/9P025X-2(LD)	
Raychem	0026A0024, 0024G0024	
S280W502-6		
JSFY11-24		
Gore	GSC-05-827300-00	
Themax	956-6262, 956-1T200	
	12814	
	MX 100-24	
Tensolite	26483/03071X-2(LD)	150

Quadrax Transition Adapters CABLE USAGE GUIDE D38999 Series III* Connectors or ARINC 600 Connectors



Cable Type		Nominal Impedance (ohms)	
Draka Fileca	F-4703-3	100	
	F-4704-4		
Tensolite	NF22Q100		
	NF22Q100-01		
	NF24Q100		
	NF26Q100		
Themax	956-5		
Gore	GSC-10-8273900		
Tensolite	26473/02006X-4(LD)		150

Differential Twinax Transition Adapters CABLE USAGE GUIDE D38999 Series III* Connectors or ARINC 600 Connectors



Cable Type		Nominal Impedance (ohms)
M17/176-00002		78
Tensolite	224463/9P025X-2	100
	24463/9P025X-2(LD)	
Tensolite	26483/03071X-2	150

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Contacts Connectors Cables

EMI Filter
Transient

26482
Matrix 2

83723 III
Matrix | Pyle

26500
Pyle

5015
Crmp Rear Release Matrix

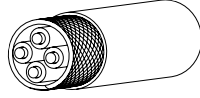
22992
Class 1

Back-Shell's

Options
Others

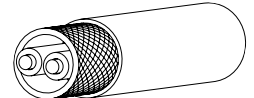
38999

Quadrax Contacts CABLE USAGE GUIDE ARINC 600 Rack & Panel Connectors



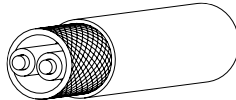
Cable Type		Nominal Impedance (ohms)	
Draka Fileca	F-4703-3	100	
	F-4704-5, F4704-4		
Tensolite	NF22Q100		
	NF24Q100		
	24443/03130X-4(LD)		
	24443/9P025X-4(LD)		
S280W502-4			
JSFY02-1	110		
Gore	RCN8328		150
Tensolite	26473/02006X-4(LD)		

Differential Twinax Contacts CABLE USAGE GUIDE ARINC 600 Rack & Panel Connectors



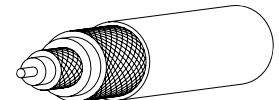
Cable Type		Nominal Impedance (ohms)
ABS0386WF24		100
ASNE0272TK22		100
ASNE0272TK24		100
Tensolite	24463/9P025X-2(LD)	100

Concentric Twinax Contacts CABLE USAGE GUIDE D38999 Series I, II, III & SJT Connectors



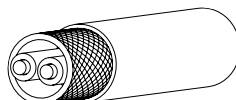
Cable Type		Nominal Impedance (ohms)
EPD32263A		77
EPD22189B		77
M17/176-00002		77
GSC-12-2548-00		77
GC875TM24H		77
GSC-12-81095-00		77
Raychem	10602	77
	10606	77
	10612	77
	10613	77
	10614	77
23089/RC		77
05A0771		77
T10971		77
7724C8664		77
7726D0664		77
782OD0111 (20 AWG)		78
0024G0024		100
5M2022-003		100
H55930		100
S280W502-1		100
CXN2268		100

Triax Contacts CABLE USAGE GUIDE D38999 Series I, II, III & SJT Connectors



Cable Type		Nominal Impedance (ohms)
JN1088WT		50
5M2397-002		75
81264-02		75
JN1088WU		75
Gore	GSC-03-81497-00	75
RG179 (Coax Cable)		75
Tensolite	28988/50823LXX-1	75
Tensolite	28988/50823LXX-1	75
Thermatics	12447	75
10602 (Twinax Cable)		77
5M2559-001		95
81264-01		95
ST5M1323-001		95
Champlain	81-00700	95
Tensolite	28598/9C026LT-1	95
	26895/90334X-1	95
Teledyne	13809	95
11914/1		95
Times AA6603		95
RGX179		75

Concentric Twinax Contacts CABLE USAGE GUIDE ARINC 600 Rack & Panel Connectors



Cable Type	Nominal Impedance (ohms)
S280W502-1	100

III
HD
Dualok
II
I
SJT
Accessories
Aquacon
Herm/Seal
PCB

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Fiber Optics
Contacts Connectors Cables

EMI Filter Transient

26482 Matrix 2

83723 III Matrix (Pyle)

26500 Pyle

5015 Crimp Rear Release Matrix

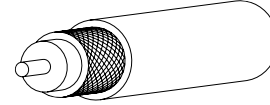
22992 Class 1

Back-Shells

Options Others

Use the Cable Usage Guides on this page for Coax Contacts as follows:

1. Locate the cable you are using in Cable Type column. For cables not listed consult Amphenol Aerospace.
2. Refer to the Amphenol connector section which features contacts for this cable, as indicated by a • in the appropriate column. If more than one connector series utilizes contacts designed for your cable, investigate each of them. Connector size, performance features and insert pattern availability may influence your choice.
3. Order your connector and coax contact by following the procedure given in the section for the connector series selected. These instructions are supplemented by the Amphenol Catalog Section covering the basic connector.
4. The Additional Contacts column of this guide is used to indicate an additional availability of contact designs for older cable types or capability. Consult Amphenol Aerospace for further information.



**Coax Contacts
CABLE USAGE GUIDE**

Cable Type		Nominal Impedance (ohms)	For Circular (MIL-DTL-38999 type)	For Standard & Heavy Duty Circular (MIL-DTL-5015 type) (MIL-DTL-22992 type)	For Rectangular Connectors	Additional Contacts (Consult Amphenol)
RG-5B/U	(M17/073-RG212)	50				•
RG-6A/U	(M17/2-RG6)	75				•
RG-7/U		97				•
RG-9B/U	(M17/075-RG214)	50				•
RG-11A/U	(M17/6-RG11)	75				•
RG-12A/U	(M17/6-RG12)	75				•
RG-13A/U		74				•
RG-21A/U		53				•
RG-55B/U	(M17/084-RG223)	53		•	•	
RG-58C/U	(M17/028-RG058)	50		•	•	
RG-58	(M17/155-00001)	50	•			
RG-59B/U	(M17/29-RG59)	75		•		
RG-62A/U	(M17/030-RG062)	93		•		
RG-62B/U		93		•		
RG-63B/U	(M17/31-RG63)	125				•
RG-71B/U	(M17/90-RG71)	93				•
RG-87A/U		50				•
RG-115/U		50				•
RG-115A/U		50				•
RG-116/U		50				•
RG-122/U	(M17/054-RG122)	50			•	•
RG-133A/U	(M17/100-RG133)	95				•
RG-140/U	(M17/110-RG302)	75		•		
RG-141A/U		50		•		
RG-142A/U		50		•		•
RG-142B/U	(M17/060-RG142)	50	•	•	•	•
RG-143A/U		50				•
RG-161/U		70	•	•		
RG-174A/U	(M17/119-RG174)	50	•	•		
RG-178B/U	(M17/093-RG178)	50	•	•		
RG-179B/U	(M17/094-RG179)	75	•	•		
RG-180B/U	(M17/095-RG180)	95	•	•	•	
RG-187A/U	(M17/094-RG179)	75	•	•		
RG-188A/U	(M17/113-RG316)	50	•	•		
RG-188 Double Braid		50				
RG-195A/U	(M17/095-RG180)	95	•	•	•	
RG-195 Double Braid		95				
RG-196A/U	(M17/169-00001)	50	•	•		
RG-210/U		93		•		
RG-212/U	(M17/073-RG212)	50		•		•
RG-214/U	(M17/075-RG214)	50				•
RG-216/U	(M17/77-RG216)	75				•
RG-222/U		50				•
RG-223/U	(M17/084-RG223)	50	•	•	•	
RG-225/U	(M17/86-RG225)	50				•
RG-227/U		50				•
RG-302/U	(M17/110-RG302)	75		•		

CHART CONTINUES ON NEXT PAGE

NOTE: For information on coax contacts for Miniature circular connectors, MIL-DTL-26482 Series 1, see catalog 12-070 and consult Amphenol Industrial Operations.

NOTE: MIL-DTL-38999 supersedes MIL-C-38999.
MIL-DTL-5015 supersedes MIL-C-38999.
MIL-DTL-22992 supersedes MIL-C-22992

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EMI Filter Transient

26482 Matrix 2

83723 III Matrix | Pyle

26500 Pyle

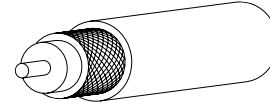
5015 Crimp Rear Release Matrix

22992 Class 1

Back-Shells

Options Others

38999



Coax Contacts CABLE USAGE GUIDE, cont.

Cable Type	Nominal Impedance (ohms)	For Circular (MIL-DTL-38999 type)	For Standard & Heavy Duty Circular (MIL-DTL-5015 type) (MIL-DTL-22992 type)	For Rectangular Connectors	Additional Contacts (Consult Amphenol)
RG-303/U (M17/111-RG303)	50		.	.	.
RG-304/U (M17/112-RG304)	50				.
RG-316/U (M17/113-RG316)	50	.	.		
RD-316 Double Braid (M17/152-00001)	50	.			
RG-400 (M17/128-RG400)	50	.			
M/A-COM 5M2869-001	50	.		.	
5022A1311-D	50	.			
Beldon 9307	50	.			
FA-19X	50	.			
T-Flex-402	50	.			
T-Flex-405	50	.			
Filotex ET124962	50	.			
JN1088WT (Triax)	50	.			
JN1088WU (Triax)	75	.			
PAN6422XQ	50	.			
PAN6422XY	75	.			
PAN6595XM (Triax)	75	.			
Haveg 51-04486		.			
81-00207		.			
Gore GWN1159A		.			
CXN3403		.			
Times AA3248		.			
Teledyne 11299		.			
Raychem 5021D1331-0	50	.			
5021D1331-9	50	.			
5022D1312-9	50	.			
7527A1318	75	.			
9527A1314	95	.			
9528A1318	95	.			
9530A5314	95	.			
9530D5314	95	.			
Thermatics 2929-29		.			
Tensolite 30850/87T-1		.			
Thermax 50C-25A-DS-1		.			
ESC352001	50	.			
ESC432101	50	.			

For Cable not found in the Coax Contact Cable Usage Guide, refer to these general dimensional ranges:
(In general, for D38999 Connectors, the size 8, 12 and 16 Coax Contacts will terminate cable in the following ranges)

SIZE 16

.012 / .0215 Center Conductor (Stranded)
.031 / .066 Dielectric
.085 Max Outer braid (must be round for crimp termination)
.102 Max. Jacket

SIZE 12

.012 / .0215 Center Conductor (Stranded)
.031 / .105 Dielectric
.126 Max Outer braid (must be round for crimp termination)
.145 Max. Jacket

SIZE 8

.012 / .0395 Center Conductor (Stranded)
.055 / .133 Dielectric
.180 Max Outer braid (must be round for crimp termination)
.201 Max. Jacket

Special coax contacts may be available for cables outside of ranges shown. Consult Amphenol Aerospace for further assistance in selection of coax contact cables.

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26482 Matrix 2

83723 III Matrix | Pyle

26500 Pyle

5015 Crimp Rear Release Matrix

22992 Class L

Back-Shells

Options Others