

RF CONNECTORS

1.6/5.6 Connectors

- a. In-Line Sockets
- b. Monitoring – Rear Entry 15mm Spacing
- c. Monitoring – Side Entry 15mm Spacing
- d. Non-Monitoring 15mm Spacing
- e. Panel Mount with Solder Lug
- f. PCB Mount
- g. PCB with Solder Lug
- h. Screw-on Type
- i. Snap-on Type
- j. Socket Mounting Tool
- k. Solid U-Link

N-Type Connectors

- a. Bulkhead feed Through Jack Receptacle – Solder Pot
- b. Flange Mount Jack Receptacle – Solder Pot
- c. Flange Mount Jack Receptacle – Straight Terminal
- d. Jack, Straight Crimp
- e. Jack, Straight Solder / Clamp
- f. Plug, Right Angle Solder / Crimp
- g. Plug, Straight Crimp
- h. Plug, Straight Solder / Clamp

TNC Connectors

- a. Adaptor
- b. Angle Adaptor
- c. Angle Jack for printed Circuits
- d. Angle Plug
- e. Angle Plug Crimp
- f. Bulkhead Adaptor
- g. Bulkhead Jack
- h. Bulkhead Jack Crimp
- i. Bulkhead Receptacle
- j. Bulkhead Receptacle with Flange
- k. Jack for Printed Circuits
- l. Straight Jack
- m. Straight Jack Crimp
- n. Straight Jack with Flange
- o. Straight Plug
- p. Straight Plug Crimp
- q. T Adaptor

1.0/2.3 Connectors

- a. Crimp Male, Right Angle
- b. Crimp, Bulkhead Jack
- c. Panel Mount Female
- d. Straight Plug

BNC Connectors

- a. Cable Boots – Rubber
- b. Coupling, Cable F-F
- c. Coupling, Cable M-M
- d. Coupling, Chassis F-F
- e. Crimp Tubes
- f. Crimp Tools
- g. Plug, Cable Clamp
- h. Plug, Cable Crimp
- i. Plug, Cable Right Angle Clamp
- j. Plug, Cable Right Angle Crimp
- k. Socket, Cable Clamp
- l. Socket, Cable Crimp
- m. Socket, Chassis Clamp
- n. Socket, Chassis Crimp
- o. Socket, Chassis Right Angle Crimp
- p. Socket, Chassis Solder
- q. Socket, PCB Straight
- r. Strippers
- s. T Piece
- t. Terminators

F-Type Connectors

- a. Right Angle Jack Receptacle
- b. Straight Bulkhead Mount Jack Receptacle

SMB / SMC / SMS

- Angle Jack
- Angle Jack Crimp
- Angle Jack for Printed Circuits
- Angle Plug Crimp
- Angle Plug for Printed Circuits
- Bulkhead Plug
- Bulkhead Plug Crimp
- Plug for Printed Circuits
- Press in Plug
- Straight Jack
- Straight Jack Crimp
- Straight Plug Crimp
- Straight Plug for Printed Circuits with Press-In Technology
- Straight Plug for SMT
- T Adaptor

Adaptors

- a. 1.6/5.6 to 1.6/5.6 Adaptors
- b. 1.6/5.6 to 1.6/5.6 Terminators
- c. 1.6/5.6 to BNC Adaptors
- d. F-F-F Configuration
- e. F-F-M Configuration
- f. F-M-F Configuration

RF Cable Assemblies

Adaptors / Terminators

Patch Panels, Antennas, Couplers

Main Distribution Frame (MDF), Digital Distribution Frame (DDF) Package for carriers exchange Environment

SMA Connectors

- Adaptor
- Angle Adaptor
- Angle Bulkhead Jack with Flange
- Angle Bulkhead Receptacle for Printed Circuits
- Angle Jack for Printed Circuits
- Angle Plug
- Angle Plug Crimp
- Bulkhead Adaptor
- Bulkhead Adaptor with Flange
- Bulkhead Jack
- Bulkhead Jack Crimp
- Bulkhead Plug with Flange
- Bulkhead Receptacle
- Bulkhead Receptacle for Printed Circuits
- Bulkhead Receptacle with Flange
- Protective Cap
- SMA Straight Plug
- SMA Straight Plug Crimp
- Straight Jack Crimp
- Straight Jack for Printed Circuits
- Straight Jack for Printed Circuits with Press-In Technology
- T-Adaptor
- Termination Plug

Hand Tools



For all your application tooling requirements, hand tools, semi automatic, fully automatic, please contact our Photonix Office

RF CONNECTOR SPECIFICATIONS

RF Connector Specifications

	TNC	BNC	N	7/16	1.6/5.6	SMA	SMB/SMC/SMS
Electrical Test							
Contact Resistance:							
• Inner	≤20mΩ	≤20mΩ	≤2mΩ	≤0.4mΩ	≤4mΩ	≤3mΩ	≤5mΩ
• Outer	≤5mΩ	≤5mΩ	≤0.5mΩ	≤2mΩ	≤2mΩ	≤2mΩ	≤2.5mΩ
Insulation Resistance	≥5GΩ	≥5GΩ	≥10GΩ	≥16GΩ	≥5GΩ	≥5GΩ	≥1GΩ
Voltage Proof	1.5KV/50Hz	1.5KV/50Hz	2.5KV/50Hz	4KV/50Hz	1KV/50Hz	1KV/50Hz	750V/50Hz
Impedance	75Ω/50Ω	75Ω/50Ω	50Ω	50Ω	75Ω	50Ω	50Ω
Reflection Factor							
• Straight	≤0.1/3GHz	≤0.1/3GHz	≤0.14GHz	≤0.021/1GHz	0.1/1GHz	<0.090	<0.15/3GHz
• Angle Style	0.13/3GHz	0.13/3GHz	0.13/4GHz				≤0.24/3GHz
Working Voltage	≤500V/50Hz	≤500V/50Hz	1KV/50Hz	2.7KV/50Hz	>500V/50Hz	335V/50Hz	4GHz-SMB/SMS
Frequency Range upto	11GHz	4GHz	11GHz	7.5GHz	1GHz	12.4GHz	10GHz-SMC
Mechanical Test							
Durability (Mating)	≥500	≥500	≥500	≥500	≥500	≥1000	100/500*
Material							
Spring Contacts	CuBe ₂	CuBe ₂	CuBe ₂	CuBe ₂	CuBe ₂	CuBe ₂	CuBe ₂
Insulators	PTfe	PTfe	PTfe	PTfe	PTfe	PTfe	PTfe
Gaskets	Silicon	Silicon	Silicon	Silicon	Silicon	Silicon	Silicon
Outer Conductor	Brass	Brass	Tele alloy	Cu2AgS	Brass	CuNiAu	CuNiAu
Other Metal Parts	Brass	Brass	Tele alloy	Tele alloy	Brass	CuNiAu	CuNiAu
* MIL Standard							

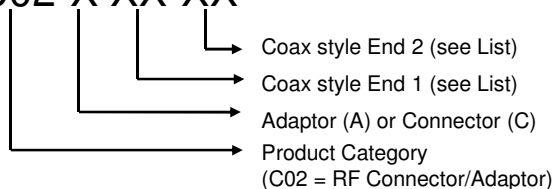
Cable Chart for Coaxial Connectors

Dimensions of Various Cables

Cable Type	Shield/Braid	Overall Diameter	Inner Conductor	Dielectric	1 st Braid	2 nd Braid	Crimp Hex Size	Connector Suffix
2.5C-2V	Single	4	0.4	2.5	3	-5.4	5.4	2.5C-2V
2.5C-XW	Double	4.7	0.4	2.5	3.1	3.7	5.4	2.5C-XW
3C-2V	Single	5.8	0.5	3.1	3.8	-	6.5	3C-2V
3C-2W	Double	6.5	0.5	3.1	3.8	4.5	6.5	3C-2W
2YC(MS)CY 0.5/3.0 – 60	Double	5.8	0.46	2.8	3.7	4.6	6.5	D
75DM	Double	5.9	0.55	3.3	3.9	4.5	6.5	DM
75DS	Double	6.25	0.6	3.7	4.4	5.1	6.5	DS
BT-3002	Double	3.7	0.31	1.95	2.4	2.85	4.4	3002
BT2003A	Double	6.9	0.61	3.7	4.5	5.06	6.7	2003
MCW (4.5mm)	Double	4.4	0.41	2	2.7	3.4	5.4	MCW
RG6/U	Double	6.86	0.95	4.57	5.31	-	6.7	RG6
RG59B/U	Single	6.1	0.6	3.7	4.5	-	6.5	H
RG59/U (MS)	Single	6.15	0.76	3.71	4.5	-	6.5	H
RG179/U, RG187/U	Single	2.5	0.3	1.5	2	-	4.4	179

Ordering Information

PX-C02-X XX-XX



Coax style

- 00 – BNC (F) Bulkhead Mounting
- 01 – BNC (m)
- 04 – BNC (f) No Mounting
- 10 – 1.6/5.6 (f) Bulkhead Mounting
- 11 – 1.6/5.6 (m) screw coupling
- 15 – 1.6/5.6 (m) snap coupling
- 21 – BT43 (f) HDC Posi Lock
- 23 – BT43 (m) fixed Mounting
- 30 – 1.0/2.3 (f) Bulkhead Mounting
- 31 – 1.0/2.3 (m) Posi Lock
- 40 – SMB (f) Snap Coupling
- 41 – SMB (m) Bulkhead Mounting
- 50 – F Type
- 60 – N Type
- 70 – TNC
- 80 – SMA

1.6/5.6 SERIES CONNECTORS & U-LINKS (Telstra approved)

1.6/5.6 Series Connectors & U-Links (Telstra approved)



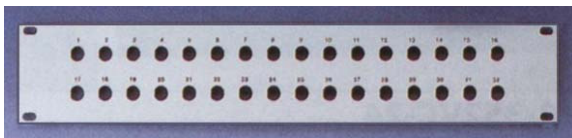
1.6/5.6 Series Connectors & U-links are precision 75 ohm coaxial connectors. The complete range is manufactured to meet the performance characteristics demanded by Telstra (formerly Telecom Australia) the major telecommunications carrier in Australia.

These connectors have been selected by many telecommunications equipment manufacturers & telecommunications service providers throughout the world as the standard connectors fitted to telecommunications equipment, for telephone exchanges and line transmission applications.

These connectors features:

- High mating cycle capacity >500+
- Very low reflection coefficient <0.1 at 1GHz
- Very low insertion loss up to 1GHz
- High screening effectiveness/low transfer impedance
- Various methods of coupling to suit different applications: Screw lock, Push On and Snap versions
- Constant impedance for high performance applications
- Interchangeable rear end to accommodate different types of coaxial cables
- Full range of connector configurations;
- Cable in-line, Right Angled, Bulk head, Couplers, T adaptors, PCB type, U-links and Inter-series adaptors
- Compact size to enable high density packing on panels with minimum connector spacing of only 15mm
- High reliability through the use of Teflon insulation and Beryllium Copper gold plated mating contracts
- Conforms to Technical Standards: DIN 47295, IEC 169-13 & Telstra Australia Specifications 1557 Pt 3 Issue 2.

RS 232 & COAX PATCH PANELS



F. 2



F. 3

F. 4

ITEM No:	No: Ports	Description	Connector Type Female	Dimensions Height W: 19"
PX-C03XX1	16	COAX, Feed-Thru.	F-F BNC	1.75"X19"
PX-C03XX2	24	COAX, Feed-Thru.	F-F BNC	3.50"X19"

COAXIAL CABLES & RF CONNECTORS

Product Range

- Coaxial, Semiflex, Semi-rigid
- N-type connectors
- 7/16 connectors
- TNC & BNC connectors & patchcords
- SMA, SMB & SMC connectors & patchcords
- 1.0/2.3 connectors & patchcords
- 1.6/5.6 connectors & patchcords
- RF cable assemblies
- Adaptors / Terminators
- Patchpanels, antennas, couplers
- Main Distribution Frame (MDF), Digital Distribution Frame (DDF) Package for carriers exchange environment.

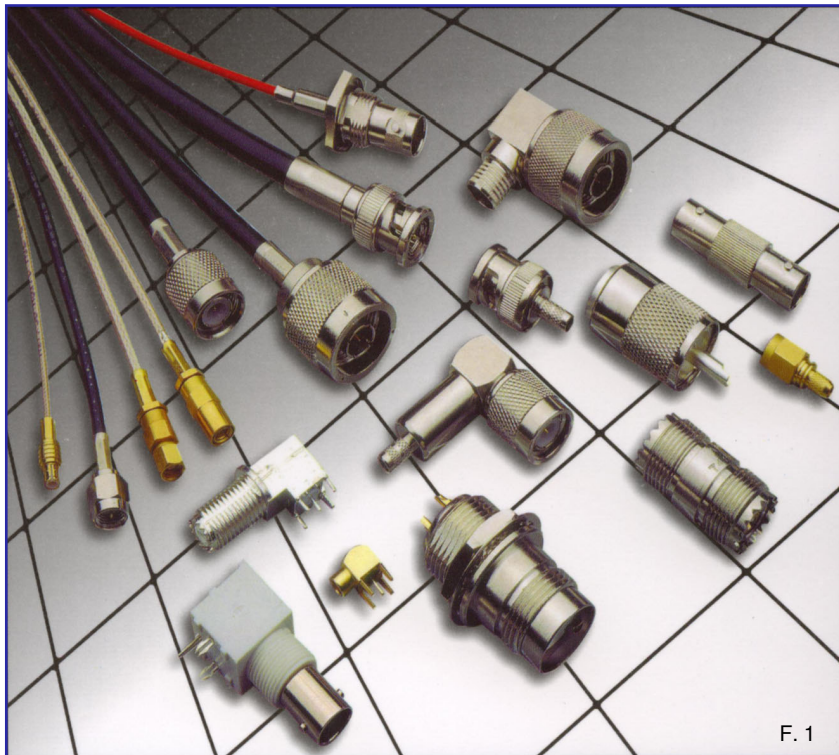


F.2

F.3



F.4



F.1



F.5



F.6



F.7



F.8

The RA Cables Solutions



F. 1

The RA7000 CABLE SOLUTION

RA7000 is capable of runs up to 250m at 34Mbit/s. It is a manageable, flexible and versatile product which is ideal for use on HDC systems. Benefits are:-

- Less than half the cross sectional area of BT2003
- Lower loss than BT2003 beyond 36MHz
- Capable of cable runs over 100m at 155Mbit/s
- Ideal for high density Voice over IP applications
- LSOH jacket as standard

➤ **Summary of transmission distance:**

Cable Type:	Transmission Rate (Mbit/s)				
	2	8	34	140	155
RA7000	N/A	250m	250m	125m	115m

➤ **Key Dimensions:-**

	Dia.(nominal)	Weight (nominal)
RA7000 single core	4.5mm	29kg/km
RA7000 4 way	12.75mm	171.06kg/km
RA7000 8 way	17.20mm	327.91kg/km

SPECIFICATIONS:

Component	Material Breakdown	Diameter
Inner Conductor	0.6mm plain annealed Cu wire solid	0.60mm
Dielectric	Cellular polyethylene	2.80mm
Screen 1	Aluminum bonded laminate foil	
Screen 2	0.12mm tinned annealed Cu wire braid Nominal coverage of 95%	3.40mm
Jacket	Low smoke zero halogen	4.50mm
Weight	29kg/km (nominal)	

Electric Parameters	MHz	Value
Impedance		75Ω
Capacitance		56pF/m
Attenuation (dB/100m Nom.)	1	1.21
	17	4.94
	69	9.14
	100	10.75
	150	12.87

The RA8000 CABLE SOLUTION

Even smaller still the RA8000 is designed to offer maximum space saving whilst maintaining excellent performance characteristics. Benefits are:-

- 40% space saving over BT3002 / TZC75024
- Lower loss than BT3002 / TZC75024
- 32-core available
- Perfect for 2Mbit/s applications
- Eases cable management
- LSOH jacket as standard

➤ **Summary of transmission distance:**

Cable Type:	Transmission Rate (Mbit/s)				
	2	8	34	140	155
RA8000	280m	160m	140m	80m	60m
RA7000	N/A	250m	250m	125m	115m

➤ **Comparison of various other cable configuration:-**

	Single Core	4 Core	8 Core	12 Core	16 Core	32 Core
RG179B/U	2.54mm	N/A	N/A	N/A	N/A	N/A
RG179PE/PVC	2.70mm	2.70mm	10.75mm	13.30mm	14.80mm	20.80mm
RA8000	2.75mm	8.25mm	1.00mm	13.30mm	14.85mm	20.55mm
BT3002	3.55mm	10.20mm	16.05mm	17.50mm	19.60mm	26.90mm
TZC75024	3.55mm	10.20mm	14.50mm	17.50mm	19.50mm	26.90mm
RA7000	4.50mm	12.75mm	17.20mm	21.40mm	24.25mm	33.45mm
BT2003	6.65mm	18.50mm	N/A	N/A	N/A	N/A

Note: Outer diameter sizes (mm) of various cable configurations (reference only)

SPECIFICATIONS:

Component	Material Breakdown	Diameter
Inner Conductor	0.31mm plain annealed Cu wire solid	0.31mm
Dielectric	Cellular polyethylene	1.45mm
Screen 1	Longitudinally applied Alum/Poly tape (Alum Side Out)	1.55mm
Screen 2	Tinned annealed Cu wire braid	1.95mm
Jacket	Low smoke zero halogen	2.75mm
Weight	12kg/km (nominal)	

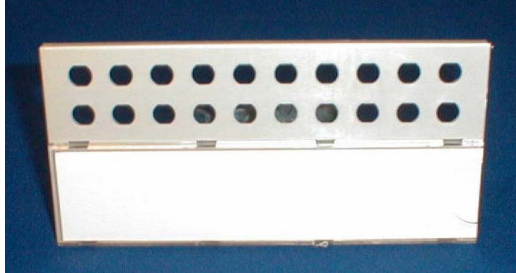
Electric Parameters	MHz	Value
Impedance		75Ω
Capacitance		53pF/m
Attenuation (dB/100m Nom.)	1	2.00
	17	8.42
	69	15.02
	78	15.70



F. 2

COPPER MANAGEMENT SOLUTIONS (Telstra approved)

Mounting Strip, 1.75 RU, Co-Axial Connector, 10 Circuit, 20 Position- Part No: PX-C03XX3



F. 1

Use / Application

This Mounting Strip for 1.6/5.6 mm co-axial connectors is used on rack mounted Digital Distribution Frames (DDF). It is used for 10 circuits i.e. it has 20 positions available for co-axial connectors, and accessories. Accessories include: U-Link; side monitoring U-Link; and baluns. These items are available separately. The Mounting Strip is made from glass re-inforced, fire resistant, halogen free, plastic. It has mounting holes for 2 x 4mm dia screws. A space is provided for a removable record card, for circuit identification.

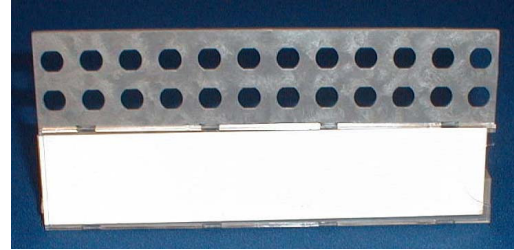
Features

- Used on Rack mounted DDF's
- Easily and quickly installed
- Accepts various accessories
- Has a secure record card position
- Purchase as a unit

Technical Specifications

Dimensions	163mm (W) x 77mm (H) x 25mm (D)
Material	Re-inforced FR plastic
Weight	64 grams
Color	Light Grey

Mounting Strip, 1.75 RU, Co-Axial Connector, 12 Circuit, 24 Position- Part No: PX-C03XX4



F. 2

Use / Application

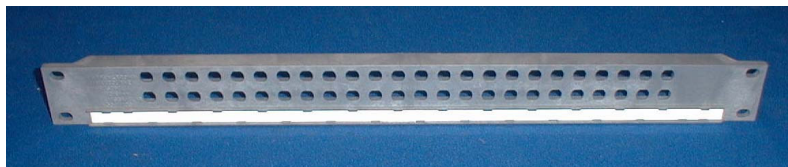
This Mounting Strip for 1.6/5.6 mm co-axial connectors is used on rack mounted Digital Distribution Frames (DDF). It is used for 12 circuits i.e. it has 24 positions available for co-axial connectors, and accessories. Accessories include: U-Link; side monitoring U-Link; and baluns. These items are available separately. The Mounting Strip is made from glass re-inforced, fire resistant, halogen free, plastic. Mounting holes are provided for 4 screws. A space is provided for a removable record card, for circuit identification.

Features

- Used on Rack mounted DDF's
- Easily and quickly installed
- Accepts various accessories
- Has a secure record card position
- Purchase as a unit

Technical Specifications

Dimensions	179mm (W) x 77mm (H) x 25mm (D)
Material	Re-inforced FR plastic
Weight	70 grams
Color	Light Grey



F. 3

Use / Application

This Mounting Strip for 1.6/5.6 mm co-axial connectors is used as a rack mounted Digital Distribution Frame (DDF). It is used for 24 circuits i.e. it has 48 positions available for co-axial connectors, and accessories. Accessories include: U-Link; side monitoring U-Link; and baluns. These items are available separately. The Mounting Strip is made from glass re-inforced, fire resistant, halogen free, plastic. The unit mounts in a 19 inch rack (i.e. 465.5mm mounting rails) A space is provided for a removable record card, for circuit identification.

Features

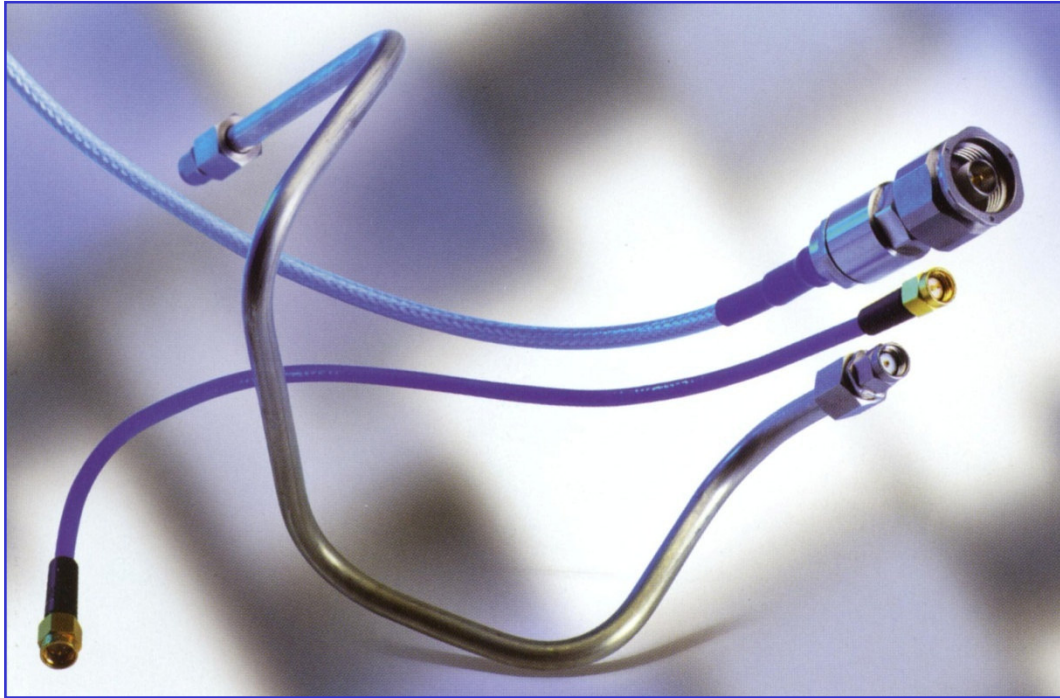
- Used as a Rack mounted DDF
- Easily and quickly installed in a 19 inch Rack
- Accepts various accessories
- Has a secure record card position
- Purchase as a unit

Technical Specifications

Dimensions	482mm (W) x 45mm (H) x 19mm (D)
Material	Re-inforced FR plastic
Weight	120 grams
Color	Light Grey

Mounting Strip, 1 RU, Co-Axial Connector, 24 Circuit, 48 Position – P/No: PX-C03XX5

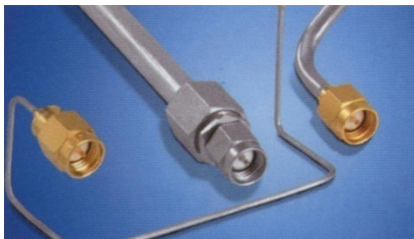
Ready-to-Use RF-Interconnect Solutions from a Single Source



F. 1

Users of coaxial cable assemblies no longer have to concern themselves with assembly personnel training, cable and connector logistics or capital spending on assembly equipment. Photonix' "One Stop Shop" service now offers them ready-to-use, high-performance assemblies from a single source – produced by state-of-the-art methods from carefully matched cables and connectors.

Microwave Cable & Assembly Range:-



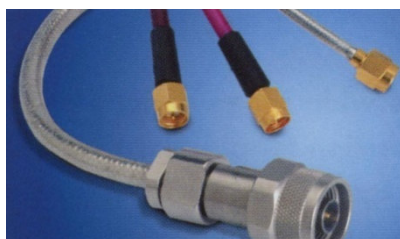
SEMI RIGID: The form-stable microwave cable, applied as a precisely formed cable in a wide variety of microwave components up to 40GHz.



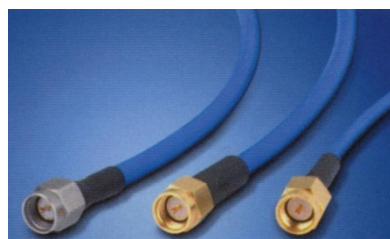
SUCOFLEX 100: The flexible and highly flexible microwave cable assemblies offer maximum performance in a wide variety of sophisticated military, test and measurement applications up to 50GHz.



SUCOFLEX 300: The flexible, weight-reduced, high-performance microwave cable assembly as an integral component of helicopters and of aircraft and satellite systems up to 18 GHz.



SUCOFORM: The hand-formable alternative to the Semi Rigid. The cost-saving variant, since no special bending tools have to be made for forming the cable. Can be applied up to 18 GHz.



MULTIFLEX: The flexible alternative to the Semi Rigid. Versatile and flexible in one, up to 18 GHz.

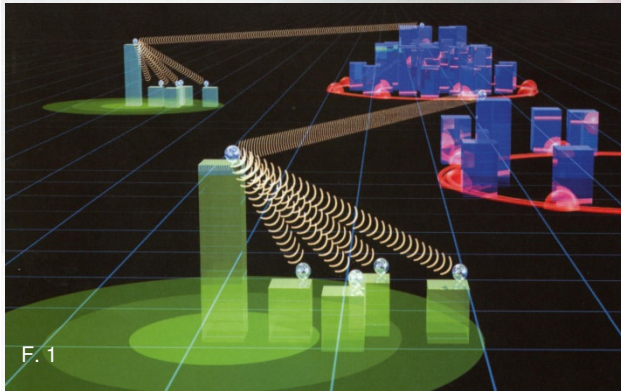


S-SERIES: The flexible, environmentally friendly and low-attenuation microwave cable for static applications up to 18 GHz.

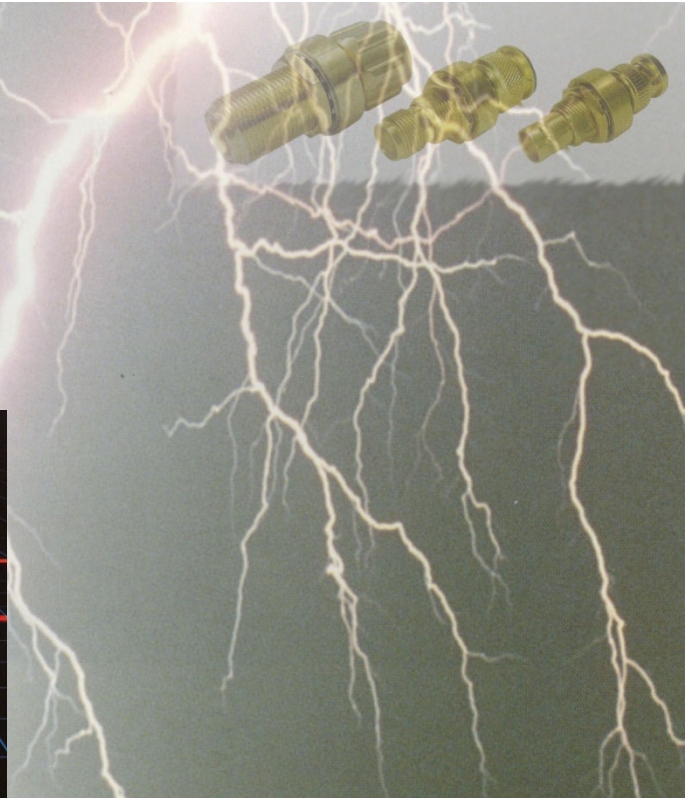
Lightning Protection: Slim Line Gas Capsule Protectors

– the New Protection Solution for Wireless Communications

The commercially promising license-free ISM/UNII 2.4GHz and 5.8GHz frequency bands are being used in a host of new radio engineering applications. Many of them can be included among the future-oriented BWA systems. Photonix is marketing entirely new lightning protection components just in time for these applications. They give consideration to the requirements to be satisfied over the next few years. Their small dimensions also cater for the trend towards building increasingly small radio sets.



F. 1



Surge Protection



F. 2



F. 3

Input/output: RJ45 sockets
All 8 wires (4 pairs) protected
Max. permitted voltage on each wire: 6 Vdc
Surge rating: 300A 8/20us
Clamping voltage at 300A 8/20us: 35V
Limit frequency: 100MHz



F. 4

- Single and multi stage protection – primary or combination primary/secondary protectors
- Single pair and 10 pair protectors
- Simple installation into Krone-LSA® disconnect block
- L-L & L-G protection – for comprehensive protection
- HSP High Speed Protectors support 8Mbit/s digital and 12MHz analog networks



F. 5

- Plug-in protection – simple to install
- 100BaseT (Cat 5) – works with high speed networks
- Earth potential equalisation
- Patch cord included – no additional cables required