# Amphenol
## FIBER OPTIC PRODUCTS

# PRODUCT CATALOG

Enabling the Electronics Revolution

Amphenol
FIBER OPTIC PRODUCTS

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Enabling the Electronics Revolution

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Standard SMArt
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Amphenol
FIBER OPTIC PRODUCTS

# Amphenol
## FIBER OPTIC PRODUCTS

# COMPANY OVERVIEW

**For over 80 years,** Amphenol Corporation has been a premier provider of advanced technology interconnect products to the world's leading electronics companies. From our very first product in 1932 — tube sockets for radios — to our current broad array of interconnect products, antennas, and sensors, we have consistently striven to create leading-edge, innovative products for a diverse range of customers across a multitude of industries and end markets. Through our close collaboration with these customers, Amphenol Corporation has become the interconnect partner of choice in enabling the electronics revolution.

Amphenol Corporation is spread across more than 30 countries with more than 58,000 employees in greater than 100 facilities. Our long term track record of success reflects, in particular, the agile, entrepreneurial culture of our management team, which consistently demonstrates an unwavering commitment to creating value for our customers.

Amphenol Fiber Optic Products, a Division of Amphenol Corporation, has provided expertise and solutions in fiber optic interconnect applications for over 40 years. Servicing the Wireless, Telecom, IT/Datacom, Data Center and Medical markets, Amphenol Fiber Optic Products has continually lead in Quality, Service, Innovation and Customer Satisfaction through an unyielding desire to Connect People with Technology in conjunction with our business partners.

This catalog highlights our broad portfolio of high technology products, across the primary end markets we serve. It is designed to help you understand Amphenol Fiber Optic Products' capabilities in developing performance-enhancing solutions that will enable your company to fulfill your goals and requirements.

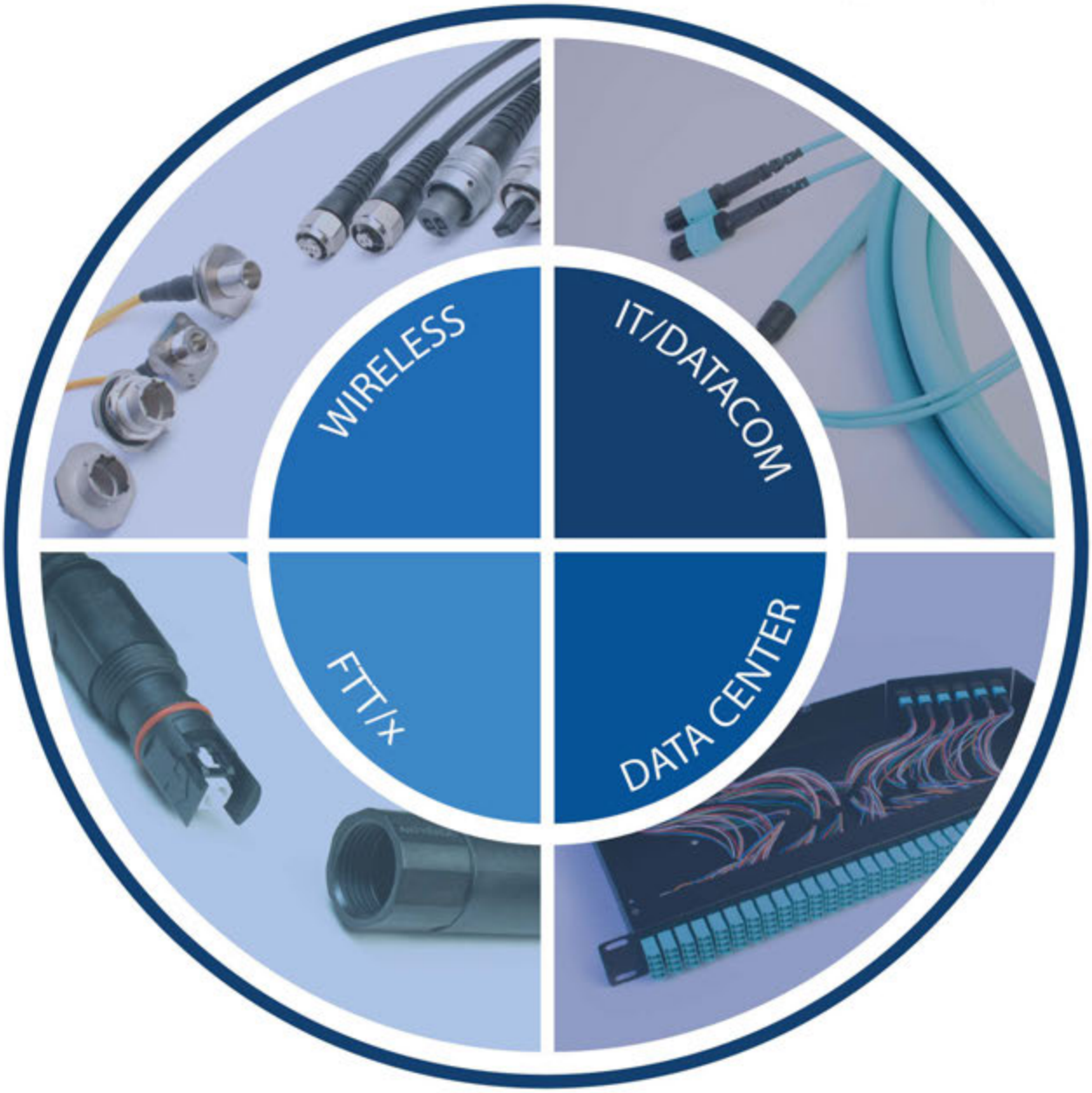
**Thank you for partnering with the Amphenol team.**

## A Worldwide Vision Connecting People with Technology

- Developed the 1st Fiber Optic Industry Standard Connector, the SMA.
- Extensive Mechanical, Optical, & Manufacturing Engineering Resources.
- Products sold to thousands of customers in approximately 70 countries worldwide.
- Emphasis on technology innovation.
- Global, in-region manufacturing strategy in order to maximize customer service and satisfaction.
- Advanced manufacturing processes as well as proprietary process technology for specialty products.
- Manufacturing facilities with ISO 9001 and ISO 14001 certifications.
- Industry recognized expert teams that collaborate and partner with customers.
- Sustained Industry-leading financial strength.
- Dedicated, entrepreneurial and experienced team that is driven to connect people and technology in an evolving world.

CONCEPT → DESIGN → VALIDATION → PRODUCTION

*Amphenol Fiber Optic Products enables customers around the globe to deliver innovative high technology equipment by closely collaborating through all phases of product development. By forming true and lasting partnerships, value is created that will drive significant growth and endless potential within the Internet of Things.*



Compliment Products | Fiber Management Systems | Cable Assemblies | Connectors & Adapters

Amphenol Fiber Optic Products innovates, designs, develops, manufactures, and markets a broad array of fiber optic products including connectors, adapters, cable assemblies, and fiber management systems for both standard and design specific applications.

We serve the Wireless, Telecom, IT/Datacom, Data Center and Medical markets through a combination of technology leadership, diversity of solution, and a global footprint at the best cost.

Amphenol Fiber Optic Products designs and manufactures in the Americas, Asia and Europe with a "Work and Win Together" mantra supported by a highly technical, customer oriented, worldwide sales and marketing organization.

# MANUFACTURING FACILITIES

Global Manufacturing Footprint, Localized Service

## Quality and Compliance

At Amphenol Fiber Optic Products, we are proud of our long standing quality record and reputation with customers. All manufacturing facilities are ISO 9001 and ISO 14001 certified. We utilize Lean processes, such as 5S, elimination of 8 wastes, and Kaizen Events to continually review and implement improvements to meet internal and external customer requirements. These processes have also influenced our manufacturing and vendor performance levels of critical KPI's consistently in the high 90's.

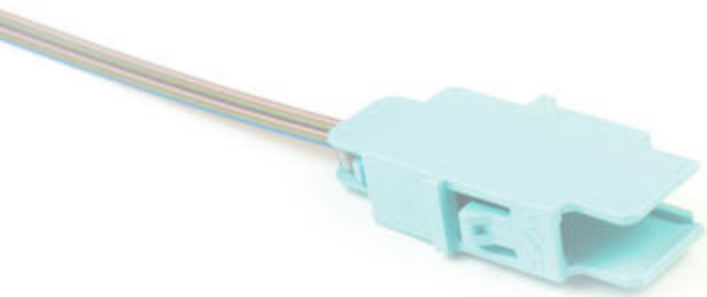
All manufacturing facilities are both EICC and RoHS2 and REACH compliant. Amphenol Fiber Optic Products has full R&D support in both the US and China, with a full environmental testing facility, including temperature, salt, vibration, RoHS, and optical loss performance measurement.

## Supply Chain

With a Global supply chain network, Amphenol Fiber Optic Products is able to maintain significant cost competitiveness to serve global markets through strong relationships with suppliers and carriers. With a global network of Amphenol facilities, we support multiple deployment options via 3PL's and regional collaborations with Amphenol divisions, depending on customer criteria. We work with customers to customize lead time parameters for multiple markets, ensuring an optimal balance of delivery and inventory. Amphenol Fiber Optic Products can also maximize both customer and supplier ordering via EDI capabilities.

## Key Statistics

- Manufacturing: Asia, North America, & Europe
- ISO 9001:2008
- ISO 14001
- RoHS2 and REACH Compliant
- EICC Compliant
- ISO Class 7 cleanroom in China
- Environmentally controlled production
- Performance levels over 95%
- Global Supply Chain
- State of the art equipment
- Lean processes; 5S, 8 wastes and
- Kaizen Events
  Design teams in US and China
- R&D in US and China
- Full Environmental Testing
- Optical testing
- EDI capabilities



Location Transparency

### Our Quality Policy:

*I will do my utmost to achieve Total Quality performance in meeting the requirements of external and internal customers. Total Quality performance means understanding who the customer is, what the requirements are, and to continually improve in order to meet those requirements without error, on time, every time.*

# MANUFACTURING FACILITIES

Global Manufacturing Footprint, Localized Service

## Quality and Compliance

Each manufacturing facility is equipped to perform full temperature conditioning. Amphenol Fiber Optic Products has design teams in both the US and China, with both market and regional focus.

North America and Europe

China

**In Mexico and Europe** we have low static, environmentally controlled production facilities. We produce large quantities of harsh environment cable assemblies for the Wireless and Cable TV market.

**In China,** the facility is an ISO Class 7 clean room equipped with state of the art equipment.

**In the USA,** we offer quick turn capabilities, high mix, and low volume.

*Headquartered in Lisle, Illinois, the company is a division of Amphenol Corporation, a Fortune 500 company with over eighty years of experience in providing total interconnect solutions to customers throughout the world.*

# DATA CENTERS

Your Resource for Mission Critical Connectivity

The Data Center environment is a complex combination of technologies that requires each of its components to work in unison to ultimately ensure the safety and security of the data within.

Technology adoption in this market is driven by cost and density, and creating a fragmented market in the connectivity; from the small Data Centers continuing to utilize 1G to 40G, to large Data Centers transitioning to 100G and 400G. As data speed and feeds continue to evolve, fiber optic solutions will enable the adoption of these technologies.

As a longtime leader in the development of interconnect products for server, storage, networking, and switching equipment, Amphenol has the experience and technology to ensure efficient and reliable connectivity of these products within the Data Center. Additionally, Amphenol has a portfolio of interconnection technologies that will ensure safe and efficient collection and distribution of power, along with the environmental monitoring products to maximize Data Center thermal efficiency.

The increasing need for optimization drives companies to improve their Data Center operations. Amphenol's fiber and copper product lines provide cost-effective solutions that deliver high speed performance, quick deployment, and space savings.

Cloud services are accelerated, in part, by the unprecedented amount of data being generated by not only people, but also machines and devices. It is estimated that more than 500 zettabytes will be generated by all people, machines, and devices by 2020.

Amphenol's leading position of enabling the IT industry for over 30 years, and our proven track record of innovation, demonstrates our readiness to assist in powering the "Cloud".

## CORE FIBER PRODUCTS

OM3/OM4 Fiber Assemblies | MPO Connector | LC Connector | HD Fiber Management System

## Value-based Partnerships

**RELIABLE:** Amphenol's products are designed to meet the strictest of network requirements.

**AGILE:** Easy ordering and fast turnaround is of the utmost importance to support the success of our partners.

**BREADTH OF PRODUCTS:** Our extensive product line enables you to easily find an Amphenol product to meet your needs.

**VERTICALLY INTEGRATED:** Controlled Quality from component design through assembly and test of final product.

*A convenient and reliable value-added solution. Amphenol's connector and assembly quality ensures your Data Center's reliability, industry compliance, and provides the engineering capabilities that allow agile partnerships and results for you and your customers.*

# DATA CENTERS

Your Resource for Mission Critical Connectivity

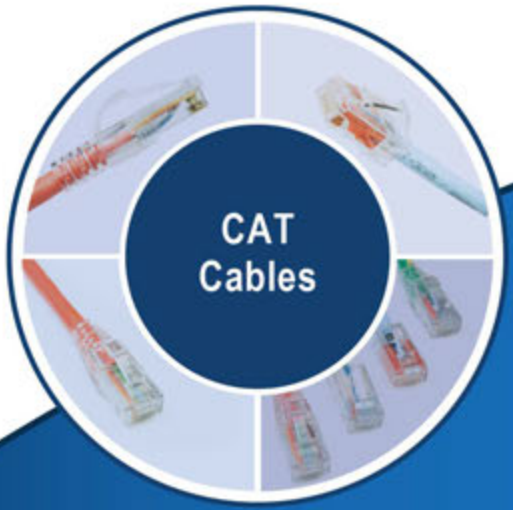
## Data Centers

Many Big Data driving companies have visions for the year 2020. Amongst those goals are:

1. Increase Active Users
2. Increase Subscribers
3. Unlimited Data Usage
4. Faster Download Rate

## Services

SITE SURVEY
ENGINEERING SERVICES
PROJECT MANAGEMENT




Consumers demand faster service, more data and more content at rates that surpass the capabilities of many companies to adapt. This is putting great constraints on existing infrastructure due to the lack of space in Data Centers and the racks inside them. The task is passed from Big Data companies to manufacturers to provide solutions that are effective in terms of real estate, time to install, and cost.

# TELECOM & IT/DATACOM

Connecting People and Technology

## Telecom & IT/Datacom

Amphenol Fiber Optic Products is a global provider of interconnect solutions to designers and equipment manufacturers of internet-enabling systems. Our wide range of offerings in backplane interconnect systems, cable assembly, connector products, fiber optic technology and high-performance copper cable, span applications in servers, storage systems, optical and copper networking equipment, modems, hubs, routers, switches, and a wide array of other IT equipment.

With our design creativity, simulation/testing capability, and cost effectiveness, Amphenol Fiber Optic Products is a leader in passive fiber optic development for the equipment powering the internet.

Amphenol Fiber Optic Products has been a global leader in fiber optic connector technology and will continue to drive technologies that support the increasing needs of high density, small factor solutions. These solutions will allow for faster, more efficient, high-performance systems that will support the explosive growth in data communications.

Whether industry-standard or application-specific designs are required, we provide customers with products that enable performance at the leading edge of the next generation, high speed technology. Customer support, knowledgeable customized designs and direct sales points ensure that your project will be successful from the outset. Forward thinking technology, utilizing resource conscious designs, maximize your space as well as your investment.

- Meets stringent industry standards for connectors and assemblies
- Supports all major connector styles such as MPO, LC, SC
- Complete fiber type offering
- High-Density/Small-Form factor designs
- Engineered Solutions
- Private labeling and custom packaging
- Global manufacturing, supply and support
- Industry leadership in the interconnect market
- Meeting the demands of changing customer needs
- ISO Certified Facilities

The "Internet of Things", mobile device application growth along with IP-based OnDemand video offerings, are creating challenges once unimaginable for equipment makers and service providers operating the world's data and telecommunications networks. As the number of connected devices grows into the billions, Amphenol is developing new solutions to enable the ongoing technology revolution

# TELECOM & IT/DATACOM

Connecting People and Technology

## Telecom & IT/Datacom

Amphenol Fiber Optic Products designs and manufactures assemblies in the Americas, Asia and Europe supported by a highly technical, customer oriented, worldwide sales and marketing organization.

Rising above the high quality standards required by our customers, Amphenol's fiber optic products are trusted by the top equipment manufacturers to move data within their next generation data communication systems.

Offering high performance assemblies, and driving the market to high-density solutions, Amphenol products are designed to meet the demanding requirements of the expanding global market.

Attenuators

PRIZM LT Assemblies

Adapters

MXC Assemblies

Cable Assemblies

# MEDICAL SPECIALTY

The Experience and Reliability that Matter

## Medical Specialty

Amphenol Fiber Optic Products is a leading global provider of high reliability fiber optic connectors and assemblies used in the medical industry. We are a solution provider to OEMs that offer a broad spectrum of systems for minimally invasive ocular procedures, epidermal laser treatments and other oxygen monitoring systems.

Amphenol designs, manufactures, and markets innovative technologies used to deliver and monitor critical patient information. For more than 80 years, our reputation for high-quality products has remained consistent, and our products are trusted by clinicians worldwide.

Amphenol Fiber Optic Products began providing some of the very first fiber optic connectors in the 1970's. The connectors' ability to be sterilized in a variety of ways, including ETO and Autoclave, allowed the implementation of fiber optics in state of the art medical monitoring equipment.

Incorporating critical customer feedback for use and application allows Amphenol Fiber Optic Products to continually develop new solutions. One such development is Amphenol's RFID solution that embeds readable tags into a connector to ensure the medical equipment is being used properly. Another is Amphenol's 905 SMA Connector. This connector was the first epoxyless interconnect solution for markets requiring high power delivery. The two piece SMA connector was designed as a safe and cost effective alternative. The rear body contains a proprietary fiber retention system designed to carefully secure the optical fiber without risk of damage to the connector.

These are just a couple of examples of Amphenol providing innovative solutions to the medical market that incorporate state of the art technology to drive applications for the future of medical solutions.

- Original designer of the fiber industry standard fiber optic connector, the SMA
- High reliability, 40 years of quality
- Damage Resistant technology
- Innovative solutions created from customer feedback
- Embedded RFID options
- High Tolerance ferrule designs
- Global support and supply

*Amphenol's next generation of technology will deliver and monitor light to diagnose and treat conditions with minimally invasive equipment that will decrease healing time.*

# MEDICAL SPECIALTY

The Experience and Reliability that Matter

## Medical Specialty

Amphenol Fiber Optic Products' custom damage-resistant cable assemblies utilize ferrule end face air-gap technology specifically designed for high power medical laser applications.

The air-gap ferrule technology eliminates energy absorbing materials near the fiber end face such as epoxies, connector materials and coatings to deliver a consistent high-precision beam of light.

The connector ferrules can be made of stainless steel, beryllium copper, or other specified materials. The ferrule is used as a heat sink, pulling the heat quickly away from the fiber significantly reducing the risk of equipment damage.

# MOBILE NETWORKS

Creative Solutions for the Mobile Evolution

Mobile networks are constantly evolving, from the first 1G system in the early '80s to the development of the standards for the upcoming 5G and beyond. As network operators around the world compete to offer the best network service to their subscribers, and OEMs allocate their best talent to develop next generation technology to meet increased data traffic demand, a plethora of entrepreneurs continue to provide consumers ways to demand larger capacity, faster, and more often.

Mobile networks have become ubiquitous in enabling the electronic revolution. The need for more efficient mobile networks capable of delivering better performance than its predecessors at a lower investment cost is the number one challenge for many CTOs. Carriers realize that the life cycle of most mobile networks is getting shorter, making it crucial to "future proof" networks to maximize the investment and to maintain a competitive edge while delivering a "super-fast" service.

Amphenol is a leading global interconnect solutions and antenna provider to the mobile networks market, including applications such as cellular base stations, cell site antenna systems, core network controllers, mobile switches, radio links and wireless routers.

Amphenol offers a wide product portfolio for every wireless standard and generation of radio technology, as well as future IP-based solutions. In addition, Amphenol Fiber Optic Products works with service providers around the world to offer an array of antennas and installation-related site solution products. Our connectivity solutions are used from the fiber backhaul to the antenna as well as a complete suite of products for indoor wireless coverage and distributed antenna systems.

## Solutions that are Simple by Design

Amphenol Fiber Optic Products' direct control over connector and assembly quality ensures your network's reliability, industry compliance, and provides the engineering capabilities that allow partnerships and transformational results for you and your customers.

Amphenol Fiber Optic Products delivers a comprehensive product portfolio designed for the network evolution, including fiber optic connectivity and antenna systems.

### Our solutions are designed with the customer in mind:

- Improve Speed of Deployment
- Reduce Deployment Cost
- Reduce Maintenance Cost
- Reduce Risk of Failure
- Simplify Infrastructure Deployment

*Our broad-based capabilities and relationships with both equipment makers and mobile operators position us strongly to support the widest array of mobile applications. Whether it's an independent network for rail communication or enabling the development of next generation mobile networks around the world, Amphenol has the products and expertise to tailor a solution for your toughest wireless network challenges.*

# MOBILE NETWORKS

Creative Solutions for the Mobile Evolution

Amphenol Fiber Optic Products is a leading global solutions provider for wireless infrastructure systems. Whether it's a complex base station or a small DAS network, we supply products with best-in-class performance.

Amphenol Fiber Optic Products is uniquely capable of supporting the entire spectrum of antenna and interconnect requirements in the mobile infrastructure system. We have helped bring mobile technologies to every corner of the globe.

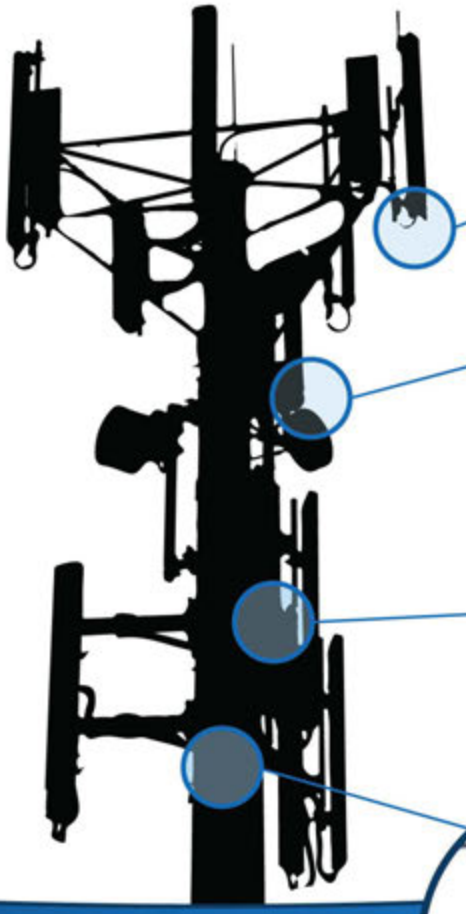
Amphenol Fiber Optic Products offers years of expertise in product design, development and engineering along with an unparalleled commitment to customer service.

## Value Beyond the Product

Daily challenges such as the need to increase efficiency and deliver more value keeps pressure on capital and operational costs. Network operators must deliver value to their customers, and they expect value from their suppliers. Amphenol Fiber Optic Products is the company that provides value beyond the product.

### Connectivity solutions for the future:

- J-Connector
- AARC Connector
- PT/MPO Connector
- IP-FX Connector
- Hybrid Trunks
- Demarcation Box
- Compact Hybrid Solutions



RF Jumpers

Fiber Optic Jumpers

Demarcation Boxes

Trunk Assemblies

# QUICK-TURN

On Time, Everytime

CUSTOMCABLE
An Amphenol Company

## Custom Cable

Custom Cable provides connectivity solutions through its manufactured products and services business divisions. A world class, 40,000 SF certified facility is located in Tampa, FL.

Custom Cable's diverse manufacturing capabilities, certifications, engineering resources, and direct relationships uniquely position Custom Cable as an industry leader. As a supply chain partner, we have innovative tools that bring procurement, standards, engineering, and deployment teams together while reducing response time, lead times, and increasing customer satisfaction.

The services division has earned the reputation as being the reliable "go to" resource providing planning, engineering, project management, installation, integration, troubleshooting, fiber characterization, training and maintenance for local, regional and national projects.

We facilitate this process with unmatched customer service, logistics support, domestic manufacturing, and customer specific supply chain partners and B2B interfaces. Our people, plant, processes and products are certified to the highest standards in the industry. Our direct OEM supplier partnerships and technologically advanced facility position Custom Cable as the partner offering the most competitive (or lowest) total cost of ownership.

## Strategies That Make Custom Cable an Industry Leader

1. Understand Supply Chain Upward Mobility
2. Automate Pre & Post Order Processing
3. Enable People To Do Great Things
4. Innovate Customer Facing Technology

QUICK-TURN
MANUFACTURING

# QUICK-TURN

On Time, Everytime

CUSTOMCABLE
An Amphenol Company

## What Sets Us Apart

Projects can happen very fast - Custom Cable's commitment to our customer's "Just in Time" order to ship requirements enables our customers to get what they need when they need it, while reducing their capital investment in raw and finished goods.

Quality is never negotiable and it is critical to the success of any project. We are committed to our quality program. In addition to this, independent third party testing ensures we manufacture to the highest standards.

**Our adaptability allows us to work well "outside the box".**

## Key Facts

### Manufacturing/Training

Custom Cable assemblers are trained and compliant IAW workmanship standard IPC/WHMA-A-620 Class 2 and 3. Assemblers are trained on site by certified IPC Trainer. Trainer certification No. 620-1175.

### Fiber Products

Custom Cable LCU and SCU Fiber assemblies are certified to Telcordia GR-326-CORE, Issue 4, Sections 4 and 7 and Verizon TPR.9404

### Quality Management System

Custom Cable's QMS is certified to TL9000/I-SO9001:2008, Registration TL9000-H Product Category 7.7.3. The Quality Management System is audited annually for compliance by a third party ANAB accredited register NQA.

### RF Products

All RF Assemblies are 100% Anritsu PIM and SWEEP verified. Assemblers have been trained on site by certified PIM master specialist. Certification No. P400211C.

### Plant And Process

The Organization and their processes are fully certified to TL9000/ ISO9001:2008. Certification No. 11572TL.

## Services

**SITE SURVEY**
**ENGINEERING SERVICES**
**PROJECT MANAGEMENT**

# SERVICES

## SITE SURVEYS
## ENGINEERING FURNISH AND INSTALL
## PROJECT MANAGEMENT

## STRUCTURED CABLE

- Access Control/Security/ CCTV/MATV/AV Cabling
- Backbone Cabling/Infrastructure Distribution
- Cat5E/6/6A Installation and Certification
- Fiber Optic Cable Installation and Certification
- Fiber Optic Fusion Splicing
- Fiber Optic OEM Field Terminations
- MDF and IDF Build outs
- Network MAC (Move, Add, Change) Services
- Overhead Paging and Sound Masking
- Wireless Access Systems (WAP/WIFI)

## FIBER OPTIC TESTING AND REMEDIATION

- Attenuation Reduction (End Face Polishing/Re-termination)
- Bi-Directional Loss
- Bi-Directional OTDR
- Bit Error Rate Testing (DS1-100GbE)
- Fiber Optic Characterization (AP/CD/ORL/PMD)
- Engineered Analysis and Reports
- Power Meter and Light Source DAS
- Design - Indoor / Outdoor Systems
- Equipment and Cable Installation
- Integration and Commissioning
- Public Safety and Carrier Systems CENTRAL OFFICE/ COLLOCATION/DATA CENTER
- Cable Management
- Commissioning / Decommissioning
- Equipment Installation
- Grounding and DC Power
- Power and Structured Cabling Audits

# PRODUCTS

## FIBER

- Attenuators
- Bend Insensitive Fiber
- Bulk Fiber
- Cable Management
- Field Terminated Connectors
- Drop Cables
- FullAXS Cables
- Jumpers - 1.2, 1.6, 2.0, 3.0mm
- LGX Style enclosures
- Micro-Distribution Trunks up to 144 strands
- MTP Cassettes
- MTP/MPO Cable Assemblies
- Multi-fiber Trunks
- Node Cables
- ODC Compatible Cables
- Passive Optical Splitters
- Pigtails - Ribbon or 900um
- Pre-Termination FDP Panels
- Pushable Fiber
- SFP Transceivers and SFP+ Cables
- Singlemode, OM3, OM4
- Splice Patch Enclosures
- Tools

## COPPER

- Bundled Ethernet
- Cat5E / Cat6 / Cat6A
- LGX Style Plug and Play
- MRJ21 Panels and Cables
- Ethernet Patch Cables
- Patch Panels
- Pre-Terminated Ethernet Trunking
- RF Coax
- Small Diameter Cat6 Patch Cables

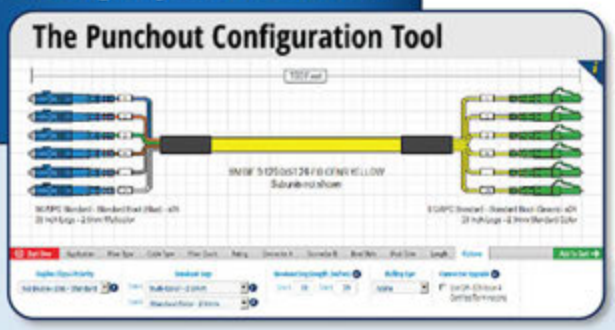
# Buy.CustomCable.com

**Cable assemblies designed by you, built by us, delivered when you want them!**

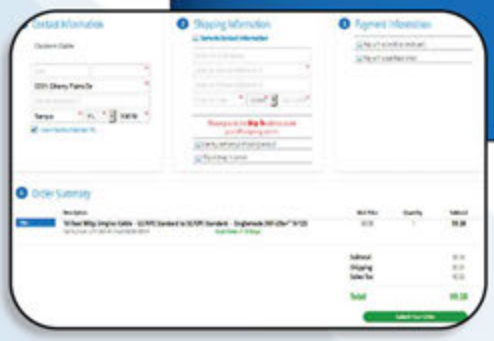
## FAST
## FLUID
## FLEXIBLE

## Get a Quote

## Design your Cables




## Place an Order



## Shipping Options

# CONNECTORS AND ADAPTERS

**Over 40 years of interconnect experience, from the first industry standard 905 Series SMA to the small form-factor connector system and high density MPO multi-fiber interconnects, Amphenol leads innovation in fiber optic connector technology.**

## Highest Quality Materials

Top grade ceramic ferrules ensure the best optical performance and polishing yield. Carefully selected engineered plastics withstand the most demanding environmental stress conditions. High quality materials ensure the long-term reliability and performance of Amphenol connectors.

## Performance and Reliability

Amphenol Fiber Optic Products' experience in military and aerospace interconnect dictates 100% field reliability. Collaborative design review processes for new product development and a state of the art in-house environmental testing lab certify each Amphenol design and production process.

## Responsiveness and Speed to Market

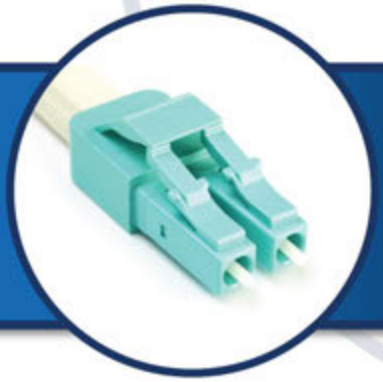
Vertical and virtual integration (supplier partnerships) of key manufacturing processes allow for customer specific production of connector parts in less than four weeks: Stamping, Die Cast, Turning, Plastic and Metal Injection Molding, Plating, Reel to Reel Etching, Photolithographic and Laser MicroMachining.

## Manufacturing Expertise and Delivery Precision

Meticulous attention to capacity and material planning allow Amphenol to meet our committed ship dates on time, every time. Amphenol knows volume manufacturing. Rapid ramp-up of challenging new products is one of our strengths. From aerospace to oil exploration, from the Internet to medical devices, Amphenol Fiber Optic Products is a preferred supplier to leading customers across many industries.

## Global Presence

With 100 manufacturing facilities worldwide, and a local presence in over 30 countries, our responsive and creative team can solve your interconnect challenge anywhere in the world.



## Product Breadth

Amphenol Fiber Optic Products offers a complete line of fiber optic connectors and adapters including SMA, ST, FC, SC, LC, MPO and sealed connectors.
Total Quality Performance. Stringent quality assurance systems exceed the ISO:9001 requirements and ensure consistent quality products regardless of manufacturing location.

# PRODUCT TYPE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*The Experience and Reliability that Matter*

# MPO Connector

Amphenol manufactures a comprehensive line of MPO connectors that provide high density connections for the expanding Datacom marketspace.

A variety of boot and accessory options are available to assist with cable routing and end customer installation.

Amphenol MPO connectors meet TIA/EIA 604-5 and IEC 61754-7 intermateability standards.

## Features and Benefits

Available for a wide variety of cable designs and sizes

Available for Singlemode and Multimode fiber types

12 and 24 fiber count options

Standard and Low loss versions available

## Specifications

Insertion Loss:
- ≤ 0.75dB, Standard Singlemode
- ≤ 0.35dB, Low loss Singlemode
- ≤ 0.5dB Standard Multimode
- ≤ 0.35dB Low Loss Multimode

Return Loss:
- Singlemode (APC) ≤ -55dB

## Applications

IT/Datacom

Data Centers

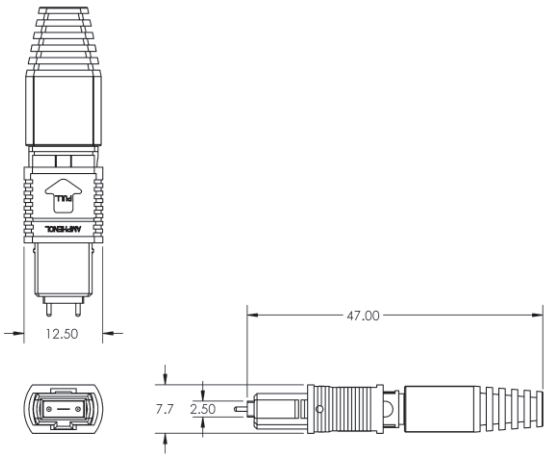
Wireless

## Industry Compliance

RoHS compliant

Meets TIA/EIA 604-5 intermateablity standards

Meets IEC 61754-7 intermateability standards




## Ordering Information

| Part Number | Description |
|---|---|
| 955-400-5C108 | CONN, MPO, M/M, AQUA FEMALE, 3MM ROUND, 12F, BLACK BOOT |
| 955-400-53108 | CONN, MPO, S/M, GREEN FEMALE, 3MM ROUND, 12F, BLACK BOOT |
| 955-410-5C108 | CONN, MPO, M/M, AQUA MALE, 3MM ROUND, 12F, BLACK BOOT |
| 955-410-53108 | CONN, MPO, S/M, GREEN MALE, 3MM ROUND, 12F, BLACK BOOT |

*Please call customer service for additional configurations

# LC Uniboot

Amphenol's LC Uniboot connector simplifies cable routing in high density panels.

The compact design allows for greater density when populated in high density panels.

Amphenol Uniboot assemblies reduce congestion in racks and trays due to the one boot, one cable design.

Amphenol's LC connectors are a high density low cost solution without any sacrifice of performance.

The Amphenol LC Uniboot connectors are compliant to the EIA/TIA-604 and IEC 61754 industry standards.

## Features and Benefits

Optional Amphenol Push/Pull tab for installation in tighter spaces

Easy RJ45 coupling mechanism enables quick installation and the audible click signifies when connected

Pull proof design prevents signal interruption

Small form factor size enables increased density

UL-rated plastic housing and boot

Singlemode and Multimode versions

Available with 1.6/2.0mm, or 3.0mm standard and short boots

## Specifications

Insertion Loss:
- ≤ 0.75dB, Standard Singlemode
- ≤ 0.35dB, Low loss Singlemode
- ≤ 0.5dB Standard Multimode
- ≤ 0.35dB Low Loss Multimode

Return Loss:
- Singlemode (APC) ≤ -55dB

Durability:
- <0.2dB change
- 500 mating cycles

Temperature:
- <0.3dB change, -40 to +85°C

## Applications

Data Communications

Wireless

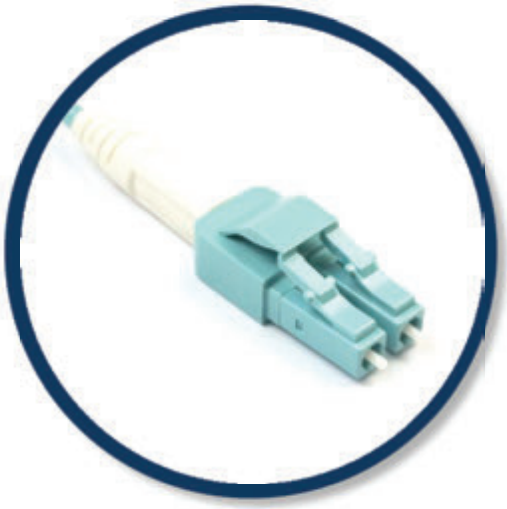
IT/Datacom

Data Centers

## Industry Compliance

RoHS compliant

Connectors comply to applicable TIA/EIA and IEC intermateability standards

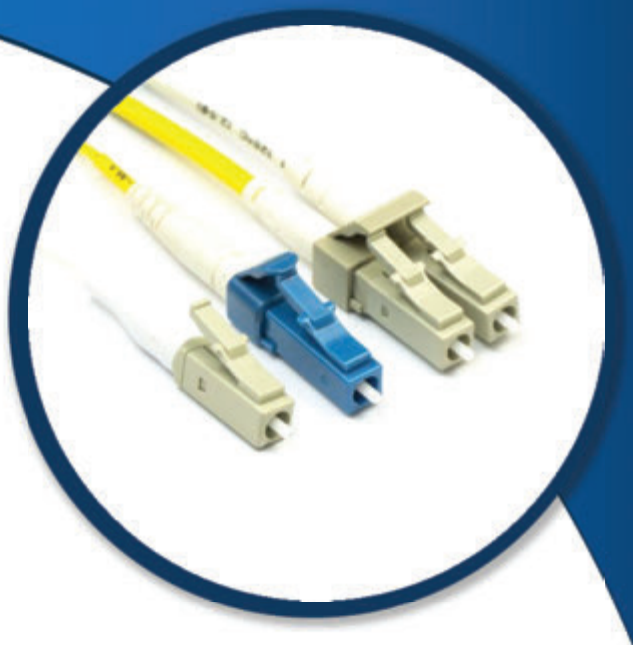


## Ordering Information

| Part Number | Description |
|---|---|
| 956-99013-50001 | |

*Please call customer service for additional configurations

# LC Connectors



Amphenol's data communications fiber optic LC small form factor (SFF) connectors utilize the familiar RJ45 latching mechanism.

The LC connector is almost half the size of the popular SC connector, providing great space savings in the network.

With accelerated growth demanding greater bandwidth in less physical space, LC connectors have emerged as a viable solution for high density frames and patch panels.

Amphenol's LC connectors are a high density low cost solution without any sacrifice of performance.

Amphenol's LC connector portfolio includes Micro, Unibody, Uniboot and standard 2 piece LC connector designs.

## Features and Benefits

Optional Amphenol Push/Pull tab for installation in tighter spaces

Easy RJ45 coupling mechanism enables quick installation and the audible click signifies when connected

Pull proof design prevents signal interruption

Small form factor size enables increased density

Duplex version utilizes a removable flexible clip providing a float between channels A and B

Singlemode and Multimode versions

Available with 900µm, 900µm Behind the Wall (BTW), Short, 1.6/2.0mm, or 3.0mm boots

Multiple boot color options

Angled boots also available (50 degree, 90 degree, and flexible boot from 0 to 90 degree)

## Specifications

Insertion Loss:
- ≤ 0.15dB typical, S/M
- ≤ 0.25dB typical, M/M
- ≤0.35dB typical, M/M

Return Loss:
- ≤-55dB SM Ultra Polish (UPC)

Durability:
- <0.2dB change
- 500 mating cycles

Operating Temperature:
- -40 to +75°C

## Applications

Data Centers

IT/Datacom

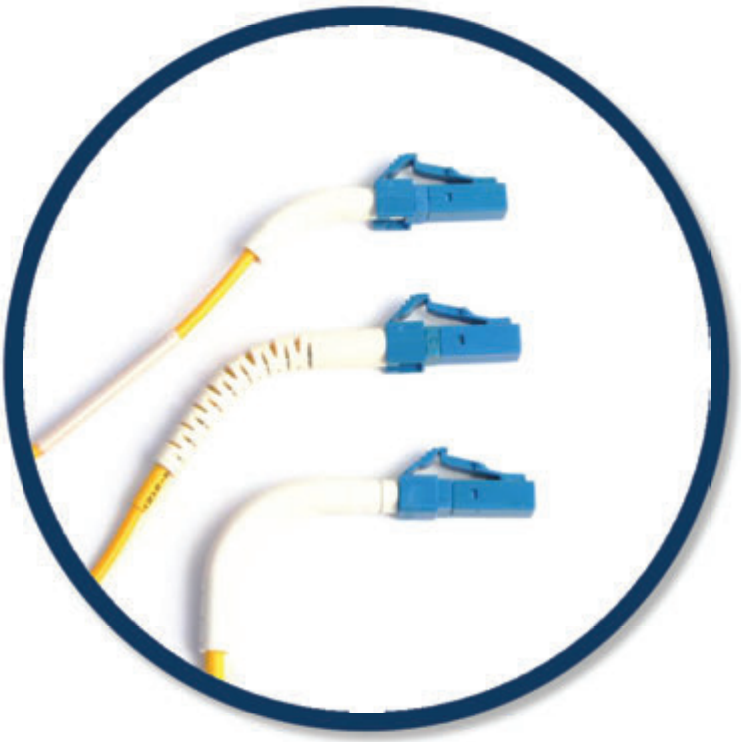
Wireless

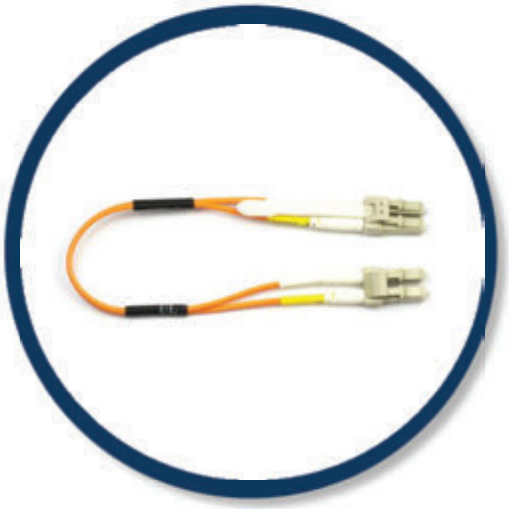
## Industry Compliance

RoHS compliant

Meets IEC 61754-20 intermateability standards

Meets TIA/EIA 604-10 intermateability standards

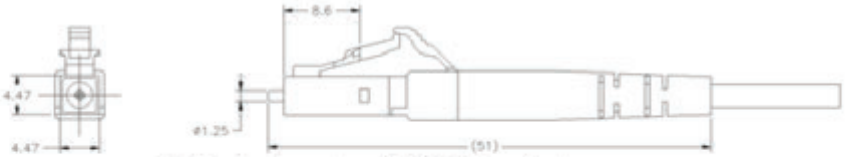




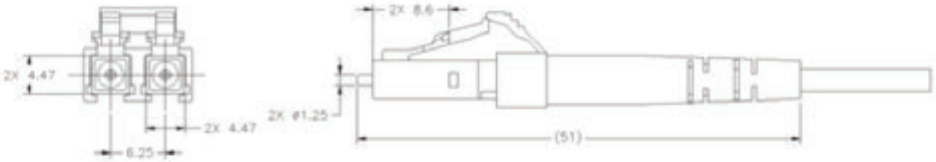
## Ordering Information

| Part Number | Description |
|---|---|
| 956-331-590314 | LC SIMPLEX, SM, 125.5µm, BLUE |
| 956-322-502214 | LC DUPLEX, MM, 127µm, 1.6/2.0mm, BEIGE |
| 956-312-502924 | LC DUPLEX, MM, 127µm, 900µm |

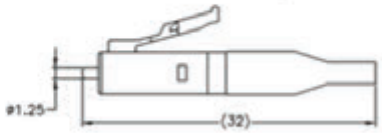
*Please call customer service for additional configurations



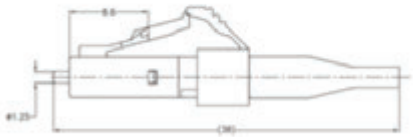

LC Simplex Connector with 1.6/2.0mm Boot




LC Duplex Connector with 1.6/2.0mm Boots




LC Simplex Behind the Wall (BTW) Connector with 900µm Boot



LC Duplex Connector with 900µm Boot

# Micro LC Connectors

Amphenol's Micro LC connector is one of the shortest LC connectors for jacketed cable on the market and reduces the total length of the connector and boot, providing great space savings in the network.

Amphenol's data communications fiber optic LC small form factor (SFF) connectors utilize the familiar RJ45 latching mechanism.

With accelerated growth demanding greater bandwidth in less physical space, LC connectors have emerged as a viable solution for high density frames and patch panels.

Amphenol's LC connectors are a high density, low cost solution without any sacrifice of performance.

## Features and Benefits

Short LC connector and short boot for a total length of 36mm

One of the shortest LC connectors for jacketed cable on the market

Singlemode and Multimode versions

Duplex version utilizes a removable flexible clip providing a float between channels A and B

Multiple boot color options

## Specifications

Insertion Loss:
- ≤ 0.15dB typical, S/M
- ≤ 0.25dB typical, M/M
- ≤0.35dB typical, M/M

Return Loss:
- ≤-55dB SM Ultra Polish (UPC)

Durability:
- <0.2dB change
- 500 mating cycles

Operating Temperature:
- -40 to +75°C

## Applications

Data Centers

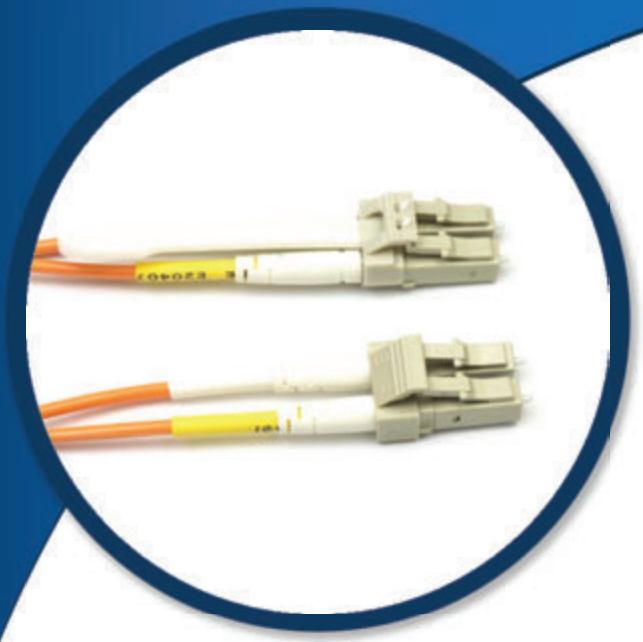
IT/Datacom

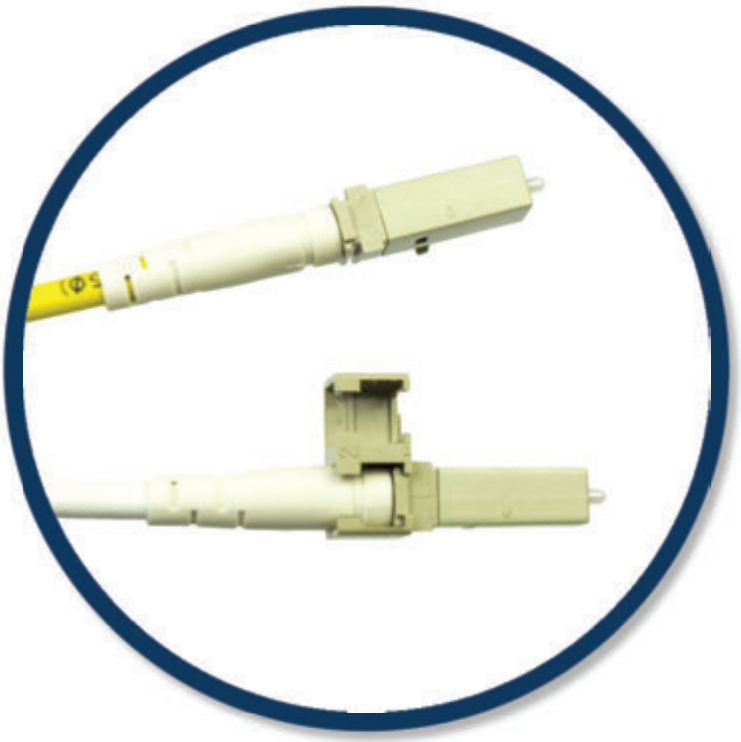
## Industry Compliance

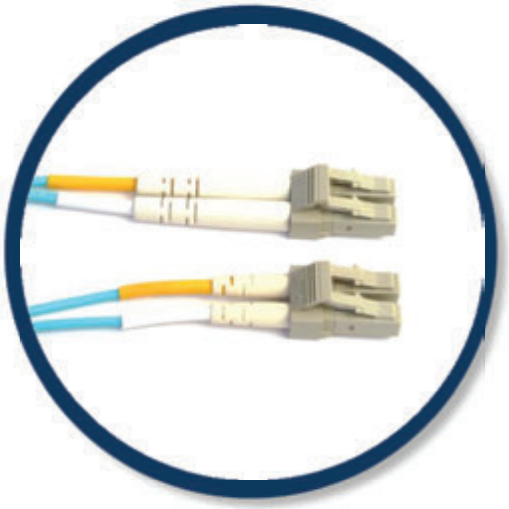
RoHS compliant

Meets IEC 61754-20 intermateability standards

Meets TIA/EIA 604-10 intermateability standards



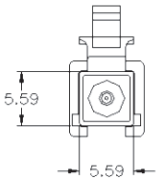


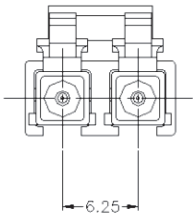


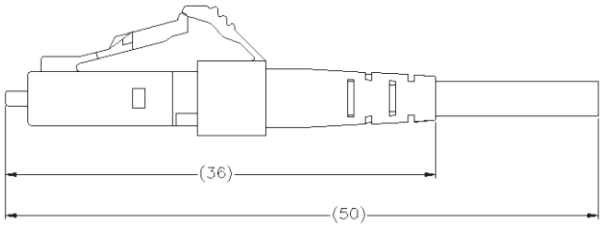
## Ordering Information

| Part Number | Description |
|---|---|
| 956-302-500204 | LC MICRO SIMPLEX, MM, 127µm |
| 956-301-590204 | LC MICRO SIMPLEX, SM, 125.5µm |
| 956-302-502204 | LC MICRO DUPLEX, MM, 127µm |

*Please call customer service for additional configurations



# SC Connectors

Amphenol's premier high performance fiber optic 954 Series SC connectors utilize a push pull retention feature enabling easy insertion and removal, making it ideally suited for network applications.

The SC connector features an internal cavity and epoxy injection tube that virtually eliminates the possibility of improper epoxy application, thus providing higher manufacturing yields and superior quality.

Amphenol's 954 Series SC connectors are compliant to the EIA/TIA-604-3, IEC 61754-4 industry standards, and are fully tested by a third party test lab per Telcordia GR-326 specifications.

## Features and Benefits

Easy push pull coupling mechanism enables quick installation and the audible click signifies when connector is locked in place

Pull proof design prevents signal interruption

Duplex version utilizes a removable flexible clip providing a float between channels A and B

High temperature and UL 94-V0 rated plastic housing and boots available in multiple colors

Available in Singlemode, angled Singlemode, and Multimode versions

Multiple boot size, colors and angle options available

## Specifications

Insertion Loss:
- ≤ 0.15dB typical, S/M
- ≤ 0.25dB typical, M/M
- ≤0.30dB typical, APC
- ≤0.35dB typical, M/M

Durability:
- <0.2dB change
- 500 mating cycles

Temperature:
- <0.3dB change, -40 to +85°C

## Applications

IT/Datacom

Data Communicatio

## Industry Compliance

RoHS compliant

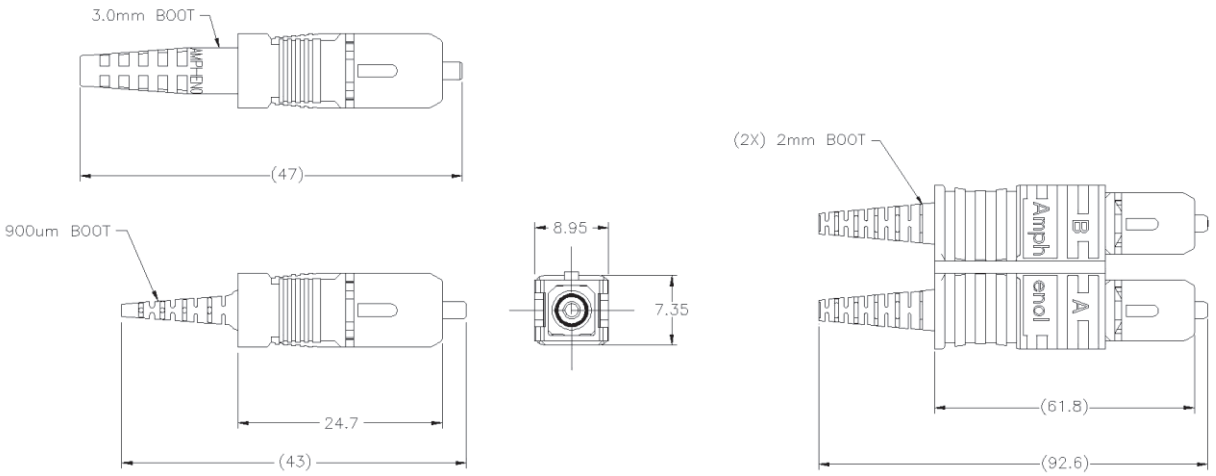
Meets IEC 61754-4 intermateability standards

Meets TIA/EIA 604-3 intermateability standards

## Ordering Information

| Part Number | Description |
|---|---|
| 954-101-57203B | SC SIMPLEX CONNECTOR, MM |
| 954-103-57393G | SC/APC SIMPLEX, SM, CONICAL FERRULE |
| 954-101-58292B | SC DUPLEX CONNECTOR, SM |

*Please call customer service for additional configurations



# FC Connectors

Amphenol's FC connectors effectively terminate optical fiber in a variety of network applications.

The connectors are secured using a threaded coupling nut, providing a significant increase in pull-out performance.

The FC/APC connector system features a tight fit keyway that prohibits the possible mismating between the FC/PC and FC/APC connectors.

## Features and Benefits

One piece construction

Non-Optical disconnect feature design prevents signal interruption

Available in Singlemode, angled Singlemode, and Multimode versions

Available with 900µm, 2.0mm, or 3.0mm boots

## Specifications

Insertion Loss:
- ≤ 0.15dB typical, S/M
- ≤ 0.25dB typical, M/M
- ≤0.30dB typical, APC
- ≤0.35dB typical, M/M

Return Loss:
- ≤-55dB SM Ultra Polish (UPC)
- ≤-65dB Angle Polish (APC)

Temperature:
- <0.3dB change, -40 to +85°C

## Applications

Military

Industrial

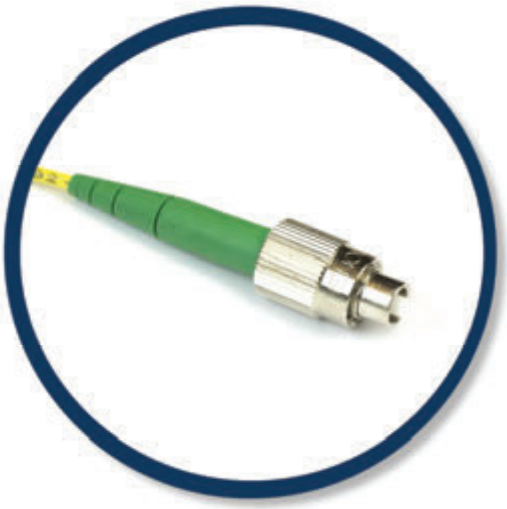
IT/Datacom

## Industry Compliance

RoHS compliant

Meets IEC 61754-13 intermateability standards

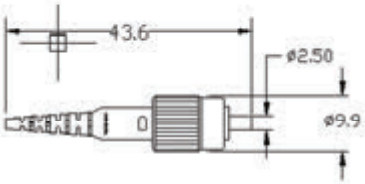
Meets TIA/EIA 604-4 intermateability standards

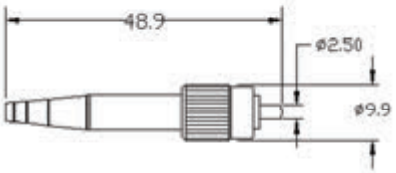


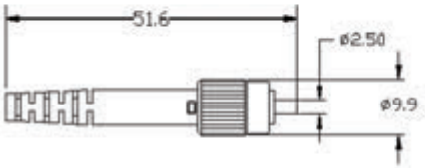
## Ordering Information

| Part Number | Description |
|---|---|
| 944-601-53203B | FC CONN, MM, 128µm |
| 944-603-53393G | FC/APC, SM, 125.5µm CONICAL FERRULE |
| 944-601-53292L | FC CONN, SM, 125.5µm |

*Please call customer service for additional configurations



# ST Connectors

Amphenol's 953 Series fiber optic ST and ST II connectors utilize a bayonet style mating concept to provide a secure, robust coupling mechanism.

The enclosed spiral slotted coupling nut allows easy insertion in densely packed patch panels.

The ST connector is available with a plastic or die-cast body with a ceramic or stainless steel ferrule.

## Features and Benefits

The ST connector body and coupling nut are precision molded with a flame retardant polymer for a durable and light weight product

The STII connector body and coupling nut are precision zinc die cast and nickel plated for superior strength and corrosion resistance

Singlemode and Multimode versions

Available with 900µm, 2.0mm, or 3.0mm boots

Stainless steel ferrules also available on both the ST and STII connectors

## Specifications

Insertion Loss:
≤ 0.15dB typical, S/M
≤ 0.25dB typical, M/M

≤0.35dB typical, M/M

Return Loss:
≤-55dB SM Ultra Polish (UPC)

Operating Temperature:
-40 to +75°C

## Applications

Military
Industrial
IT/Datacom

## Industry Compliance

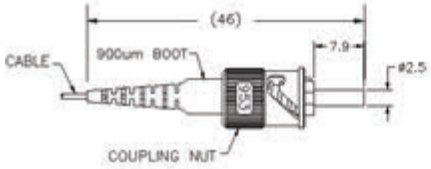
RoHS compliant

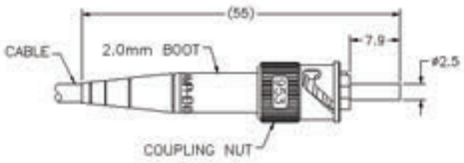
Meets TIA/EIA 604-2 intermateability standards

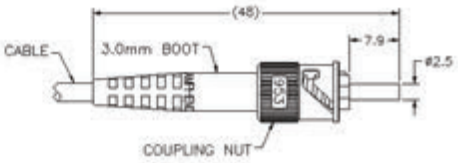
## Ordering Information

| Part Number | Description |
|---|---|
| 953-101-5306-P | ST II CONNECTOR, SINGLEMODE, 126µm |
| 953-101-5310-P | ST II CONNECTOR, MULTIMODE, 128µm |
| 953-101-5316-P | ST II CONNECTOR, SINGLEMODE, 126µm |

*Please call customer service for additional configurations



# H-Connector

Amphenol's H-Connector assemblies provide a robust and sealed connection solution for fiber to the home (FTTH) connectivity.

The H-Connector incorporates an SC/APC type connection within a slim, sealed, threaded polymer housing allowing easy connection to either a panel mounted receptacle or in-line extension cable.

Standard indoor SC/APC connectors mate to the adapter providing a common interface to mate with optical systems within an enclosure or Network Interface Device (NID).

Available with flat drop or traditional round style OSP cables, the H-Connector provides an ideal solution for direct burial, conduit or aerial installations.

## Features and Benefits

Factory terminated assemblies provide reliable performance

Plug dust cap with pulling eye protects connectors during installation

Threaded style coupling

## Specifications

Operating Temperature:
-40° to 85°C

> 33 lb. axial cable retention (150N)

Cable Diameter Range:
4.8mm to 7mm

Insertion Loss:
≤ 0.35dB typical

Return Loss:
≤-55dB

## Applications

FTTH

FTTA

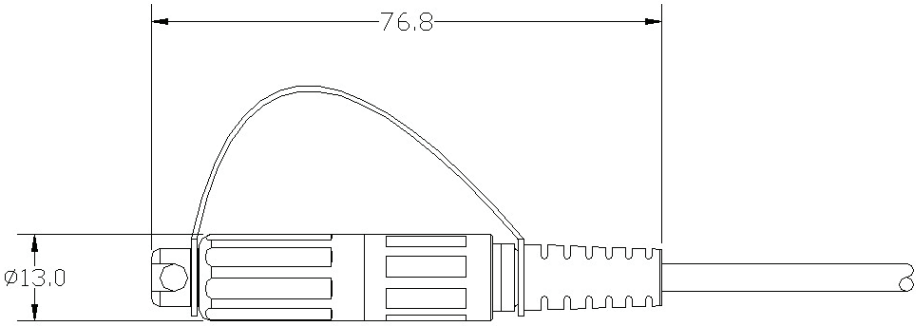
Outdoor Areas

Harsh Environment

## Industry Compliance

Connectors are mechanically and optically intermateable with industry standard connectors and adapters and conform to TIA/EIA, IEC, and Telcordia specifications

RoHS compliant




## Ordering Information

| Part Number | Description |
|---|---|
| 942-98468-10001 | PIGTAIL, H-CONN FLAT DROP SM, 1M |
| 942-98469-10001 | PIGTAIL, H-CONN ROUND 7MM SM, 1M |
| 942-98469-10001 | PIGTAIL, H-CONN ROUND 7MM SM, 1M |
| 942-98468-10001 | PIGTAIL, H-CONN FLAT DROP SM, 1M |
| 942-98469-10001 | PIGTAIL, H-CONN ROUND 7MM SM, 1M |

*Please call customer service for additional configurations

# IP-FX

The Amphenol IP-FX is a compact, sealed, outdoor feed-thru housing that is designed to provide dust and water protection for assemblies mating to outdoor enclosures and transmission equipment. The IP-FX is suitable to protect several connector types including LC Duplex, RJ45, USB, and others.

The unique design of the IP-FX housing allows it to be supplied on factory terminated (tested cables) or field installed over existing cables such as LC Duplex or RJ45, making it an ideal solution for conversion from legacy systems to newer transmission equipment.

IP-FX housing mates to equipment or enclosures that are pre-fitted with the FullAXS-style receptacle, providing a water and dust sealed interface when mated.

Applications include connection to Remote Radio Units (RRU/RRH), FTTA equipment and other outdoor systems.

## Features and Benefits

Factory or Field Installable version available

Can be installed over existing outdoor assemblies

Pass-Thru Design is suitable for many different connector types

No tools required for installation

Bayonet style coupling

## Specifications

Operating Temperature:
-40° to 85°C

> 33 lb. axial cable retention (150N)

Cable Diameter Range:
4.8mm to 7mm

Durability:
>100 mating cycles

## Applications

FTTA

Small Cells

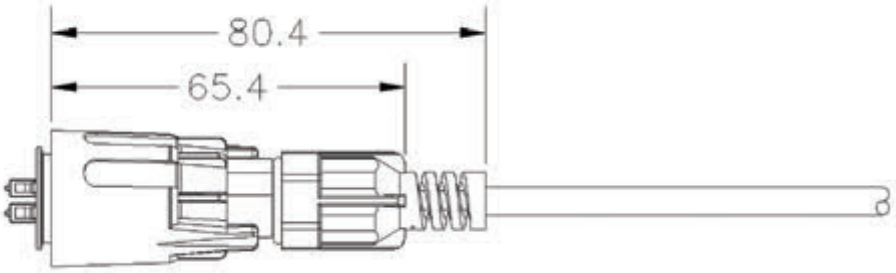
Outdoor Areas

## Industry Compliance

Connectors comply to applicable TIA/EIA and IEC intermateability standards

GR-326 Issue IV

RoHS compliant




## Ordering Information

| Part Number | Description |
|---|---|
| 958-5000-1 | KIT, IP-FX CONNECTOR, FACTORY FOR 4.8-6.0MM CABLE |
| 958-5000-2 | KIT, IP-FX CONNECTOR, FACTORY FOR 6.0-8.0MM CABLE |
| 958-5001-1 | KIT, IP-FX CONNECTOR, FIELD FOR 4.8-6.0MM CABLE |
| 958-5001-2 | KIT, IP-FX CONNECTOR, FIELD FOR 6.0-8.0MM CABLE |
| 942-98473-10006 | JUMPER, IP-FX TO LC DUPLEX (STD WITH 2MM BO) |

*Please call customer service for additional configurations

# R2CT

The R2CT Field Installable weatherproof housing is designed as a cost effective means of providing a removable interface for applications requiring protection from wet or dirty environments.

It allows for quick and easy installation onto Optical LC, RJ45, or other outdoor style communication assemblies. The system can be field assembled over previously deployed assemblies or provided on factory terminated assemblies for quick and reliable deployments.

The R2CT allows direct mating to edge mounted active devices or as a sealed feed-thru to adapters or internally mounted devices.

The R2CT Gland is also suitable for use as a feed-through interface for other type signal and fiber applications. Amphenol's R2CT Field Installable cable glands are exceptionally suited for WiMax, LTE, wireless, and base station applications.

## Features and Benefits

Field Installable

Can be installed over existing outdoor assemblies

Corrosion resistant aluminum housing

Plug dust cap with pulling eye protects connectors during installation

## Specifications

Operating Temperature:
-40° to 85°C

Durability:
>200 mating cycles

> 45 lb. axial cable retention (200N)

Cable Diameter Range:
4.8mm to 7mm

## Applications

FTTA

Outdoor Areas

Harsh Environment

## Industry Compliance

Connectors are mechanically and optically intermateable with industry standard connectors and adapters and conform to TIA/EIA, IEC, and Telcordia specifications

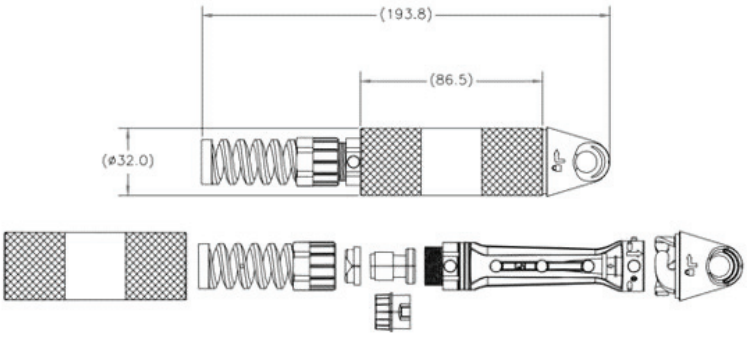
RoHS compliant

## Ordering Information

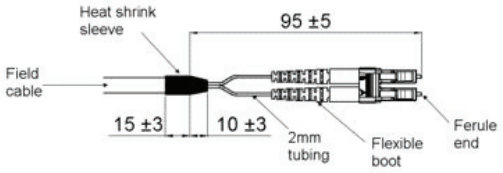
| Part Number | Description |
|---|---|
| 957-5010 | RECEPTACLE WITH VINYL DUST CAP |
| 957-5001 | R2CT PLUG (LONG) FOR OPTICAL |
| 957-5011 | RECEPTACLE WITH METAL SEALING CAP |

*Please call customer service for additional configurations

### R2CT Plug Assembly Details
Optical or RJ45 Applications




### Recommended Cable Breakout for Transceiver Applications



# SC Adapters

Amphenol's new and improved, complete range of premium SC adapter options provides the perfect solution for your network needs.

The one-piece plastic design is more robust than the typical two-piece design that is ultrasonically welded together.

The adapters meet EIA/TIA, IEC, and Telcordia standards. Options for Amphenol patented internal shutters* and external door shutters are available.

## Features and Benefits

One piece plastic body provides improved mechanical side load performance

Panel mounting clips molded into the plastic offer sturdy mounting support
(metal mounting clip option is available upon request)

Made of a durable plastic material to meet the temperature extremes of Telcordia GR-326 standard

Amphenol's patented internal shutter option as well as an external door shutter version available

Multiple flange types, colors, and alignment sleeves are available

## Specifications

Durability:
- <0.2dB change
- 500 mating cycles

Operating Temperature:
- -40 to +75°C

## Applications

Data Centers

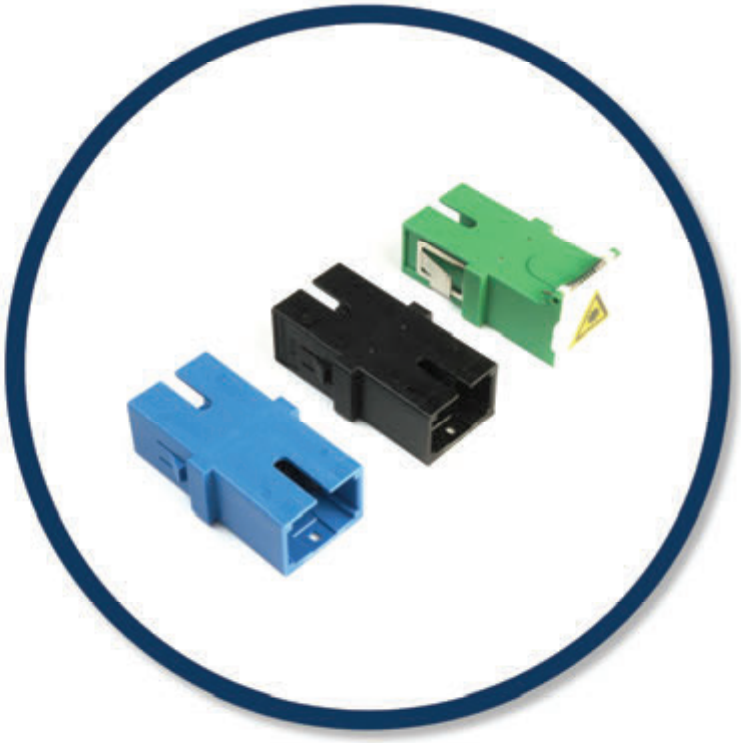
IT/Datacom

## Industry Compliance

RoHS compliant

Meets IEC 61754-4 intermateability standards

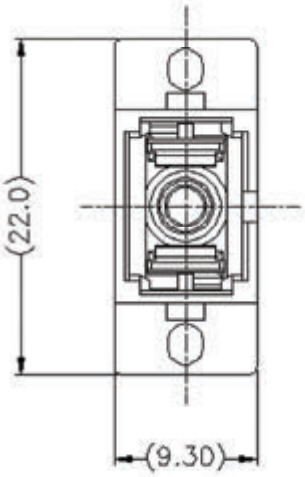
Meets TIA/EIA 604-3 intermateability standards

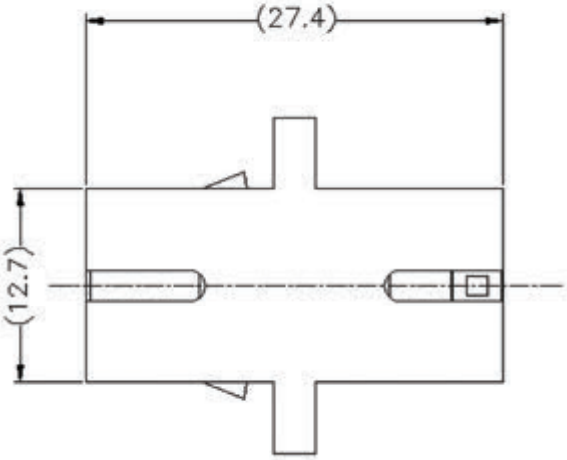


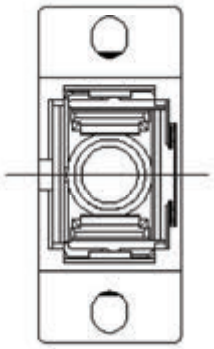
## Ordering Information

| Part Number | Description |
|---|---|
| 954-180-50010 | ADAPTER, SC SIMPLEX, BLUE |
| 954-180-521E0 | ADAPTER, SC DUPLEX, BEIGE |
| 954-190-50130 | ADAPTER, SC SIMPLEX, GREEN |

*Please call customer service for additional configurations



# MPO Adapters

Amphenol's MPO adapters are used to mate the high density MPO/MTP® connectors.

Made in both die-cast and thermoplastics, Amphenol MPO adapters are precision manufactured to ensure intermateability with industry standard assemblies and connectors.

Available with various flange styles, Amphenol MPO adapters meet the challenges and mechanical requirements of highly dense system designs while maintaining industry standard footprints.

## Features and Benefits

Accepts industry standard MPO/MTP® interfaces

Multiple flange options including standard, rotated, or reduced

Optional internal shutter mechanisms assist in eye safety requirements

Matched keyway option available

## Specifications

Durability:
- <0.3dB change
- 500 mating cycles

Operating Temperature:
- -40 to +75°C

## Applications

Data Centers

IT/Datacom

## Industry Compliance

RoHS compliant

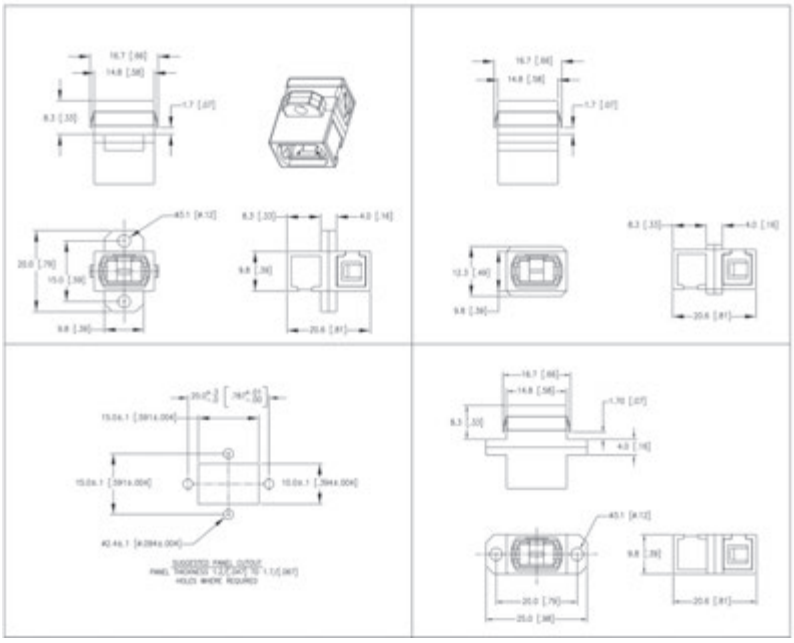
Meets IEC 61754-7 intermateability standards

Meets TIA/EIA 604-5 intermateablity standards

## Ordering Information

| Part Number | Description |
|---|---|
| 955-121-5010 | MPO DIE-CAST ADAPTER, STD FLANGE |
| 955-121-5110 | MPO DIE-CAST ADAPTER, STD FLANGE |
| 955-121-5020 | MPO DIE-CAST ADAPTER, ROTATED FLANGE |

*Please call customer service for additional configurations



# LC Adapters

Amphenol's complete range of LC adapter options provides the perfect solution for your high density network needs.

The one-piece design is more durable than the typical two-piece design.

Amphenol LC adapters are for use with IEC 614754-20 and TIA/EIA 604-10 industry compliant LC connectors.

Amphenol patented internal shutters are available on most adapter types.

## Features and Benefits

Amphenol's patented internal shutter option as well as an external door shutter version available

Multiple flange types, colors, and alignment sleeves are available

Panel mounting clips molded into the plastic offer sturdy mounting support

Custom configurations available upon request

One piece plastic body provides improved mechanical side load performance

## Specifications

Durability:
- <0.3dB change
- 500 mating cycles

Operating Temperature:
- -40 to +75°C

## Applications

Data Centers
IT/Datacom
Wireless

## Industry Compliance

RoHS compliant

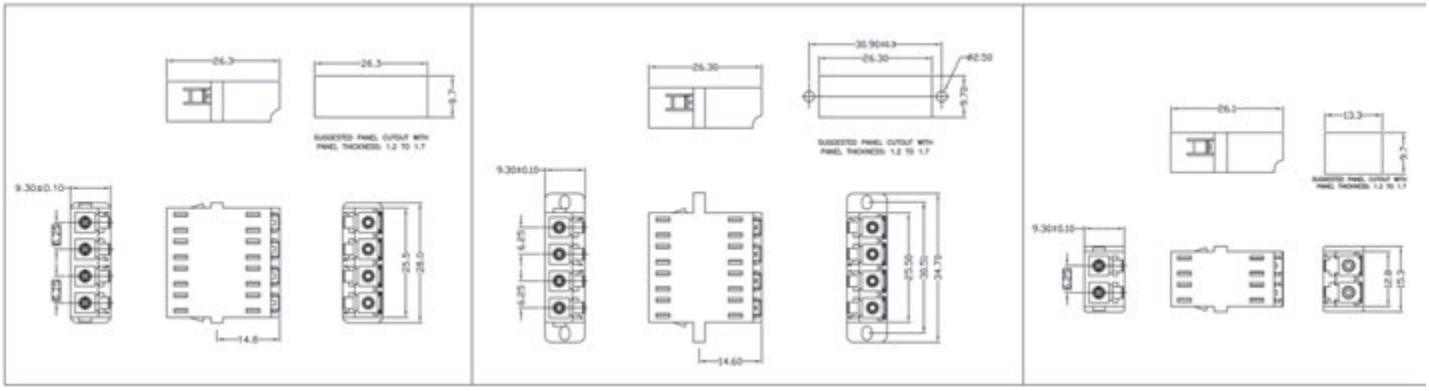
Meets IEC 61754-20 intermateability standards

Meets TIA/EIA 604-10 intermateability standards

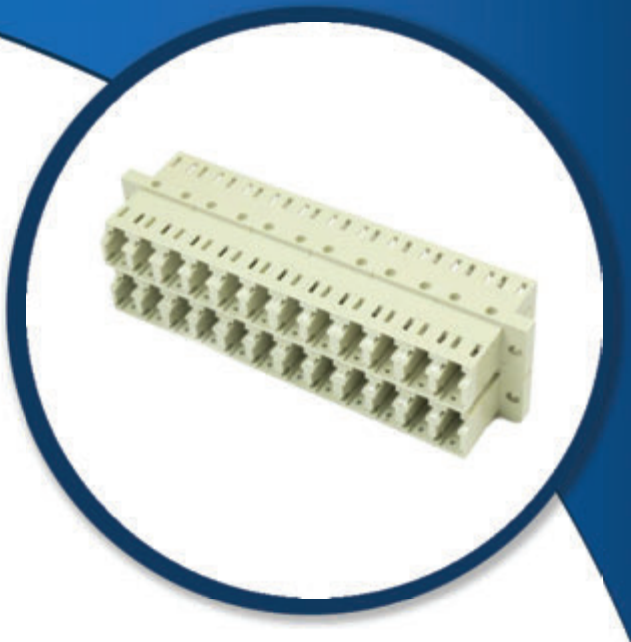
## Ordering Information

| Part Number | Description |
|---|---|
| 956-370-55010 | ADAPTER, LC(D), BLUE, SC FOOTPRINT |
| 956-380-550A0 | ADAPTER, LC DUPLEX, AQUA |
| 956-380-540A0 | ADAPTER, LC QUAD, AQUA, SC FOOTPRINT |

*Please call customer service for additional configurations



# Stackable Adapters



Amphenol's LC and MPO stackable adapter system is an innovative way to aggregate a high number of LC connections into a small footprint.

The stackable adapters are modular and allow network and equipment designers to improve fiber density.
The stackable adapters have a track system for alignment and a permanent locking feature that prevents the adapters from coming loose.

Amphenol will preassemble the adapters into your custom configuration saving you time and ensuring the highest

## Features and Benefits

Modular design allows for custom configurations

Straight and 45° angled available

Amphenol's patented internal shutter option available

Accepts industry standard MPO/MTP® interfaces

Small form factor size enables increased density

## Specifications

Durability:
<0.3dB change
500 mating cycles

Operating Temperature:
-40 to +75°C

## Applications

Data Centers

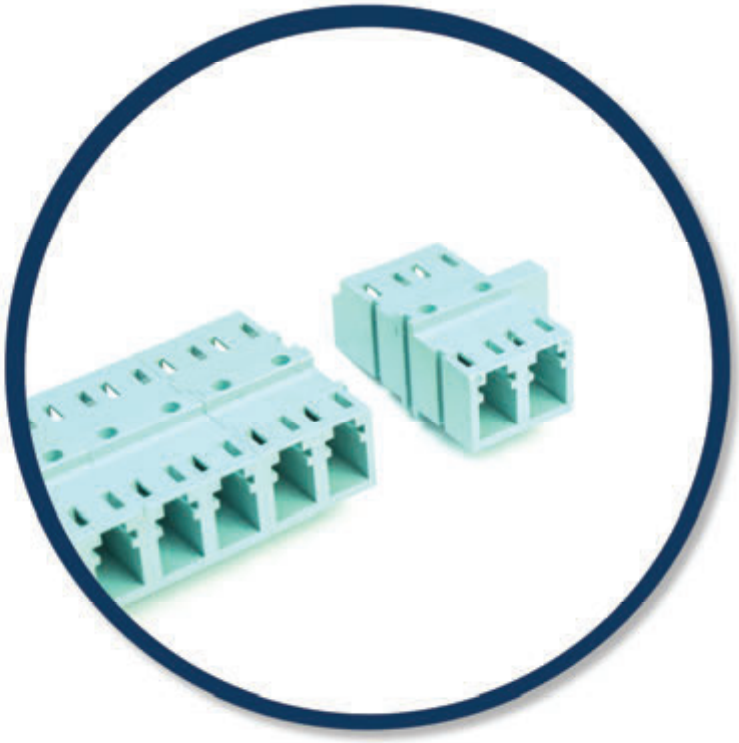
IT/Datacom

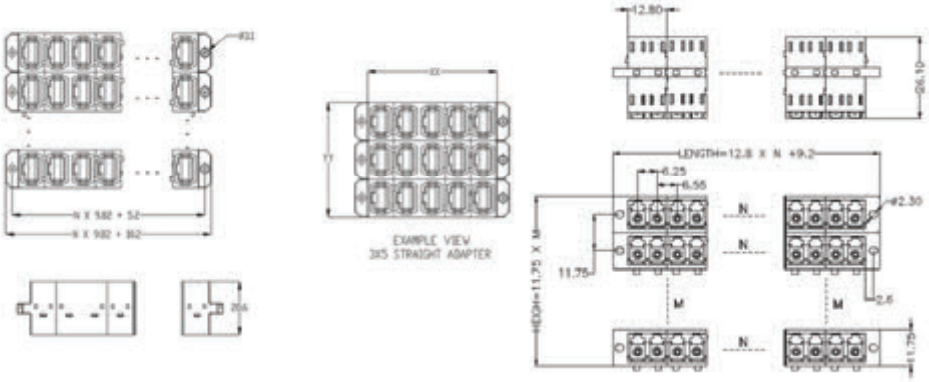
## Industry Compliance

RoHS compliant

Meets IEC 61754-7 intermateability standards

Meets IEC 61754-20 intermateability standards






## Ordering Information

| Part Number | Description |
|---|---|
| 956-602-02013 | ADAPTER, STACKABLE LC STR 1x2 |
| 956-602-02023 | ADAPTER, STACKABLE LC STR 2x2 |
| 956-602-04013 | ADAPTER, STACKABLE LC STR 1x4 |
| 956-602-06013 | ADAPTER, STACKABLE LC STR 1x6 |
| 955-602-02010 | ADAPTER, STACKABLE MPO 1x2 |
| 955-602-02020 | ADAPTER, STACKABLE MPO 2x2 |
| 955-602-02040 | ADAPTER, STACKABLE MPO 4x2 |
| 955-602-04010 | ADAPTER, STACKABLE MPO 1x4 |
| 955-602-04020 | ADAPTER, STACKABLE MPO 2x4 |

*Please call customer service for additional configurations

# Amphenol
## FIBER OPTIC PRODUCTS

# Amphenol
## FIBER OPTIC PRODUCTS

# INDOOR CABLE ASSEMBLIES

**Amphenol's fiber optic cable assembly expertise dates back to 1976. As new fiber optic connectors have entered the industry, Amphenol Fiber Optic Products has carefully selected the most robust and reliable connectors to participate in their design and development. Our in-depth understanding of connector design, and the complete control of materials, make Amphenol cable assemblies one of the best in the industry.**

## Product Breadth

Amphenol Fiber Optic Products offers a comprehensive line of cable assemblies in a variety of cable configurations with SC, FC, LC, ST SMA, and MTP® (MPO) type connectors. Both standard and custom assemblies are available for a wide variety of applications. From simplex jumpers to multi-fiber drop cables to ribbon breakouts, Amphenol can design and supply all of your cable assembly needs.

## Consistent Quality

High quality polishing processes have been developed to meet and exceed industry standards specifications for insertion loss, return loss, and endface geometry. Attention to process control ensures high-yield processes and consistent quality. Additionally, all assemblies are designed to intermateability standards for optical and physical performance criteria, as dictated by EIA/TIA, IEC, JIS, NTT, ANSI, and Telcordia (where applicable).

## Complete Testing

Performance testing is one of Amphenol Fiber Optic Products' fundamental strengths. Connector and cable materials are extensively inspected prior to assembly. Every cable receives 100% inspection for both insertion loss and visual defects (under 1200X video magnification). Interferometers are used for accurate endface geometry testing.

## Manufacturing Expertise & Delivery Precision

Amphenol Fiber Optic Products delivers. Meticulous attention to capacity and material planning allow us to meet our committed ship dates on time. Every time. Amphenol Fiber Optic Products knows volume manufacturing. Rapid ramp-up of challenging new products is one of our strengths.

*MTP is a trademark of US Connect

## Creative and Functional Designs

You specify the functionality of the cable assembly, and our talented, enthusiastic, and friendly mechanical and optical engineers develop an "end-to-end" solution. Design creativity, experience and a deep understanding of your application ensure a functional and manufacturable design.

# PRODUCT TYPE


Singlemode Assemblies ..... 35
Multimode Assemblies ..... 37
MPO QSFP Assemblies ..... 39
MPO Cable Assemblies ..... 41
LC Flippable Uniboot Assemblies ..... 43
1.2mm Assemblies ..... 45
Traceable Patch Cords ..... 47


*High Performance Quality You Can Count On*

# Singlemode Assemblies

Amphenol is a premier manufacturer of singlemode patch cords in the telecommunications industry, meeting or exceeding many of the industry standard requirements for optical transmission loss, reflectance, visual endface specifications, and geometry.

Amphenol offers standard patch cords in a variety of configurations and connector types.

Both standard SMF-28e and bend reduced fiber types are available.

Custom options are available upon request.

## Features and Benefits

Custom labeling available

Available in a wide variety of connector types, cable designs, and lengths

Duplex version utilizes a removable flexible clip providing a float between channels A and B

Multiple boot size, colors and angle options available

Assemblies are available in standard SMF-28e and Bend reduced fiber types

Custom configurations available upon request

## Specifications

Insertion Loss:
- ≤ 0.15dB typical, S/M
- ≤ 0.25dB typical, M/M
- ≤0.25dB typical, Angle

Return Loss:
- ≤-55dB SM Ultra Polish (UPC)
- ≤-65dB Angle Polish (APC)

Durability:
- <0.2dB change
- 500 mating cycles

Temperature:
- -20 to +75°C

## Applications

IT/Datacom

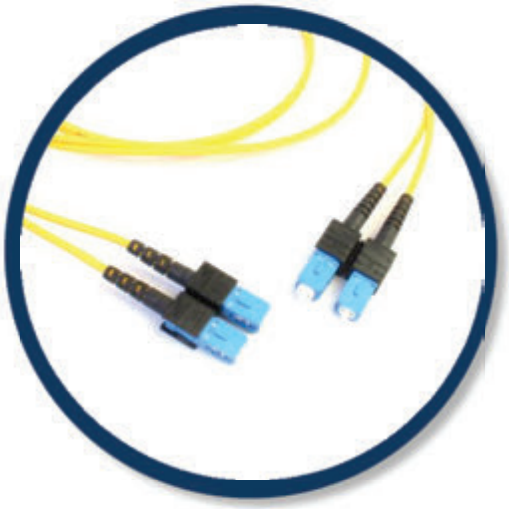
Wireless

Data Centers

## Industry Compliance

RoHS compliant

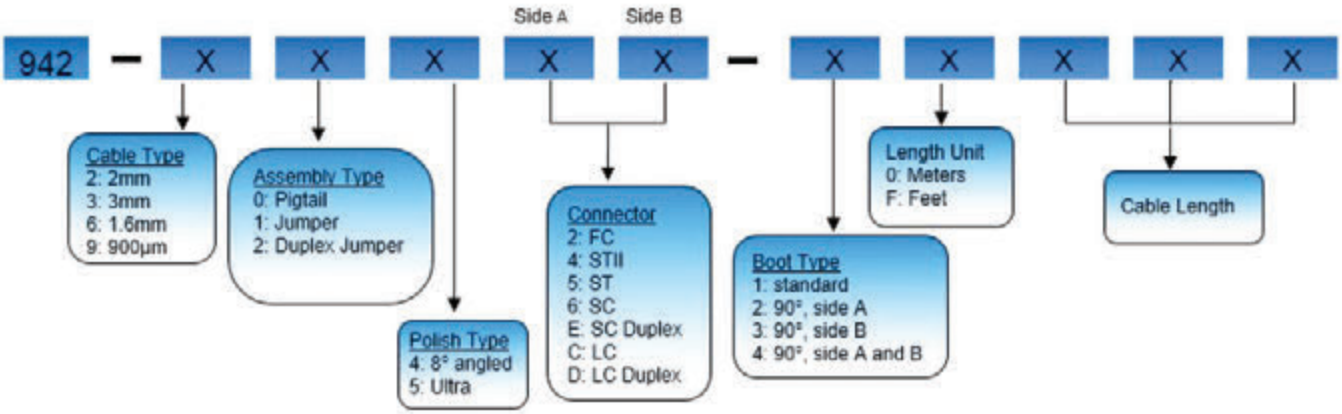
Connectors are mechanically and optically intermateable with industry standard connectors and adapters and conform to TIA/EIA, IEC, and Telcordia specifications



## Ordering Information

| Part Number | Description |
|---|---|
| 942-21566-10001 | JUMPER, SC/UPC, 2MM SIMPLEX, 1M |
| 942-215CC-10001 | JUMPER, LC/UPC, 2MM SIMPLEX, 1M |
| 942-225DE-10001 | JUMPER, LC/UPC(D)-SC/UPC(D), ZIP, 1M |

*Please call customer service for additional configurations



# Multimode Assemblies

Amphenol is a premier manufacturer of Multimode patch cords in the telecommunications industry, meeting or exceeding many of the industry standard requirements for optical transmission loss, reflectance, visual endface specifications, and geometry.

Amphenol offers standard patch cords in a variety of configurations and connector types.

Multimode assemblies are available in a variety of fiber types; 62.5/125, 50/125, OM3, OM4, and bend reduced OM3/ OM4.

Custom options are available upon request.

## Features and Benefits

Custom labeling available

Available in a wide variety of connector types, cable designs, and lengths

Duplex version utilizes a removable flexible clip providing a float between channels A and B

Multiple boot size, colors and angle options available

Assemblies are available in OM1, OM2, OM3, and OM4 fiber types

Custom configurations available upon request

## Specifications

Insertion Loss:
≤ 0.35dB typical

Durability:
<0.2dB change
500 mating cycles

Temperature:
-20 to +75°C

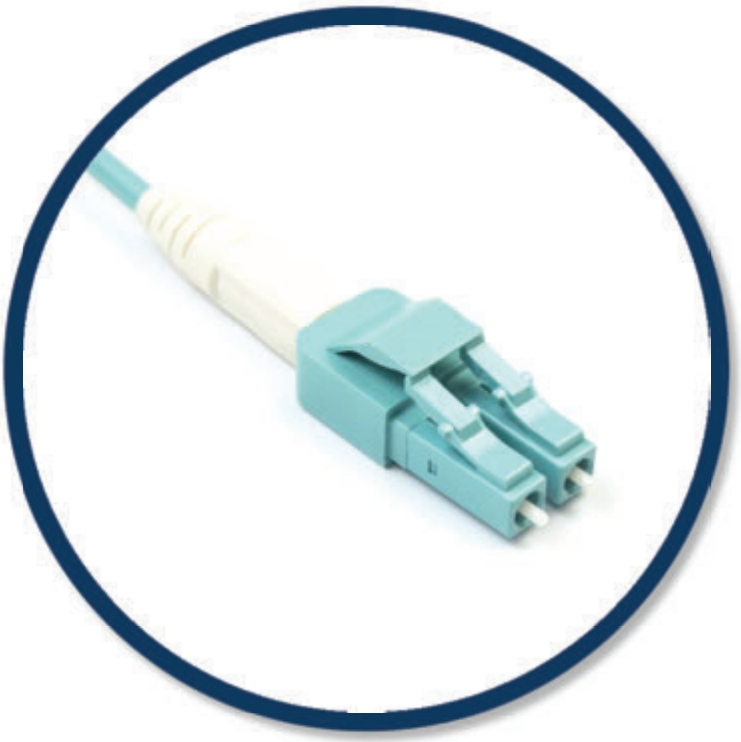
## Applications

Data Centers
IT/Datacom
Wireless

## Industry Compliance

RoHS compliant

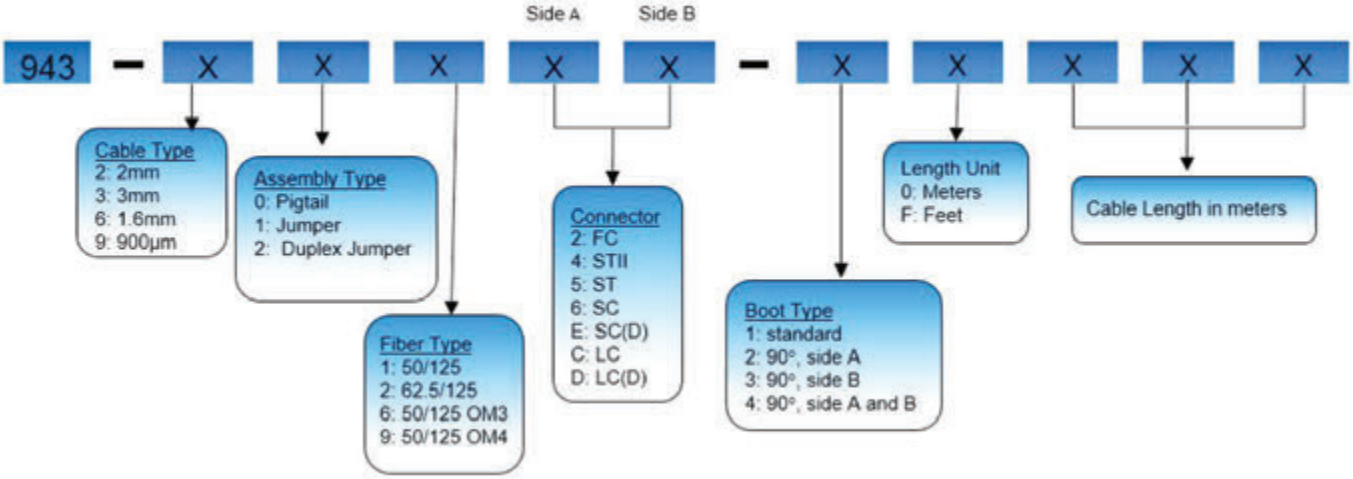
Connectors are mechanically and optically intermateable with industry standard connectors and adapters and conform to TIA/EIA, IEC, and Telcordia specifications



## Ordering Information

| Part Number | Description |
|---|---|
| 943-21666-10001 | JUMPER, SC, 2MM OM3, 1M |
| 943-229DD-10001 | JUMPER, LC(D), 2MM OM4 ZIPCORD, 1M |
| 943-226DE-10001 | JUMPER, LC(D)-SC(D), 2MM OM3 ZIP, 1M |

*Please call customer service for additional configurations



# MPO QSFP Assemblies

Amphenol's QSFP (Quad Small Form-factor Pluggable) with 4 TX and 4 RX channels meets QSFP requirements up to 10Gb/s per channel for a 40G interface.

The MPO QSFP assemblies are available in both MPO to MPO or MPO to LC breakout configurations.

## Features and Benefits

Assemblies are available in OM3 and OM4 fiber types

Optional Amphenol Push/Pull tab for installation in tighter spaces

Assemblies wired for QSFP applications

Customized breakout lengths and fan-out sizes available

Custom configurations available upon request

## Specifications

Insertion Loss:
MPO: 0.75dB max

LC: 0.3dB max

Fiber Count: 4Rx, 4Tx

Operating Temperature:
0° to +70°C

Cable Flammability Rating: OFNP

## Applications

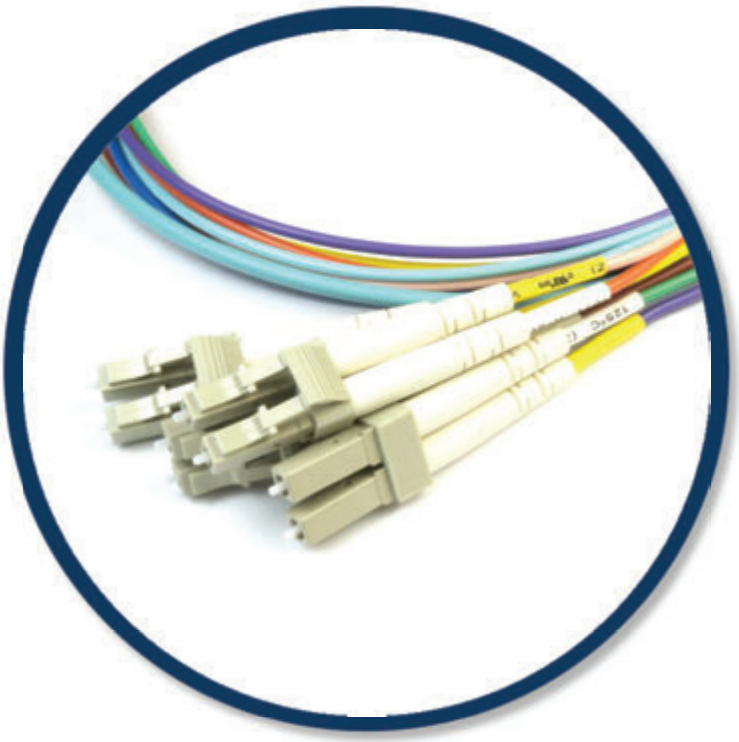
Data Centers

IT/Datacom

## Industry Compliance

RoHS compliant

Connectors comply to applicable TIA/EIA and IEC intermateability standards



## Ordering Information

| Part Number | Description |
|---|---|
| 942-98241-10001 | JUMPER, MPO/APC(F), 3MM ROUND, QSFP, 1M |
| 942-98203-10001 | JUMPER, MPO/APC(F)-LC/UPC(D) 4X, 12F 3MM SM ROUND, 2MM FANOUT, QSFP |
| 943-99383-10001 | JUMPER, MPO(F), 3MM ROUND, OM3, QSFP, 1M |
| 943-99354-10005 | JUMPER, MPO(F)-LC(D) 4X, 12F 3MM ROUND, OM3, 2MM FANOUT, QSFP |

*Please call customer service for additional configurations

# MPO Cable Assemblies

MPO assemblies are becoming increasingly popular due to the high density applications in the marketplace.

MPO connectors offer a higher density than standard connectors providing space and cost savings for the network.

Amphenol's MPO assemblies are offered with 8, 12, and 24 fiber connector options and straight, crossed or custom pin outs.

Amphenol's MPO assemblies are available with ribbon, round, and trunk cable types. Various connector options on the breakout side available.

## Features and Benefits

Angled boots also available (50 degree, 90 degree, and flexible boot from 0 to 90 degree)

Optional Amphenol Push/Pull tab for installation in tighter spaces

Available in a wide variety of connector types, cable designs, and lengths

Customized breakout lengths and fan-out sizes available

Singlemode and Multimode versions

Straight, crossed, and QSFP pinouts available

## Specifications

Insertion Loss:
- ≤0.75dB typical, Angle
- ≤0.5dB typical, M/M
- ≤0.35dB typical, Low Loss

Return Loss:
- ≤-55dB S/M Angle (APC)

## Applications

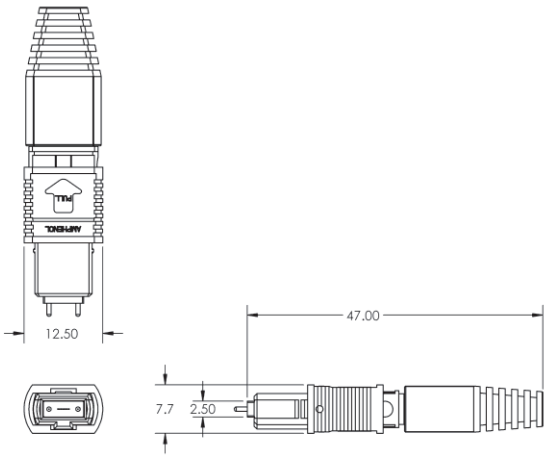
Data Centers

IT/Datacom

## Industry Compliance

RoHS compliant

Connectors comply to applicable TIA/EIA and IEC intermateability standards




## Ordering Information

| Part Number | Description |
|---|---|
| 942-98667-10001 | JUMPER, MPO/APC(F), 12F 3mm SM ROUND, TYPE A, 1M |
| 942-98668-10001 | JUMPER, MPO/APC(F), 12F 3mm SM ROUND, TYPE B, 1M |
| 943-99791-10001 | JUMPER, MPO(F), 12F 3MM OM4 ROUND, TYPE A, 1M |
| 943-99792-10001 | JUMPER, MPO(F), 12F 3MM OM4 ROUND, TYPE B, 1M |

*Please call customer service for additional configurations

# LC Flippable Uniboot

Amphenol's Flippable Uniboot assemblies simplifies cable router in high density panels.The compact design allows for greater density and reduces congestion in racks and trays due to the one boot, one cable design.The flippable style Uniboot allows for swapping polarity without the need for any special tools or removal of any components. Swapped connectors can be identified by an indicator on the rear body.

In addition, Amphenol's flippable Uniboot has a unique feature that allows for the pitch to be changed to a mSFP 5.25mm pitch if necessary.

## Features and Benefits

Swappable polarity provides a way to switch between channel A and B

Easiest swappable connector on the market without the need to remove the LC connectors from the rear body

Connectors can be polarity swapped without the use of any special tools

Clip allows for shrinking to a mini 5.25mm pitch from the standard 6.25mm pitch

Indicator allows for identifying if connectors have been switched

Small form factor LC connector enables high panel densities

Smaller Diameter Cable allows for better airflow

## Specifications

Return Loss:
≤-55dB SM Ultra Polish (UPC)

Singlemode IL:
≤0.14dB Typical
<0.30dB Max.

Multimode IL:
≤0.35dB Typical
<0.50dB Max.

## Applications

Data Centers

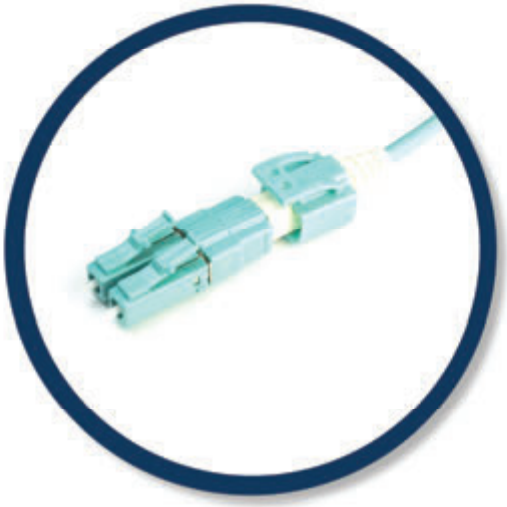
IT/Datacom

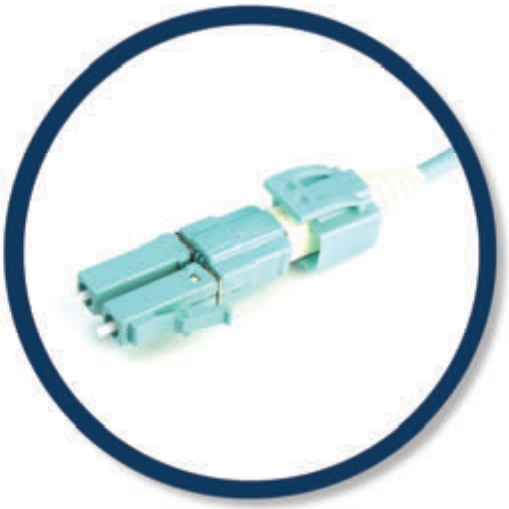
## Industry Compliance

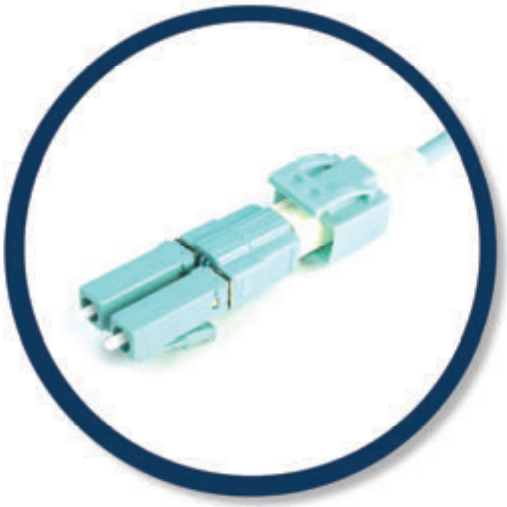
RoHS compliant

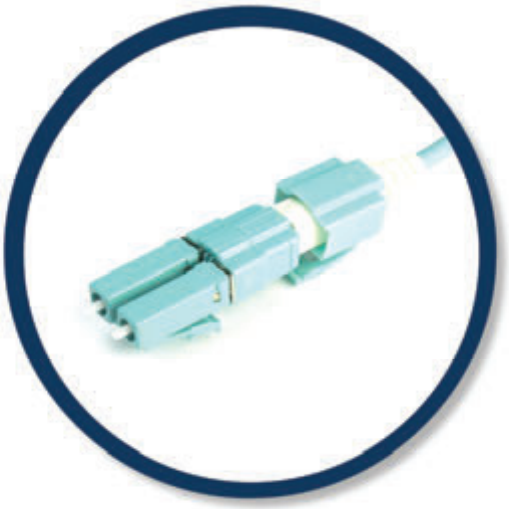
Meets IEC 61754-20 intermateability standards

Meets TIA/EIA 604-10 intermateability standards









## Ordering Information

| Part Number | Description |
|---|---|
| 942-98669-10001 | JUMPER, LC-X, 3MM DPLX RD, SM, 1M |
| 943-99793-10001 | JUMPER, LC-X, 3MM DPLX RD, OM3, 1M |
| 943-99794-10001 | JUMPER, LC-X, 3MM DPLX RD, OM4, 1M |

*Please call customer service for additional configurations

# 1.2mm Assemblies

Amphenol's 1.2mm assemblies simplifies cable router in high density panels.

The compact design allows for greater density and reduces congestion in racks and trays.

Available in LC and SC connector options, the 1.2mm assemblies utilizes Amphenol's connector with a compact boot.

## Features and Benefits

Small form factor size enables increased density

Duplex version utilizes a removable flexible clip providing a float between channels A and B

Smaller Diameter cable allows for better airflow

Assemblies reduce congestion in trays and racks

## Specifications

Insertion Loss:
- ≤ 0.15dB typical, S/M
- ≤ 0.25dB typical, M/M

Return Loss:
- ≤-55dB SM Ultra Polish (UPC)

## Applications

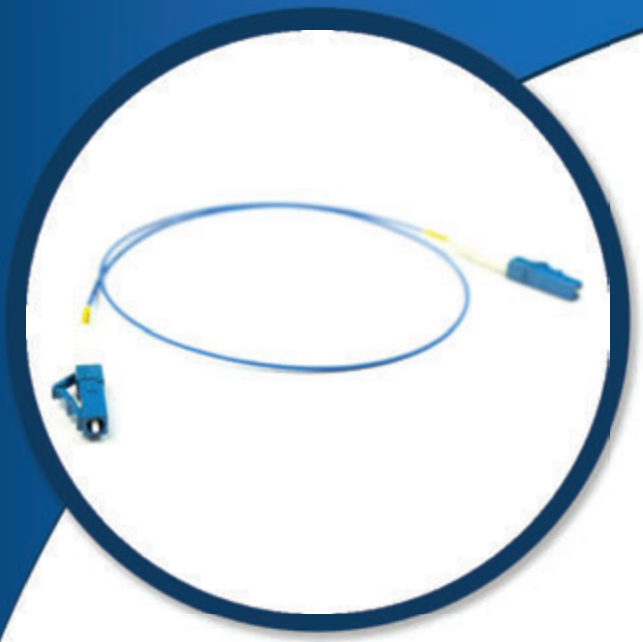
IT/Datacom

Data Centers

## Industry Compliance

RoHS compliant

Connectors comply to applicable TIA/EIA and IEC intermateability standards



## Ordering Information

| Part Number | Description |
|---|---|
| 942-98345-10001 | JUMPER, LC/UPC, 1.2mm, 1M |
| 942-98670-10001 | JUMPER, LC/UPC(D), 1.2mm ZIP, 1M |
| 943-99795-10001 | JUMPER, LC(D), 1.2mm OM3 ZIP, 1M |
| 942-98671-10001 | JUMPER, SC/UPC, 1.2mm, 1M |

*Please call customer service for additional configurations

# Traceable Patch Cords

The Traceable Fiber Patch Cord (TPC) product line is an effective solution for eliminating interconnect errors in dense interconnect environments by adding functionality into a simple patch cord to be able to trace the other end of a connection. From the back of the equipment, to the front of dense frames, or cross room interconnect, the TPC product utilizes a positive light indication to identify the other side of the patch.
The Traceable Patch Cord is targeted toward high density and high congestion areas of the telecommunication fiber optic network. Areas of use span across the network where passive and active fiber management elements are located.

## Features and Benefits

Duplex version utilizes a removable flexible clip providing a float between channels A and B

Singlemode, Multimode and Bend Insensitive versions available

Light and compact power source

LED indicator at both ends of jumper

Available in a wide variety of connector types, cable designs, and lengths

## Specifications

Insertion Loss:
- ≤ 0.15dB typical, S/M
- ≤ 0.25dB typical, M/M
- ≤0.25dB typical, Angle
- ≤0.35dB typical, M/M

Return Loss:
- ≤-55dB SM Ultra Polish (UPC)
- ≤-65dB S/M Angle Polish (APC)

## Applications

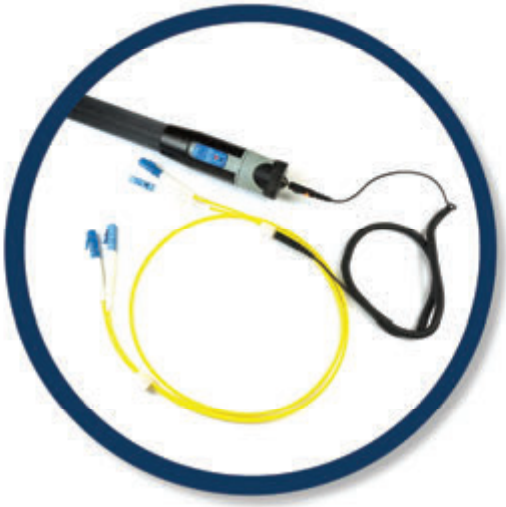
IT/Datacom

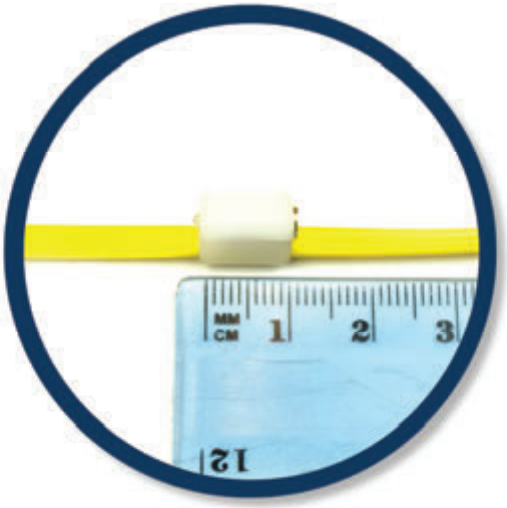
Data Centers

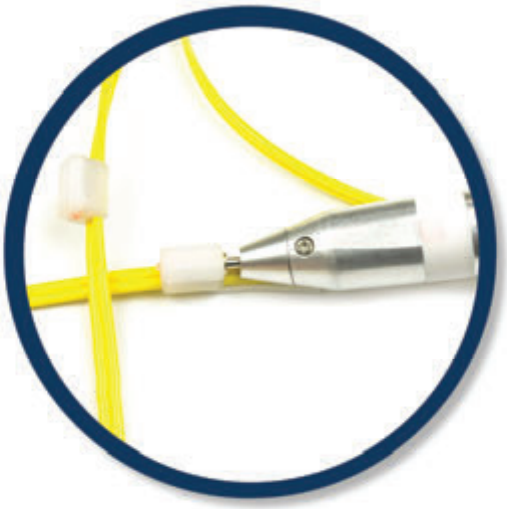
## Industry Compliance

RoHS compliant

Connectors comply to applicable TIA/EIA and IEC intermateability standards







## Ordering Information

| Part Number | Description |
|---|---|
| 943-99665-10003 | JUMPER, LC(D), 2mm TRACEABLE ZIP, OM3, 3M |
| 942-98500-10007 | JUMPER, LC/UPC(D)-SC/UPC(D), 2mm TRACEABLE ZIP, SM, 7M |
| 942-98501-10001 | JUMPER, LC/UPC(D), 2mm TRACEABLE ZIP, SM, 7M |

*Please call customer service for additional configurations

# OUTDOOR CABLE ASSEMBLIES

**Amphenol Fiber Optic Products is the world's leading interconnectivity provider. Founded in 1976, Amphenol Fiber Optic Products designs, manufactures, and markets fiber optic, electrical, and coaxial interconnect products. Our products are engineered and manufactured in the Americas, Europe, Asia, and Africa and offered through a worldwide sales and marketing organization.**

## Creative Solutions for the Mobile Evolution

Amphenol Fiber Optic Products delivers a comprehensive product portfolio designed for the network evolution, including fiber optic connectivity and antenna systems. Our solutions are designed with the customer in mind to (a) Improve Speed of Deployment, (b) Reduce Deployment Cost, (c) Reduce Maintenance Cost, (d) Reduce Risk of Failure, and (e) Simplify Infrastructure Deployment.

## Experience

As a manufacturer with over 40 years of interconnect design and development, Amphenol Fiber Optic Products leads innovation in connector technology. Utilizing this experience, Amphenol is able to develop a cost effective end-to-end solution to satisfy a customer's full connectivity and cabling needs.

## Customization

Amphenol Fiber Optic Products' relationship begins at the design stage to understand the customer's needs and project requirements in order to develop a complete customized solution.

## Reliability

Amphenol Fiber Optic Products has a long history of total quality performance. Our high quality products, helpful customer service, and dependable product support, from design through production, result in satisfied customers.

**Engineered Quality for the Toughest Environments**

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*Creative Solutions for the Future*

# Fiber Feeder Assemblies

Amphenol offers a wide selection of fiber feeder cable assemblies designed to support cell site installations using discrete fiber cables.

The assemblies can be terminated with the full range of Amphenol's harsh environment optical connectors.

Amphenol's fiber feeder assemblies are capable of performing in the toughest environments and are exceptionally suited for WiMax, LTE, 3G/4G wireless, and base station applications.

## Features and Benefits

Compatible with all common models of FTTA equipment

Available in various lengths and configurations

Easy to Install

Available in a wide variety of wiring configurations and fiber types

Singlemode and Multimode versions

LC Duplex connectors on BTS side

Factory terminated assemblies provide reliable performance

## Specifications

Multimode IL:
- ≤0.35dB Typical
- <0.50dB Max.

Singlemode IL:
- ≤0.35dB Typical
- <0.50dB Max.

Return Loss:
- ≤-45dB

Operating Temperature:
- -40° to 85°C

Durability:
- >50 mating cycles

## Applications

FTTA

Wireless

Small Cells

## Industry Compliance

Connectors are mechanically and optically intermateable with industry standard connectors and adapters and conform to TIA/EIA, IEC, and Telcordia specifications

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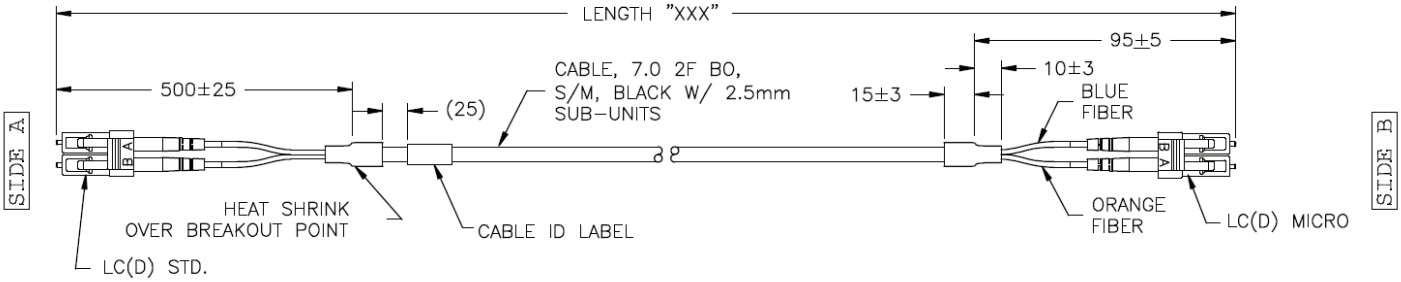
## Ordering Information

| Part Number | Description |
|---|---|
| 942-98666-10015 | JUMPER, LC(D)-LC(D), SM, ARM OSP, 15M |
| 942-98665-10010 | JUMPER, LC(D)-LC(D), SM, I/O, 10M |
| 943-99790-10012 | JUMPER, LC(D)-LC(D), MM, ARM OSP, 12M |

*Please call customer service for additional configurations



# AARC Jumpers

The harsh environment AARC plug and receptacle assemblies are available in 2 fiber or 4 fiber cable assembly configurations.

Based on the N Type RF threaded connector housing, this interconnect system provides superior optical performance in outdoor environments using LC style 1.25mm ceramic ferrules.

The corrosion resistant metal housings provide a durable and environmentally protected solution for optical connectivity in areas exposed to elements such as rain and snow as well as dirt and other types of contamination.

The factory terminated AARC plug assemblies are available in plug, receptacle and in-line connector styles and can be supplied as Pigtails or jumpers in lengths starting from 1 meter. The factory terminated AARC receptacle assemblies are available with flange, jam nut, or in-line configurations. Amphenol's AARC connectors are exceptionally suited for WiMax, LTE, 3G/4G wireless, and base station applications.

## Features and Benefits

Available in both Singlemode and Multimode fiber types

Available in 2 or 4 fiber configurations

Flange, Jam Nut, or in-line receptacles

N Type Threaded Connector Housing

Easy to Install

Metal housing provides improved EMI protection

## Specifications

Multimode IL:
≤0.35dB Typical;
<0.75dB Max.

Singlemode IL:
≤0.35dB Typical
<0.75dB Max.

Return Loss:
≤-45dB

Operating Temperature:
-40° to 85°C

Durability:
>50 mating cycles

Tightening Torque:
6N Maximum
(4N to 5N recommended)

## Applications

FTTA

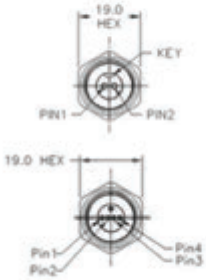
Outdoor Areas

Harsh Environment

## Industry Compliance

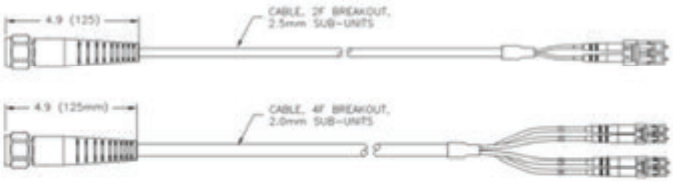
IP67 Water and Dust Ingress Protection

Connectors are mechanically and optically intermateable with industry standard connectors and adapters and conform to TIA/EIA, IEC, and Telcordia specifications




**AARC Plug Assembly**

*Shown Here:* AARC Plug to LC Duplex Assemblies




## Ordering Information

| Part Number | Description |
|---|---|
| 942-98140-10001 | JUMPER, AARC 2F PLUG-LC(D), SM, 1M |
| 942-98155-10001 | JUMPER, AARC 4F PLUG-2X LC(D),4F 0.5M BREAKOUT, SM, 1M |
| 942-98156-10001 | JUMPER, AARC 2F IN-LINE RECEPTACLE TO LC DUPLEX, 1M |
| 942-98157-10001 | JUMPER, 4F AARC IN-LINE RECPT TO LC(D), SM, 1M |
| 942-98302-10001 | JUMPER, AARC 2F PLUG TO PLUG, SM 4.8MM CABLE, 1M |
| 942-98159 | JUMPER, 2F AARC RECPT TO LC(D), 1M ZIP |
| 942-98161 | JUMPER, 4F AARC RECPT(F)-LC(D), SM 0.5M BO |
| 942-98162 | JUMPER, 2F AARC RECPT(N)-LC(D), SM 0.5M BO |
| 942-98302-10001 | JUMPER, AARC 2F PLUG TO PLUG, SM 4.8MM CABLE, 1M |

*Please call customer service for additional configurations

# PT/LC Cable Assemblies

The harsh environment PT/LC plug assemblies and mating receptacles leverage the proven MIL spec 26482 connector system to provide an environmental seal and mechanical protection for 2 fiber duplex LC style connections.

Available with either a quick mate bayonet or anti-vibration threaded coupling, the PT/LC provides a simple and reliable sealed connection. Factory terminated PT/LC plug assemblies, in various lengths, can be provided as jumpers to connect with most any industry standard optical connectors, allowing hassle free integration with existing hardware.

The PT/LC Receptacle accepts standard simplex or duplex LC assemblies to provide cost effective connections to active devices or patching with LC pigtails or jumpers. The PT/LC is capable of performing in the toughest environments and is exceptionally suited for WiMax, LTE, 3G/4G wireless, small cell and base station applications. Many available receptacle mounting configurations and cable types allow installation into almost any system or application.

## Features and Benefits

Available in both Singlemode and Multimode fiber types

Blind Mate and Scoop Proof Interface

Threaded or Bayonet mating style

Easy to Install

Metal housing provides improved EMI protection

Mates to Standard LC simplex or duplex assemblies

Excellent Vibration Characteristics

## Specifications

Multimode IL:
- ≤0.35dB Typical
- <0.50dB Max.

Singlemode IL:
- ≤0.14dB Typical
- <0.30dB Max.

Return Loss:
- ≤-55dB

Operating Temperature:
- -40° to 85°C

Durability:
- >50 mating cycles

## Applications

FTTA

Outdoor Areas

Harsh Environment

## Industry Compliance

Connectors are mechanically and optically intermateable with industry standard connectors and adapters and conform to TIA/EIA, IEC, and Telcordia specifications

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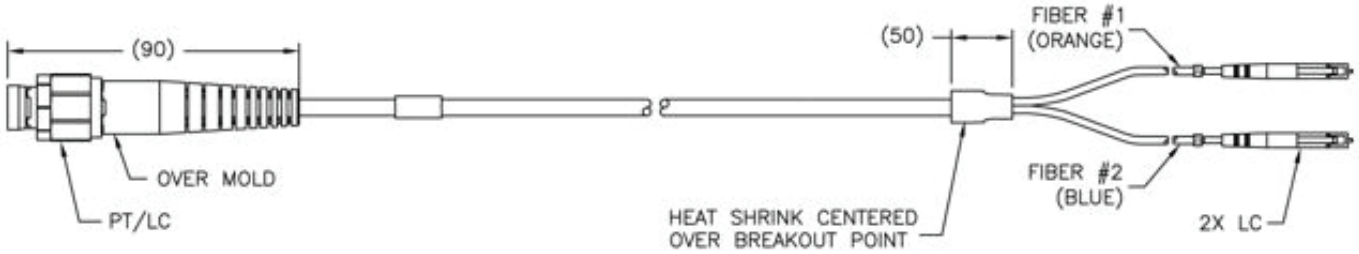
## Ordering Information

| Part Number | Description |
|---|---|
| 942-98142-10001 | JMPR, PT/LC TO 2X SC, SM, 0.25M BO |
| 942-98160-10001 | JMPR, PT/LC TO LC(D), SM 0.5M BO, 1M |
| 943-99595-10001 | JMPR, PT/LC TO LC(D), OM2, 0.5M BO, 1M |

*Please call customer service for additional configurations

### PT/LC Plug Assembly

*Shown Here:* PT/LC Threaded to LC Assembly



# PT/MPO Cable Assemblies

The harsh environment PT/MPO plug assemblies and mating receptacles leverage the proven MIL spec 26482 connector system to provide an environmental seal and mechanical protection for 4 to 24 fiber MPO style connections.

The metal bayonet connector system is quick to deploy, requiring only ¼ turn. It is a metal construction and has a positive latching system (both audible and visual).

Factory terminated PT/MPO plug assemblies are available in lengths starting from 1 meter and can be provided as jumpers with a breakout to connect with most any industry standard optical connectors, allowing hassle free integration. The PT/MPO receptacle accepts industry standard MPO patch cables to be used inside the enclosure, allowing simple connection to QSFP devices, or can be used with a breakout cable for discrete single fiber or SFP connections. Amphenol's PT/MPO connectors are exceptionally suited for WiMax, LTE, and other applications requiring more than 2 fibers. The PT/MPO is capable of performing in even the toughest environments.

## Features and Benefits

Available in both Singlemode and Multimode fiber types

Available in 4, 8, 12 or 24 fiber configurations

Excellent Vibration Characteristics

Mates to Standard MPO or MTP assemblies

## Specifications

Multimode IL:
- ≤0.25dB Typical
- <0.75dB Max.

Singlemode IL:
- ≤0.35dB Typical
- <0.75dB Max.

Return Loss:
- ≤-55dB

Operating Temperature:
- -40° to 85°C

Durability:
- >200 mating cycles

> 100 lb. Strain Relief

## Applications

FTTA

Outdoor Areas

Harsh Environment

## Industry Compliance

Connectors are mechanically and optically intermateable with industry standard connectors and adapters and conform to TIA/EIA, IEC, and Telcordia specifications

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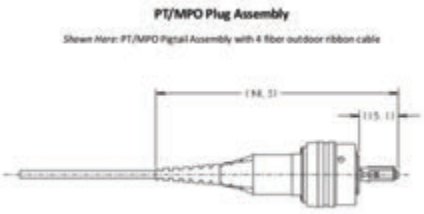
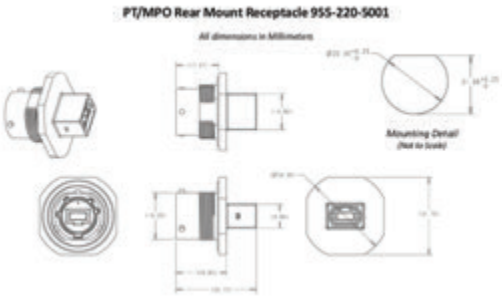



## Ordering Information

| Part Number | Description |
|---|---|
| 942-98281-10001 | JUMPER, PT/MPO TO 2F AARC RECEPTACLE, 4F FLAT RIBBON |
| 942-98281-10001 | JUMPER, PT/MPO TO 2F AARC RECEPTACLE, 4F FLAT RIBBON |
| 942-98281-10001 | JUMPER, PT/MPO TO 2F AARC RECEPTACLE, 4F FLAT RIBBON |
| 942-98281-10001 | JUMPER, PT/MPO TO 2F AARC RECEPTACLE, 4F FLAT RIBBON |
| 942-98281-10001 | JUMPER, PT/MPO TO 2F AARC RECEPTACLE, 4F FLAT RIBBON |
| 942-98465-10001 | JUMPER, LC/UPC(D)-LC/UPC(D) MICRO, 2F, S/M, 1M |
| 942-98XXX-10003 | JUMPER, AARC PLUG-LC 2F, SM, OUTDOOR CABLE, 3M |
| 942-98XXX-1xxxx | JUMPER, PT/MPO TO 2F AARC RECEPTACLE, 4F FLAT RIBBON |
| 943-98XXX-1xxxx | JUMPER, PT/MPO TO 2F AARC RECEPTACLE, 4F FLAT RIBBON |

*Please call customer service for additional configurations

# R2CT Assemblies

Amphenol R2CT jumper cable assemblies are commonly used on Remote Radio Head (RRH) equipment.

Offered in addition to field-installable R2CT connector system, the factory terminated cable assemblies with the R2CT connector housing pre-installed are ideal for faster implementation and IP67 sealing in new deployments.

Amphenol's R2CT assemblies are capable of performing in the toughest environments and are exceptionally suited for WiMax, LTE, 3G/4G wireless, and base station applications.

## Features and Benefits

Available in both Singlemode and Multimode fiber types

Easy to Install

Corrosion resistant aluminum housing

Mates to Standard LC simplex or duplex assemblies

## Specifications

Multimode IL:
- ≤0.35dB Typical
- <0.50dB Max.

Singlemode IL:
- ≤0.35dB Typical
- <0.50dB Max.

Return Loss:
- ≤-45dB

Operating Temperature:
- -40° to 85°C

Durability:
- >50 mating cycles

## Applications

FTTA

Outdoor Areas

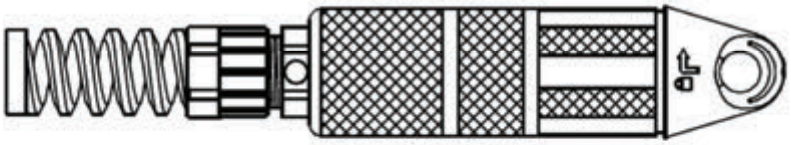
Wireless

Harsh Environment

## Industry Compliance

IP67 Water and Dust Ingress Protection

Connectors are mechanically and optically intermateable with industry standard connectors and adapters and conform to TIA/EIA, IEC, and Telcordia specifications



## Ordering Information

| Part Number | Description |
|---|---|
| 943-99787-10010 | JUMPER, R2CT-LC(D), MM, 10M |
| 942-98659-10010 | JUMPER, R2CT-LC(D), SM, 10M |
| 942-98660-10005 | JUMPER, R2CT-LC(D), UNIBOOT, SM, 5M |

*Please call customer service for additional configurations

# TxRx Assemblies

The TxRx Harsh Environment Interconnect system is designed to provide connection of an outdoor LC duplex-based sealed connector directly to a board mounted SFP or RJ45 device within a sealed enclosure.

The system is designed to provide IP67 dust and water protection when connector and receptacle are mated or with dust caps installed.

Plug cap includes integrated pulling eye for easy installation.

Amphenol's TxRX assemblies are exceptionally suited for WiMax, LTE, wireless, wireless backhaul and base station applications.

## Features and Benefits

Common housing for Optical or RJ45 connectivity

Direct connect to active device (SFP, SFP+, RJ)

No internal jumper needed

Provides ample float for proper alignment to active device

Factory terminated assemblies provide reliable performance

Available with Singlemode or Multimode fiber or Category 3, 4, 5, 5E or 6

Bayonet style coupling

## Specifications

Multimode IL:
- ≤0.35dB Typical
- <0.50dB Max.

Singlemode IL:
- ≤0.35dB Typical
- <0.50dB Max.

Return Loss:
- ≤-45dB

Operating Temperature:
- -40° to 85°C

Durability:
- >50 mating cycles

## Applications

FTTA

Outdoor Areas

## Industry Compliance

Connectors are mechanically and optically intermateable with industry standard connectors and adapters and conform to TIA/EIA, IEC, and Telcordia specifications

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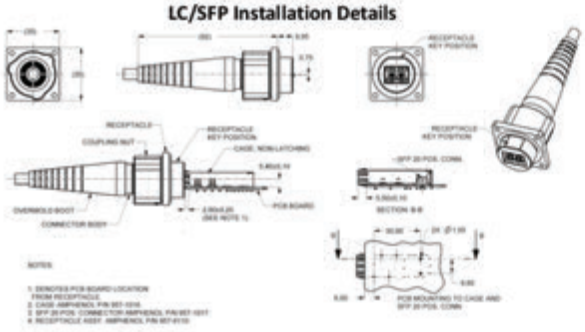
## Ordering Information

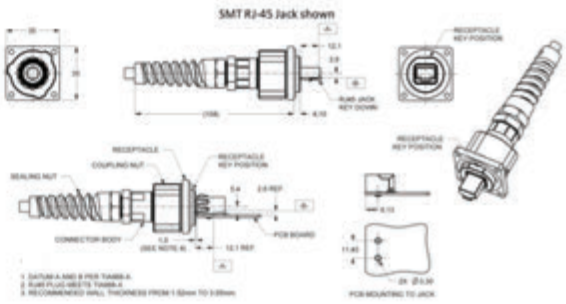
| Part Number | Description |
|---|---|
| 957-99001-10001 | JUMPER, TXRX OPTICAL TO LC(D), SM, 1M |
| 957-99002-10001 | PIGTAIL, TXRX OPTICAL TO LC(D), SM, 1M |
| 957-99018-10001 | TXRX OPTICAL TO LC(D), OM3, 1M |

*Please call customer service for additional configurations

LC/SFP Installation Details



RJ/SFP Installation Details



# J-Connector Assemblies

The Amphenol Optical J-Connector is designed for optical connectivity to outdoor installed electronics. Using a 'Direct Connect' topology, the J-Connector accepts either SFP or SFP+ pluggable transceivers.

It maximizes both space and performance by removing the internal link from the enclosure wall to the PCB mounted optics, allowing the transceiver to plug directly into the SFP or SFP+ cage.

Factory terminated and tested assemblies are available with S/M or M/M fiber in a variety of configurations. The field installable version can be installed over an existing outdoor simplex or duplex LC assembly for applications requiring on-site or local assembly manufacturing.
The J-Connector optical bulkhead receptacle is designed to accept any MSA compliant SFP or SFP+ transceiver, providing both IP-67 ingress protection as well as grounding to the panel/cage for improved EMI shielding. Applications include connection to Remote Radio Units (RRU/RRH), FTTA equipment and other outdoor systems.

## Features and Benefits

Factory or Field Installable version available

Accepts any MSA compliant SFP or SFP+ transceiver

Direct connect style interface

Metal housing provides improved EMI protection

Bayonet style coupling

## Specifications

Multimode IL:
- ≤0.35dB Typical
- <0.50dB Max.

Singlemode IL:
- ≤0.35dB Typical
- <0.50dB Max.

Operating Temperature:
- -40° to 85°C

Durability:
- >100 mating cycles

## Applications

FTTA

Small Cells

Outdoor Areas

## Industry Compliance

Connectors are mechanically and optically intermateable with industry standard connectors and adapters and conform to TIA/EIA, IEC, and Telcordia specifications

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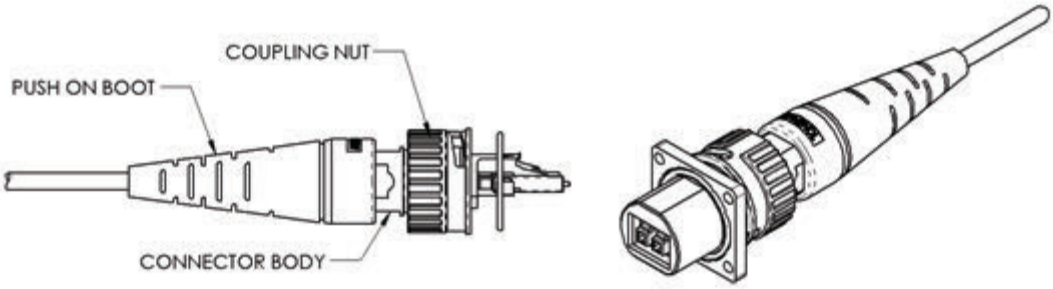
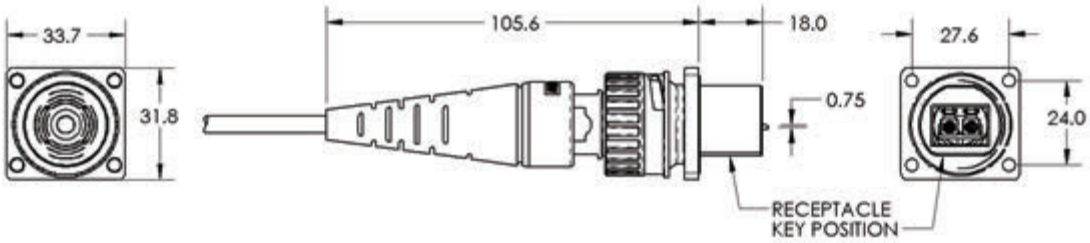
## Ordering Information

| Part Number | Description |
|---|---|
| 942-98363-10001 | JUMPER, J-CONNECTOR TO 2F AARC, 1M |
| 942-98364-10001 | JUMPER, J-CONNECTOR TO LC (D), 1M |
| 942-98365-10001 | JUMPER, J-CONNECTOR TO LC SIMPLEX, 1M |

*Please call customer service for additional configurations



# Fiber Trunks Direct Connect

Amphenol fiber trunk direct connect solutions offer fiber optic connectivity in a single cable, with up to 48 fiber pairs available.

A single trunk enables connectivity to several RRH's without the need for a tower-top distribution box.
The fiber trunk direct connect boxless solution is the most efficient and easiest to install solution on the market.

The plug and play installation system is one of preferred choices of many communication equipment manufacturers and operators.

An outdoor heat shrink divider splits fiber cables into separate ruggedized short branches equipped with fiber optic outdoor harsh environment connectors. The connection to the RRH is ensured with factory terminated Fiber jumpers with RRH interface (large range available to fit most of RRH in the market). An alternative system with metal canister is available. The metal canister provides a secure and reliable hoisting and grounding mechanism.

## Features and Benefits

Single fiber cable running to the RRH

Boxless solution limiting esthetical impact, weight and wind load risk

Fastest and easiest to install solution compared to conventional box

Only RRH jumpers need to be changed when equipment is upgraded:
- Easy to maintain
- Future proof design

Available in configurations up to 48 fiber pairs

LC Duplex connectors on BTS side

AARC connectors on tower-top side

Singlemode and multimode fiber available

Factory terminated assemblies provide reliable performance

Protective Pulling sockets at Tower Top side (branch and canister), waterproof protection tube at BTS side

## Specifications

Fiber trunk cable
- Jacket Material: PVC or LSZH

Fiber Optic: 5mm cable with 2 fibers

Bending radius:
- Long term - 15x diameter
- Short term: 20x diameter

Crush resistance: 2000 N/m

Cable shielding: Copper Tape

Flame retardant: IEC 60032-1

Temperature range
- Operating: -40 to 80°C
- Installation: -30 to 60°C

Canister system
- Number of Power pairs: up to 9
- Number of Fiber pairs: up to 48

Canister dimension:
- Varies per configuration

Canister Material:
- Anodized aluminum

1 to 48 fiber capacity

Impact resistance: UL-746C

UV resistant: UL 1581 Sec. 1200

Material flammability rating: UL-94

## Industry Compliance

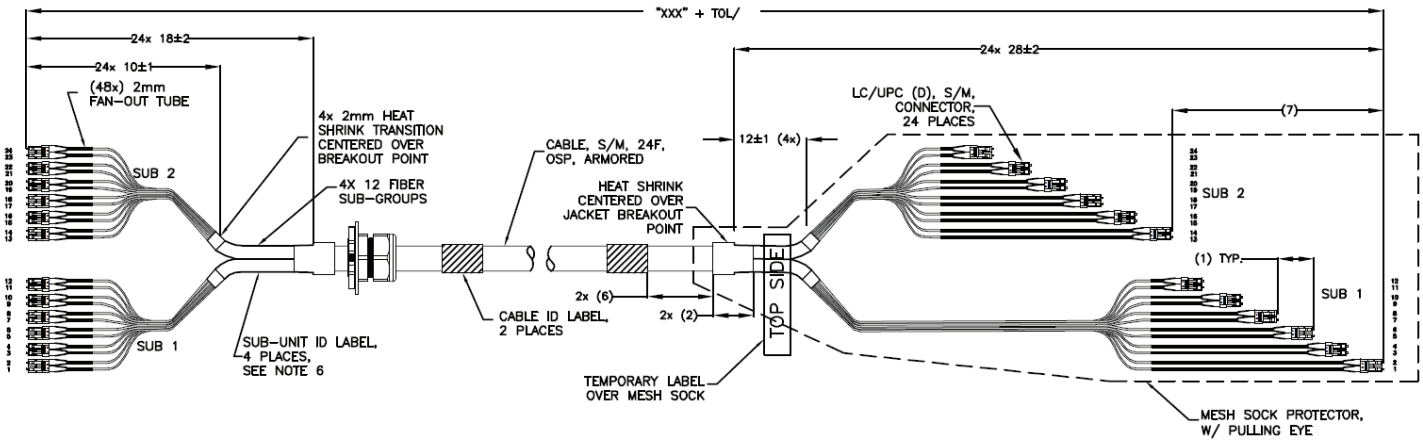
OFNR/FT-4 and IEEE Flammability

RoHS compliant

GR-326 Issue IV

## Applications

| | |
|---|---|
| FTTA | Outdoor Areas |
| Wireless | Industrial |




## Ordering Information

| Part Number | Description |
|---|---|
| 942-98663-10040 | FIBER TRUNK, SM, 24F, LC(D)-LC(D), 40M |
| 942-98664-10020 | FIBER TRUNK, SM, 24F, LC(D)-AARC, 20M |
| 943-99789-10035 | FIBER TRUNK, MM, 24F, LC(D)-LC(D), 35M |

*Please call customer service for additional configurations

# Fiber Trunks with Distribution Box

Amphenol's trunk solutions with distribution box offer a single cable with up to 48 fiber pairs.

A single fiber trunk enables connectivity to a distribution box available in different capacity.

Amphenol's fiber trunk is light weight, small diameter and is made with UV and flame resistant material.

Optional metal armor is available for resistance against rodent and bird attacks.

Amphenol's Fiber box is designed to be the easiest and fastest to install box solution on the market. The box is delivered preassembled, ready to connect to the fiber trunk and to any RRH with fiber optic jumpers.

## Features and Benefits

Single fiber cable with box solution supporting several RRH units

Only RRH jumpers need to be changed when equipment is upgraded:
- Easy to maintain
- Future proof design

Available in configurations up to 48 fiber pairs with LC duplex connectors on both sides

Singlemode and multimode fiber available

Factory terminated assemblies provide reliable performance

Factory preassembled box with DC breakers and/or surge protection device, DC terminal blocks, cable gland, grommets, LC duplex adapters

The box is delivered with all necessary accessories, such as mounting bracket and labelling, to enable easy and fast installation in the field

## Specifications

Fiber trunk cable
- Jacket Material: PVC or LSZH

Fiber Optic: 5mm cable with 2 fibers

Bending radius:
- Long term - 15x diameter
- Short term: 20x diameter

Crush resistance: 2000 N/m

Cable shielding: Copper Tape

Flame retardant: IEC 60032-1

Temperature range
- Operating: -40 to 80°C
- Installation: -30 to 60°C

Fiber box

1 to 48 fiber capacity

Dimension: 16"x14"x7" (other sizes available)

Material: Polycarbonate

Color: Gray

Ambient temperature range:
- -30 to +129°C

Halogen free (optional)

Reconfigurable layout

## Industry Compliance

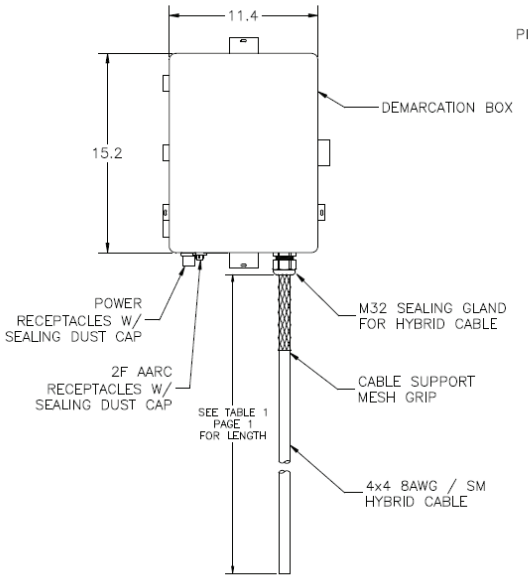
IP67 Water and Dust Ingress Protection

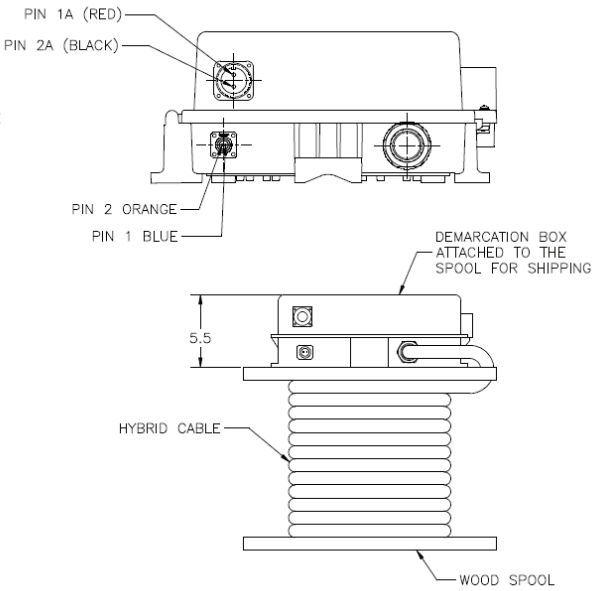
Meets NEMA-4X requirements

UL Listed enclosure

## Applications

| | |
|---|---|
| FTTA | Outdoor Areas |
| Wireless | Industrial |




## Ordering Information

| Part Number | Description |
|---|---|
| 942-98662-10030 | FIBER TRUNK, 48F, SM, 30M |
| 942-98661-10025 | FIBER TRUNK, 24F, SM, 25M |
| 943-99788-10050 | FIBER TRUNK, 24F, MM, 50M |

*Please call customer service for additional configurations

# Hybrid Trunks Direct Connect

Amphenol hybrid trunk solutions offer fiber optic and power connectivity in a single cable, with up to 48 fiber pairs and 18 copper conductors available. A single trunk enables connectivity to several RRH's without the need for a tower-top distribution box.

The direct connect hybrid trunk is the most efficient and easiest to install solution on the market. The plug and play installation system is the preferred choice of many communication equipment manufacturers and operators.

A metal canister providing a secure and reliable hoisting and grounding mechanism splits power and optical cables into separate ruggedized short branches equipped with fiber optic outdoor harsh environment connectors and optional power connectors. The connection to the RRH is ensured with fiber jumpers factory terminated with RRH interface (large range available to fit most of RRH in the market) and optional power jumpers. An alternative system with a heat shrink divider instead of a canister is available for use with hybrid cable without drain or shielding.

## Features and Benefits

Single cable running to the RRH

Boxless solution limiting esthetical impact, weight and wind load risk

Fastest and easiest to install solution compared to conventional box

Only RRH jumpers need to be changed when equipment is upgraded:
- Easy to maintain
- Future proof design

Base station side cable over-length management very easy due to the presence of a rip cord in the cable

Delivered on wooden drum with ends protected with protective and pulling socks and weatherproof sleeves

## Specifications

Hybrid trunk cable
- Jacket Material: PVC or LSZH

Fiber Optic: 5mm cable with 2 fibers

Individual Conductors:
- Gauge: 6, 8,10, 12 AWG
- Cross Section: 13.3mm²
  8.37mm²
  5.26mm²
  3.31mm²

Bending radius:
- Long term - 15x diameter
- Short term: 20x diameter

Crush resistance: 2000 N/m

Operating voltage: -48 Vdc

Cable shielding: Copper Tape

Flame retardant: IEC 60032-1

Temperature range
- Operating: -40 to 80°C
- Installation: -30 to 60°C

Canister system
- Number of Power pairs: up to 9
- Number of Fiber pairs: up to 48

Canister system
- Number of Power pairs: up to 9
- Number of Fiber pairs: up to 48

## Industry Compliance

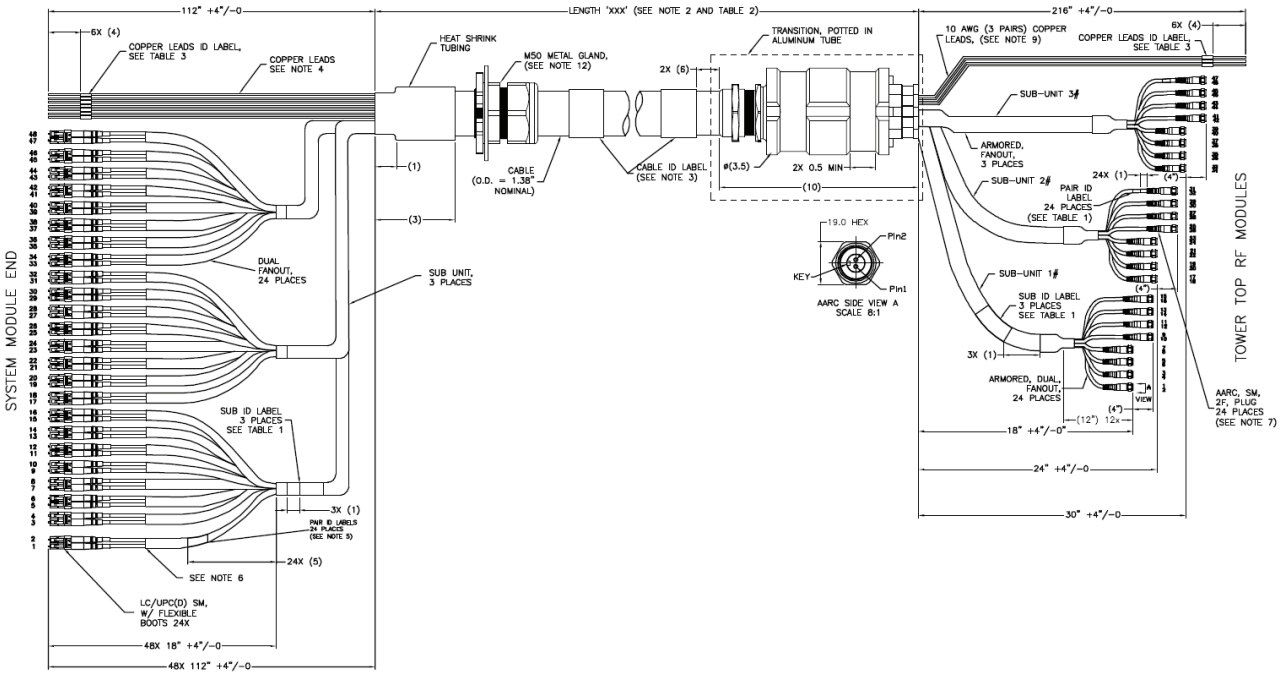
OFNR/FT-4 and IEEE Flammability

RoHS compliant

GR-326 Issue IV

## Applications

| | |
|---|---|
| FTTA | Outdoor Areas |
| Wireless | Industrial |




## Ordering Information

| Part Number | Description |
|---|---|
| 942-98xxxx-xxxx | CUSTOMER SPECIFIC, CALL FOR DETAILS |

*Please call customer service for additional configurations

# Hybrid Trunks with Distribution Box

Amphenol's hybrid trunk solutions with distribution box offer fiber optic and power connectivity in a single cable with up to 48 fiber pairs and 18 copper conductors available.

A single hybrid trunk enables connectivity to a distribution box available in many configurations with DC breaker and/or surge protection devices.

The hybrid trunk with distribution box is the best choice for connectivity for rooftop wireless sites where access to the distribution box is possible.

DC breakers enable the installer to switch off any single RRH during installation or mainte-nance operation without having to access the power supply rack usually located on the ground.

Amphenol's hybrid trunk with distribution box is designed to be the easiest and fastest to install box- solution on the market. The box is delivered preassembled, ready to connect to any RRH with fiber optic and power jumpers.

## Features and Benefits

Single cable with box solution supporting several RRH units

Only RRH jumpers need to be changed when equipment is upgraded:
- Easy to maintain
- Future proof design

Available in configurations up to 48 fiber pairs with LC duplex connectors on both sides

Singlemode and multimode fiber available

Available in configurations up to 18 power conductors in a variety of cross sections

Factory terminated assemblies provide reliable performance

Factory preassembled box with DC breakers and/or surge protection device, DC terminal blocks, cable gland, grommets, LC duplex adapters

The box is delivered with all necessary accessories, such as mounting bracket and labelling, to enable easy and fast installation in the field

Hassle free cable length management due to the presence of a rip cord in the cable

## Specifications

Hybrid trunk cable
- Jacket Material: PVC or LSZH

Fiber Optic: 5mm cable with 2 fibers

Individual Conductors:
- Gauge: 6, 8,10, 12 AWG
- Cross Section: 13.3mm²
  8.37mm²
  5.26mm²
  3.31mm²

Bending radius:
- Long term - 15x diameter
- Short term: 20x diameter

Crush resistance: 2000 N/m

Operating voltage: -48 Vdc

Cable shielding: Copper Tape

Flame retardant: IEC 60032-1

Temperature range
- Operating: -40 to 80°C
- Installation: -30 to 60°C

Distribution Box

Up to 18 power conductor capacity

1 to 48 fiber capacity

Dimension: 16"x14"x7" (other sizes available)

## Industry Compliance

IP67 Water and Dust Ingress Protection

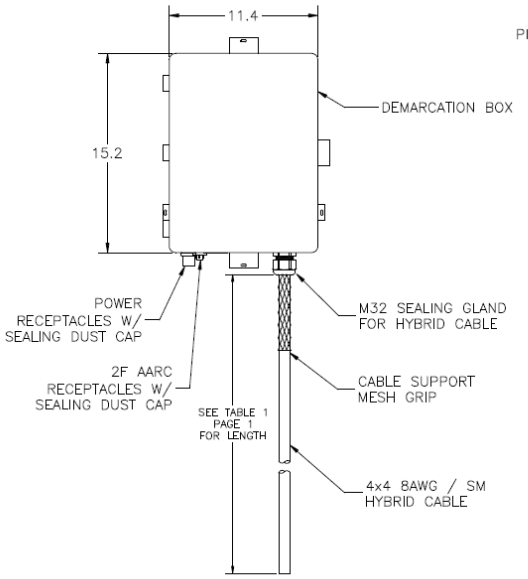
UL Listed enclosure

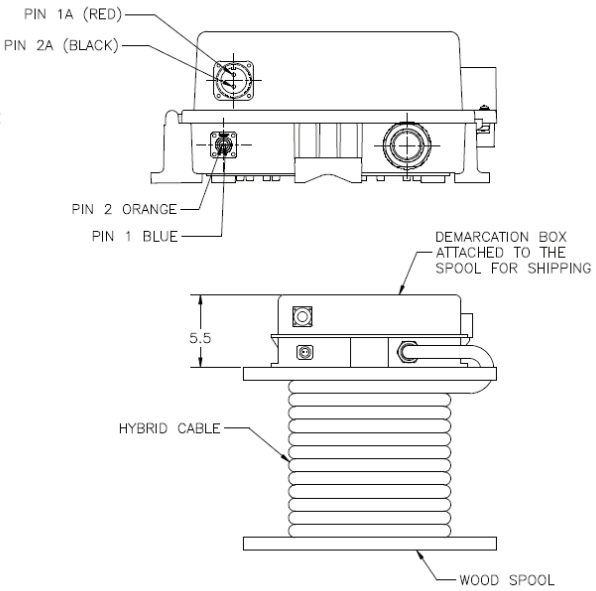
Meets NEMA-4X requirements

Connectors are mechanically and optically intermateable with industry standard connectors and adapters and

## Applications

| | |
|---|---|
| FTTA | Outdoor Areas |
| Wireless | Industrial |




## Ordering Information

| Part Number | Description |
|---|---|
| 942-98658-10025 | HYBRID TRUNK, 48F, 6CX10AWG, 25M |
| 943-99786-10030 | HYBRID TRUNK, MM, 24F, 6CX8AWG, 30M |
| 942-98657-10050 | HYBRID TRUNK, SM, 24F, 6CX8AWG, 50M |

*Please call customer service for additional configurations

# Power Trunks Direct Connect

Amphenol's direct connect power trunk solutions offer discrete power connectivity for wireless infrastructure applications, with up to 18 copper conductors of various sizes available.

A single power trunk enables direct connectivity to several RRH's without the need for a tower-top demarcation box.

A metal canister design provides a secure and reliable hoisting and grounding mechanism.

Amphenol's power trunks are rated for IP67 water and dust protection, making them capable of performing in the toughest environments.

## Features and Benefits

Single cable solution supporting several RRH units

Available in configurations up to 18 power conductors

Available in a variety of AWG sizes: 4AWG, 6AWG, 8AWG, 10AWG, 12AWG. Other sizes upon request

Factory terminated assemblies provide reliable performance

Suitable for Harsh Environment applications

Future-proof design (only RRH jumpers need to be changed when equipment is upgraded)

## Specifications

Power trunk cable
Jacket Material: PVC or LSZH

Individual Conductors:
Gauge: 6, 8,10, 12 AWG
Cross Section: 13.3mm²
8.37mm²
5.26mm²
3.31mm²

Bending radius:
Long term - 15x diameter
Short term: 20x diameter

Crush resistance: 2000 N/m

Operating voltage: -48 Vdc

Cable shielding: Copper Tape

Flame retardant: IEC 60032-1

Temperature range
Operating: -40 to 80°C
Installation: -30 to 60°C

Canister system
Number of Power pairs: up to 9
Number of Fiber pairs: up to 48

Canister dimension:
Varies per configuration

Canister Material:
Anodized aluminum

## Industry Compliance

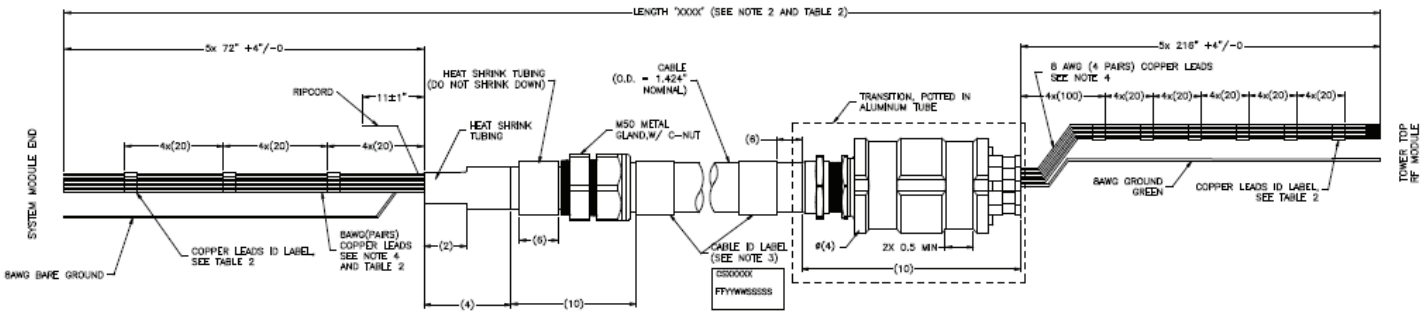
OFNR/FT-4 and IEEE Flammability

RoHS compliant

GR-326 Issue IV

## Applications

| | |
|---|---|
| FTTA | Outdoor Areas |
| Wireless | Industrial |




## Ordering Information

| Part Number | Description |
|---|---|
| 941-99024-10050 | POWER TRUNK, 4CX8AWG, 50m |
| 941-99023-10025 | POWER TRUNK, 8Cx10AWG, 25m |
| 941-99022-10050 | POWER TRUNK, 12Cx8AWG, 50m |

*Please call customer service for additional configurations

# Power Trunks with Distribution Box

Amphenol's power trunk solutions with distribution box offer fiber optic and power connectivity in a single cable with up to 18 copper conductors available.

A single power trunk enables connectivity to a distribution box available in many configurations with DC breaker and /or surge protection devices.

The power trunk with distribution box is the best choice for connectivity for rooftop wireless sites where access to the distribution box is possible.

DC breakers enable the installer to switch off any single RRH during installation or maintenance operation without having to access the power supply rack usually located on the ground. Amphenol's power trunk with distribution box is designed to be the easiest and fastest to install box solution on the market.

The box is delivered preassembled, ready to connect to any RRH with power jumpers.

## Features and Benefits

Single cable with box solution supporting several RRH units

Only RRH jumpers need to be changed when equipment is upgraded:
- Easy to maintain
- Future proof design

Available in configurations up to 18 power conductors in a variety of cross sections

Factory terminated assemblies provide reliable performance

Factory preassembled box with DC breakers and/or surge protection device, DC terminal blocks, cable gland, grommets, LC duplex adapters

The box is delivered with all necessary accessories, such as mounting bracket and labelling, to enable easy and fast installation in the field

Hassle free cable length management due to the presence of a rip cord in the cable

## Specifications

Distribution Box

Up to 18 power conductor capacity

Dimension: 16"x14"x7" (other sizes available)

Material: Polycarbonate

Color: Gray

Ambient temperature range:
-30 to +129°C

Halogen free (optional)

Circuit breaker optional: C20A, C32A

Surge protection device optional:
SPD type 1+2 or type 2

Reconfigurable layout

Impact resistance: UL-746C

UV resistant: UL 1581 Sec. 1200

Material flammability rating: UL-94

Power trunk cable
Jacket Material: PVC or LSZH

Individual Conductors:
Gauge: 6, 8,10, 12 AWG
Cross Section: 13.3mm²
8.37mm²
5.26mm²

## Industry Compliance

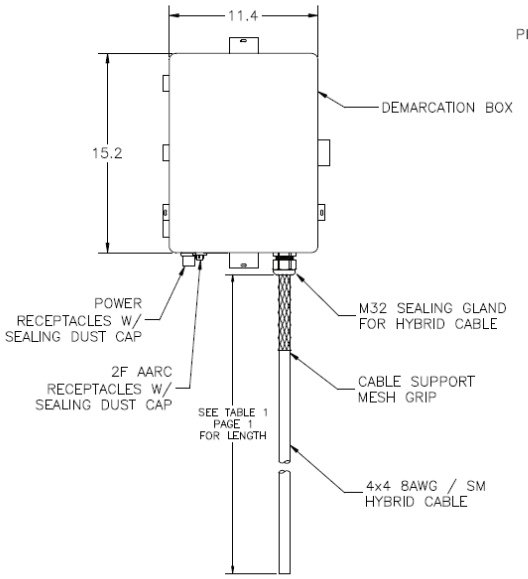
IP67 Water and Dust Ingress Protection

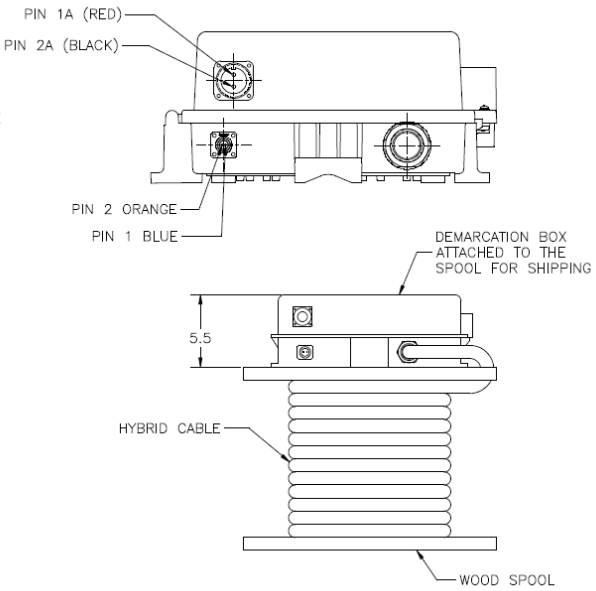
Meets NEMA-4X requirements

UL Listed enclosure

## Applications

| | |
|---|---|
| FTTA | Wireless |
| Outdoor Areas | Industrial |




## Ordering Information

| Part Number | Description |
|---|---|
| 941-99001-10050 | POWER TRUNKS, 12X8AWG, 50M |
| 941-99006-10050 | POWER TRUNKS, 8X8AWG, 50M |
| 941-99014-10050 | POWER TRUNKS, 4X8AWG, 50M |

*Please call customer service for additional configurations

# Drop Assemblies

Amphenol's H-Connector assemblies provide a robust and sealed connection solution for fiber to the home (FTTH) connectivity.

The H-Connector incorporates an SC/APC type connection within a slim, sealed, threaded polymer housing allowing easy connection to either a panel mounted receptacle or in-line extension cable.

Standard indoor SC/APC connectors mate to the adapter providing a common interface to mate with optical systems within an enclosure or Network Interface Device (NID).

Available with flat drop or traditional round style OSP cables, the H-Connector provides an ideal solution for direct burial, conduit or arial installations.

## Features and Benefits

Factory terminated assemblies provide reliable performance

Plug dust cap with pulling eye protects connectors during installation

Threaded style coupling

## Specifications

Operating Temperature:
-40° to 85°C

> 33 lb. axial cable retention (150N)

Cable Diameter Range:
4.8mm to 7mm

Insertion Loss:
≤ 0.35dB typical

Return Loss:
≤-55dB

## Applications

FTTH

FTTA

Outdoor Areas

Harsh Environment

## Industry Compliance

Connectors are mechanically and optically intermateable with industry standard connectors and adapters and conform to TIA/EIA, IEC, and Telcordia specifications

## Ordering Information

| Part Number | Description |
|---|---|
| 942-98468-10001 | PIGTAIL, H-CONNECTOR, SM |
| 942-98522-10001 | JUMPER, H-CONN PLUG - SC/APC |
| 942-98597-10050 | PIGTAIL, H-CONN, S/M, LM3 |
| 942-98635-F0150 | PIGTAIL, H-CONNECTOR, SM |

*Please call customer service for additional configurations

# Node Cables

Amphenol's Node Cable Assemblies link optical transport cable to optical processing equipment. This connection is critical and requires an environmental seal between the cable and the node housing.

Amphenol's Node cables utilize a unique stainless steel feed-thru adapter, featuring a patented anti-twist coupling body that eliminates cable twist on installation.

Standard Node assemblies use either an OFNR-rated OSP cable or an armored OSP cable. Its multiple O-rings ensure a fully sealed cable and node.

## Features and Benefits

Available with LC, SC, FC and ST connectors

Available with a variety of lengths of pigtails

> 100 lb. Strain Relief

Stainless Steel fitting for added strength and environmental protection

Threaded metal coupling nut for maximum retention

Threaded style coupling

Singlemode and Multimode versions

## Specifications

Insertion Loss:
≤ 0.15dB typical, S/M
≤ 0.25dB typical, M/M

Return Loss:
≤-55dB SM Ultra Polish (UPC)

Operating temperature:
-40 to +85

2 to 24 fiber/conductor capacity

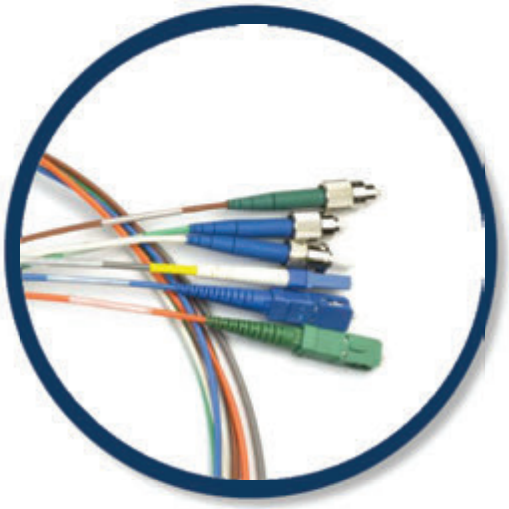
Operating Temperature:
-40 to +80°C

## Applications

CATV
Outdoor Areas
Harsh Environment

## Industry Compliance

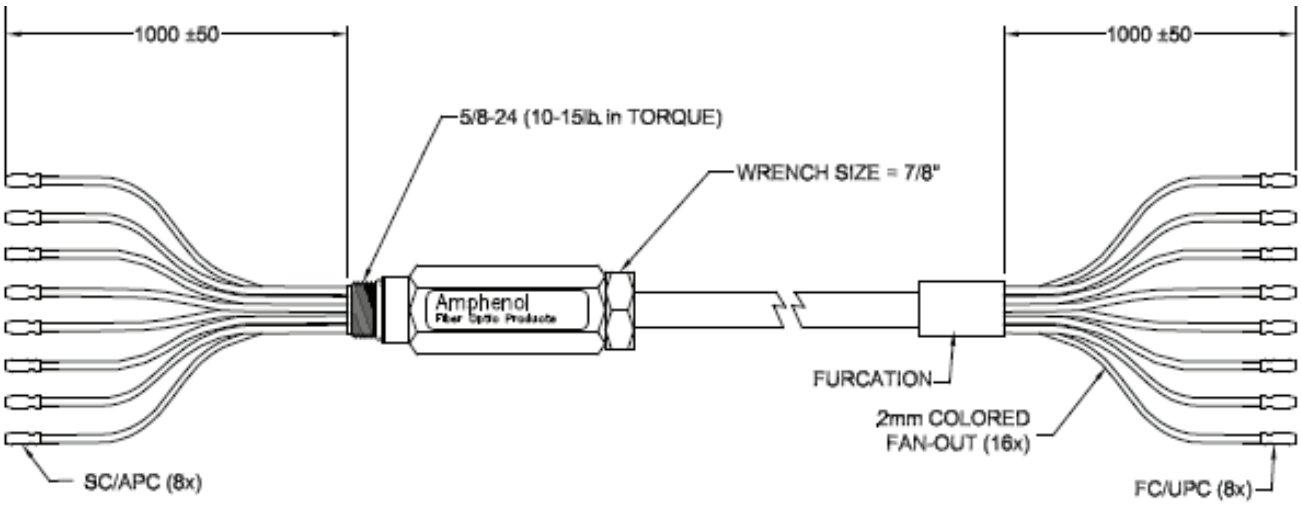
RoHS compliant



## Ordering Information

| Part Number | Description |
|---|---|
| 962-11220-01030 | PIG, 4F SC/UPC OSP OFNR, 1M, BO 30M |
| 962-11320-01031 | PIG, 6F SC/UPC OSP OFNR, 1M BO, 31M |
| 962-12120-63030 | PIG, 2F SC/APC OSP OFNR, 63CM BO, 30M |

*Please call customer service for additional configurations



# OCTIS Cable Assemblies

The versatile OCTIS™ I/O system, using multiple industry standard interfaces, features high speed signal and power, lightning protection, EMI shielding, and ease of installation for outdoor, compact and harsh environments.

## Features and Benefits

Transceiver moves outside the box saving board space and providing better thermal management

Lightning protection, EMI shielding features, and a rugged weather proof design makes it ideal for use in harsh environment applications

Blind mate, float mount, color and physical coding features makes it easy to use and avoids mismating

Use of standard small form factor interfaces enable greater port to port density. This makes it ideal for outdoor applications like small cells, macro cells, smart radios and RRU/RRH

## Specifications

OCTIS™ I/O system is suitable for various applications with standard connector interfaces

SFP/SFP+

Signal, PoE (Power over Ethernet)

Power

Hybrid of Signal & Power and RJ45.

## Applications

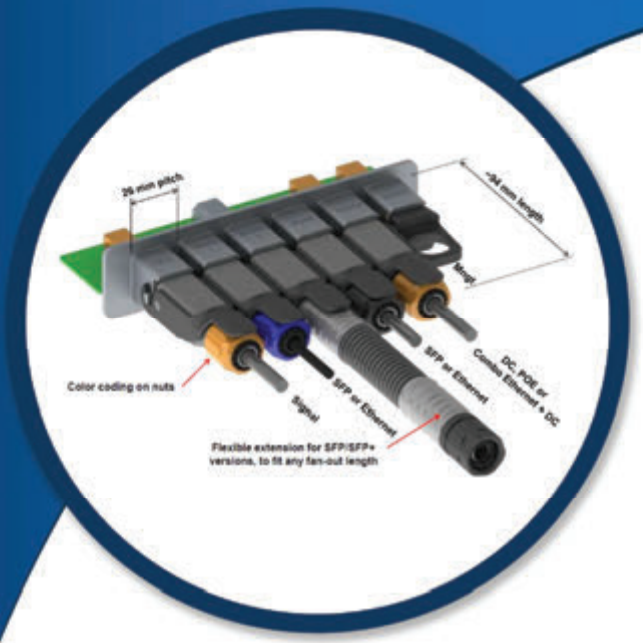
FTTA

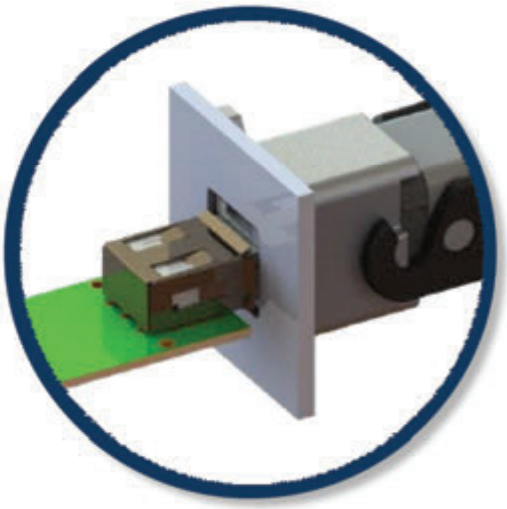
Wireless

Small Cells

## Industry Compliance

Connectors comply to applicable TIA/EIA and IEC intermateability standards





## Ordering Information

| Part Number | Description |
|---|---|
| 942-98xxxx-xxxx | CALL AMPHENOL FOR ORDERING INFORMATION |

*Please call customer service for additional configurations

# RRH Jumpers

Amphenol offers a wide selection of optical jumper cable assemblies for connection to Remote Radio Head (RRH) equipment.

The jumpers are available for multiple sealed optical connectors providing IP67 water and dust protection, and can be terminated at the other end with most industry standard connections, allowing seamless and hassle-free integration with existing hardware.

Amphenol's RRH jumpers are capable of performing in the toughest environments and are exceptionally suited for WiMax, LTE, 3G/4G wireless, and base station applications.

## Features and Benefits

Available in both Singlemode and Multimode fiber types

Available in various fiber count configurations

Meets IP67 Specifications

Easy to Install

## Specifications

Multimode IL:
≤0.35dB Typical;
<0.75dB Max.

Singlemode IL:
≤0.35dB Typical
<0.75dB Max.

Return Loss:
≤-45dB

Operating Temperature:
-40° to 85°C

Durability:
>50 mating cycles

Tightening Torque:
6N Maximum
(4N to 5N recommended)

Cable diameter:
5mm (non-armored)
6mm (armored)

Rodent-resistant (optional)

## Applications

FTTA

Wireless

## Industry Compliance

Connectors are mechanically and optically intermateable with industry standard connectors and adapters and conform to TIA/EIA, IEC, and Telcordia specifications

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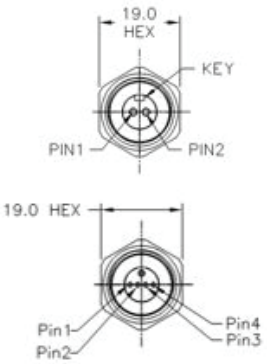
## Ordering Information

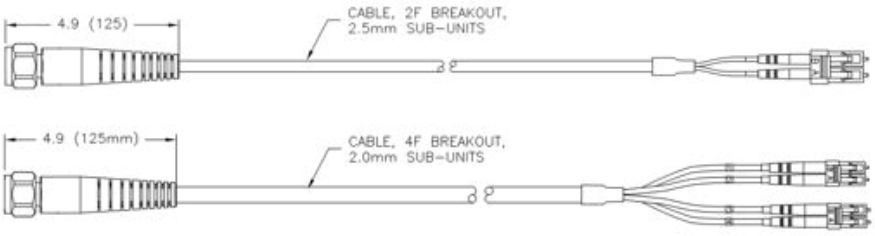
| Part Number | Description |
|---|---|
| 942-XXXXX-XXXXX | CUSTOMER SPECIFIC, CALL FOR DETAILS |

*Please call customer service for additional configurations

### AARC Plug Assembly

*Shown Here:* AARC Plug to LC Duplex Assemblies



# FIBER MANAGEMENT

**The Amphenol Fiber Management Systems product line is comprised of a complete series of wall and rack mounted enclosures that are designed to be used for the distribution and management of fiber optic cables. The product offering includes a variety of enclosures for patching, splicing, distribution, storing, splitting, and coupling of fiber optic signals for both single mode and multimode cables.**

## Patch Panels

Amphenol 948 Series Patch Panels provide a convenient point for patching and storing fiber optic cables. A full range of products are available for termination of backbone cables and horizontal cables at cross-connects and for interconnection between fiber optic distribution and equipment jumper cables.

## Coupler Panels

Amphenol 948 Series Rack Mount Coupler Panels incorporate fiber optic couplers (optical splitters and wavelength division multiplexers) at the fiber distribution frame. These panels are used in fiber optic networks to increase System capacity.

## Storage Panels

Amphenol 948 Series Rack Mount Storage Panels provide ample and organized slack storage of fiber optic cables. These panels reduce the concerns involved in maintaining and upgrading the network.

## Splice Panels

Amphenol 948 Series Splice Panels are rack mounted panels which provide a convenient point for on rack storing and protecting of fiber optic splices. These panels are typically used at building entrances for transition splicing between the outdoor cables and indoor pigtails. They are typically used in conjunction with the 948 Series Patch Panel enclosures.

## Distribution Panels

Amphenol 948 Series Rack and Wall Mount Distribution Panels combine all the features of a patch panel and a splice panel into one enclosure. They provide a protective area for patching, splicing and storing fiber optic cables. Distribution panels are typically used at building entrances, telecom closets, customer premise applications, or in equipment rooms for termination of inter-building backbone cables.

## The Right Fit

Panels requiring adapters are preloaded with Amphenol's SC, ST or FC adapters to reduce labor costs during installation.

Panels can be pre-loaded with Amphenol pigtail cable assemblies to further reduce labor costs during field installation.

A single part number is used to specify semi-loaded or fully loaded enclosures to simplify the ordering process.

Rack mount panels have removable doors for increased access during installation and maintenance.

Panels provide ample room for storage of fiber slack, while maintaining bend radius protection for the stored fibers.

All enclosures include mounting hardware, installation instructions, laser warning labels, cable ties, and cable routing designation cards.

# PRODUCT TYPE


1RU Fiber Rack Mount Distribution Panel ..... 87
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*Density and Scalability for the Future*

# 1RU Fiber Rack Mount Distribution Panel

1RU Rack Mount Distribution Panels are designed to incorporate both patching and splicing within the same enclosure.

Mounts are available in 19 or 23 racks.

Amphenol's 1RU Fiber Rack Mount Distribution Panels fully enclose the pigtails (usually routed between separate panels), providing greater protection and shorter length cables.

The enclosure provides ample fiber optic cable storage.

1RU Fiber Rack Mount Distribution Panels can accommodate from 6- to 72-fiber adapter plates or cassettes utilizing LC, MPO, SC, FC or ST adapters.

## Features and Benefits

- Available Empty
- Available with a variety of lengths of pigtails
- Available in LGX or High Density
- Available Wired with Singlemode, OM3 or OM4
- Adapter plates or Cassettes
- Available in Black or Beige

## Specifications

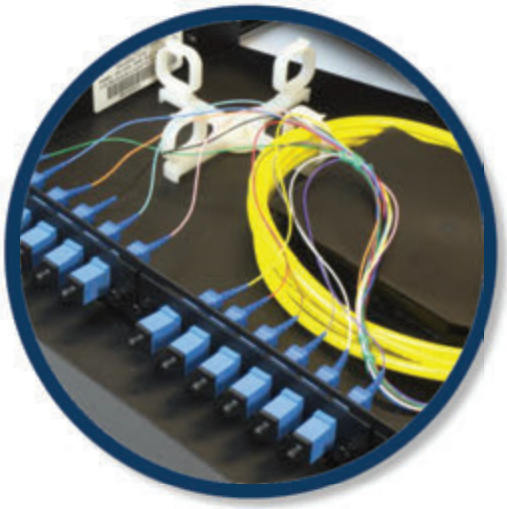
- 6 to 72 Fiber/conductor capacity
- Reconfigurable layout
- LGX or High Density Form Factor
- Singlemode or Multimode wired
- Splice or Patch only

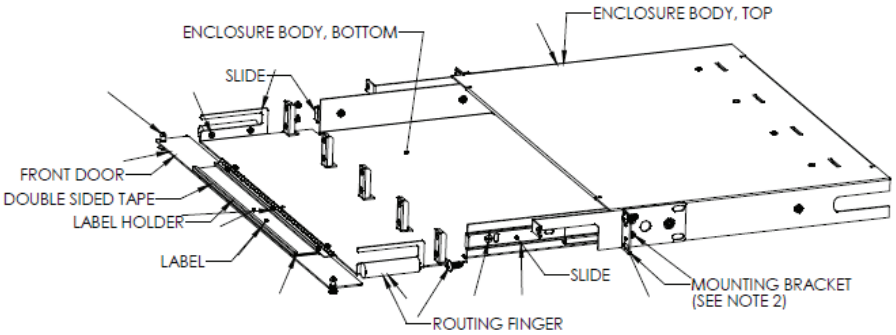
## Applications

- Data Centers
- MAN and WAN
- SAN and Data Centers
- LAN
- IT/Datacom

## Industry Compliance

- RoHS compliant






## Ordering Information

| Part Number | Description |
|---|---|
| 948-112DD-22B03 | PANEL, RACK MOUNT DIST FC/UPC 12F WITH 3 METER PIGTAILS AND SPLICE |
| 948-1A2DA-22L03 | PANEL, RACK MOUNT SC/UPC 12 FIBER WITH 3 METER PIGTAILS AND SPLICE |
| 948-1A2DM-22D03 | PANEL, RACK MOUNT DIST 6 LC(D) 12F WITH 3 METER S/M PIGTAILS AND SPLICE |
| 948-1A2DQ-23L03 | PANEL, RACK MOUNT SC/APC 12 FIBER WITH 3 METER PIGTAILS AND SPLICE |
| 948-99999-10207 | PANEL, RACK MOUNT DIST, LGX W/ DRAWER - EMPTY |
| 948-99999-10208 | PANEL 1RU 19" 3 LGX CUTOUTS OPEN REAR |
| 948-99999-10217 | PANEL RACK PATCH 1RU 3 LGX PORTS EMPTY BLACK |
| 948-99999-10235 | PANEL 1RACK UNIT HIGH DENSITY W/ DRAWER EMPTY |
| 968-302LY-00A00 | PANEL, 1RU FRONT PLATE AND LANDING W/ CABLE MANAGEMENT LGX CUT-OUTS |

*Please call customer service for additional configurations

# 19" 1 Rack Unit 144 fiber Cassette

Amphenol's High Density, 1 Rack Unit, 144 Fiber prewired cassette allows for a clean, efficient installation.

The 1RU Cassette is factory terminated and fully tested to eliminate hours of build time.

The 1RU Cassette has 36 LC Quad Adapters prewired to 12 MPO Adapters in Singlemode, OM3 or OM4 fiber.

The 1RU Cassettes have LC to MPO adapters in solid, sturdy 16 gauge steel to protect assembly.

An angled back for streamlined routing of trunk cables is available separately.

## Features and Benefits

Accepts industry standard MPO/MTP® interfaces

Singlemode and Multimode versions

Amphenol LC Connectors are mechanically and optically intermateable with industry standard LC connectors and adapters and conform to TIA/EIA, IEC, and Telcordia specifications

Custom configurations available upon request

Available Wired with Singlemode, OM3 or OM4

## Specifications

144 Fibers in 1 Rack Unit

Durable heavy gauge steel powder coated for protection

Metal housing with 1.5mm thick steel

UL 94V0 rated front mounting on UTP panel

Singlemode or Multimode wired

## Applications

Data Communications

Data Centers

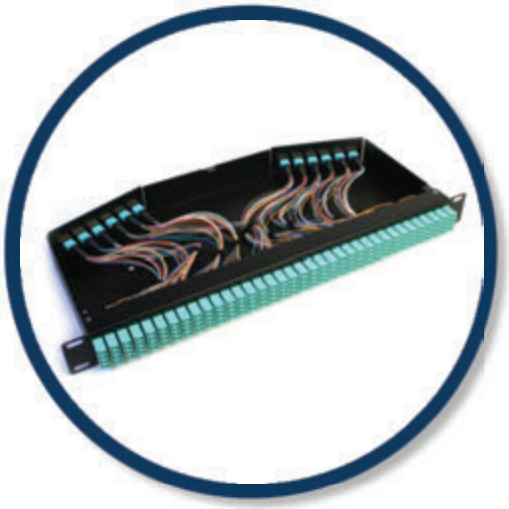
LAN

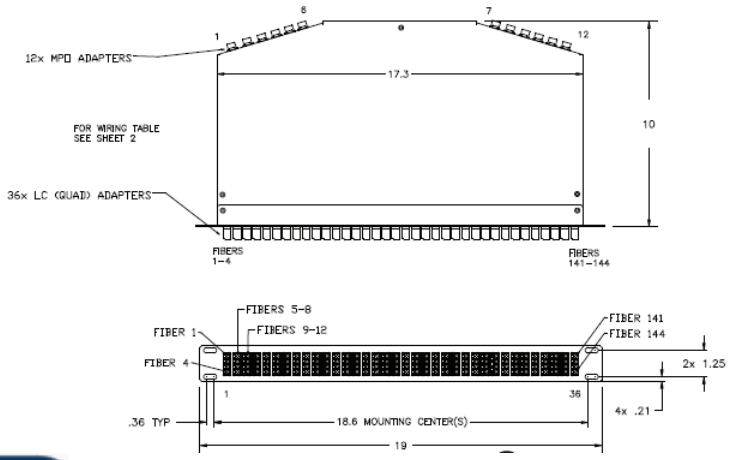
SAN and Data Centers

IT/Datacom

## Industry Compliance

RoHS compliant






## Ordering Information

| Part Number | Description |
|---|---|
| 948-99999-10123 | PANEL, RP, 144P LC, S/M ADAPTERS |

*Please call customer service for additional configurations

# 2RU Fiber Rack Mount Distribution Panel

Amphenol's 2RU Rack Mount Distribution Panels are designed to incorporate both patching and splicing within the same enclosure.

Mounts are available in 19 or 23 cabinets with cable management fingers front and rear.

The 2RU Rack Mount Distribution Panels fully enclose the pigtails (usually routed between separate panels), providing greater protection and shorter length cables.

The enclosure provides ample fiber optic cable storage.

2RU Rack Mount Distribution Panels can accommodate from 6 to 72 fibers with optional no tool required adapter plates, populated with a variety of adapters, splice and wide range of pigtails.

## Features and Benefits

Available Wired with Singlemode, OM3 or OM4

Available Empty

Available in Black or Beige

Available in Singlemode, angled Singlemode, and Multimode versions

## Specifications

Reconfigurable layout

2 to 24 fiber/conductor capacity

Reconfigurable layout

Singlemode or Multimode wired

## Applications

Data Centers

MAN and WAN

SAN and Data Centers

LAN

CATV

## Industry Compliance

RoHS compliant

## Ordering Information

| Part Number | Description |
|---|---|
| 948-99999-10212 | PANEL, RACK PATCH, 2RU 6 LGX PORTS, EMPTY |
| 948-99999-10244 | PANEL, HIGH DENSITY 2RU 8 LGX PORTS, EMPTY |

*Please call customer service for additional configurations

# 19" Rack Mount Cassette, 2RU

Amphenol's Ultra-High Density, 2 Rack Unit Cassette is factory terminated and fully tested, ready to install with 288 fibers for LC, or 144 Fibers for SC interconnect.

The 2RU Cassette has seventy-two LC Quad adapters or seventy-two SC Duplex adapters, optimally spaced on an angled front panel, to significantly improve ease of installation.

The 2RU high density cassette manages 144/288 Fibers in a neat, pre-wired, pre-tested unit.

The angled back panel allows for optimally routed trunk cables.

The 2RU high density cassette manages 288 fibers in a neat, pre-wired, easily installed unit that saves hours of installation time.

## Features and Benefits

Available Wired with Singlemode, OM3 or OM4

Can allow for future upgrades and re-configuration

Easy to Install

Singlemode and Multimode versions

## Specifications

288 Fibers in 2 Rack Unit Contained Panel for LC Adapters

144 Fibers in 2 Rack Unit Contained Panel for SC adapters

Factory assembled and tested

Durable heavy gauge steel powder coated for protection

Metal housing with 1.5mm thick steel

UL 94V0 rated front mounting on UTP panel

Singlemode or Multimode wired

## Applications

IT/Datacom

Data Centers

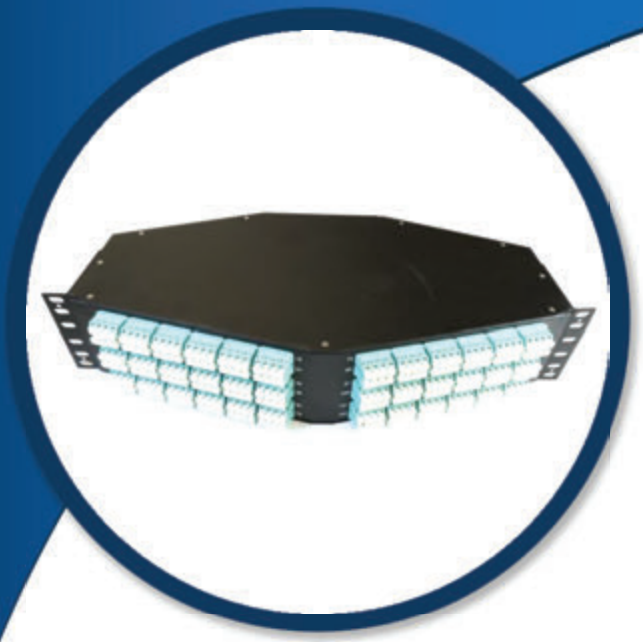
SAN and Data Centers

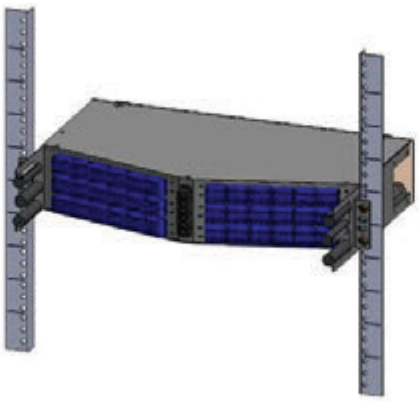
Data Communications

Wireless

## Industry Compliance

RoHS compliant





## Ordering Information

| Part Number | Description |
|---|---|
| 948-972GY-XXXXX | CONFIGURATIONS UPON REQUEST |

*Please call customer service for additional configurations

# 3RU Fiber Rack Mount Distribution Panel

3RU Rack Mount Distribution Panels are designed to incorporate both patching and splicing within the same enclosure.

Amphenol's 3RU Rack Mount Distribution Panels are easily installed panels for clean, quick assembly. Mounts available in 19 or 23 racks.

3RU Rack Mount Distribution Panels fully enclose the pigtails (usually routed between separate panels), providing greater protection and shorter length cables. The enclosure provides ample fiber optic cable storage.

The 3RU Rack Mount Distribution Panels can accommodate from 6 to 72 fibers with optional no tool required adapter plates, splice trays and pre-installed pigtails or jumpers.

## Features and Benefits

- Available Wired with Singlemode, OM3 or OM4
- Available in Black or Beige
- Adapter plates or Cassettes
- Available with a variety of lengths of pigtails

## Specifications

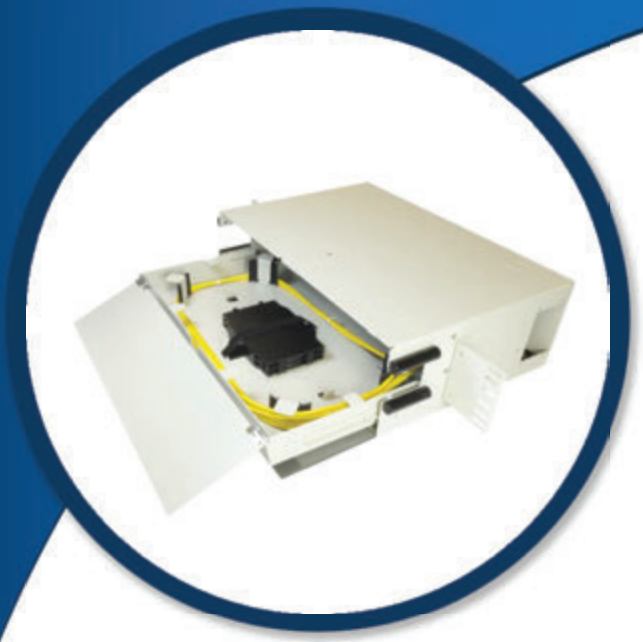
- 6 to 24 fiber/conductor capacity
- Reconfigurable layout
- Singlemode or Multimode wired

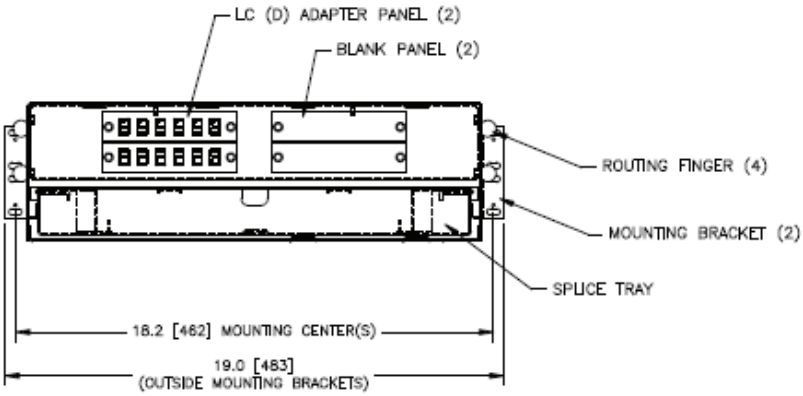
## Applications

- Data Communications
- MAN and WAN
- SAN and Data Centers
- LAN

## Industry Compliance

- RoHS compliant






## Ordering Information

| Part Number | Description |
|---|---|
| 948-732SY-22D03 | PANEL, RACK SPLICE 3RU 96F 24 S/M LC(Q) 3 METER PIGTAILS, SPLICE |
| 948-212DA-20A00 | PANEL, RACK DIST 24 SC S/M ADAPTERS SPLICE NO PIGTAILS |
| 948-212DA-22B03 | PANEL, RACK DIST 24 SC/UPC ADAPTERS 900µm 3 M PIGTAILS AND SPLICE |
| 948-212DA-22D03 | PANEL, RACK DIST 24 SC/UPC ADAPTERS 12F, 3 M PIGTAILS AND SPLICE |
| 948-212DG-10A00 | PANEL, RACK DIST 24 MM SC ADAPTERS AND SPLICE, NO PIGTAILS |
| 948-212DM-22D03 | PANEL, RACK DIST 12 LC(D) ADAPTERS, (2) 12F UC/UPC 3M PIGTAILS AND SPLICE |
| 948-212DQ-22D03 | PANEL, RACK DIST 12 SC/APC ADAPTERS, (2) 12F UC/UPC 3M PIGTAILS AND SPLICE |
| 948-602DY-10A00 | PANEL, RACK DIST 72 PORT, EMPTY |

*Please call customer service for additional configurations

# 4RU Fiber Rack Mount Distribution Panel

4RU Rack Mount Distribution Panels are designed to incorporate both patching and splicing within the same enclosure.

Available with adapters preinstalled or cassettes, the 4RU Fiber Rack Mount Distribution Panel offers lower cost options than individual units. Mounts are available in 19 or 23 racks.

Amphenol's 4RU Fiber Rack Mount Distribution Panels have horizontally mounted adapter packs or prewired, factory tested cassettes for easy access for growth or ex change.

Panels are available with document cards for readily accessible port information. The 4RU Fiber Rack Mount Distribution Panels can accommodate from 6 to 288 fibers with optional LGX or high density adapter plates or cassettes with LC, MPO, SC, FC or ST adapters.

## Features and Benefits

- Adapter plates or Cassettes
- Available in LGX or High Density
- Available with a variety of lengths of pigtails
- Available Wired with Singlemode, OM3 or OM4
- Available in Black or Beige

## Specifications

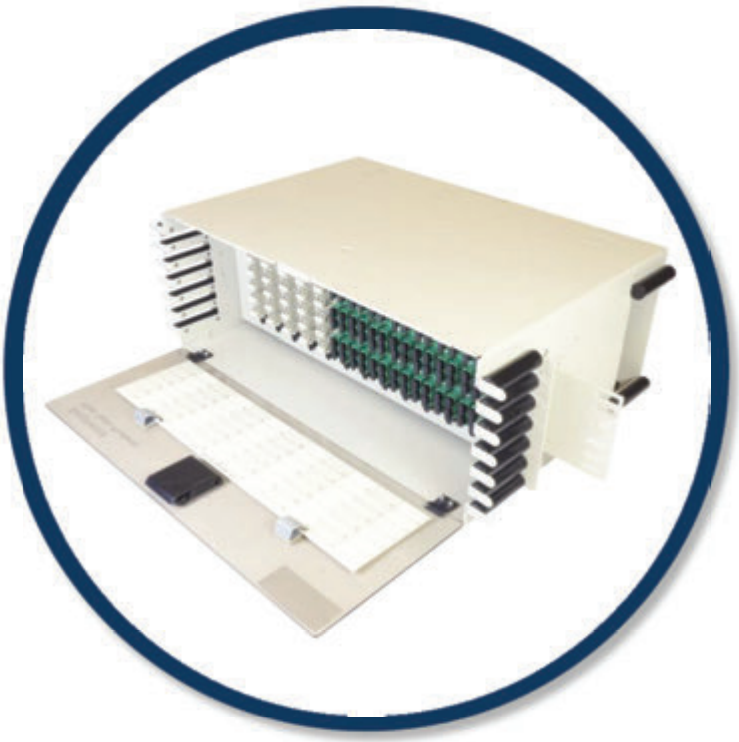
- 6 to 384 fiber/conductor capacity
- Reconfigurable layout
- LGX or High Density Form Factor
- Singlemode or Multimode wired
- Splice or Patch only

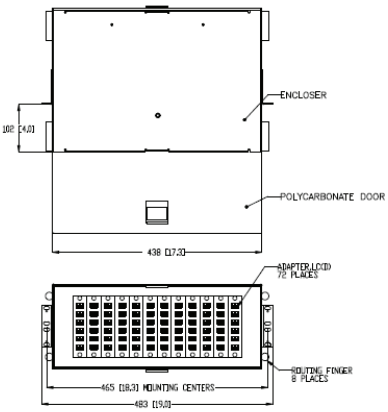
## Applications

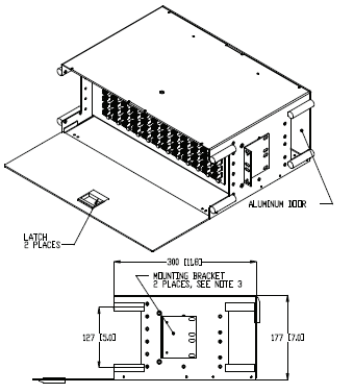
- Data Communications
- MAN and WAN
- SAN and Data Centers
- LAN
- CATV

## Industry Compliance

- RoHS compliant






## Ordering Information

| Part Number | Description |
|---|---|
| 948-99999-10236 | PANEL, 4RU HD 16 HIGH DENSITY SLOTS EMPTY BLACK |
| 948-99999-10213 | PANEL 4RU 12 LGX PORTS EMPTY BLACK |
| 948-872DM-00A00 | PANEL, RACK PATCH 4RU BLACK 72 LC(D) BLUE S/M ADAPTERS NO PIGTAILS |
| 948-972FY-02D03 | PANEL, RACK PATCH 4RU 288F W/ 72 S/M LC(Q) ADAPTERS 3M 12F |

*Please call customer service for additional configurations

# 6RU Fiber Rack Mount Distribution Panel

Amphenol's 6RU Rack Mount Distribution Panels are designed to incorporate both patching and splicing within the same enclosure. No tool required adapter packs or cassettes are available.

Blank fill plate options allow you to future-proof your site.

The 6RU Rack Mount Distribution Panels fully enclose the pigtails (usually routed between separate panels), providing greater protection and shorter length cables.

The enclosure provides ample fiber optic cable storage.

The 6RU Rack Mount Distribution Panels can accommodate splicing of 6 to 144 fibers with adapters available in LC, MPO, SC, FC or ST in standard or angled polished.

## Features and Benefits

- Available in LGX or High Density
- Available in Black or Beige
- Available Wired with Singlemode, OM3 or OM4
- Available with a variety of lengths of pigtails

## Specifications

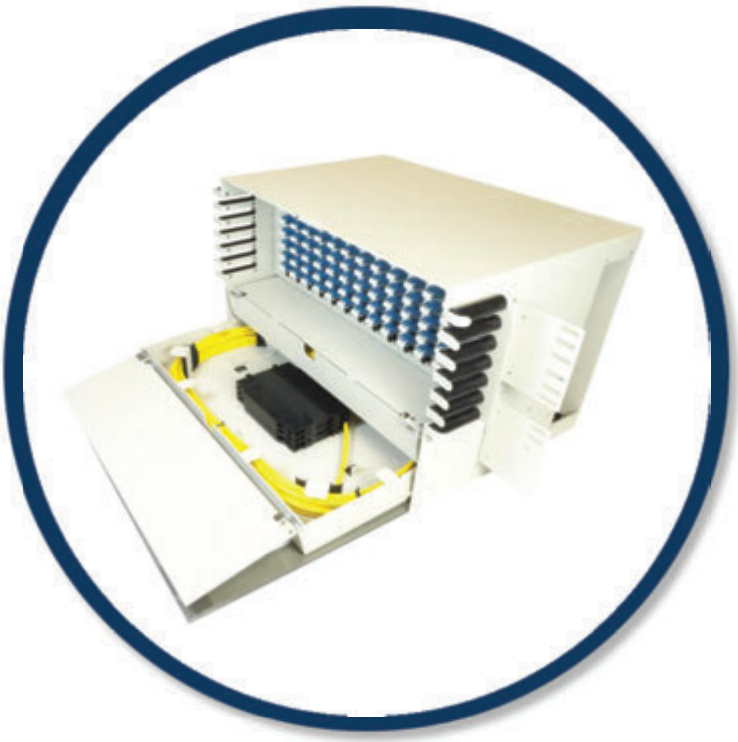
- 6 to 384 fiber/conductor capacity
- LGX or High Density Form Factor
- Singlemode or Multimode wired
- Durable heavy gauge steel powder coated for protection
- Metal housing with 1.5mm thick steel
- UL 94V0 rated front mounting on UTP panel

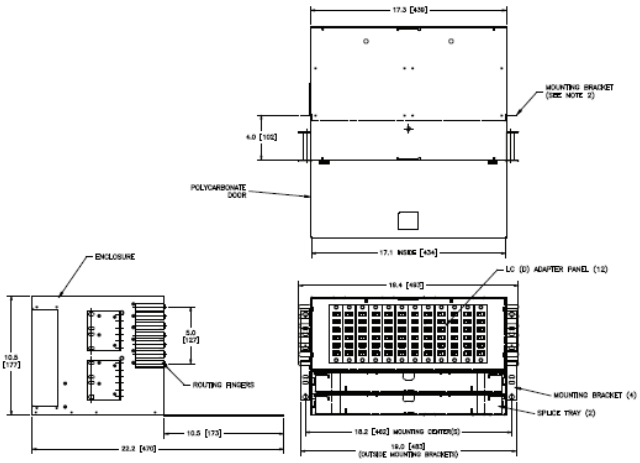
## Applications

- CATV
- Data Communications
- IT/Datacom
- SAN and Data Centers

## Industry Compliance

- RoHS compliant






## Ordering Information

| Part Number | Description |
|---|---|
| 948-602DY-00A00 | PANEL, 6RU W/ 2 SPLICE DRAWERS, EMPTY BEIGE |
| 948-402DY-00A00 | PANEL, RACK DIST 48 PORT WITH SPLICE DRAWERS, EMPTY |
| 948-412DA-22B03 | PANEL, RACK DIST W/ 48 S/M SC ADAPT 3M PIGTAILS AND SPLICE |
| 948-612DA-10A00 | PANEL, RACK DIST 72 SC ADAPT AND SPLICE, NO PIGTAILS |
| 948-612DA-12C03 | PANEL, RACK DIST W/ 72 S/M SC ADAPT, SC/UPC 3M PIGTAILS AND SPLICE |
| 948-812DM-22D03 | PANEL, RACK DIST W/ 72 LC(D) 144F S/M ADAPT 12F 3M PIGTAILS AND SPLICE |

*Please call customer service for additional configurations

# Wall Mount 12 Port Distribution Panel

Wall Mount Distribution Panels are designed to be compact as well as provide ample fiber optic cable routing, organization and storage.

The Wall Mount Distribution panels are designed for ease of installation with optional splice trays installed as well as optional pigtail cables.

Amphenol's wall panels accommodate from 6 to 24 fiber count. They come factory installed and tested with LC, SC, MPO, FC or ST adapters.

Optional pigtails in Singlemode or Multimode fiber as well as optional splice trays allow for a single orderable part number or base parts and upgrade options.

## Features and Benefits

Available Empty

Available Wired with Singlemode, OM3 or OM4

Can be configured for installation type or site by site requirements

Available with a variety of lengths of pigtails

Available in a wide variety of connector types, cable designs, and lengths

Customizable: Entire systems are designed to meet the client's individual specifications

Available in Singlemode, angled Singlemode, and Multimode versions

## Specifications

6 to 24 fiber/conductor capacity

Reconfigurable layout

Factory assembled and tested

Singlemode or Multimode wired

Durable heavy gauge steel powder coated for protection

Metal housing with 1.5mm thick steel

UL 94V0 rated front mounting on UTP panel

## Applications

Data Centers

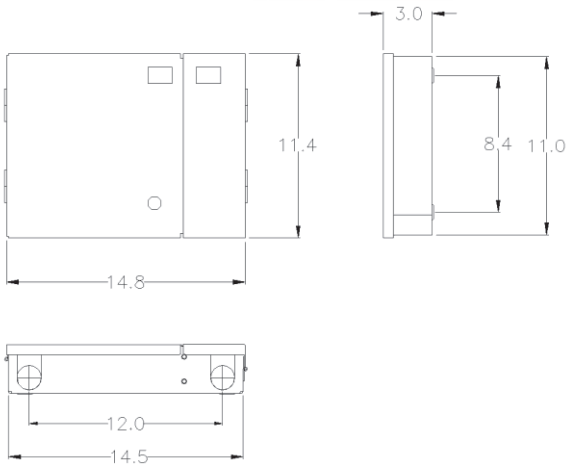
IT/Datacom

SAN and Data Centers

LAN

## Industry Compliance

RoHS compliant




## Ordering Information

| Part Number | Description |
|---|---|
| 948-1A1D2-12B05 | PANEL, WALL MOUNT DIST. 12 PORT |
| 948-1M1D2-12B05 | PANEL, WALL MOUNT, 12 PORT |
| 948-1A1D2-22B05 | PANEL, WALL MOUNT, 12 PORT |
| 948-1M1D2-12D05 | PANEL, WALL MOUNT, 12 PORT |
| 948-1M1D2-12C05 | PANEL, WALL MOUNT, 12 PORT |

*Please call customer service for additional configurations

# Wall Mount 24 Port Distribution Panel

Wall Mount Distribution Panels provide an excellent enclosure for patching, splicing and storing fiber optic terminations.

Available in a variety of sizes to accommodate from 6 to 48 fibers with multiple access points for fiber. Doors are removable for easy access of installation.

Amphenol's Wall Mount Distribution Panels are designed to be compact, yet provide ample fiber optic cable routing, organization, and storage. Amphenol's wall panels accommodate from 6 to 48 fiber count.

Factory installed and tested with LC, SC, MPO, FC or ST adapters.

Optional pigtails in Singlemode or Multimode fiber as well as optional splice trays allow for a single orderable part number or base parts and upgrade options.

## Features and Benefits

- Available with a variety of lengths of pigtails
- Available Wired with Singlemode, OM3 or OM4
- Available in 4, 8, 12 or 24 fiber configurations
- Singlemode and Multimode versions

## Specifications

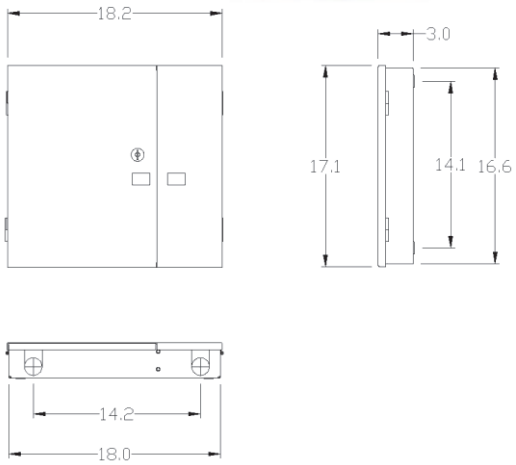
- Singlemode or Multimode wired
- Factory assembled and tested
- Durable heavy gauge steel powder coated for protection
- Metal housing with 1.5mm thick steel
- UL 94V0 rated front mounting on UTP panel
- 6 to 48 fiber/conductor capacity
- Reconfigurable layout

## Applications

- Data Communications
- MAN and WAN
- SAN and Data Centers
- LAN
- CATV

## Industry Compliance

- RoHS compliant




## Ordering Information

| Part Number | Description |
|---|---|
| 948-2A1D2-12B05 | PANEL, WALL MOUNT 24 PORT |
| 948-2M1D2-12B05 | PANEL, WALL MOUNT 24 PORT |
| 948-2A1D2-12E05 | PANEL, WALL MOUNT 24 PORT |

*Please call customer service for additional configurations

# HD Fiber Management Patch Panels

Modular High Density Fiber Management Patch Panels are designed with the highest density in the market.

Available with vertically mountable no tool adapter packs with LC, MPO, SC, FC or ST adapters. Mounts in 19 or 23 racks.

Amphenol's Modular High Density Fiber Management Patch Panels are designed to be compact yet allow easy access, upgrade and swap out adapter styles.

These panels are available in front plate, front plate with cable management plate, short or long box options.

Modular High Density Fiber Management Patch Panels can have up to 96 Fibers per Rack Unit, up to 384 fibers per 4 Rack Units.

Custom options are available upon request.

## Features and Benefits

- Available with a variety of lengths of pigtails
- Available Empty
- Available in LGX or High Density
- Available in Black or Beige
- Available Wired with Singlemode, OM3 or OM4

## Specifications

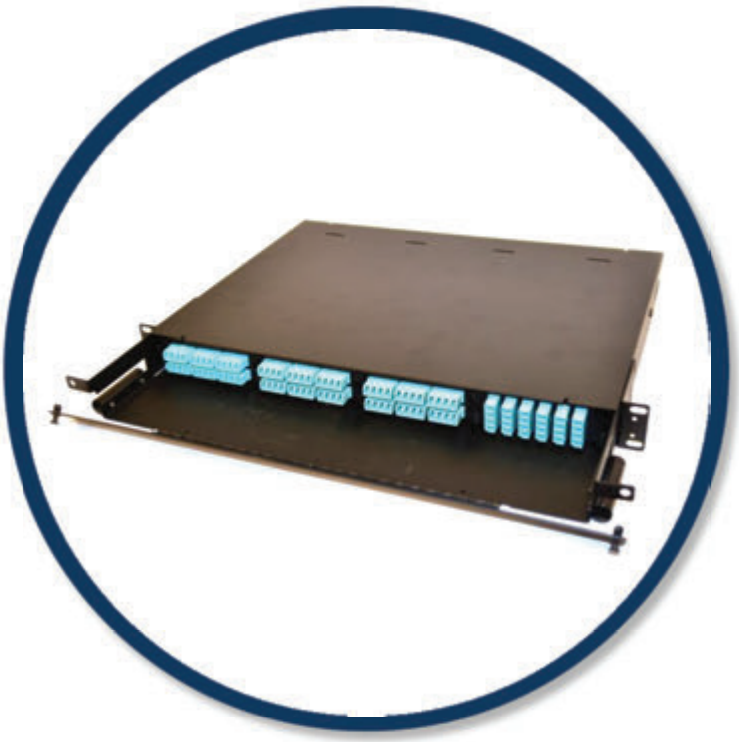
- Singlemode or Multimode wired
- Durable heavy gauge steel powder coated for protection
- Metal housing with 1.5mm thick steel
- UL 94V0 rated front mounting on UTP panel
- 6 to 384 fiber/conductor capacity
- Reconfigurable layout

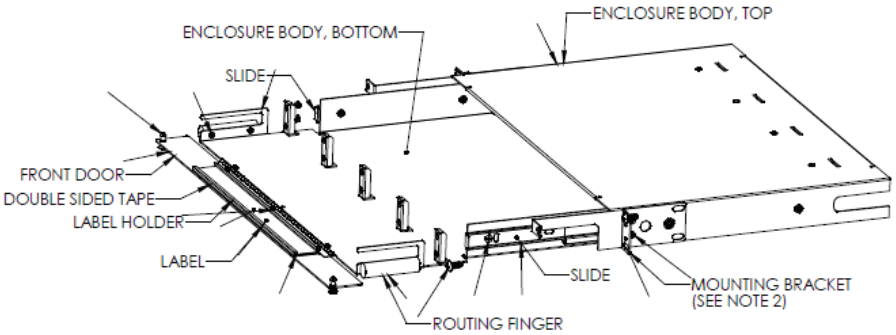
## Applications

- MAN and WAN
- SAN and Data Centers
- LAN

## Industry Compliance

- RoHS compliant






## Ordering Information

| Part Number | Description |
|---|---|
| 948-99999-10235 | PANEL, HD, 1RU, W/DRAWER, EMPTY, BLACK |
| 948-99999-10244 | PANEL, HD, 2RU, W/DRAWER, EMPTY, BLACK |
| 948-99999-10236 | PANEL, HD, 4RU, W/DRAWER, EMPTY, BLACK |

*Please call customer service for additional configurations

# Cassette Fiber Management Modules

Amphenol cassettes are available in LGX or High Density form factor.

These cassettes are also available in a full range of fiber types: Singlemode, OM3 or OM4 Multimode, standard and angled polished.

Amphenol cassettes are a factory assembled and fully tested rapid deployment accessory. No tools are required for installation.

Amphenol's cassettes can accommodate up to 24 fibers per cassette, with a variety of adapter options front and rear.

## Features and Benefits

No tools required for installation

Available in Singlemode, angled Singlemode, and Multimode versions

Available in LC, FC, and SC configurations

Available in Black or Beige

Available Wired with Singlemode, OM3 or OM4

Available in 4, 8, 12 or 24 fiber configurations

Available in LGX or High Density

## Specifications

2 to 24 fiber/conductor capacity

LGX or High Density Form Factor

Factory assembled and tested

Custom mounting options available

## Applications

Data Communications

MAN and WAN

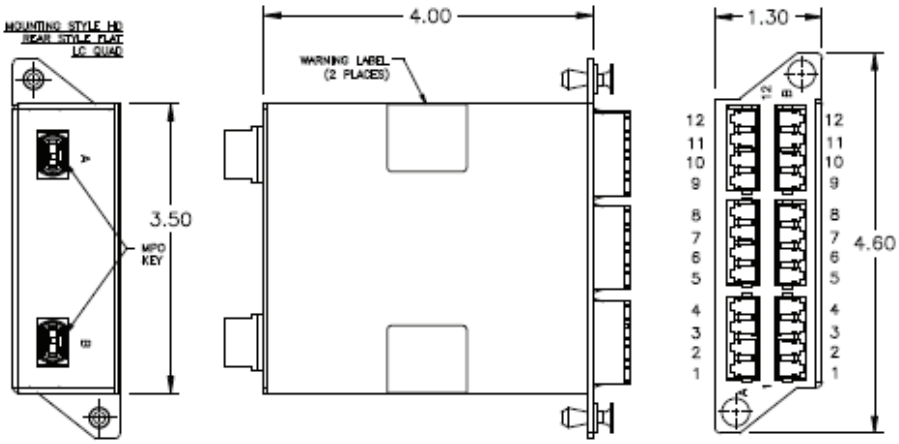
SAN and Data Centers

LAN

Data Centers

## Industry Compliance

RoHS compliant

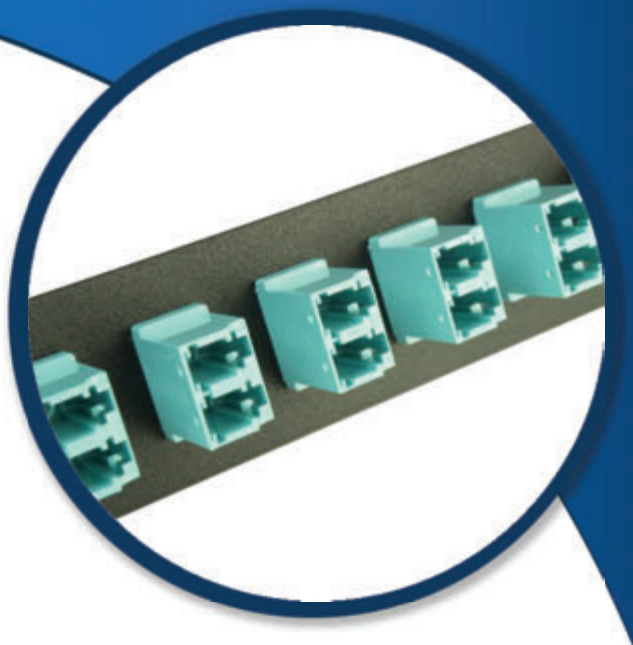



## Ordering Information

| Part Number | Description |
|---|---|
| 948-100-5242-52 | MODULE, MPO(M)-LC/PC, 24 FIBER, 50µm OM3, ANGLED REAR PANEL CONFIGURATION |
| 948-100-5242-51 | MODULE, MPO(M)-LC/PC, 24 FIBER, 50µm OM3, FLAT REAR PANEL CONFIGURATION |

*Please call customer service for additional configurations

# Adapter Packs



Amphenol's Adapter Packs are modular, allowing for you to future-proof your design. Adapter packs are available in LGX or high density form factors.

Adapter Packs are also available in 6 to 24 fiber count options.

Adapter Packs are available in LC Duplex, LC Quad, MPO, SC, FC, or ST. No tools required for installation or exchange.

Adapter Packs offer quick replacement for new connector site.

## Features and Benefits

Available in LGX or High Density

Available in Black or Beige

Pass-Thru Design is suitable for many different connector types

Field Installable

## Specifications

2 to 24 fiber/conductor capacity

LGX or High Density Form Factor

Durable heavy gauge steel powder coated for protection

Metal housing with 1.5mm thick steel

UL 94V0 rated front mounting on UTP panel

## Applications

Data Communications

MAN and WAN

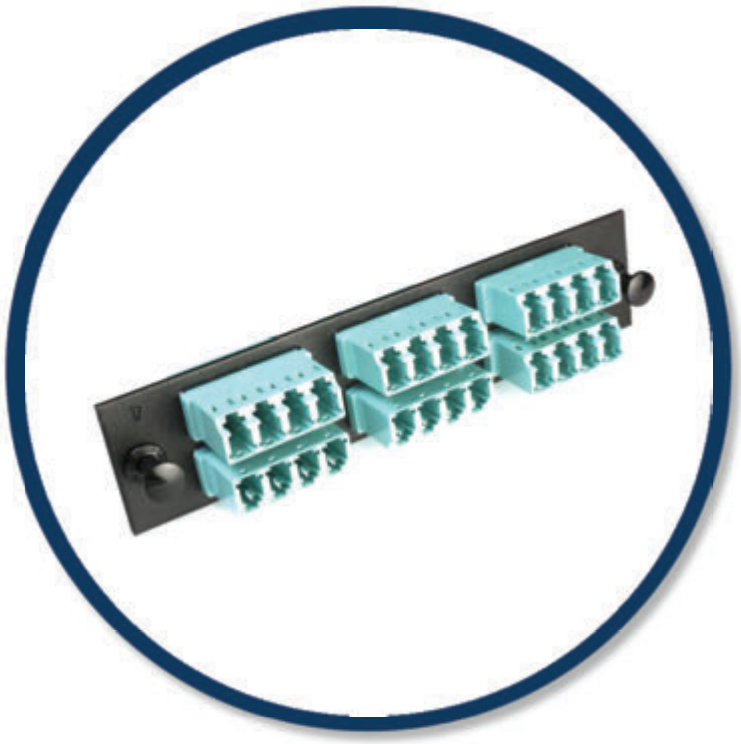
SAN and Data Centers

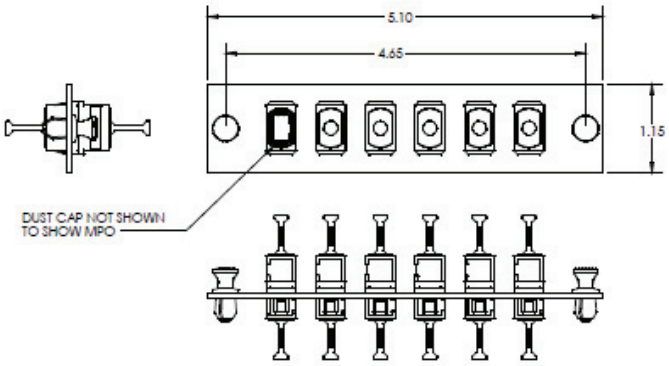
LAN

Data Centers

## Industry Compliance

RoHS compliant






## Ordering Information

| Part Number | Description |
|---|---|
| 948-100-2100 | BLANK COVER PLATE, BEIGE - NO ADAPTERS |
| 948-100-2101 | ADAPTER PACK, MULTI MODE BEIGE LC ADAPTERS, BEIGE PANEL |
| 948-100-2101-B | ADAPTER PACK, MULTI MODE BEIGE LC ADAPTERS, BLACK PANEL |
| 948-100-2102 | ADAPTER PACK, SINGLE MODE CERAMIC BLUE SC ADAPTERS, BLACK PANEL |
| 948-100-2103 | ADAPTER PACK, SINGLE MODE CERAMIC BLACK SC/PC ADAPTERS, BLACK PANEL |
| 948-100-2104 | ADAPTER PACK, SINGLE MODE CERAMIC GREEN SC ADAPTERS, BLACK PANEL |
| 948-100-2111 | ADAPTER PACK, SINGLE MODE BLUE SC ADAPTERS, BEIGE PANEL |
| 948-100-2112 | ADAPTER PACK, SINGLE MODE CERAMIC FC ADAPTERS, BEIGE PANEL |
| 948-100-2113 | ADAPTER PACK, SINGLE MODE CERAMIC SLEEVE, FC ADAPTERS, BEIGE PANEL |

*Please call customer service for additional configurations

# Splice Tray

Amphenol offers a great, low cost, small footprint splice tray offering.

Thermoplastic material, RoHS compliant.

Available in 12 or 24 fiber options.

100mm Wide x 10mm high x 140 mm deep.

Each 140 mm tray can accommodate up to 12 fusion splices wit heat shrink. It allows the stacking of multiple trays to increase capacity.

## Features and Benefits

Available Empty

Can allow for future upgrades and re-configuration

Fiber count from 2 to 12

Small form factor size enables increased density

## Specifications

2 to 24 fiber/conductor capacity

Operating Temperature:
-40 to +75°C

Custom mounting options available

## Applications

Data Communicatio

Data Centers

## Industry Compliance

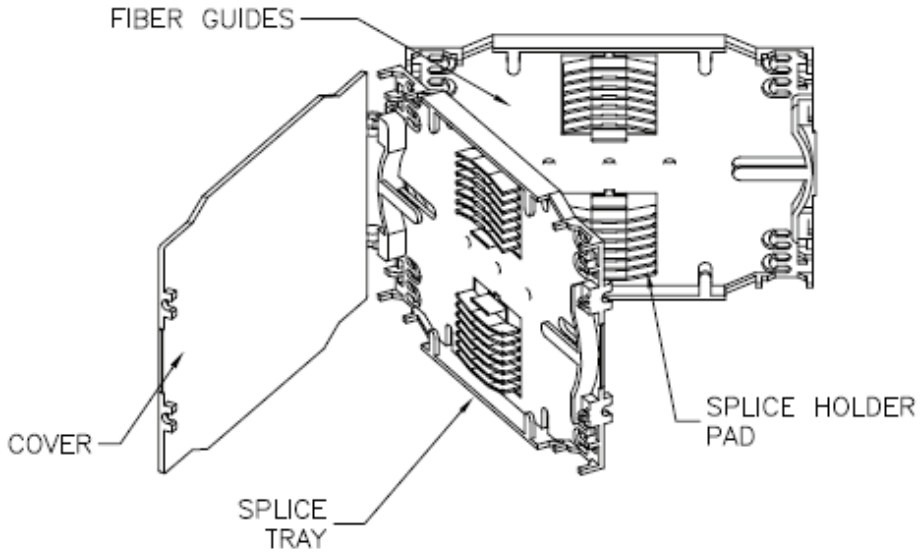
UL Listed enclosure

RoHS compliant

## Ordering Information

| Part Number | Description |
|---|---|
| 48-2741-P | LID, SPLICE TRAY, 100 X 140mm-BULK PACK |
| 948-2370 | BRACKET, SPLICE TRAY |
| 948-2741 | LID, SPLICE TRAY, 100 X 140mm |

*Please call customer service for additional configurations



# OUTDOOR ENCLOSURES

The Amphenol Demarcation and Aggregation Box product line offer superior protection for indoor/outdoor equipment installations. Sealed polymer enclosures provide a long life, weather resistant location to optical signal fibers and copper power cables. Enclosures provide connection to various communication equipment, including backhaul, macro and small cell wireless applications.

Enclosures are tailored with internal or external patching, splicing and/or distribution options to meet existing requirements and provision for future expansion. Entrance and exit ports can be configured to include pigtails, flexible port covers, sealing cable glands or pluggable receptacles for either copper power or optical fiber cables.

Provided with integrated mounting features, the enclosures are designed for easy installation in any location and environment, ideal for wall and pole mount applications.

## Benefits

Flexible by design: configurable for specific applications, with no compromise

Hybrid, Fiber only and Power only designs

Protected : NEMA 4x, F1 and UL rated

Corrosion resistant and outdoor rated

Easy mounting to pole or wall

Factory terminated and tested assemblies

**Connected Everywhere in Extreme Temperatures**

# PRODUCT TYPE

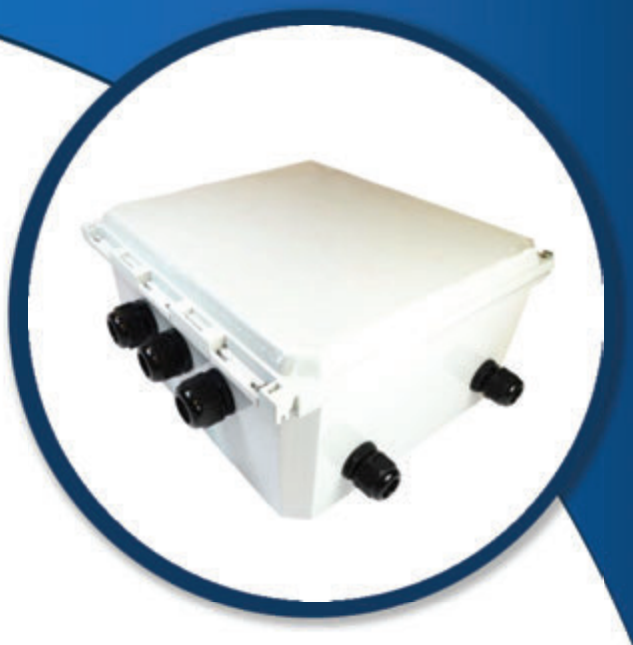

Fiber Distribution Box ..... 115

Hybrid Distribution Box ..... 117

Power Distribution Box ..... 119

*Solutions that are Simple by Design*

# Fiber Distribution Box



Amphenol's Fiber Demarcation Boxes offer superior protection for indoor or outdoor equipment installations.

These sealed polymer enclosures provide a long life, weather resistant location to demarcate, combine, or segregate optical signal fibers for connection to various communication equipment, including backhaul, macro and small cell wireless applications.

Enclosures are tailored with internal or external patching, splicing and/or distribution options to meet existing requirements and provision for future expansion.

Entrance and exit ports can be configured to include pigtails, flexible port covers, sealing cable glands or pluggable receptacles for optical fiber cables.

Provided with integrated mounting features, the enclosures are designed for easy installation in any location and environment, ideal for wall and pole mount applications.

## Features and Benefits

Feeder and drop Customizable connections; Maximum flexibility and interchangeability to serve different network configurations and interconnectivity methods.

Customizable feeder and drop box entrance; Flexible cable entrance options that include weather proofing grommets for interconnect within the box, or harsh environment optical connectors for plug-n-play designs

Available for 4, 8, 12, 24, or 36 Fiber Count; High density and flexible designs with attention to cable management to accommodate all applications. This right-sized approach is intended to simplify infrastructure deployment for all environments

NEMA-4x Rated Enclosure; Designed to the highest environmental standard to ensure protection of the optical and power connections from wind, rain, flooding, UV, moisture, and other environmental factors that the box may be exposed to

UL Listed housing; One solution for indoor and outdoor usage simplifies your network deployment

Lockable cover; Provides security and protection to network circuits from vandalism and tampering

## Specifications

Fiber box

1 to 48 fiber capacity

Dimension: 16"x14"x7" (other sizes available)

Material: Polycarbonate

Color: Gray

Ambient temperature range:
-30 to +129°C

Halogen free (optional)

Reconfigurable layout

Impact resistance: UL-746C

UV resistant: UL 1581 Sec. 1200

Material flammability rating: UL-94

## Industry Compliance

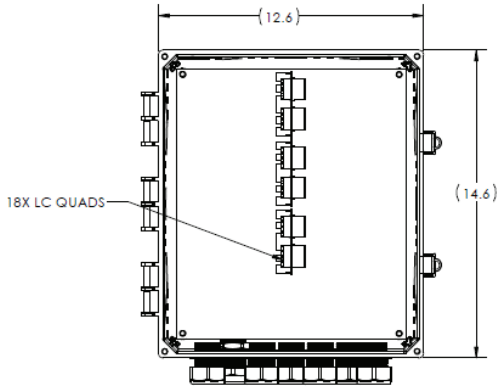
IP67 Water and Dust Ingress Protection

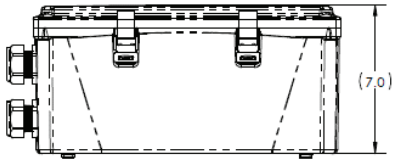
Meets NEMA-4X requirements

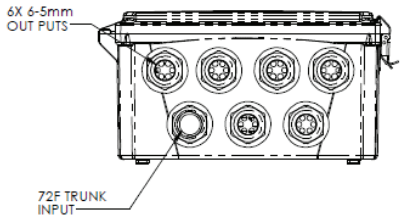
UL Listed enclosure

## Applications

| | |
|---|---|
| FTTA | Outdoor Areas |
| Wireless | Industrial |



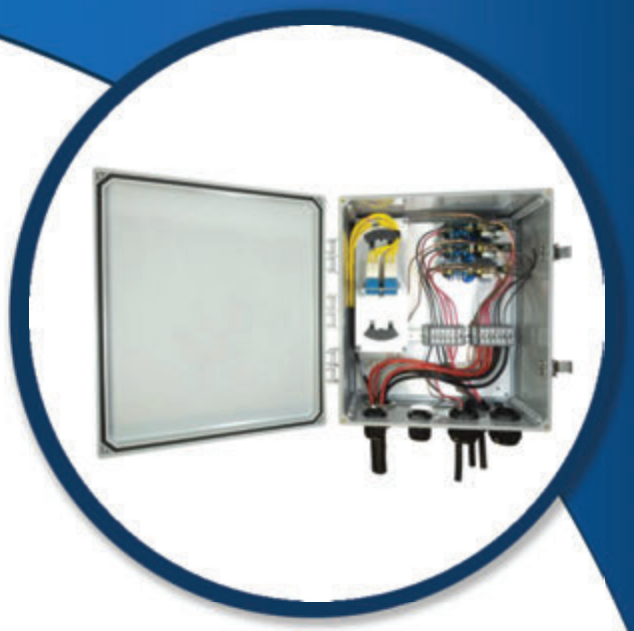




## Ordering Information

| Part Number | Description |
|---|---|
| 927-xxx | CUSTOMER SPECIFIC, CALL FOR DETAILS |

*Please call customer service for additional configurations

# Hybrid Distribution Box



Amphenol's Hybrid (Power and Fiber) Demarcation Boxes offer superior protection for indoor or outdoor equipment installations.

Sealed polymer enclosures provide a long-life weather resistant location to demark, combine, or segregate optical signal fibers and copper power for connection to various communication equipment, including backhaul, macro and small cell wireless applications.

Enclosures are tailored with internal or external patching, splicing and/or distribution options to meet existing requirements and provision for future expansion. Entrance and exit ports can be configured to include pigtails, flexible port covers, sealing cable glands or pluggable receptacles for either copper power or optical fiber cables.

Provided with integrated mounting features, the enclosures are designed for easy installation in any location and environment, ideal for wall and pole mount applications.

## Features and Benefits

Feeder and drop Customizable connections; Maximum flexibility and interchangeability to serve different network configurations and interconnectivity methods.

Customizable feeder and drop box entrance; Flexible cable entrance options that include weather proofing grommets for interconnect within the box, or harsh environment optical connectors for plug-n-play designs

Available for 4, 8, 12, 24, or 36 Fiber Count; High density and flexible designs with attention to cable management to accommodate all applications. This right-sized approach is intended to simplify infrastructure deployment for all environments

NEMA-4x Rated Enclosure; Designed to the highest environmental standard to ensure protection of the optical and power connections from wind, rain, flooding, UV, moisture, and other environmental factors that the box may be exposed to

UL Listed housing; One solution for indoor and outdoor usage simplifies your network deployment

Lockable cover; Provides security and protection to network circuits from vandalism and tampering

## Specifications

Distribution Box

Up to 18 power conductor capacity

1 to 48 fiber capacity

Dimension: 16"x14"x7" (other sizes available)

Material: Polycarbonate

Color: Gray

Ambient temperature range:
-30 to +129°C

Halogen free (optional)

Circuit breaker optional: C20A, C32A

Surge protection device optional:
SPD type 1+2 or type 2

Reconfigurable layout

Impact resistance: UL-746C

UV resistant: UL 1581 Sec. 1200

Material flammability rating: UL-94

## Industry Compliance

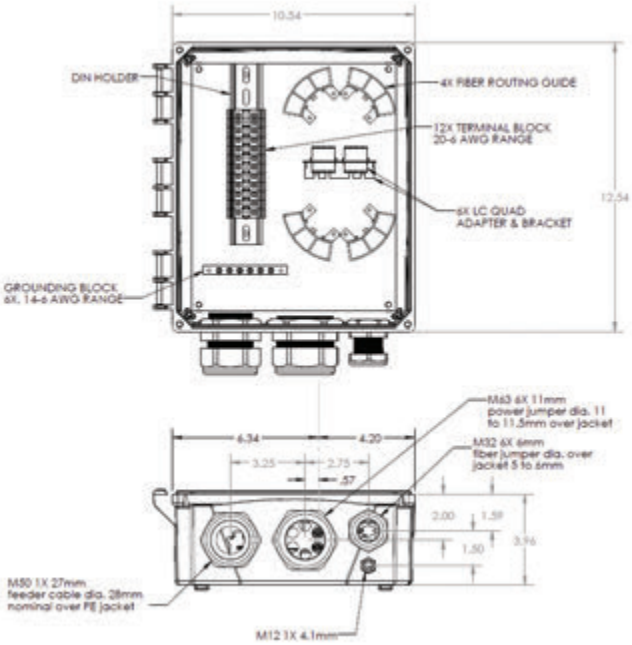
IP67 Water and Dust Ingress Protection

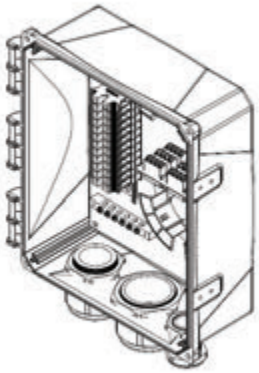
Meets NEMA-4X requirements

UL Listed enclosure

## Applications

| | |
|---|---|
| FTTA | Outdoor Areas |
| Wireless | Industrial |



## Ordering Information

| Part Number | Description |
|---|---|
| 940-1001 | HYBRID DISTRIBUTION BOX, 6F-6P OUTPUTS, 14X12X6 |
| 940-1002 | HYBRID DISTRIBUTION BOX, 12F-12P OUTPUTS, 14X12X6 |
| 940-1003 | HYBRID DISTRIBUTION BOX, M50, 12X AARC, 6X POWER |

*Please call customer service for additional configurations

# Power Distribution Box

Amphenol's Power Demarcation Box offers superior protection for indoor or outdoor equipment installations.

Sealed polymer enclosure provides a long life, weather resistant location to demark, combine, or segregate optical signal fibers and/or copper power for connection to various communication equipment, including backhaul, macro and small cell wireless applications.

Enclosures are tailored with internal or external patching, splicing and/or distribution options to meet existing requirements and provision for future expansion.

Provided with integrated mounting features, the enclosures are designed for easy installation in any location and environment, ideal for wall and pole mount applications.

## Features and Benefits

Feeder and drop Customizable connections; Maximum flexibility and interchangeability to serve different network configurations and interconnectivity methods.

Customizable feeder and drop box entrance; Flexible cable entrance options that include weather proofing grommets for interconnect within the box, or harsh environment optical connectors for plug-n-play designs

Available in configurations up to 18 power conductors in a variety of cross sections

NEMA-4x Rated Enclosure; Designed to the highest environmental standard to ensure protection of the optical and power connections from wind, rain, flooding, UV, moisture, and other environmental factors that the box may be exposed to

UL Listed housing; One solution for indoor and outdoor usage simplifies your network deployment

Lockable cover; Provides security and protection to network circuits from vandalism and tampering

Lightweight Construction; Reduces wind loading on towers and structures while allowing an easy, one person installation.
Plastic boxes provide the lightest solution with no compromise to quality or protection.

## Specifications

Distribution Box

Up to 18 power conductor capacity

Dimension: 16"x14"x7" (other sizes available)

Material: Polycarbonate

Color: Gray

Ambient temperature range:
-30 to +129°C

Halogen free (optional)

Circuit breaker optional: C20A, C32A

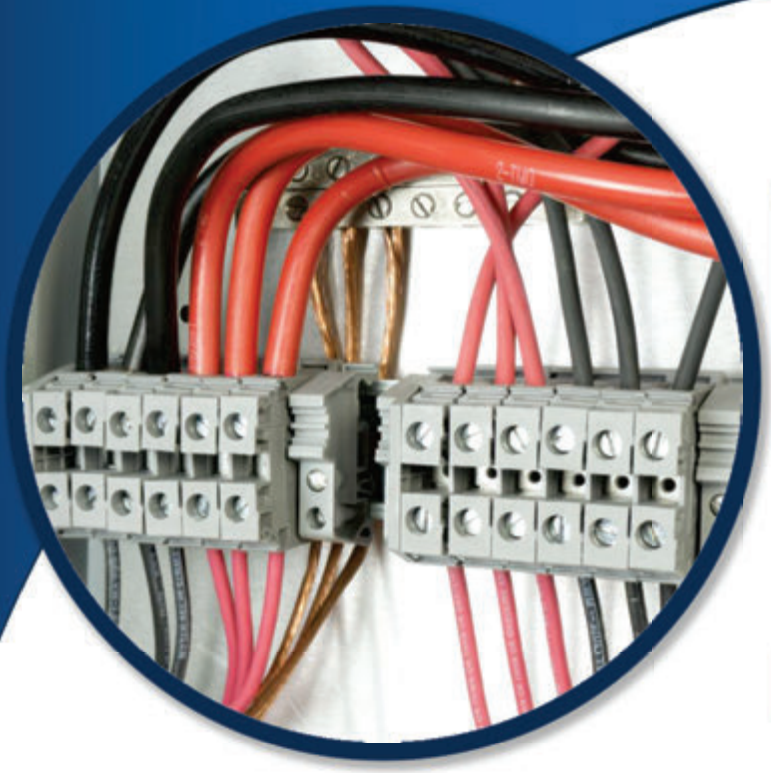
Surge protection device optional:
SPD type 1+2 or type 2

Reconfigurable layout

Impact resistance: UL-746C

UV resistant: UL 1581 Sec. 1200

Material flammability rating: UL-94



## Industry Compliance

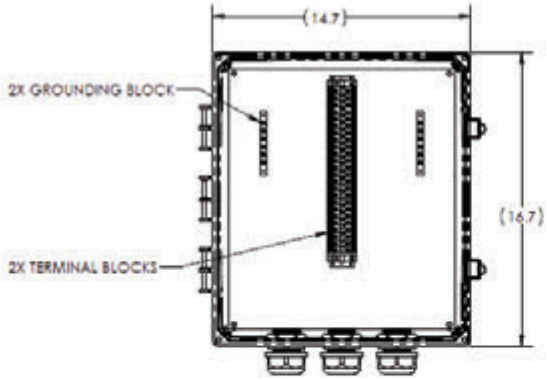
IP67 Water and Dust Ingress Protection

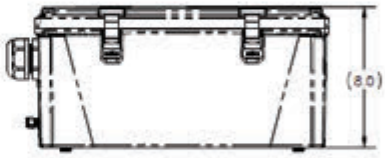
Meets NEMA-4X requirements

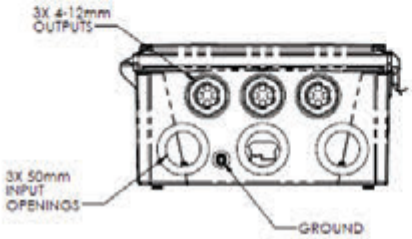
UL Listed enclosure

## Applications

| | |
|---|---|
| FTTA | Outdoor Areas |
| Wireless | Industrial |




## Ordering Information

| Part Number | Description |
|---|---|
| 927-xxx | CUSTOMER SPECIFIC, CALL FOR DETAILS |

*Please call customer service for additional configurations

# ATTENUATORS & COUPLERS

**Amphenol Fiber Optic Products' couplers are manufactured using a precision computer-controlled manufacturing process capable of producing large volumes and tight unit-to-unit uniformity. An optical coupler is a passive device that precisely distributes light signals between two fibers over a broadband operating window. Each device offers bi-directional performance allowing for either power splitting or signal combining.**

The optical coupler has proven to be a beneficial component of any optical network design. Amphenol's low loss, cost-effective devices provide a means for network design flexibility, system monitoring or increasing capacity. The excellent uniformity from unit to unit allows for ease in network design, saving our customers time and money.

**Amphenol Fiber Optic Products' attenuator product line consists of fixed and variable optical attenuators. An attenuator, by definition, is a device which precisely reduces an optical signal from point-to-point. The loss can be achieved through various technologies such as absorption, scattering, interference (thin film) filter, or air-gap.**

The most common use of the optical attenuator, whether fixed or variable, is in optical networks where erbium doped amplifiers are being used. Attenuators are used to adjust optical signal levels thereby increasing network flexibility and providing management of optical power.

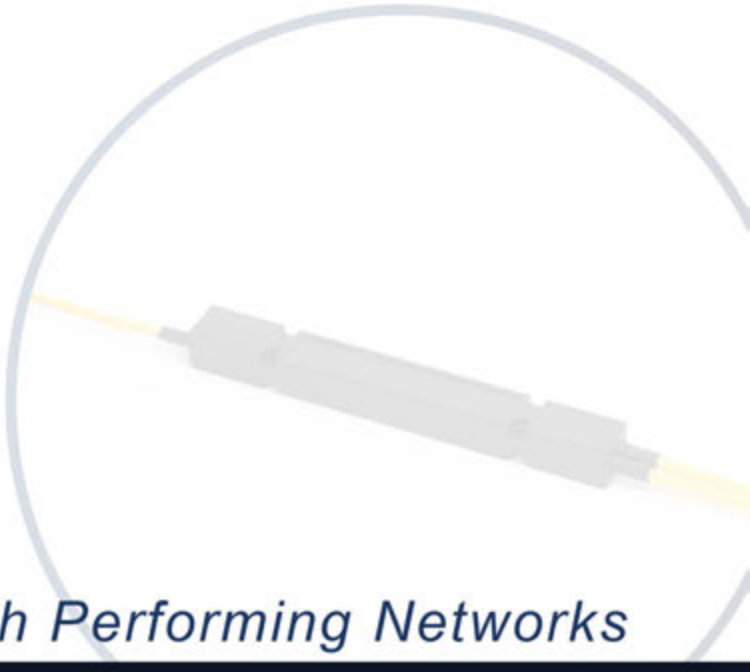
# PRODUCT TYPE


Plug Attenuators ..... 123

Mode Conditioning Plug ..... 125

Couplers ..... 127



*Signal Distribution for High Performing Networks*

# Plug Attenuators

Amphenol's plug-style attenuator is compact in size, offers attenuation values from 0-20dB, and is available in LC, SC, and FC industry standard connector styles, with either flat or angle polish.

Amphenol's attenuators use light absorption technology. This eliminates the scattering of light into the fiber cladding that could be reflected back from the connector interface.

With the short distance between connector end faces, the reflected light creates interferences that in turn create the desired insertion loss variation as the wavelength changes.

## Features and Benefits

Available in LC, FC, and SC configurations

Wavelength independent for multiple wavelength system compatibility

Compact plug style design easily fits into existing patch panels

Available in 1dB through 20dB attenuation values

Polarization insensitive

Compact plug style design easily fits into existing patch panels

## Specifications

Attenuation values:

≤5dB ±0.5dB

>6dB ± 10% of nominal value

Return Loss:

≤-55dB Ultra Polish (UPC)

≤-65dB S/M Angle Polish (APC)

Operating Temperature:
-40 to +80°C

Operating Wavelengths: 1310/1550nm (center wavelength)

Operating Band Pass:
1260nm to 1360nm and 1430nm to 1580nm

PDL:
≤0.2dB

≤5dB ±0.5dB

## Applications

Data Centers IT/Datacom

## Industry Compliance

RoHS compliant

Meets GR-910 specifications

Connectors comply to applicable TIA/EIA and IEC intermateability standards

# Amphenol
## FIBER OPTIC PRODUCTS

# Mode Conditioning Plug

Amphenol's MC plug is designed for use in Gigabit Ethernet applications and is compliant with the IEEE 802.3Z standards. The use of mode conditioning plugs significantly increases the performance and applicable distances of laser diodes over multimode fiber networks.

The MC pluggable module eliminates the need for placing a mode conditioner into a cable assembly. The MC plug can be used with any standard multimode cable assembly greater than 3 meters. This versatility allows the user to quickly configure and reconfigure systems without the limitations of fixed length mode conditioning patch cords.

## Features and Benefits

Available in LC, FC, and SC configurations

Male to Female Pluggable

Available in either direction (i.e.. Male either S/M or M/M)

Reduced size mounts directly to panel

Universal plug package, commonly used for plug style attenuators

## Specifications

Insertion Loss: <.5dB
Return Loss: >25dB

Operating Wavelength:
1300nm Nominal

Operating Bandpass:
1260nm to 1360nm

Operating Temperature:
-40 to +75°C

Storage Temperature: -40 to +75°C

## Applications

IT/Datacom

Data Centers

## Industry Compliance

RoHS compliant

## Ordering Information

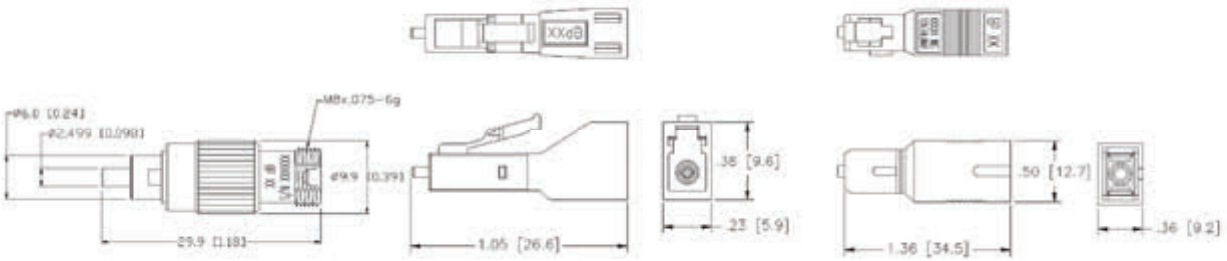
*Please call customer service for additional configurations

| Part Number | Description |
|---|---|
| 956-999-MCP50M1 | MC PLUG, LC S/M FEMALE, 50µm MALE |
| 954-999-MCP50M | MC PLUG, SC, 50µm MALE, S/M FEMALE |

## Ordering Information

| Part Number | Description |
|---|---|
| 944-130-51xx | FC/UPC PLUG ATTENUATOR, XX= DB VALUE |
| 956-130-51xx | LC/UPC PLUG ATTENUATOR, XX= DB VALUE |
| 954-130-51xx | SC/UPC PLUG ATTENUATOR, XX= DB VALUE |

*Please call customer service for additional configurations



# Couplers

An optical coupler is a passive device that precisely distributes light signals between two fibers over a broadband operating window.

Each device offers a bi-directional performance allowing for either power splitting or signal combining.

Amphenol's couplers are made using a precision manufacturing process capable of producing large volumes and tight unit to unit uniformity. The optical coupler has proven to be a beneficial component of any optical network design.

Amphenol's low loss, cost effective devices provide a means for network design flexibility, system monitoring or increasing capacity.

Amphenol couplers are offered in a variety of packaging options and can be terminated with any industry standard connector.

## Features and Benefits

Polarization insensitive

Multiple packaging options: Miniature or Ruggedized

Various Coupling ratios available

## Specifications

Coupling Ratio:
1/99 to 50/50

Directivity:
≥ 50dB (1x2)
≥60dB (2x2)

Reflectance:
≤ -55dB

Operating Bandpass:
+/- 40nm

Operating Temperature:
-40° to 85°C

Storage Temperature:
-55° to + 85°C

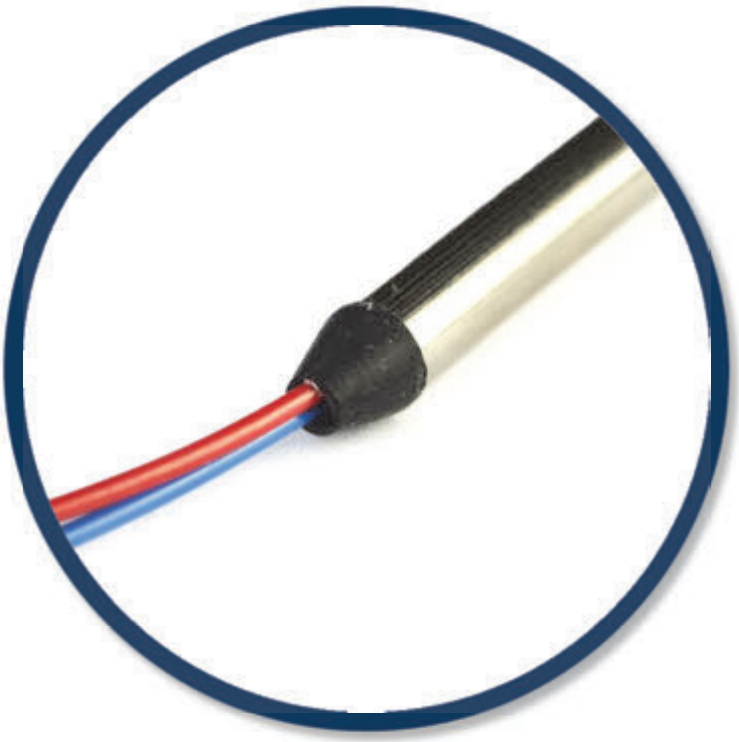
## Applications

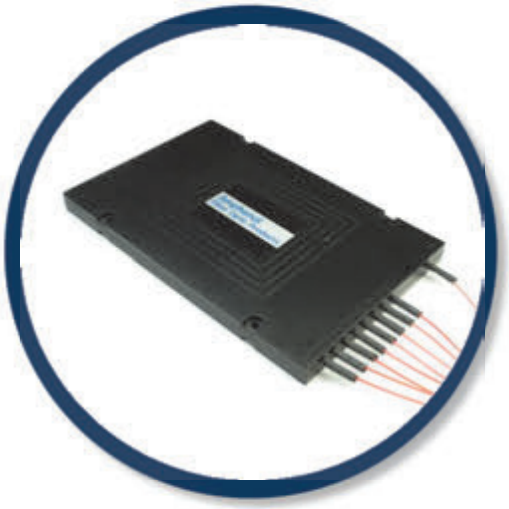
CATV

IT/Datacom

Testing Equipment

## Industry Compliance





## Ordering Information

| Part Number | Description |
|---|---|
| 945-23033-11000 | COUPLER, 1X2, 50/50, 1310NM,SC/UPC,1M |
| 945-70033-11100 | COUPLER,1X2,50/50,1310/1550,SC/UPC,1M |

*Please call customer service for additional configurations

# MEDICAL SPECIALTY

**Amphenol is a leading provider of Fiber Optic connectors and assemblies used in the Medical Industry today. The Amphenol Medical Specialty Product line is comprised of a complete series of connector assemblies and accessories that allow customers to basically pick and choose different options for their individual needs. The product offering includes a variety of connectors used in medical procedures, like Tattoo and Hair removal, Urology, Arthroscopy, Angioplasty and Cosmetic surgery. The Medical products are also used in power deliveries, diagnostics and custom fiber interfaces.**

Amphenol Fiber Optic Products has continued to develop new connector designs by incorporating new concepts and ideas with our customers. One new concept is the development of the Amphenol Custom RFID solution that ensures Medical probes are being used correctly. Another technology is the Hybrid connector design which is one connector that has a combination of both a fiber optic and an electrical connector all in one. These are just examples of Amphenol providing next generation solutions to the medical market.

Amphenol Fiber Optic Products is a premier designer and manufacturer of ophthalmic surgical consumable probes and connector interfaces for surgical laser equipment, as well as supplying assemblies that are used in non-invasive monitor capabilities and connector interfaces for the treatment of vascular diseases. Amphenol Fiber Optic Products will continue to build key relationships with our Medical engineering groups and offer solutions to our customer needs. We will also showcase our state of the art manufacturing capabilities to gain valuable insight to the medical and industrial markets.

Amphenol Fiber Optic Products prides itself on producing the highest quality connectors and is committed to achieve Total Quality performance in meeting the requirements of all our customers. Total Quality Performance means understanding who our customer is, what their requirements are, and to continually improve in order to meet those requirements without error, on time, every time.

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*The Experience and Reliability that Matter*

# Standard SMA

Amphenol Fiber Optic Products was a pioneer in developing the first industry standard fiber optic interconnect system by introducing the SMA connector.

The 905 series was the first fiber optic interconnect system to gain industry-wide acceptance. Today, Amphenol Fiber Optic Products continues to support these markets with a wide variety of standard and custom SMA connectors and accessories.

The SMA connector family utilizes a threaded coupling nut system for mating and de-mating.

Available with zirconia or stainless steel ferrules with custom hole size, the SMA is an excellent choice for a robust, cost competitive and reliable system. Amphenol's long standing history and development of the SMA product ensures exceptional quality and long term reliability. We continue to support further development and improvement with our standard and custom product offerings.

## Features and Benefits

Stainless Steel Ferrules available in custom precision drilled optical fiber hole sizes for specialized applications

Custom stainless steel ferrule tip configurations available for high power laser delivery

Able to be sterilized through autoclave

Compatible with RFID Integrated Technology

Strain relief boots and dust caps available with medical grade material

## Specifications

Insertion Loss (Zirconia Ferrule): 128um to 144um ≤1.0dbB typical

Insertion loss (Stainless Steel): 128um to 144um ≤2.0dbB typical

Tolerance for Stainless Steel Ferrule Holes: 125um to 149um: +5/-0um

Tolerance for Stainless Steel Ferrule Holes: 150um to 249um: +10/-0um

Tolerance for Stainless Steel Ferrule Holes: 250um to 1499um: +15/-0um

Tolerance for Stainless Steel Ferrule Holes: 1500um to 2300um: +25/-0um

## Applications

Medical Specialty

Data Communications

Industrial

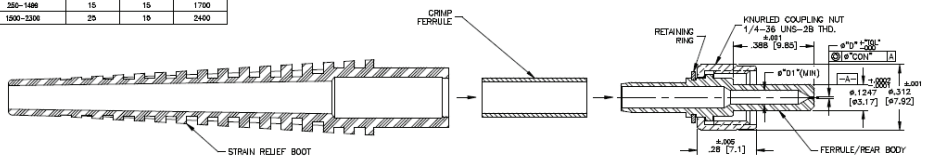
Military

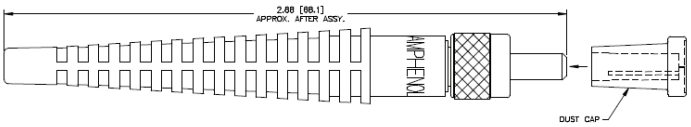
## Industry Compliance

RoHS compliant

Meets IEC 61754-22 International standard; Part 22 Type F-SMA connector

| FIBER HOLE DIAMETER RANGE "D" (um) | TOLERANCE "TOL" (um) | CONCENTRICITY "CON" (um) | DIAMETER "D1" ±100(um) |
|---|---|---|---|
| 125-148 | 5 | 10 | 1700 |
| 150-248 | 10 | 10 | 1700 |
| 250-1486 | 15 | 15 | 1700 |
| 1500-2300 | 25 | 18 | 2400 |




## Ordering Information

| Part Number | Description |
|---|---|
| 905-160-50128-P | 905 SMA CONNECTOR, 128µm |
| 905-160-50128HP | 905 SMA CONNECTOR, 128µm, HEX NUT |
| 905-160-50144-P | 905 SMA CONNECTOR, 144µm |
| 905-160-50144HP | 905 SMA CONNECTOR, 144µm, HEX NUT |
| 905-160-50231-P | 905 SMA CONNECTOR, 231µm |
| 905-160-50231HP | 905 SMA CONNECTOR, 231µm, HEX NUT |
| 905-160-52000-P | 905 SMA CONNECTOR, 2000µm |
| 905-160-52000HP | 905 SMA CONNECTOR, 2000µm, HEX NUT |

*Please call customer service for additional configurations

# Standard SMArt

Amphenol's SMArt connector family utilizes a threaded coupling nut system for mating and de-mating.

Available with zirconia ferrules with custom hole size, the SMArt connector is an excellent choice for a robust, cost competitive and reliable system.

Amphenol's long standing history and development of the SMA product ensures exceptional quality and long term reliability.

We continue to support further development and improvement with our standard and custom product offerings.

## Features and Benefits

Ceramic (Zirconia) Ferrules are available in custom molded optical hole sizes for specialized applications

Ceramic (Zirconia) Ferrule tip configurations are available for high power laser delivery

Able to be sterilized through autoclave

Strain relief boots and dust caps available with medical grade material

Compatible with RFID Integrated Technology

## Specifications

Insertion Loss (Zirconia Ferrule): 128um to 144um ≤1.0dbB typical

Typical Zirconia Ferrule Hole sizes: 126um, 128um, 142um, 144um, 201um & 206um

Typical Zirconia Ferrule Hole Tolerance: +2 to 10um/-0um

## Applications

Medical Specialty

Data Communications

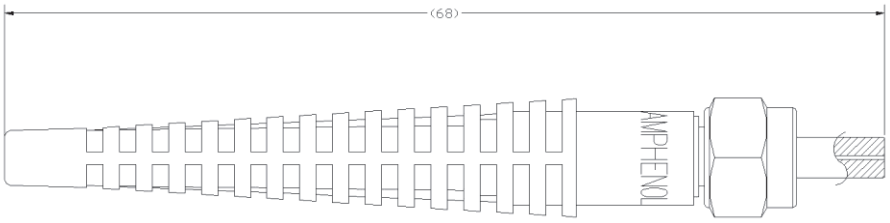
Industrial

Military

## Industry Compliance

Meets IEC 61754-22 International standard; Part 22 Type F-SMA connector

RoHS compliant




## Ordering Information

| Part Number | Description |
|---|---|
| 905-405-5001-P | 905 SMART CONNECTOR, 128µm |
| 905-405-5001HP | 905 SMART CONNECTOR, 128µm, HEX NUT |
| 905-405-5002-P | 905 SMART CONNECTOR, 126µm |
| 905-400-5007-P | 905 SMART CONNECTOR, 144µm |
| 905-400-5007HP | 905 SMART CONNECTOR, 144µm, HEX NUT |

*Please call customer service for additional configurations

# Standard Tight Tolerance SMA

The Tight Tolerance SMA connector family utilizes a threaded coupling nut system for mating and de-mating.

Available with stainless steel ferrules with custom hole size, the SMA is an excellent choice for a robust, cost competitive and reliable system.

Amphenol's long standing history and development of the SMA product ensures exceptional quality and long term reliability.

We continue to support further development and improvement with our SMA connectors and custom product offerings. Amphenol Fiber Optic Products was a pioneer in developing the first industry standard fiber optic interconnect system by introducing the SMA Connector.

Today Amphenol Fiber Optic Products continues to support these markets with a wide variety of standard and custom SMA connectors and accessories.

## Features and Benefits

Stainless Steel Ferrules available in custom precision drilled optical fiber hole sizes for specialized applications

Custom stainless steel ferrule tip configurations available for high power laser delivery

Able to be sterilized through autoclave

Strain relief boots and dust caps available with medical grade material

Compatible with RFID Integrated Technology

## Specifications

Insertion Loss (Zirconia Ferrule): 128um to 144um ≤1.0dbB typical

Insertion loss (Stainless Steel): 128um to 144um ≤2.0dbB typical

Tolerance for Stainless Steel Ferrule Holes: 125um to 149um: +5/-0um

Tolerance for Stainless Steel Ferrule Holes: 150um to 249um: +5/-0um

Tolerance for Stainless Steel Ferrule Holes: 250um to 599um: +5/-0um

Tolerance for Stainless Steel Ferrule Holes: 600um to 2300um: +10/-10um

## Applications

Medical Specialty

Data Communications

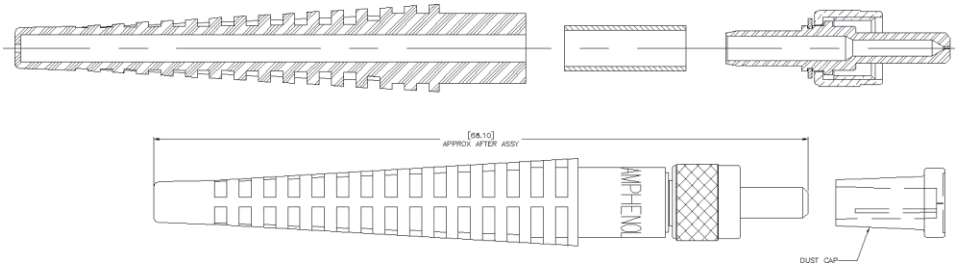
Industrial

Military

## Industry Compliance

RoHS compliant

Meets IEC 61754-22 International standard; Part 22 Type F-SMA connector




## Ordering Information

| Part Number | Description |
|---|---|
| 905-158-50170-P | 905 SMA TIGHT TOLERANCE CONNECTOR, 170µm |
| 905-158-50170HP | 905 SMA TIGHT TOLERANCE CONNECTOR, 170µm, HEX NUT |
| 905-158-50435-P | 905 SMA TIGHT TOLERANCE CONNECTOR, 435µm |
| 905-158-50435HP | 905 SMA TIGHT TOLERANCE CONNECTOR, 435µm, HEX NUT |
| 905-158-51600-P | 905 SMA TIGHT TOLERANCE CONNECTOR, 1600µm |
| 905-158-51600HP | 905 SMA TIGHT TOLERANCE CONNECTOR, 1600µm, HEX NUT |

*Please call customer service for additional configurations

# Plastic SMA

The Plastic SMA connector family utilizes a threaded coupling nut system for mating and de-mating. Available with only plastic ferrule/bodies with custom hole sizes, the SMA is an excellent choice for a robust, cost competitive and reliable system.

Amphenol's long standing history and development of the SMA product ensures exceptional quality and long term reliability.

We continue to support further development and improvement with our standard and custom product offe-rings.

Amphenol's long standing history and development of the SMA product ensures exceptional quality and long term reliability. We continue to support further development and improvement with our standard and custom product offerings.

## Features and Benefits

Plastic Ferrule/Bodies are available in custom precision optical hole sizes for specialized applications

Plastic connector has typical hole sizes of 1000um, 750um, 500um & 436um

Plastic connector can be ordered with Plastic or Stainless Steel Knurl Nut

## Specifications

Tolerance for Plastic Holes: 125um to 499um: +10/-0um

Tolerance for Plastic Holes: 500um to 1000um: +20/-0um

## Applications

| | |
|---|---|
| Plastic Optic Fiber | Medical Specialty |
| Data Communicatio | Industrial |

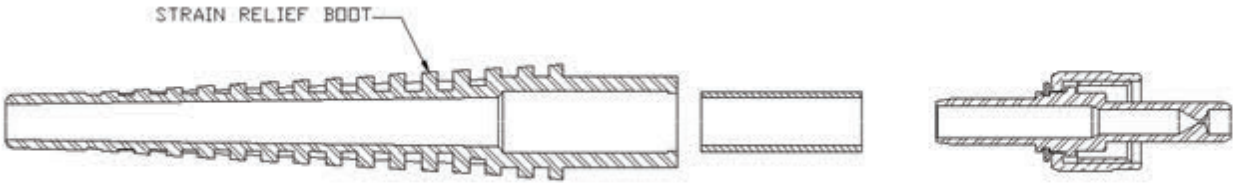
## Industry Compliance

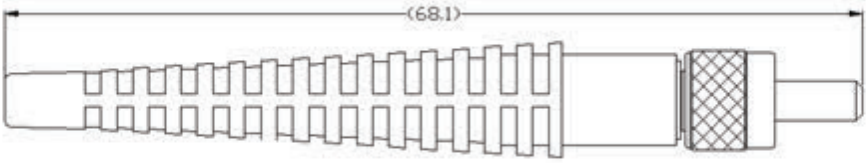
RoHS compliant

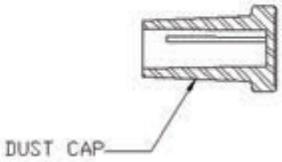
## Ordering Information

| Part Number | Description |
|---|---|
| 905-149-5001-P | 905 SMA PLASTIC, 1000µm, KNURL NUT |
| 905-149-5001HP | 905 SMA PLASTIC, 1000µm, HEX NUT |
| 905-149-5101-P | 905 SMA PLASTIC, 500µm, KNURL NUT |

*Please call customer service for additional configurations



# FiberGrip® SMA

The 905 SMA FiberGrip® Connector is a simple to use, epoxyless, interconnect solution for markets where High-Power Delivery is required.

This two-piece connector is designed as a safe and cost effective alternative that allows for efficient ease of use during termination.

Amphenol's 905 SMA FiberGrip® Connector is designed for high power applications.
The connector ferrule is made from stainless steel allowing the ferrule to act as a heat sink, pulling the heat quickly from the fiber, when used.

Damage threshold on these types of connectors will vary based on launch conditions and operational wavelength.The front body of the connector is a stainless steel ferrule that is designed with a custom, high-tolerance, application specific hole diameter. The rear body contains the proprietary fiber retention system designed to carefully secure the optical fiber, without the risk of damage, to the connector.

## Features and Benefits

Quick and Safe Epoxyless Termination

Designed for use with High Power Medical Laser Delivery Systems

Can withstand Autoclave and ETO Sterilization process

Custom Optical Fiber Hole Sizes and Ferrule Tip configurations

Strain relief boots and dust caps available with medical grade material

Compatible with RFID Integrated Technology

## Specifications

Tolerance for Stainless Steel Ferrule Holes: 125um to 149um: +5/-0um

Tolerance for Stainless Steel Ferrule Holes: 150um to 249um: +10/-0um

Tolerance for Stainless Steel Ferrule Holes: 250um to 1499um: +15/-0um

Tolerance for Stainless Steel Ferrule Holes: 1500um to 2300um: +25/-0um

Retention value is dependent upon the specific size and type of the optical fiber

Retention can reach values of 20 lb. and higher - Amphenol will determine retention values

## Applications

Medical Specialty

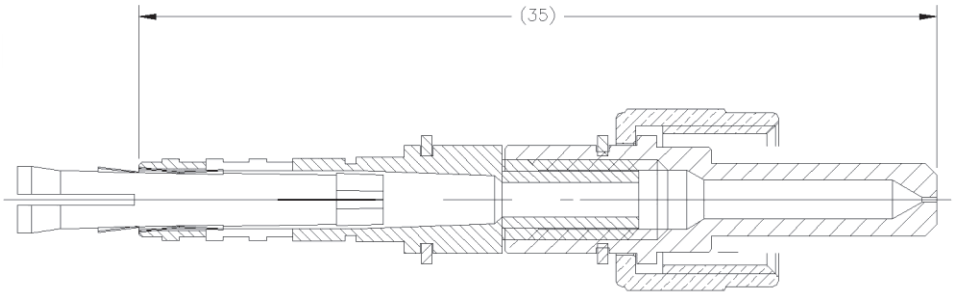
Data Communications

Industrial

Military

## Industry Compliance

RoHS compliant




## Ordering Information

| Part Number | Description |
|---|---|
| 905-40230-0270P | 905 FIBERGRIP SMA, 230µm, KNURL NUT |
| 905-40230-0270H | 905 FIBERGRIP SMA, 230µm, HEX NUT |
| 905-40640-1040P | 905 FIBERGRIP SMA, 640µm, KNURL NUT |
| 905-40640-1040H | 905 FIBERGRIP SMA, 640µm, HEX NUT |
| 905-41050-1400P | 905 FIBERGRIP SMA, 1050µm, KNURL NUT |
| 905-41050-1400H | 905 FIBERGRIP SMA, 1050µm, HEX NUT |

*Please call customer service for additional configurations

# Damage Resistant SMA

The 905 SMA Damage Resistant Connector is a simple to use interconnect solution for markets where high power delivery is required. Amphenol's Damage Resistant Connectors are designed for high power applications and utilize air gap ferrule technology.

The air gap ferrule technology eliminates energy absorbing materials near the fiber end face such as epoxies, connector materials, and coatings. The connector ferrules can be made of stainless steel, beryllium copper, or other customer specified material. The ferrule is used as a heat sink, pulling the heat quickly away from the fiber.

Damage threshold on these types of connectors will vary based on launch conditions and operational wavelength. Amphenol's accelerated design and development cycle allows for rapid response to the client's custom requirements. Amphenol Fiber Optic Products is dedicated to supporting each customer by providing exceptional quality and long-term reliability of the SMA connector.

## Features and Benefits

Stainless Steel Ferrules available in custom precision drilled optical fiber hole sizes for specialized applications

Custom stainless steel ferrule tip configurations available for high power laser delivery

Strain relief boots and dust caps available with medical grade material

Compatible with RFID Integrated Technology

## Specifications

Insertion loss (Stainless Steel): 128um to 144um ≤2.0dbB typical

Tolerance for Stainless Steel DR Ferrule Holes ≤128um +5/-0um

Tolerance for Stainless Steel DR Ferrule Holes 128 < D ≤ 460um: +10/-0um

Tolerance for Stainless Steel DR Ferrule Holes 460 < D ≤ 1200um: +15/-0um

## Applications

Medical Specialty

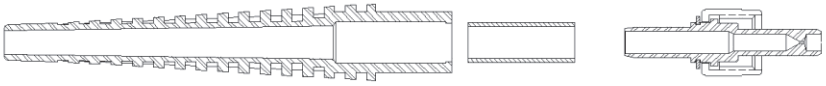
Data Communications

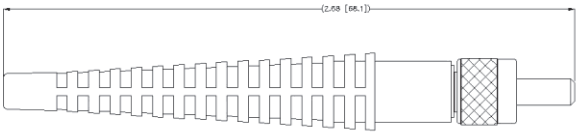
Industrial

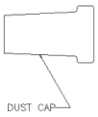
Military

## Industry Compliance

RoHS compliant








## Ordering Information

| Part Number | Description |
|---|---|
| 905-151-50128-P | 905 DR TIP SMA, 128µm, KNURL NUT |
| 905-151-50128HP | 905 DR TIP SMA, 128µm, HEX NUT |
| 905-151-50231-P | 905 DR TIP SMA, 231µm, KNURL NUT |
| 905-151-50231HP | 905 DR TIP SMA, 231µm, HEX NUT |
| 905-151-50445-P | 905 DR TIP SMA, 445µm, KNURL NUT |
| 905-151-50445HP | 905 DR TIP SMA, 445µm, HEX NUT |
| 905-151-50625-P | 905 DR TIP SMA, 625µm, KNURL NUT |
| 905-151-50625HP | 905 DR TIP SMA, 625µm, HEX NUT |

*Please call customer service for additional configurations

# Damage Resistant Tight Tolerance SMA

The 905 Tight Tolerance SMA Damage Resistant Connector is a simple to use interconnect solution for markets where high power delivery is required.

Amphenol's Damage Resistant Connectors are designed for high power applications and utilize air gap ferrule technology. The air gap ferrule technology eliminates energy absorbing materials near the fiber end face such as epoxies, connector materials, and coatings. The connector ferrules can be made of stainless steel, beryllium copper, or other customer specified material.

The ferrule is used as a heat sink, pulling the heat quickly away from the fiber. Damage threshold on these types of connectors will vary based on launch conditions and operational wavelength.

Amphenol's accelerated design and development cycle allows for rapid response to the client's custom requirements. Amphenol Fiber Optic Products is dedicated to supporting each customer by providing exceptional quality and long-term reliability of the SMA connector.

## Features and Benefits

Stainless Steel Ferrules available in custom precision drilled optical fiber hole sizes for specialized applications

Custom stainless steel ferrule tip configurations available for high power laser delivery

Can withstand Autoclave and ETO Sterilization process

Strain relief boots and dust caps available with medical grade material

Compatible with RFID Integrated Technology

## Specifications

Insertion loss (Stainless Steel): 128um to 144um ≤2.0dbB typical

Tolerance for Stainless Steel DR Ferrule Holes ≤128um +5/-0um

Tolerance for Stainless Steel DR TT Ferrule Holes: 128 < D ≤ 599um: +5/-0um

Tolerance for Stainless Steel DR TT Ferrule Holes: 600 < D ≤ 1200um: +10/-0um

## Applications

Medical Specialty

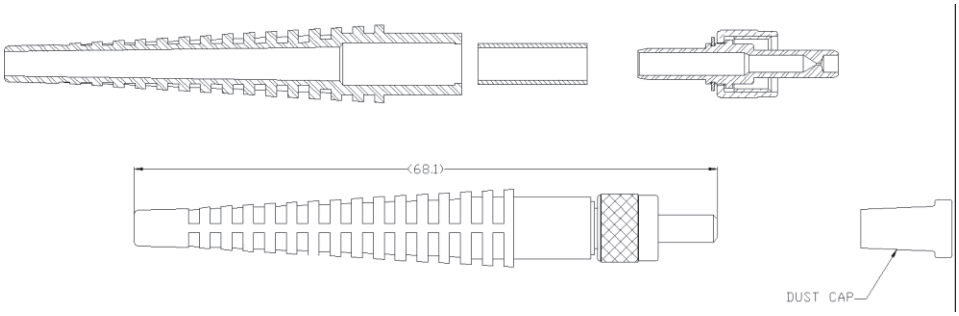
Data Communications

Industrial

Military

## Industry Compliance

RoHS compliant




## Ordering Information

| Part Number | Description |
|---|---|
| 905-189-50128-P | 905 DR TIGHT TOLERANCE, 128µm, SMA CONNECTOR |
| 905-189-50128HP | 905 DR TIGHT TOLERANCE, 128µm, HEX, SMA CONNECTOR |
| 905-189-50445-P | 905 DR TIGHT TOLERANCE, 445µm, SMA CONNECTOR |
| 905-189-50445HP | 905 DR TIGHT TOLERANCE, 445µm, HEX, SMA CONNECTOR |
| 905-189-50625-P | 905 DR TIGHT TOLERANCE, 625µm, SMA CONNECTOR |
| 905-189-50625HP | 905 DR TIGHT TOLERANCE, 625µm, HEX, SMA CONNECTOR |

*Please call customer service for additional configurations

# DR Beryllium Copper FiberGrip® SMA

The 905 SMA Damage Resistant Beryllium Copper FiberGrip® Connector is a simple to use, epoxyless, interconnect solution for markets where High-Power Delivery is required.

This two-piece connector is designed as a safe and cost effective alternative that allows for efficient ease of use during termination. Amphenol's 905 SMA Damage Resistant Beryllium Copper FiberGrip® Connector is designed for high power applications and utilizes air gap ferrule technology. The air gap ferrule technology eliminates energy absorbing materials near the fiber end epoxies, connector materials and coatings.

The connector ferrules is made from Beryllium Copper allowing the ferrule to act as a heat sink, pulling the heat quickly away from the fiber, when used. Damage threshold on these types of connectors will vary based on launch conditions and operational wavelength. The front body of the connector is a Beryllium Copper ferrule that is designed with a custom, high-tolerance, application-specific hole diameter.

## Features and Benefits

- Quick and Safe Epoxyless Termination
- Designed for use with High Power Medical Laser Delivery Systems
- Can withstand Autoclave and ETO Sterilization process
- Custom Optical Fiber Hole Sizes and Ferrule Tip configurations
- Strain relief boots and dust caps available with medical grade material
- Compatible with RFID Integrated Technology

## Specifications

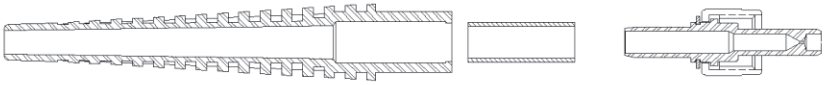
- Tolerance for Beryllium Copper Ferrule Holes: 125um to 149um: +5/-0um
- Tolerance for Beryllium Copper Ferrule Holes: 150um to 249um: +10/-0um
- Tolerance for Beryllium Copper Ferrule Holes: 250um to 1499um: +15/-0um
- Tolerance for Beryllium Copper Ferrule Holes: 1500um to 2300um: +25/-0um
- Retention value is dependent upon the specific size and type of the optical fiber
- Retention can reach values of 20 lb. and higher - Amphenol will determine retention values

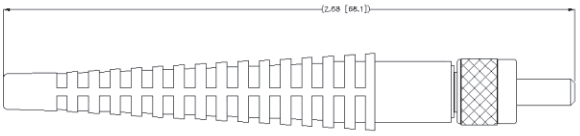
## Applications

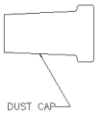
- Medical Specialty
- Data Communications
- Industrial
- Military

## Industry Compliance

- RoHS compliant








## Ordering Information

| Part Number | Description |
|---|---|
| 905-20270-0400L | CONN, SMA, 270/440µm, FG, BERY COPPER DAM RES |
| 905-20630-0950L | CONN, SMA, 630/750µm, FG, BERY COPPER DAM RES |
| 905-21050-1400L | CONN, SMA, 1050/1400µm, FG, BERY COPPER DAM RES |

*Please call customer service for additional configurations

# Damage Resistant FiberGrip® SMA

The 905 SMA Damage Resistant FiberGrip® Connector is a simple to use, epoxyless, interconnect solution for markets where High-Power Delivery is required. This two-piece connector is designed as a safe and cost effective alternative that allows for efficient ease of use during termination.

Amphenol's Damage Resistant FiberGrip® Connector is designed for high power applications and utilizes air gap ferrule technology. The air gap ferrule technology eliminates energy absorbing materials near the fiber end face such as epoxies, connector materials, and coatings. The connector ferrules can act as a heat sink pulling the heat quickly away from the fiber.

Damage threshold on these types of connectors will vary based on launch conditions and operational wavelength. The front body of the connector is a ferrule that is designed with a custom, high-tolerance, application specific hole diameter. Stainless steel, beryllium copper, or other customer specified material.

## Features and Benefits

- Quick and Safe Epoxyless Termination
- Designed for use with High Power Medical Laser Delivery Systems
- Can withstand Autoclave and ETO Sterilization process
- Custom Optical Fiber Hole Sizes and Ferrule Tip configurations
- Strain relief boots and dust caps available with medical grade material
- Compatible with RFID Integrated Technology

## Specifications

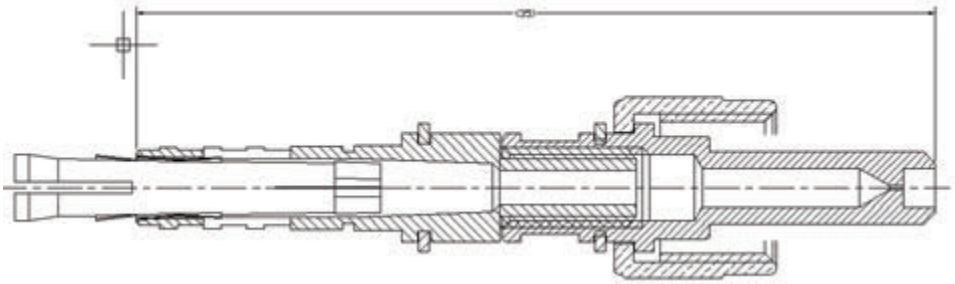
- Tolerance for Stainless Steel Ferrule Holes: 125um to 149um: +5/-0um
- Tolerance for Stainless Steel Ferrule Holes: 150um to 249um: +10/-0um
- Tolerance for Stainless Steel Ferrule Holes: 250um to 1499um: +15/-0um
- Tolerance for Stainless Steel Ferrule Holes: 1500um to 2300um: +25/-0um
- Retention value is dependent upon the specific size and type of the optical fiber
- Retention can reach values of 20 lb. and higher - Amphenol will determine retention values

## Applications

- Medical Specialty
- Data Communications
- Industrial
- Military

## Industry Compliance

- RoHS compliant



## Ordering Information

| Part Number | Description |
|---|---|
| 905-20230-0270P | 905 FIBERGRIP SMA, 230µm, KNURL NUT |
| 905-20230-0270H | 905 FIBERGRIP SMA, 230µm, HEX NUT |
| 905-20640-1040P | 905 FIBERGRIP SMA, 640µm, KNURL NUT |
| 905-20640-1040H | 905 FIBERGRIP SMA, 640µm, HEX NUT |
| 905-21050-1400P | 905 FIBERGRIP SMA, 1050µm, KNURL NUT |
| 905-21050-1400H | 905 FIBERGRIP SMA, 1050µm, HEX NUT |

*Please call customer service for additional configurations

# Beryllium Copper FiberGrip® SMA

The 905 SMA Beryllium Copper FiberGrip® Connector is a simple to use, epoxyless, interconnect solution for markets where High-Power Delivery is required. This two-piece connector is designed as a safe and cost effective alternative that allows for efficient ease of use during termination.

Amphenol's 905 SMA Beryllium Copper FiberGrip® Connector is designed for high power applications. The connector ferrule is made from Beryllium Copper allowing the ferrule to act as a heat sink, pulling the heat quickly away from the fiber, when used.

Damage threshold on these types of connectors will vary based on launch conditions and operational wavelength. The front body of the connector is a Beryllium Copper ferrule that is designed with a custom, high-tolerance, application specific hole diameter.

## Features and Benefits

- Quick and Safe Epoxyless Termination
- Designed for use with High Power Medical Laser Delivery Systems
- Can withstand Autoclave and ETO Sterilization process
- Custom Optical Fiber Hole Sizes and Ferrule Tip configurations
- Strain relief boots and dust caps available with medical grade material
- Compatible with RFID Integrated Technology

## Specifications

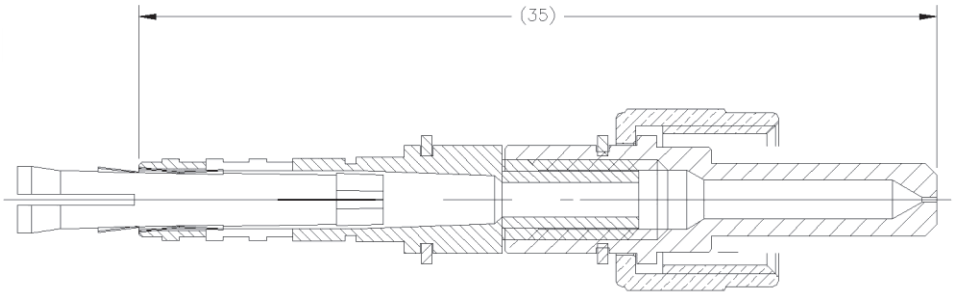
- Tolerance for Beryllium Copper Ferrule Holes: 125um to 149um: +5/-0um
- Tolerance for Beryllium Copper Ferrule Holes: 150um to 249um: +10/-0um
- Tolerance for Beryllium Copper Ferrule Holes: 250um to 1499um: +15/-0um
- Tolerance for Beryllium Copper Ferrule Holes: 1500um to 2300um: +25/-0um
- Retention value is dependent upon the specific size and type of the optical fiber
- Retention can reach values of 20 lb. and higher - Amphenol will determine retention values

## Applications

- Medical Specialty
- Data Communications
- Industrial
- Military

## Industry Compliance

- RoHS compliant




## Ordering Information

| Part Number | Description |
|---|---|
| 905-40230-0270L | CONN, SMA, 230/270µm, FG, BERY COPPER, KNURL |
| 905-40640-1040L | CONN, SMA, 640/1040µm, FG, BERY COPPER, KNURL |
| 905-41050-1400L | CONN, SMA, 1050/1400µm, FG, BERY COPPER, KNURL |

*Please call customer service for additional configurations

# Custom Damage Resistant Assemblies

Amphenol's 907 Custom Damage Resistant Cable assemblies are designed for high power applications and utilize air gap ferrule technology.
The air gap ferrule technology eliminates energy absorbing materials near the fiber end face such as epoxies, connector materials and coatings.
The connector ferrules can be made of stainless steel, beryllium copper, or other customer specified material. The ferrule is used as a heat sink, pulling the heat quickly away from the fiber. Damage threshold on these types of connectors will vary based on launch conditions and operational wavelength.

## Features and Benefits

Custom designed SMA connector available on request

Amphenol is capable of designing and producing an entire "end-to-end" assembly solution, from connector to connector

Amphenol's accelerated design and development cycle, allows for quick response to the customer needs, when time is limited

Rapid ramp-up production method, allows Amphenol to swiftly support production when demand is greater than customer's current production capabilities

Can withstand Autoclave and ETO Sterilization process

## Specifications

Multimode IL:
≤0.35dB Typical;
<0.75dB Max.

Singlemode IL:
≤0.35dB Typical
<0.75dB Max.

Return Loss:
≤-45dB

Operating Temperature:
-40° to 85°C

Durability:
>50 mating cycles

## Applications

Medical Specialty

Data Communications

Industrial

Military

## Industry Compliance

RoHS compliant

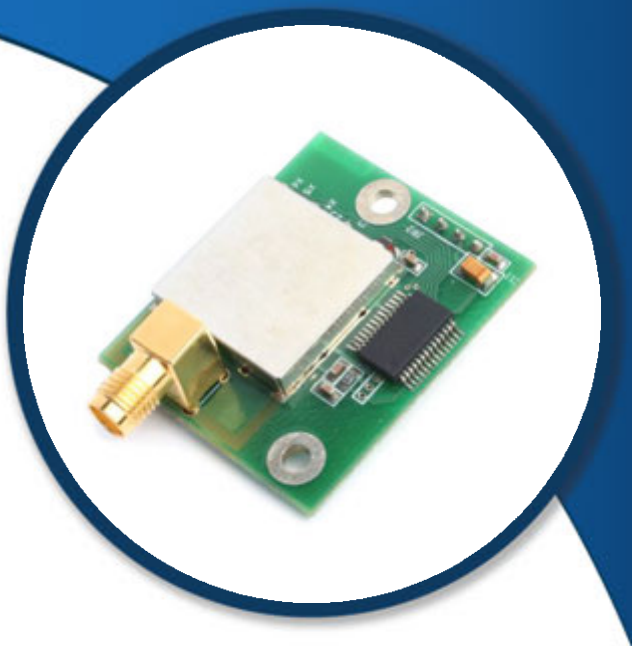
## Ordering Information

*Please call customer service for additional configurations

| Part Number | Description |
|---|---|
| 907-99999-00303 | SMA PIGTAIL, DR, BERY COPPER 200/240/260/400µm, 1.2M |
| 907-99999-00310 | SMA JUMPER, DAM RES, 550/600µm, W/SS TUBING, 2M |

# Amphenol
## FIBER OPTIC PRODUCTS

# Amphenol Secure Reader (ASR)



Amphenol Fiber Optic Products has combined the state-of-the-art technology of Radio Frequency Identification (RFID) with industry leading connectors to develop the Amphenol Secure Connector (ASC) product line. This combination provides our customers with the ability to control and direct the use of their laser delivery systems and assemblies in a safe manner.

The ASC product line allows OEMs to protect their product and market share by securely programming individual serialization and critical data into the read/write memory of the RFID Tag. Each ASC system is designed to meet the client's specific application.

## Features and Benefits

Brand Protection: Ensures that only OEM qualified products are used and not competitors'

Licensing: Allows the ability to actively control and monitor companies that are licensing product

Validation: ASC system determines that the assemblies and systems are valid and used correctly for application

Security: Encryption is available to secure customer sensitive information from reaching the public

Customizable: Entire systems are designed to meet the client's individual specifications

## Specifications

Radio Frequency Transmitted: 13.56 ± .007 MHz or 125 ± 6.25KHz

Radio Frequency Wave Power: 100mW Maximum

RFID Antenna Read Range: Approximately 1 inch

RFID Transceiver Communication Interface: USB, RS-232, RS-485 and TTL Compatible

Operating Voltage:
5V to 25V Standard

Operating Temperature:
0° to +65°C

Current Consumption:
150mA Maximum

## Applications

Medical Specialty

Data Communications

Industrial

## Industry Compliance

RoHS compliant

## Ordering Information

*Please call customer service for additional configurations

| Part Number | Description |
|---|---|
| 927-2167 | RFID SECURE READER PCB ASSEMBLY WITH COAX SMC |
| 927-2265 | RFID SECURE READER PCB ASSEMBLY WITH COAX SMC |

# Secure Connectors

Amphenol Fiber Optic Products has combined the state-of-the-art technology of Radio Frequency Identification (RFID) with industry leading connectors to develop the Amphenol Secure Connector (ASC) product line.
This combination provides our customers with the ability to control and direct the use of their laser delivery systems and assemblies that are in the market in a safe manner.

The ASC product line allows OEMs to protect their product and market share by securely programming individual serialization and critical data into the read/write memory of the RFID Tag.

## Features and Benefits

Brand Protection: Ensures that only OEM qualified products are used and not competitors'

Licensing: Allows the ability to actively control and monitor companies that are licensing product

Validation: ASC system determines that the assemblies and systems are valid and used correctly for application

Security: Encryption is available to secure customer sensitive information from reaching the public

Customizable: Entire systems are designed to meet the client's individual specifications

## Specifications

RFID Transponder Tag: Operating Frequency 125KHz to 13.56 MHz

RFID Programmable Memory: Up to 256 Byte

RFID Antenna Read Range: Approximately 1 inch

RFID Transceiver Communication Interface: USB, RS-232, RS-485 and TTL Compatible

Operating Voltage:
8 - 25V Standard

Operating Temperature:
0° to +85°C

Power Consumption:
100mW Maximum

## Applications

Medical Specialty

Data Communications

Industrial

## Industry Compliance

RoHS compliant

## Ordering Information

*Please call customer service for additional configurations

| Part Number | Description |
|---|---|
| 905-700-5000 | RFID SECURE CONN, WITH BLACK CAP & SIDES AND BOOT |
| 905-700-5331 | RFID SECURE CONN, WITH BLUE CAP & SIDES AND WHITE BOOT |

# SMA Adapters

Amphenol Fiber Optic Products was a pioneer in developing the first industry standard fiber optic inconnect system by introducing the SMA Connector as well as our 905 Series SMA Adapters.

Together they were the first fiber optic interconnect system to gain industry wide acceptance. Today Amphenol Fiber Optic Products continues to support these markets with a wide variety of SMA accessories.

The SMA adapters are made of Nickel Plated Brass and Stainless Steels options. Amphenol Adapters come in the following options: (1) standard Bulkhead D-Hole Feed through adapter, (2) In-line Adapter with chain.

Amphenol's long standing history and development of the SMA product ensures exceptional quality and long term reliability. We continue to support further development and improvement with our standard and custom product offerings.

## Features and Benefits

Reliable, robust and time tested as one of the first industry stabndard fiber optic interface.

Threaded metal coupling nut for maximum retention

Available with knurl or hexagonal coupling nut upon request

Optional precision machined stainless ste

## Specifications

Nickel Plated Brass

Bulkhead feed through

Jack to Jack; in-line with nuts & washers

Optional environmentally sealed

Dust cap: vinyl

## Applications

Medical Specialty

Data Communicatio

## Industry Compliance

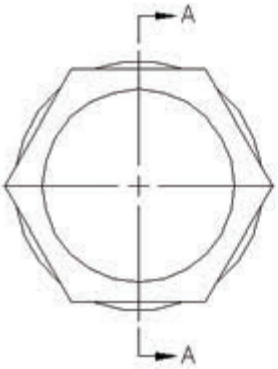
RoHS compliant

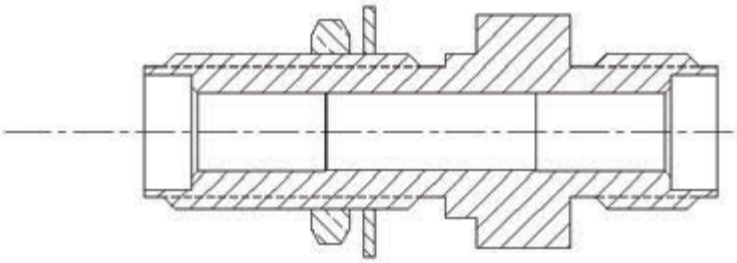
Meets IEC 61754-22 standard

## Ordering Information

| Part Number | Description |
|---|---|
| 905-120-5000 | SMA ADAPTER, STANDARD |
| 905-120-5008 | SMA ADAPTER, SEALED |
| 905-120-5004 | SMA ADAPTER, HALF LENGTH |

*Please call customer service for additional configurations



# SMA Coupling Nut (Quad Thread)

Amphenol Fiber Optic Products was a pioneer in developing the first industry standard fiber optic interconnect system by introducing the SMA Connector. The 905 series was the first fiber optic interconnect system to gain industry wide acceptance for Medical, Military, Industrial and Data Communications.

Today Amphenol Fiber Optic Products continues to support these markets with a wide variety of standard and custom SMA connectors and accessories.

The SMA connector family utilizes a threaded coupling nut system for mating and de-mating. The SMA Quad Thread coupling nut is an excellent choice for mating and locking SMA connectors to laser equipment.

Amphenol's long standing history and development of the SMA product ensures exceptional quality and long term reliability. We continue to support further development and improvement with our standard and custom product offerings.

## Features and Benefits

Precision Machined Stainless Steel Knurl Nut

Threaded metal coupling nut for maximum retention

Can withstand Autoclave and ETO Sterilization process

## Specifications

Raised Diamond Etching

Front OD; 8mm (.314"): Length 7mm (.275"): Rear OD; 7.5mm (.295")

## Applications

Medical Specialty

Data Communications

Industrial

Military

## Industry Compliance

RoHS compliant

Conform to TIA/EIA

## Ordering Information

| Part Number | Description |
|---|---|
| 905-5385 | SMA COUPLING NUT, QUAD THREAD |

*Please call customer service for additional configurations

# SMA Coupling Nuts

The 905 SMA series connectors were the first fiber optic interconnect system to gain industry wide acceptance for Medical, Military, Industrial and Data Communications.

Amphenol Fiber Optic Products continues to support these markets with a wide variety of SMA coupling nut options. Amphenol has developed a complete line of coupling nuts to be used with our SMA connectors.

Amphenol has standardized on two types of coupling nuts, a knurl and hex nut. Coupling nuts are made from nickel plated brass, stainless steel or plastic based on customer preference.

The typical knurl nut has a thread of 1/4 x 36 UNS 2B, which is the bais of all coupling nuts. The knurl nuts can be ordered separetely.

## Features and Benefits

Precision Machined Stainless Steel Knurl Nuts for Specialized Applications

Threaded metal coupling nuts for maximum retention

Can withstand Autoclave and ETO Sterilization process

## Specifications

Typical ¼ x 36 2B threads

Standard Nickel Plated Brass

Typical .312” Hexagonal OD

Typical .312” Knurl OD

Raised Diamond Etching

.35 dB typical, M/M

## Applications

Medical Specialty

Data Communications

## Industry Compliance

RoHS compliant

Meets IEC 61754-22 standard

## Ordering Information

| Part Number | Description |
|---|---|
| 905-5080-C-P | SMA COUPLING NUT, HEX, LOGO, BULK PACK |
| 905-5191-P | SMA COUPLING NUT, KNURL, BULK PACK |
| 905-5296-P | SMA COUPLING NUT, KNURL, TIGHT TOLERANCE |
| 905-5377 | SMA COUPLING NUT, STRAIGHT KNURL, TIGHT TOLERANCE |

*Please call customer service for additional configurations

# SMA Overnuts

Amphenol's accelerated design and development cycle allows for rapid response to the client's custom requirements.

Amphenol Fiber Optic Products is dedicated to supporting each customer by providing exceptional quality and long-term reliability of the SMA connector features.

Amphenol's long standing history and development of the SMA product ensures exceptional quality and long term reliability.

We continue to support further development and improvement with our standard and custom product offerings in a variety of options.

## Features and Benefits

Customizable Design: Entire system are designed to meet client's individual specifications.

Available in 1piece or 2 piece design

Support a variety of colors

Supplied with or without RFID tags

Can withstand Autoclaving and ETO sterilization

## Specifications

Based on clients individual needs

Typically designed in Crystalline Plastic (Delrin)

## Applications

Medical Specialty

Data Communications

## Industry Compliance

RoHS compliant

Meets IEC 61754-22 standard

## Ordering Information

| Part Number | Description |
|---|---|
| 905-600-1007 | SMA OVERNUT, W/SLEEVE AND BUSHING |
| 905-600-1002 | SMA OVERNUT, W/SLEEVE AND BUSHING |
| 905-700-5000 | SMA OVERNUT, ASSEMBLY |
| 927-1720-11 | SMA OVERNUT, LONG NOSE |

*Please call customer service for additional configurations

# SMA Boots

Amphenol Fiber Optic Products was a pioneer in developing the first industry standard fiber optic inconnect system by introducing the SMA Connector. In addition, to join the SMA Connector we have developed a series of strain relief options for our customers.

Amphenol's long standing history and development of the SMA product ensures exceptional quality and long term reliability.
We continue to support further development and improvement with our standard and custom product offerings.

## Features and Benefits

- Multiple colors
- Passes ETO Sterilization
- Medical Class VI SMA Boots

## Specifications

- Santoprene material
- 3mm Rear Boot ID
- 2mm Rear Boot ID
- 900um Rear Boot ID
- 500um Rear Boot ID

## Applications

- Medical Specialty
- Data Communications

## Industry Compliance

- RoHS compliant

## Ordering Information

*Please call customer service for additional configurations

| Part Number | Description |
|---|---|
| 905-5100-01-P | SMA BOOT, BLACK, NO LOGO, BULK PACK |
| 905-5215-8-MD-P | SMA BOOT, 64 MED CL. VI. FG, NO CRIMP SM END, BULK PACK |

# SMA Dust Caps

The 905 SMA series connectors were the first fiber optic interconnect system to gain industry wide acceptance for Medical, Military, Industrial and Data Communications. Amphenol Fiber Optic Products continues to support these markets with a wide variety of SMA dust cap options.

Amphenol's long standing history and development of the SMA product ensures exceptional quality and long term reliability.
We continue to support further development and improvement with our standard and custom product offerings.

## Features and Benefits

- Amphenol Logo or without logo
- Multiple colors
- Comes with or without Tether Loop
- Comes with or without Slit
- Passes ETO Sterilization
- Medical Class VI  Dust Cap
- Stainless Steel Dust Cap

## Specifications

- Typical 3.25 mm ID
- Typical length 13.5mm
- Tether Loop 105mm
- Santoprene material

## Applications

- Medical Specialty
- Data Communications

## Industry Compliance

- RoHS compliant

## Ordering Information

*Please call customer service for additional configurations

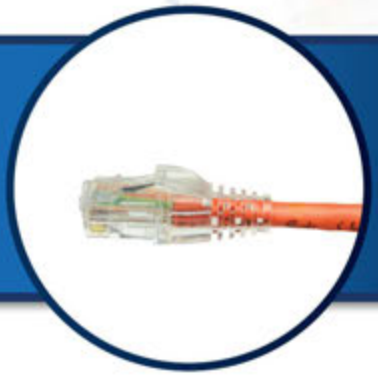
| Part Number | Description |
|---|---|
| 905-5173-01-P | SMA DUST CAP, NO TETHER, SLIT, NO LOGO, BLACK |
| 905-5309-01-07P | SMA DUST CAP, NO TETHER, SLIT, NO LOGO, RED |

# CATEGORY PRODUCTS

Twisted pair products continue to be an essential part of all networks. Amphenol's Category Products are designed to support increased patch panel density in telecom and premise wiring applications. This modular cabling platform supports network applications such as Gigabit Ethernet, Voice over Internet Protocol (VoIP), and Power over Ethernet (PoE).

Amphenol's Category Products allow a connection migration path from legacy networks to state of the art Data Center and telecom connectivity.

From standard patch cords to customer specific harnesses, Amphenol provides the expertise and reliability needed for all the mission critical connectivity projects.



# PRODUCT TYPE

CAT Cables ..... 167
CAT Patch Panel ..... 169

*Connecting People and Technology*

# CAT Cables

Amphenol Category patch cords are designed for ease of use in Data Center applications.

Amphenol's narrow plug design works well in high density panels, and the strain relief assembly with an anti-snag device protects the locking clip and makes installation simple.

Patch cords are compliant to industry standard ANSI/TIA-568-C.2.

Copper cables are available in UL recognized CM jacket, or a combination.

Copper patch cords are available in CAT5e, CAT6 and CAT6A.

## Features and Benefits

CM, Low Smoke Zero Halogen or Dual Rated

Multiple boot color options

Kitting solutions available

Available in Shielded or Unshielded

Variety of Jacket Colors

Easy RJ45 coupling mechanism enables quick installation and the audible click signifies when connected

Pull proof design prevents signal interruption

CM, Low Smoke Zero Halogen or Dual Rated

## Specifications

24 AWG to 26 AWG

Temperature:
-20 to +75°C

Durability:
>200 mating cycles

## Applications

Data Communications

MAN and WAN

SAN and Data Centers

LAN

Data Centers

## Industry Compliance

RoHS compliant

## Ordering Information

| Part Number | Description |
|---|---|
| CAT-5140U1-1005 | JMPR, CAT 5E,W/ANTI-SNAG BOOTS, 5M |
| CAT-5904U0-1007 | JUMPER, CAT 5E UNSHIELDED, 7M |
| CAT-6100UB-1001 | ASSY, CAT6 UNSHIELDED 4PR BLUE, 1M |
| CAT-6140U1-1005 | JMPR, CAT 6,W/ANTI-SNAG BOOTS, 5M |
| CAT-6150U1-1005 | JMPR, CAT 6A,W/ANTI-SNAG BOOTS, 5M |
| CAT-6160U1-4005 | ASSY, CAT 6 UNSHIELDED, GREEN, 5M |

*Please call customer service for additional configurations

# CAT Patch Panel

Amphenol snap-in type UTP and 10G FTP patch panels are designed for your customized cabling solution.

Keystone connectors can be selected to snap into the panel as required.

A staggered rear cable management on the 10G patch panel helps to minimize alien cross talk and achieve optimum 10G performance.

## Features and Benefits

Available with blanking panels for ease of upgrade

Modular design allows for custom configurations

Rack mounted unloaded patch panels

Standard size for mounting in 19” racks and cabinet

Window style label strips with outlet numbers

Integral cable management in rear

Modern design and simplicity of mounting

Numerical marking of ports on t

## Specifications

Durable heavy gauge steel powder coated for protection

Metal housing with 1.5mm thick steel

UL 94V0 rated front mounting on UTP panel

## Applications

Data Communications

MAN and WAN

SAN and Data Centers

LAN

## Industry Compliance

RoHS compliant

## Ordering Information

*Please call customer service for additional configurations

| Part Number | Description |
|---|---|
| CAT-P601-001 | CAT 5e/6 PATCH PANEL, 24 PORTS, 1RU, 19", UNLOADED |
| CAT-P602-001 | CAT 5e/6 PATCH PANEL, 48 PORTS, 2RU, 19", UNLOADED |

# Amphenol
## FIBER OPTIC PRODUCTS

# ACCESSORIES

**For more than 40 years, Amphenol Fiber Optic Products has enabled customers around the globe to deliver innovative high technology equipment by closely collaborating through all phases of product development.**

Amphenol Fiber Optic Products manufactures all optical accessories and collaborates with partners to develop the best accessories that provide the right fit.

Our accessories are manufactured to the highest quality standards, and tested to provide the right fit for the proper installation and support of our connectivity solutions.

# PRODUCT TYPE


Loopbacks ..... 173
Snap-ins ..... 175
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Feeder Clamps ..... 175
Pulling Grips ..... 176
Weatherproofing Kits ..... 176
Grounding Kits ..... 176
Connector Cleaning ..... 177
Torque Wrench ..... 177
Cable Clamp for FMS ..... 177


*The Right Fit*

# Loopbacks

Loopback plugs are used for network diagnostics, system configuration testing, and device burn-in. Looping back the signal allows for testing of the optical network.

MPO loopbacks are offered with 8, 12, and 24 fiber options in a compact footprint. Straight, crossed, or QSFP pin-outs are available.

Loopbacks are available in multiple fiber types; LC and MPO loopbacks are offered with applicable fiber and polish type colored housings.

Singlemode loopbacks are available with or without added attenuation.

## Features and Benefits

Available in a wide variety of wiring configurations and fiber types

Customized attenuation available

Compact and portable with lanyard feature

2F and 24F available

Available with or without Pull tabs

## Specifications

Insertion Loss:
LC Loopback:
SM : ≤ .5dB
MM: ≤.5dB

MPO Loopback:
SM: ≤ 1.5dB
MM: ≤ 1.0dB

2dB<"W" ≤5dB Attenation: W+/-1dB where W is attenuation value

Operating Temperature:
-40 to +75°C

## Applications

Data Centers

IT/Datacom

## Industry Compliance

RoHS compliant

Connectors comply to applicable TIA/EIA and IEC intermateability standards

## Ordering Information

| Part Number | Description |
|---|---|
| 956-353-511511 | LOOPBACK, LC, SM, 4dB, BLUE |
| 956-353-511011 | LOOPBACK, LC-F, SM, BLUE |
| 956-353-53301C | LOOPBACK, LC-F,OM3, AQUA |
| 955-5500-110183 | LOOPBACK, MPO/APC, 12F, S/M, GREEN |
| 955-5500-310183 | LOOPBACK, MPO/APC, 12C, 8F, STD 3, GREEN |
| 955-5500-33018C | LOOPBACK, MPO, 12C, 8F, OM3, STD 3, AQUA |
| 955-5500-63018C | LOOPBACK, MPO, 24F, OM3, STD 1, AQUA |

*Please call customer service for additional configurations

# Accessories

## Snap-ins

Amphenol offers a selection of snap-in hangers for site installations of hybrid, fiber or power outdoor cables.

| Part Number | Description |
|---|---|
| 927-2939 | HANGER, SNAP-IN, 7/8" |
| 927-2940 | HANGER, SNAP-IN, 1-1/4" |
| 927-2965 | HANGER, SNAP-IN, 1/2" |
| 927-3416 | HANGER, SNAP-IN, 2-1/4" |

*Please call customer service for additional configurations

## Grommets

Amphenol's grommets/barrel cushions fit all available snap-in hangers and are made with high quality EPDM.

| Part Number | Description |
|---|---|
| 927-2938 | GROMMET, FOR 1-1/4" HANGER |
| 927-3015 | GROMMET, FOR 7/8" HANGER |
| 927-3107 | GROMMET, FOR 1-5/8" HANGER |
| 927-2937 | GROMMET, CUSHION INSERT |

*Please call customer service for additional configurations

## Feeder Clamps

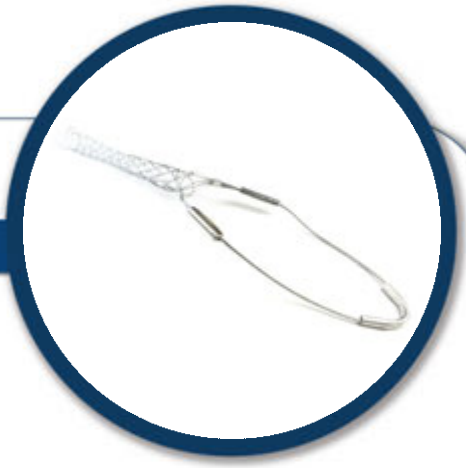
Amphenol offers reliable feeder clamps for wireless and telecom cable installations.

| Part Number | Description |
|---|---|
| 927-3020 | CLAMP 2X1/2IN - 10-Pack |
| 927-3021 | CLAMP 4X1/2IN. - 10-Pack |
| 927-3022 | CLAMP 6X1/2IN. - 10-Pack |

*Please call customer service for additional configurations

## Pulling Grips

Amphenol offers a wide variety of grips for low-tension pulling of outside plant cable.



| Part Number | Description |
|---|---|
| 927-2881-12 | CABLE GRIP METAL, W/LOOP, 1/2", PRE-LAC |
| 927-2881-78 | CABLE GRIP METAL, W/LOOP, 7/8",PRE-LAC |
| 927-2881-114 | CABLE GRIP METAL, W/LOOP, 1-1/4", PRE-L |

*Please call customer service for additional configurations

## Weatherproofing Kits

Amphenol's weatherproofing kits provide a reliable, long-term environmental seal for outdoor cable installations.

| Part Number | Description |
|---|---|
| 927-3019 | KIT, UNIVERSAL WEATHERPROOFING |

*Please call customer service for additional configurations

## Grounding Kits

Amphenol offers a wide range of grounding kits for hybrid and power cable installation.

| Part Number | Description |
|---|---|
| 927-2882-12 | GROUNDING KIT FOR 1/2" cable, 60" PIGTAIL |
| 927-2882-114 | GROUNDING KIT FOR 1/-1/4" cable, 60" PIGT |
| 927-2882 | UNIVERSAL GROUNDING KIT FOR 1/2" THR |

*Please call customer service for additional configurations

# Accessories

## Connector Cleaning

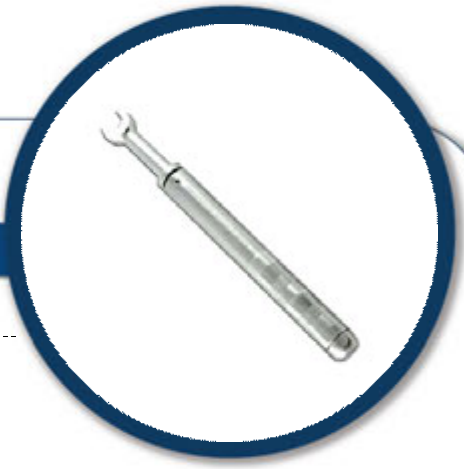
Amphenol offers a wide variety of cleaning tools for all types of optical connectors.

| Part Number | Description |
|---|---|
| 927-2734-P | LC DUPLEX CLEANING TOOL |
| 927-2481-P | MPO CLEANING TOOL |
| 927-2486-P | LC CLEANING TOOL |
| 927-2733-P | MPO(F), LC, SC, ST, and FC CLEANING TOOL |

*Please call customer service for additional configurations

## Torque Wrench

Amphenol supplies a specialized tool (torque wrench) for AARC connector installation.

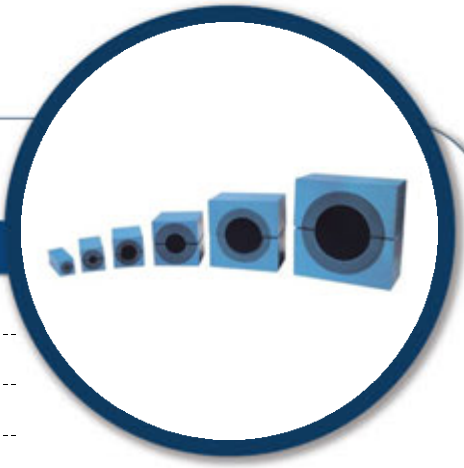


| Part Number | Description |
|---|---|
| 927-3039 | WRENCH, TORQUE, AARC |

*Please call customer service for additional configurations

## Cable Clamp for FMS

Amphenol's Cable Clamp provides a unique method for securing fiber optic cables on its FMS product line.



| Part Number | Description |
|---|---|
| 948-100-5210 | CABLE CLAMP 4-13.5mm |
| 948-100-5211 | CABLE CLAMP 12-22mm |
| 948-100-5212 | CABLE CLAMP 22-32mm |
| 948-100-5213 | CABLE CLAMP 4-13.5mm |

*Please call customer service for additional configurations

# Amphenol
## FIBER OPTIC PRODUCTS

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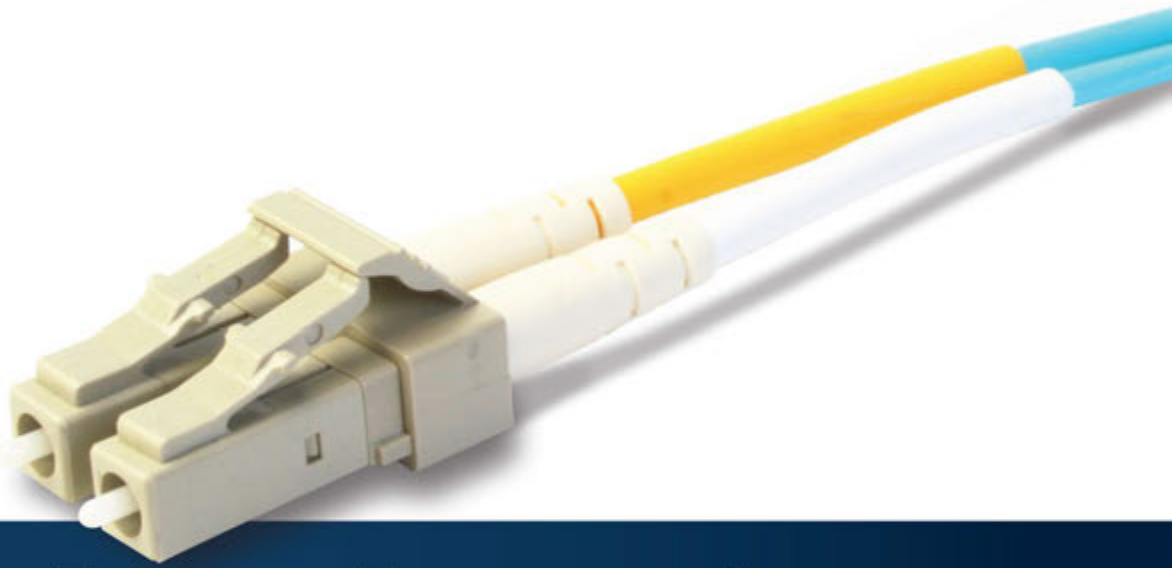

# Amphenol
## FIBER OPTIC PRODUCTS

ООО «ЛайфЭлектроникс» “LifeElectronics” LLC

ИНН 7805602321 КПП 780501001 Р/С 40702810122510004610 ФАКБ "АБСОЛЮТ БАНК" (ЗАО) в г.Санкт-Петербурге К/С 30101810900000000703 БИК 044030703

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