

Component Guide



Premises Distribution System Component Guide

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About This Guide

This guide describes all the components that have been tested and approved for the AT&T Premises Distribution System (PDS). These components have been divided into two categories. Those designated in the table of contents with an asterisk (*) will be used for the majority of PDS installations, and will be referred to as the **core components**. The other components, referred to as the **optional components**, are essential to some systems but are less commonly used than the core components.

The guide itself is divided into six sections, corresponding to the six PDS component families:

- **Transmission media** includes a variety of cords and cables, both wire and fiber, for transmitting voice, data, and other communications signals.
- **Closures, cross connects, and interconnects** includes the special cabinets that hold and protect cables at points where they are spliced, and the frames and modular components that serve as connecting points, also called administration points, where the circuits of a distribution system can be conveniently linked, routed, and rerouted.
- **Connectors, plugs, and jacks** includes the connectors, plugs, connecting blocks, and information outlets for both wire and fiber.
- **Adapters** includes the adapters used to make connections between various wire cables.
- **Electrical protection devices** includes the protector panels and protector units used to limit harmful electrical power surges that can damage distribution system equipment.
- **Tools and support hardware** includes the modular cabinets, brackets, clips, clamps, and other equipment necessary to house and support cable runs and connections.

At the beginning of each section, there is an introduction that gives general information about the components covered in that section. These introductions discuss the physical properties of the components, including the reasons certain components are used in particular situations; define terms that will be used in the descriptions of individual components; and explain the codes developed by AT&T that are used when ordering components for a distribution system.

Each component featured in this guide is used in one or more of the six subsystems, or functional groupings, that comprise the AT&T Premises Distribution System. These subsystems are specified in the upper

right-hand corner of each component listing. When linked to one another, the subsystems provide a complete, integrated distribution system. In most cases, the names of the subsystems are derived from the functions they serve. The individual subsystems are described below.

When a premises distribution system encompasses more than one building, the components that facilitate communication between buildings constitute the **campus subsystem**. This subsystem includes wire cable, optical fiber cable, and connectors to link the buildings on a campus; and electrical protection devices to prevent potential harm when cables are exposed to lightning and/or power.

The voice and data equipment common to a building's entire distribution system is usually stored and maintained in the equipment room. The **equipment wiring subsystem** consists of the cable, connectors, and associated support hardware that interconnect the various units in an equipment room.

The main cable route in a building, running from the equipment room (often in the basement) to other distribution connecting points, is called the **riser subsystem**. This subsystem consists of all the wire and/or optical fiber cable and the support hardware necessary to link the riser cable, run vertically between floors, to other locations. The connecting points for the riser subsystem commonly include a cross connect in a backbone or riser closet, a network interface, a connection with interbuilding facilities (the campus subsystem), or a computer room.

The circuits in the riser subsystem must be extended to information outlets (IOs), or wall jacks, at user work locations. The **horizontal wiring subsystem** joins the riser cable and information outlets; it is always located on one floor and always terminates in an information outlet at one end.

The information outlets must, in turn, be connected to terminal devices at work locations. The **work location wiring subsystem** consists of the mounting cords, extension cords, and connectors that bridge the distance between a terminal and an information outlet.

Finally, every distribution system includes cross connects, interconnects, and information outlets that serve as administration points for routing and rerouting circuits. Called the **administration subsystem**, these components link all the other subsystems.

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Introduction to Transmission Media

The AT&T Premises Distribution System (PDS) includes mounting cords used to connect terminal equipment to information outlets; wire cables used in the horizontal, riser, and campus subsystems; and optical fiber cables used, at present, mainly in the riser and campus subsystems.

Both the wire and fiber cables used in PDS may be divided into two basic categories: inside cable and outside cable. These cables differ in function and construction. Designed for use within buildings, inside cable has an air core and a flame-retardant sheath. Where a cable is designated for plenum use, it also meets specific requirements for not producing toxic smoke in the event of a fire.

Outside cable, which is run between buildings in a campus environment, is designed to meet the needs of the particular environment in which it is installed. Specific cables are designed for one of the three common kinds of installation. Underground (in-conduit) cable, installed in an underground system of conduit and manholes, consists of air-core cable covered by a special protective sheath. Direct-buried cable, which is set in a trench, unprotected by conduit, requires a waterproofing compound and additional protective coverings. Aerial cable, which is supported on poles and suspended between buildings, has varying features, such as lightning protection, depending on the environment.

Certain types of inside cable and outside cable can be ordered from the factory, either connectorized or unconnectorized. For example, where the length of a cable run can be measured exactly, or where a fiber cable is run directly to an interconnect or cross-connect module, connectorized cable will save installation time, because all the precision work is already completed. On the other hand, where exact cable runs are unknown or conduits are nearly full, it makes sense to order unconnectorized cable for greater flexibility and ease of pulling.

Regardless of whether it has primarily wire or optical fiber transmission media, every AT&T Premises Distribution System requires mounting cords at work locations to connect terminal devices or auxiliary equipment to information outlets.

Wire Cable

Each wire cable used in PDS consists of a core of 24-gauge copper conductors* that are annealed, that is, put through a special heating process during manufacturing that makes them resistant to the flex and vibration stresses encountered in typical applications, and able to withstand damage during stripping and termination of the wire.

Solid copper conductors are used for some applications, and stranded copper conductors for others. In

stranded copper construction, a specified number of small-gauge wires are twisted or stranded together to form a unit. Solid conductors are less costly than stranded, have better conductivity, and are easier to terminate; stranded conductors, however, are more flexible. In addition, a scratch or nick that occurs during stripping will usually be a far less serious problem with a stranded conductor than similar damage to a solid wire conductor.

Conductors are covered by an insulation, called a dielectric, which prevents contact between conductors or between a conductor and its environment, and thus controls the flow of current through the conductor. Most insulation in PDS cable consists of extruded thermoplastics, which are plastics that soften and flow when heated and become firm when cooled. Extrusion refers to a manufacturing process that involves heating the material and forcing it through a die, which results in uniform, homogeneous insulation.

An important characteristic of conductors and dielectrics is the property, known as capacitance, that permits the storage of electrically separated charges whenever a difference in potential exists between conductors. The ratio of the capacitance of an insulated wire to that of the same wire uninsulated in air, called the wire's dielectric constant, is used as a measure in selecting an insulation material. Generally, a low dielectric constant is desirable.

Some cables include a layer wrapped around the core of insulated conductors, which further insulates that group of conductors. This extra layer, called a core wrap, gives the finished cable extra protection from stress and heat, improves the roundness of a cable to give it a more uniform appearance, and helps to isolate the cable core from electrical discharges in the environment. Some core wraps are also designed to retard a cable's flame and smoke generation.

Sometimes a metallic covering or envelope, called a shield, is added to the cable to minimize the effect of external electromagnetic signals on the cable and to reduce the radiated signal from the cable to an acceptable level.

Finally, a protective outer coating, called the jacket, surrounds the cable's core and wires, protecting them against mechanical damage, moisture, and other harmful elements. Made of the same kinds of materials as conductor insulation, cable jackets can also enhance the physical, electrical, or chemical properties of the underlying insulation, and of the cable as a whole. In some cases, the cable jacket is bonded to another material inside the jacket, forming a protective sheath.

* There are two exceptions to 24-gauge wire in PDS: ground wire is available with 6-, 10-, or 12-gauge conductors; undercarpet cable and DUCTPIC™ underground cable are available only with 26-gauge conductors.

Inside Wire Cable

Inside wire cable includes nonplenum, plenum, riser, and undercarpet cables, as well as ground and cross-connecting wires.

Nonplenum (DIW) cable is the general-purpose wire in PDS; larger pair sizes are used to connect the equipment room to the riser subsystem or to satellite closets, while smaller pair sizes are used to connect satellite closets to information outlets.

For plenum applications, bulk plenum cable—with either TEFLON® insulation and a HALAR® jacket, or HALAR insulation and a HALAR jacket—offers low-flame and low-smoke producing qualities. Because of its lower dielectric constant, TEFLON/HALAR cable provides a higher bit rate than HALAR/HALAR over longer distances, but differences over shorter distances are negligible.

Riser cable, which has a fire-retardant sheath and is installed in the riser shaft without conduit, serves the riser subsystem.

When short runs of cable must be run in open office spaces, flat, undercarpet cable, either unconnectorized for field connectorization or connectorized with modular plugs, helps avoid obstruction and preserves aesthetic appearances.

As its name implies, ground wire is used to ensure electrical safety by grounding connections and outside wiring.

At the cross connect there are commonly two ways to connect circuits: with F Cross-Connecting Wire, which must be cut down at the cross connect by the installer, or with patch cords, which are simply pushed on and pulled off the connecting block, thus facilitating the administration of cross-connect fields.

Outside Wire Cable

The selection of outside cable is governed by conditions at the installation site and economic considerations.

For underground (in-conduit) cable applications where duct congestion is a concern, underground cable with DUCTPIC insulation provides standard capacitance in a small cable diameter. At sites where steam entering the duct poses a particular threat, STEAMPETH underground cable is used.

For direct-buried cable applications, waterproof cable filled with FLEXGEL® filling compound and protected by an ASP (aluminum-steel-polyethylene) sheath provides protection against moisture, physical damage, and burrowing animals.

Aerial cable can be either self-supporting or non-self-supporting. Self-supporting aerial cable consists of a galvanized-steel support strand flooded with a moisture-proofing compound and covered with an ALPETH (aluminum-polyethylene) sheath. Where damage to the cable sheath, especially by wildlife, is likely, reinforced self-supporting aerial cable is used. Similar to self-supporting aerial cable, this cable offers added reinforcement in the form of a soldered steel wrap flooded with moisture-proofing compound. Non-self-supporting aerial cable, which requires that the cable be lashed to a supporting steel strand attached to telephone poles, is an air-core cable with an aluminum shield, and is available with any of three sheaths, depending on the application. The standard sheath for PDS applications where lightning exposure is at a minimum is ALPETH. For lightning protection, a PAP (polyethylene-aluminum-polyethylene) sheath is recommended. For additional lightning protection and protection from mechanical damage or wildlife, a PASP (polyethylene-aluminum-steel-polyethylene) sheath is preferred.

Code Systems for Inside and Outside Wire Cable

The variety of cables available are coded according to their physical characteristics.

Wire cable, whether for inside or outside plant, is designated by a 4-character alphabetic code. The first letter designates the type of cable design; the second, the type of insulation; the third, the gauge and type of metal used for the conductor; and the fourth, the type of sheath.

CODE	L	L	L	L
POSITION	1	2	3	4

Position	Meaning	Options
1	Cable design	A - Waterproof, pulp air core, or riser B - Air core C - Pulp MUP, Pseudo-MUP, or high potential waterproof D - DUCTPIC or STEAMPETH
2	Insulation type	C - Dual expanded polyolefin F - Dual expanded polyolefin core with FLEXGEL filling compound K - Solid polyolefin, air core R - Expanded polyethylene/polyvinyl chloride
3	Gauge and metal of conductor	M - 24 AWG copper
4	Sheath type	A - ALPETH G - PAP H - PASP M - ALVYN N - Bonded STEAMPETH P - Reinforced self-supporting S - Self-supporting W - ASP Z - Bonded STALPETH

Example: BKMA cable is an air-core cable with polyolefin insulation around 24-gauge conductors with an ALPETH sheath.

Mounting Cords

All PDS mounting cords are 24-gauge cables with stranded conductors. Each conductor consists of seven strands of fine-gauge copper grouped together to form a single electrical path, a construction that furnishes a good balance between flexibility and relatively low electrical resistance.

Each stranded conductor is individually insulated with a thermoplastic dielectric, and the conductors are arranged in twisted pairs to minimize or eliminate crosstalk and decrease unbalanced mutual capacitance.

A polyvinyl chloride (PVC) jacket covers each mounting cord and protects against mechanical damage, moisture, and other harmful elements. PVC is used because it provides flame retardance and abrasion resistance at a reasonable cost.

PDS mounting cords are terminated, most of them at both ends, with factory-installed polycarbonate

modular plugs. In some cases, such as the D8AC Mounting Cord, this plug is "keyed," that is, uniquely shaped for a particular application so that it cannot be mistakenly inserted in the wrong outlet. The plug clamps the insulated conductors and is specially designed for a long flex life. The plug's locking tab holds the plug securely in place when it is inserted in a modular jack, yet it has enough flexibility to be inserted thousands of times without breaking.

Fiber Cable

Optical fiber cable employs a technology in which light is transmitted along the inside of a thin glass or plastic fiber. The AT&T Premises Distribution System uses glass fibers, consisting of a germanium core surrounded by a silica cladding, each of which is protected by a dual construction coating that cushions the fiber against microbending losses, provides abrasion resistance, and preserves its mechanical strength.

One way to classify optical fiber cable is by mode, which is the path (single-mode) or paths (multimode) that light can travel in the cable; mode is a function of the size of a cable's core, with only the smallest diameters being classified as single-mode. The core's refractive index is the ratio of the speed of light in a vacuum to the speed of light in the cable's core.

With a 62.5-micron core, the optical fiber cable used in the AT&T Premises Distribution System is a multimode cable, meaning that light disperses into multiple lightwaves, each of which takes its own path. Since the different lightwaves travel at different speeds, this dispersion can cause losses and impose limitations on a system over long distances. To avoid

this problem, PDS fiber cable has a core with a nonuniform refractive index, called a graded index; the core's refractive index is greatest at the center and tapers off toward the edges of the core. This increases efficiency since the light farther from the core's center travels a longer distance, but at a higher speed, than the light at the center, meaning that all the rays reach the same point at approximately the same time.

PDS optical fiber cable includes two designs—ribbon and LIGHTPACK™. Ribbon cable, which consists of twelve fibers set side by side and laminated between clear pressure-sensitive adhesive tapes, is available in both air-core and filled constructions. The filled variety uses a specially formulated compound that remains soft over a wide temperature range; it behaves as an elastic solid during small strain loads or, if the yield stress is exceeded, acts as a liquid to allow fiber movement in the core area. Ribbon cable that has been connectorized at the factory is equipped on both ends with hardware that protects the array connectorized ribbons within. Ribbon cable can be used with individual fiber splicing systems.

LIGHTPACK cable consists of a bundle of up to 36 fibers held together loosely with a spirally wrapped binder; up to eight bundles lie inside a large tube. LIGHTPACK cables are factory-connectorized with arrays or unconnectorized (individually fiber spliced).

PDS includes four sheath designs to meet the specific requirements of underground, buried, aerial, and building applications:

- A crossply metallic sheath consists of four layers, which are, starting from the core tube outward: steel strength members, an intermediate jacket of high-density polyethylene, additional steel strength members, and an outer layer of high-density polyethylene.
- A crossply nonmetallic sheath using fiberglass strength members is also available. Like steel strength members, the fiberglass members provide mechanical protection; however, since the nonmetallic sheath contains no conductive elements, it provides a high degree of immunity from lightning damage or induction.
- A rodent-lightning protective sheath has the same construction as the crossply metallic sheath but incorporates an extra layer of a stainless steel laminate.
- A PVC sheath incorporates nonmetallic strength members and a flame-retardant PVC jacket. This cable is UL listed for use in riser applications.

Inside Fiber Cable

Inside fiber cable includes three types of cable used in buildings: the first two types, lightguide riser cable and lightguide building cable (LGBC), are used primarily in the backbone subsystem. All inside fiber

cables are UL listed. A lightguide riser cable may consist of from one to twelve ribbons, with up to twelve fibers in each ribbon. From 2 to 136 guaranteed fibers may be contained in a single ribbon cable having an outer sheath diameter of 0.48 inches.

A lightguide building cable (LGBC) may consist of 2, 4, 6, 12, 18, 34, or 36 fibers; the single fibers in this type of cable can be spliced to the fibers in a LIGHTPACK cable or to individual fibers separated from a ribbon cable, using the mechanical multimode splice. If LGBC is run to a cross-connect or interconnect field, the fibers can be field-connectorized before installation.

The third type of inside cable, interconnect cable, is generally used as a patch cord between cables at optical cross-connect fields or as a link between cross-connect or interconnect modules and optical/electronic equipment. The sturdy construction of this cable makes it ideal for applications in which fibers must be rearranged or moved. In most cases, the distances between points on the cross-connect field or between the cross-connect field and optical equipment can be determined in advance, and so connectorized cables should be used (see the FL cables); where these distances are not known in advance, unconnectorized interconnect cable, which can be field connectorized, should be used (see the 1860 Series cables).

Outside Fiber Cable

Used in underground, direct-buried, and aerial applications between buildings, outside fiber cable is filled with a specially formulated compound that protects the fibers from environmental damage, such as moisture. The sheath of outside cable, reinforced with steel or fiberglass, provides additional protection from the elements. This category encompasses ribbon cable and LIGHTPACK cable, as described above. LIGHTPACK cable is used when less than 96 fibers are needed, while ribbon cable is generally used when a high fiber count is required.

As with wire cable, the choice of a particular type of outside cable is determined in part by the conditions at the installation site and, in part, by economic considerations.

For underground plant applications in which neither lightning nor rodents present an environmental problem, standard filled, steel-reinforced crossply cable or LIGHTPACK cable is the most economical choice (see 3BAX or 3DAX). If there is a small possibility of lightning damage, these cables can be pulled into buried PVC ducts. In high lightning areas, cables with fiberglass-reinforced sheaths provide excellent immunity from lightning damage, since these cables contain no metallic elements (see 3BFX or 3DFX).

For direct buried applications (either plowed or trenched) the standard metallic crossply cable or LIGHTPACK cable (see 3BAX or 3DAX) is again the best choice, except where lightning and rodents pre-

sent major hazards; there, a cable offering protection from these hazards should be used (see 3BHX or 3DHX).

For aerial applications in which lightning protection is required, fiberglass-reinforced cable, which has no metallic strength members, is the best choice (see 3BFX or 3DFX). If both lightning and rodent protection are needed, a cable offering protection from both of these hazards should be used (see 3BHX or 3DHX).

Code Systems for Inside and Outside Fiber Cables

Since all PDS cable is available in a variety of cable sheaths, core designs, and fiber counts, the cables are coded according to their physical characteristics.

The different types of ribbon and LIGHTPACK cables are designated using a 7-character alphanumeric code. As shown below, the first four characters define the fiber type and the construction of the cable; the following three characters indicate the number of guaranteed fibers.

CODE	N	L	L	L	—	N	N	N
POSITION	1	2	3	4	—	5	6	7

Example: A 3DAX cable is a multimode cable with a 62.5- μ m core, has a LIGHTPACK filled core, a metallic crossply sheath, and no oversheath.

Position	Meaning	Options
1	Fiber design	1 - Multimode with 50- μ m core 3 - Multimode with 62.5- μ m core (PDS standard) 4 - Single mode
2	Cable core design	A - Ribbon air core B - Ribbon filled core D - LIGHTPACK filled core
3	Sheath design	A - Metallic crossply E - PVC flame-retardant crossply* F - Dielectric H - Rodent and lightning protection
4	Oversheath design	B - B oversheath X - No oversheath required
5-7	No. of guaranteed fibers (in even numbers only)	004-136 for ribbon cables 004-048 for LIGHTPACK cables

* The PVC flame-retardant crossply sheath is only available on ribbon air-core cables.

* There are two exceptions to 24-gauge wire in PDS: ground wire is available with 6-, 10-, or 12-gauge conductors; undercarpet cable and DUCTPICTM underground cable are available only with 26-gauge conductors.

The two types of LGBC cables (plenum and nonplenum) are also designated using a 7-character alphanumeric code. The first three numbers refer to the number of fibers in the cable; the last three characters indicate the type of fiber and how it is to be used.

CODE	LGBC	N	N	N	A	-	L	L	X
POSITION		1	2	3	4	-	5	6	7

Example: The product code LGBC-012A-LPX describes a 12-fiber, multimode cable with a 62.5- μ m core, designed for plenum use.

All connectorized interconnection cables used in PDS are designated as FL1P-P, FL2P-P; FL1P-B, FL2P-B; or FL1P-A, FL2P-A. The number in the code refers to the number of fibers in the cable. The letter "P" after the hyphen stands for the (straight-tip) STTM (P2020A-C-125) Connector Plug; the letter "B" after the hyphen stands for the data link 1005B Connector Plug; the letter "A" after the hyphen stands for the biconic 1006A Connector Plug.

All unconnectorized interconnection cables used in PDS are simply provided with a number followed by a letter: 1860A, 1861A, 1862A.

Position	Meaning	Options
1-3	Fiber count	002 004 006 012
4	Space holder for future use	A
5	Fiber design	L - Multimode with 62.5 μ m core S - Single mode
6	Fiber use	P - Plenum R - Riser
7	Space holder for future use	X

Modular Null Modem Cable

Applications

The Modular Null Modem Cable is used to connect the Premises Lightwave System (PLS) Model 2731 Multiplexer to the AT&T Premises Distribution System.

Description

The null modem cable is a 4-pair round cord covered by a PVC jacket, with a modular plug at each end. It has pins 2 and 3, 5 and 6, and 7 and 8 crossed over. The cable is 3 feet long.

Specifications

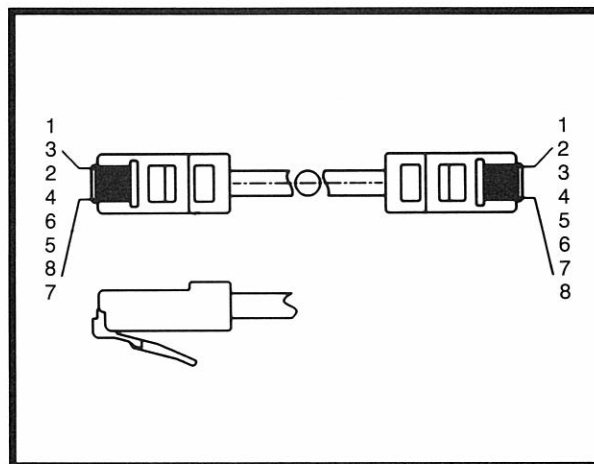
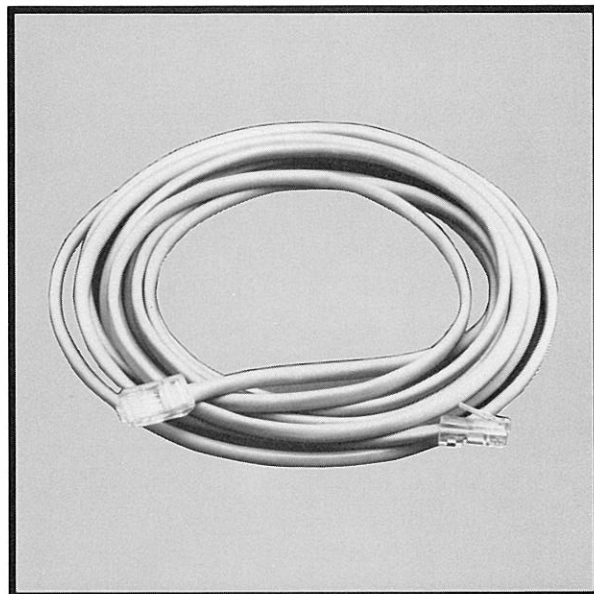
Physical Specifications

Gauge: 24 AWG

Pair Size: 4

Length: 3 ft

Product Code	Comcode
NCA-3444-10	105 224 992



Mounting Cord, D6AP

Applications

The D6AP Mounting Cord is used at work locations to provide power to auxiliary equipment, such as the Z3A Asynchronous Data Unit (ADU). It can also be used to connect a single-line analog telephone to an information outlet, and provides additional crosstalk protection for older-model single-line telephones.

Description

The D6AP Mounting Cord consists of a 3-pair (two twisted and one straight) round cord with stranded copper conductors and a PVC jacket. It has a 6-position modular plug at each end and comes in three standard lengths.

Specifications

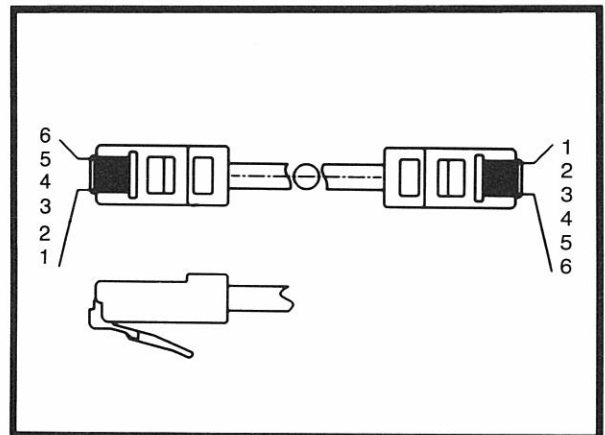
Physical Specifications

Gauge: 24 AWG

Pair Size: 3

Lengths: 7 ft, 14 ft, 25 ft

Product Code	Length (Ft)	Comcode
D6AP-87	7	102 937 620
D6AP-87	14	102 937 604
D6AP-87	25	102 937 588



Mounting Cord, D8AC

Applications

The D8AC Mounting Cord is used at work locations to connect a speakerphone to an information outlet.

Description

The D8AC Mounting Cord consists of a 4-pair round cord with stranded copper conductors and a PVC jacket. It has an 8-position, keyed, modular plug at each end. It is similar to the D8W Mounting Cord, except for its plug profile, which allows the plug to be inserted into a speakerphone jack, but not into a standard voice jack.

Specifications

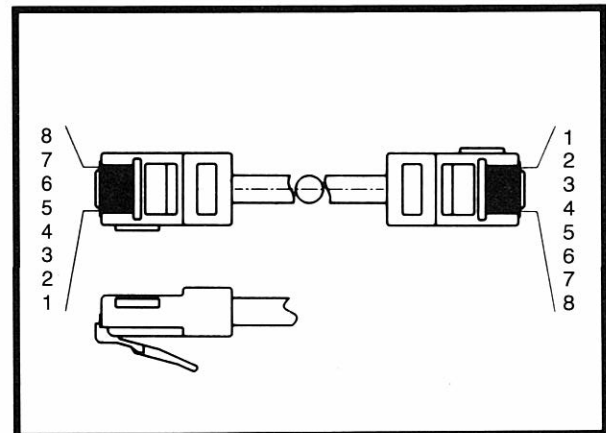
Physical Specifications

Gauge: 24 AWG

Pair Size: 4

Lengths: 1.5 ft, 4 ft, 14 ft

Product Code	Length (Ft)	Comcode
D8AC-87	1.5	103 796 199
D8AC-87	4	103 796 215
D8AC-87	14	103 796 231



Mounting Cord, D8AF

Applications

The D8AF Mounting Cord is used as an extension cord at work locations to connect a terminal device to an information outlet when the standard mounting cord cannot bridge the distance between the device and the outlet.

Description

The D8AF Mounting Cord consists of a 4-pair, stranded conductor round cord with an 8-position modular plug at one end and an 8-position modular jack on the other.

Specifications

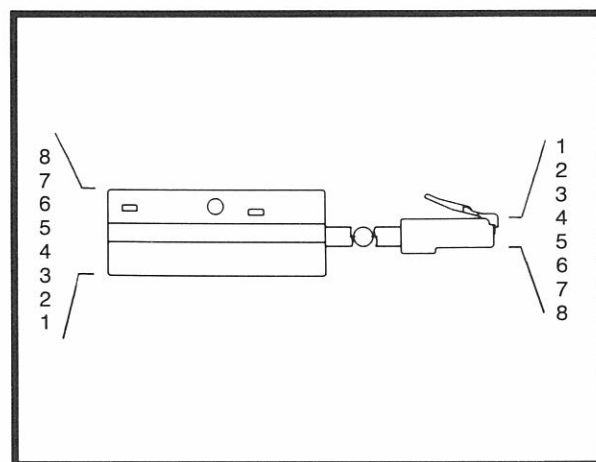
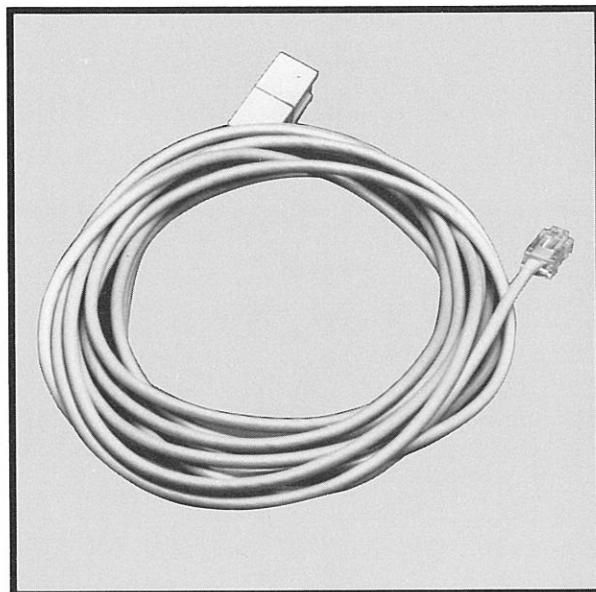
Physical Specifications

Gauge: 24 AWG

Pair Size: 4

Lengths: 14 ft, 25 ft

Product Code	Length (Ft)	Comcode
D8AF-87	14	104 073 655
D8AF-87	25	104 073 663



Mounting Cord, D8AM

Applications

The D8AM Mounting Cord is used at work locations to connect terminal equipment to an information outlet when the transmit and receive pairs must be reversed.

Description

The D8AM Mounting Cord consists of a 4-pair round cord with stranded copper conductors and a PVC jacket; pairs 2 and 3 are crossed over. It has an 8-pin modular jack at one end and an 8-pin modular plug at the other.

Specifications

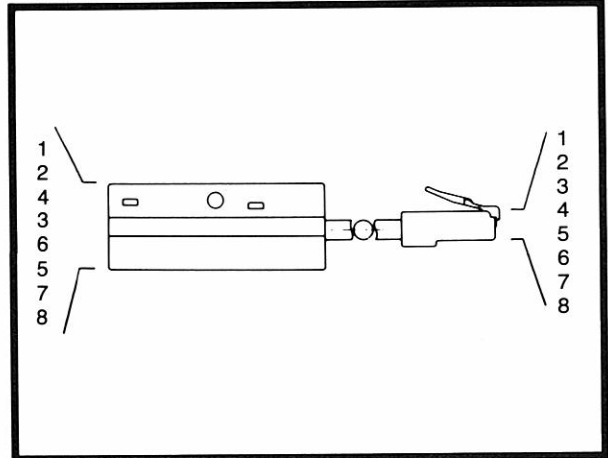
Physical Specifications

Gauge: 24 AWG

Pair Size: 4

Length: 6 in.

Product Code	Comcode
D8AM	104 154 414



Mounting Cord, D8W

Applications

The D8W Mounting Cord is used at work locations to connect a terminal device, either voice or data, to an information outlet.

Description

The D8W Mounting Cord consists of a 4-pair, stranded conductor round cord with an 8-position plug on each end. The cord is wired straight through.

Specifications

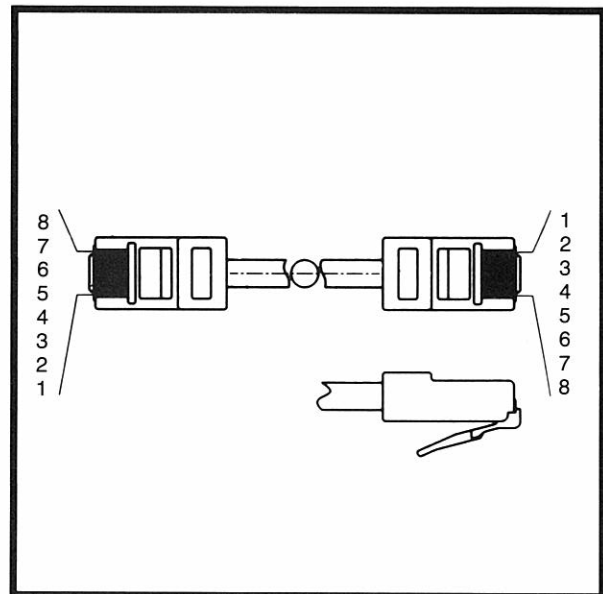
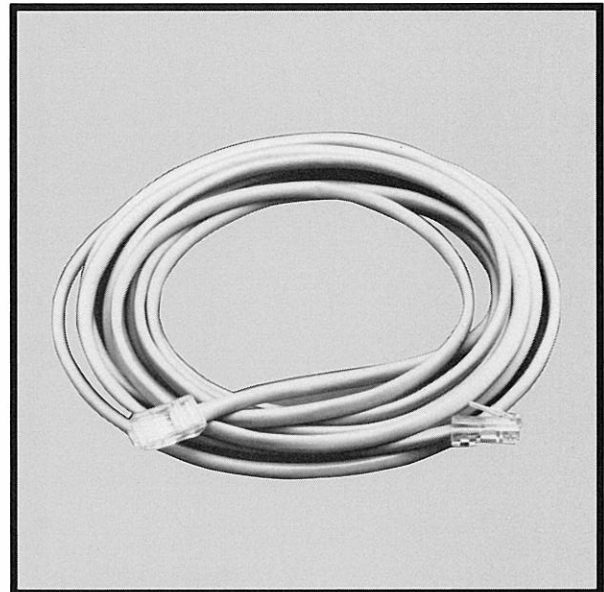
Physical Specifications

Gauge: 24 AWG

Pair Size: 4

Lengths: 1 ft, 2.5 ft, 7 ft, 14 ft, 25 ft

Product Code	Color	Length (Ft)	Comcode
D8W-50	Ivory	1	102 796 943
D8W-50	Ivory	7	102 796 976
D8W-50	Ivory	14	102 796 968
D8W-50	Ivory	25	102 796 950
D8W-87	Satin Silver	1	103 786 760
D8W-87	Satin Silver	2.5	104 160 148
D8W-87	Satin Silver	7	103 786 786
D8W-87	Satin Silver	14	103 786 802
D8W-87	Satin Silver	25	103 786 828



Patch Cord, 110 Patch Panel System, 1-, 2-, 3-, and 4-Pair

Applications

The 110 Patch Panel System Patch Cord is used to route and reroute circuits. The 1-pair patch cord is used to patch across a single pair of wires. The 2-pair patch cord is used to patch across two pairs of wires. The 3-pair patch cord is the standard cord used between the purple (PBX) and white (distribution) fields, and between the blue (station) and orange (data) fields. The 4-pair patch cord is used for special applications, when there is need to patch all eight wires.

Description

The patch cord is a connectorized jumper cord that mates with the 110C Connecting Block mounted on the 110 Wiring Block. Patch cord connectors are built in such a way that they prevent accidental polarity reversal or pair splitting, thus ensuring error-free connections. They are available in lengths from 2 to 19 feet, and come in packages of ten.



Specifications

Physical Specifications

Pair Size: 1, 2, 3, 4

Lengths: 2 ft, 3 ft, 4 ft, 5 ft, 6 ft, 7 ft, 8 ft, 9 ft, 19 ft

Product Code	Pair Size	Length (Ft)	Comcode	Product Code	Pair Size	Length (Ft)	Comcode
110P2A2B	1	2	104 324 991	110P6A2B	3	2	103 882 965
110P2A3B	1	3	104 325 006	110P6A3B	3	3	103 882 957
110P2A4B	1	4	104 325 014	110P6A4B	3	4	103 882 940
110P2A5B	1	5	103 908 349	110P6A5B	3	5	103 882 973
110P2A6B	1	6	104 325 022	110P6A6B	3	6	103 882 932
110P2A7B	1	7	104 325 030	110P6A7B	3	7	103 882 924
110P2A8B	1	8	104 325 048	110P6A8B	3	8	103 882 916
110P2A9B	1	9	103 908 356	110P6A9B	3	9	103 882 908
110P2A19B	1	19	103 908 364	110P6A19B	3	19	103 882 890
110P4A2B	2	2	104 317 318	110P8A2B	4	2	104 317 409
110P4A3B	2	3	104 317 326	110P8A3B	4	3	104 317 417
110P4A4B	2	4	104 317 334	110P8A4B	4	4	104 317 425
110P4A5B	2	5	104 317 342	110P8A5B	4	5	104 317 433
110P4A6B	2	6	104 317 359	110P8A6B	4	6	104 317 441
110P4A7B	2	7	104 317 367	110P8A7B	4	7	104 317 458
110P4A8B	2	8	104 317 375	110P8A8B	4	8	104 317 466
110P4A9B	2	9	104 317 383	110P8A9B	4	9	104 317 474
110P4A19B	2	19	104 317 391	110P8A19B	4	19	104 317 482

F Cross-Connecting Wire

Applications

F Cross-Connecting Wire is used to connect circuits at 110-type cross connects.

Description

F Cross-Connecting Wire has solid annealed copper conductors individually insulated with PVC. The insulation is marked at regular intervals with an additional code for color.

Specifications

Physical Specifications

Gauge: 24 AWG

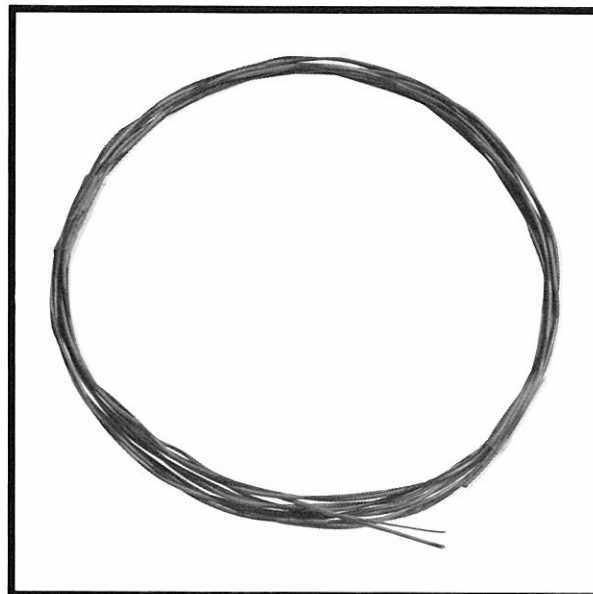
Pair Size: 1, 2, 3

Outside Diameter: 0.038 in. maximum

Electrical Specifications

DC Resistance: 52 Ohms/1000 ft

Mutual Capacitance: 0.015 μ F/1000 ft (maximum)



Product Code	Length (Ft)	Comcode
1	1000	841 506 553
2	1150	841 506 579
3	660	841 506 587

Ground Wire

Applications

There are three types of Ground Wire available for use in the Premises Distribution System:

- 6-Gauge Ground Wire is used to ground connections to protected cable terminals, protector mountings, and groups of station protectors
- 10- or 12-Gauge Ground Wire is used to ground outside plant and station wiring
- B Ground Wire is used for bonding and grounding in the communications zones on utility poles and for upgrading power company grounds.

Description

The 6-, 10-, and 12-Gauge Ground Wires are insulated with PVC. B Ground Wire is a bare, 6-gauge solid copper wire.

Specifications

Physical Specifications

Gauge: 6, 10, 12 AWG

Outside Diameter, Maximum Average Insulated:

- 0.237 in. (6 AWG)
- 0.156 in. (10 AWG)
- 0.133 in. (12 AWG)

Insulation Thickness, Minimum Average:

- 0.028 in. (6 AWG)
- 0.0205 in. (10 AWG)
- 0.0205 in. (12 AWG)

Electrical Specifications

Conductor Resistance:

- 0.415 Ohms/100 ft maximum (6 AWG)
- 1.049 Ohms/100 ft maximum (10 AWG)
- 1.669 Ohms/100 ft maximum (12 AWG)

Description	Length (Ft)	Comcode
6 AWG coil	600	401 172 341
6 AWG reel	4000	401 172 341
10 AWG coil	200	401 172 341
12 AWG coil	300	401 172 341
B Ground coil	600*	401 172 424
B Ground reel	4000*	400 292 231

* Order by footage.

Nonplenum (DIW) Cable, Bulk

Applications

Bulk Nonplenum (DIW or "D inside wire") Cable is a general-purpose cable used in many applications in a Premises Distribution System. Larger pair sizes are used for cable runs from the equipment room to riser or satellite closets, while smaller pair sizes are used for connecting satellite closets to information outlets. If run through conduit, it can be used in air-handling plenums.

Description

Nonplenum (DIW) cable consists of solid annealed copper conductors insulated with color-coded PVC; it has a nylon binder and a rip cord to tear back the sheath. The cable has a gray or beige PVC sheath with improved frictional properties, permitting it to be pulled through conduit without using lubricants that can eventually clog conduits and cause corrosion. Nonplenum (DIW) cable is UL listed (type CM and CMR).

Specifications

Physical Specifications

Gauge: 24 AWG

Pair Size: 4, 25, 50, 100, 200

Weight Per 100 Feet: 1.65 lb (4-pair)

Outside Diameter: 0.18 in. (4-pair) to 0.97 in. (200-pair)

Insulation Thickness: 0.006 in.

Electrical Specifications

DC Resistance: 28.6 Ohms/1000 ft (maximum)

Mutual Capacitance: 18 pF/ft

Impedance: 100 Ohms above 1 MHz

Attenuation:

0.3 dB/100 ft at 0.1 MHz

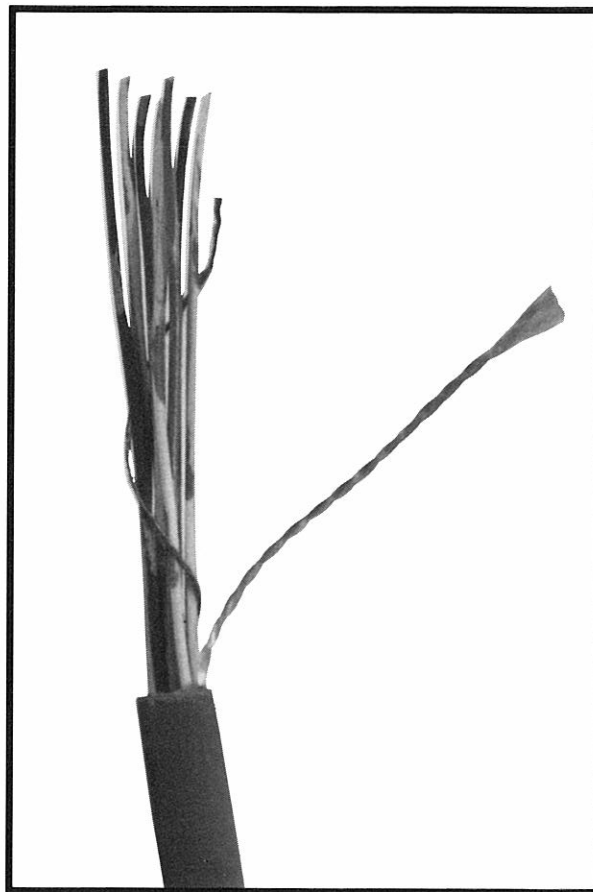
0.8 dB/100 ft at 1 MHz

3.0 dB/100 ft at 10 MHz

Delay: 0.17 μ sec/100 ft at 1 MHz

Dielectric Strength: 2000 Vrms between conductors

Bit Rate: supports T1 systems (1.544 mb/s up to 2600 ft)



Product Code	Pair Size	Length (Ft)	Color	Packaging	Comcode
DIW 4/24 GY W300	4	300	Gray	WETOTE	403 313 877
DIW 4/24 BG W500	4	500	Beige	WETOTE	105 192 066
DIW 4/24 BG S500	4	500	Beige	Spool*	105 196 950
DIW 4/24 GY W500	4	500	Gray	WETOTE	403 313 935
DIW 4/24 BG W1000	4	1000	Beige	WETOTE	104 316 807
DIW 4/24 BG S1000	4	1000	Beige	Spool	104 309 737
DIW 4/24 GY W1000	4	1000	Gray	WETOTE	403 101 140
DIW 4/24 GY S1000	4	1000	Gray	Spool	103 137 063
DIW 4/24 BL W1000	4	1000	Blue	WETOTE	104 307 814
DIW 4/24 BG R5000	4	5000	Beige	Reel*	
DIW 4/24 GY R5000	4	5000	Gray	Reel	
DIW 4/24 IV R5000	4	5000	Ivory	Reel	
DIW 4/24 BG R16800	4	16800	Beige	Reel	105 135 743
DIW 4/24 GY R16800	4	16800	Gray	Reel	401 606 819
DIW 25/24 BG R1000	25	1000	Beige	Reel	104 316 831
DIW 25/24 GY R1000	25	1000	Gray	Reel	105 003 693
DIW 25/24 BG R5000	25	5000	Beige	Reel	105 164 313
DIW 25/24 GY R5000	25	5000	Gray	Reel	105 164 305
DIW 25/24 GY R6780	25	6780	Gray	Reel	400 025 425
DIW 25/24 GY R11300	25	11300	Gray	Reel	105 133 961
DIW 50/24 BG R1000	50	1000	Beige	Reel	104 316 823
DIW 50/24 GY R1000	50	1000	Gray	Reel	105 004 907
DIW 50/24 BG R5000	50	5000	Beige	Reel	105 164 297
DIW 50/24 GY R5000	50	5000	Gray	Reel	105 164 289
DIW 50/24 GY R4155	50	4155	Gray	Reel	400 025 433
DIW 50/24 GY R5900	50	5900	Gray	Reel	105 133 987
DIW 100/24 BG R1000	100	1000	Beige	Reel	104 317 193
DIW 100/24 GY R1000	100	1000	Gray	Reel	105 004 170
DIW 100/24 GY R2090	100	2090	Gray	Reel	400 025 458
DIW 100/24 GY R3400	100	3400	Gray	Reel	105 134 027
DIW 100/24 GY R3000	100	3000	Gray	Reel	104 273 375
DIW 200/24 GY R3000	200	3000	Gray	Reel	104 273 354

* A spool is less than 1 foot in diameter; a reel is more than 1 foot in diameter.

Nonplenum Cable with 50-Pin Connectors

Applications

Nonplenum Cable with 50-Pin Connectors is used to connect voice switching equipment, terminal devices, data devices, and connectorized distribution cable to the administration subsystem.

Description

The cable consists of solid annealed copper conductors insulated with semirigid gray PVC. It is available with connectors on one end (single-ended) or on both ends (double-ended), and is equipped with 25-pair female, male, or male and female connectors. It comes in standard lengths, ranging from 5 to 200 feet.

Specifications

Physical Specifications

Gauge: 24 AWG

Pair Size: 25

Weight: 8.544 lb/100 ft

Outside Diameter: 0.38 in.

Insulation Thickness: 0.006 in

Jacket Thickness: 0.025 in.

Electrical Specifications

DC Resistance: 28.6 Ohms/1000 ft

Mutual Capacitance: 18 pF/ft

Characteristic Impedance: 100 Ohms above 1 MHz

Attenuation:

0.3 dB/100 ft at 0.1 MHz

0.8 dB/100 ft at 1 MHz

3.0 dB/100 ft at 10 MHz

Delay: 0.17 μ sec/100 ft at 1 MHz

Bit Rate: supports T1 systems (1.544 mb/s up to 2600 ft)



Product Code	Connector Type	Length (Ft)	Single- or Double-Ended	Comcode
A25B	Female	5	Single	100 959 113
A25B	Female	10	Single	100 959 139
A25B	Female	15	Single	100 959 162
A25B	Female	25	Single	100 849 918
A25B	Female	30	Single	100 959 246
A25B	Female	50	Single	100 016 765
A25B	Female	75	Single	100 849 926
A25B	Female	100	Single	100 016 773
A25B	Female	150	Single	100 959 428
A25B	Female	200	Single	100 959 477
A25B	Female/Female	5	Double	100 959 105
A25B	Female/Female	10	Double	100 959 147
A25B	Female/Female	15	Double	100 959 170
A25B	Female/Female	20	Double	100 959 212
A25B	Female/Female	30	Double	100 016 781
A25B	Female/Female	50	Double	100 959 261
A25B	Female/Female	75	Double	100 959 303
A25B	Female/Female	100	Double	100 016 807
A25B	Female/Female	200	Double	100 016 815
A25D	Male	10	Single	100 959 931
A25D	Male	15	Single	100 959 949
A25D	Male	25	Single	100 959 964
A25D	Male	50	Single	100 960 004
A25D	Male	75	Single	101 208 908
A25D	Male	100	Single	101 129 484
A25D	Male	150	Single	101 129 492
A25D	Male	200	Single	100 960 053
A25D	Male/Male	10	Double	100 963 982
A25D	Male/Male	15	Double	100 963 990
A25D	Male/Male	25	Double	100 959 972
A25D	Male/Male	50	Double	100 985 571
A25D	Male/Male	75	Double	101 507 077
A25D	Male/Male	100	Double	100 960 046
A25D	Male/Male	150	Double	101 507 796
A25D	Male/Male	200	Double	101 508 281
B25A	Male/Female	5	Double	101 017 326
B25A	Male/Female	10	Double	101 619 336
B25A	Male/Female	15	Double	100 017 334
B25A	Male/Female	20	Double	101 619 450
B25A	Male/Female	30	Double	100 017 342
B25A	Male/Female	60	Double	100 017 359
B25A	Male/Female	100	Double	100 017 367

Plenum Cable, Bulk (HALAR/HALAR)

Applications

Bulk Plenum Cable is used for cable runs between an information outlet and a satellite closet and between the equipment room and the riser or satellite closets. It conforms to the low-flame and low-smoke producing requirements of section 800-3(d) of the National Electrical Code (NEC), it is UL listed (type CMP), and can be used in air-handling plenums or above suspended ceilings without the use of conduits. The cable can be connectorized in the field or terminated on 110-type wiring blocks.

Description

Plenum cable has 24-gauge, twisted-pair copper conductors individually insulated with HALAR and sheathed with an outer jacket of the same material.

Specifications

Physical Specifications

Gauge: 24 AWG

Pair Size: 4, 25, 50, 75, 100

Outside Diameter: 0.16 in. (4-pair)

Insulation Thickness: 0.004 in. (minimum)

Jacket Thickness: 0.006 in. (minimum)

Electrical Specifications

Conductor Resistance: 28.6 Ohms/1000 ft

Mutual Capacitance: 16 pF/ft

Impedance: 100 Ohms above 1 MHz; 600 Ohms at 1 kHz

Attenuation:

0.3 dB/100 ft at 0.1 MHz

0.8 dB/100 ft at 1 MHz

Dielectric Strength: 2.6

Bit Rate: supports T1 systems (1.544 mb/s up to 2600 ft)

Product Code	Pair Size	Comcode
2001 004B W1000	4	105 147 631
2001 025B R1000	25	105 147 680
2001 050B R1000	50	105 147 698
2001 075B R1000	75	105 147 706
2001 100B R1000	100	105 147 714

Plenum Cable, Bulk (TEFLON/HALAR)

Applications

Bulk Plenum Cable is used for cable runs from equipment rooms to riser or satellite closets. It conforms to the low-flame and low-smoke-producing requirements of NEC 800-3(d), is UL listed (type CMP), and it can be used in air-handling plenums or above suspended ceilings without the use of conduits. The cable can be connectorized in the field or terminated on 110-type wiring blocks.

Description

This plenum cable has 24-gauge, twisted-pair solid copper conductors individually insulated with TEFLON and sheathed with an outer jacket of HALAR.

Specifications

Physical Specifications

Gauge: 24 AWG

Pair Size: 4, 25, 50, 100

Outside Diameter: 0.16 in. (4-pair)

Insulation Thickness: 0.006 in.

Jacket Thickness:

0.006 in. minimum (4-pair)

0.008 in. minimum (25-pair)

0.015 in. minimum (50- and 100-pair)

Electrical Specifications

DC Resistance: 25.7 Ohms/1000 ft

Mutual Capacitance: 17 pF/ft

Impedance: 90 Ohms above 1 MHz

Attenuation:

0.3 dB/100 ft at 0.1 MHz (4-pair)

0.8 dB/100 ft at 1.0 MHz (4-pair)

3.0 dB/100 ft at 10.0 MHz (4-pair)

Delay: 0.17 μ sec per 100 ft at 1.0 MHz

Dielectric Strength: 2.1

Bit Rate: supports T1 systems (1.544 mb/s up to 2600 ft)

Product Code	Pair Size	Weight (Lbs/1000 ft)	Comcode
2021 004B S1000	4	15.23	105 192 199
2021 025B R1000	25	78.93	105 192 249
2021 050B R1000	50	155.13	105 192 264
2021 100B R1000	100	303.21	105 192 306

Riser Cable, ARMM

Applications

ARMM Riser Cable is used in riser shafts where a fire-retardant sheath is necessary to meet the low-flame requirements of NEC 800-3(b). It can be used without conduit and is UL listed (type CMR).

Description

The cable consists of a core of solid copper conductors insulated with a PVC skin over expanded polyethylene. The core is covered by a plastic tape layer and overlaid with a corrugated aluminum shield adhesively bonded to an outer jacket of PVC plastic, thus forming an ALVYN (aluminum-polyvinyl-chloride) sheath.

Specifications

Physical Specifications

Gauge: 24 AWG

Pair Size: 100, 200, 300, 600, 900, 1200, 1800

Weight Per Foot: 0.43 lb (100-pair) to 6.13 lb (1800-pair)

Outside Diameter: 0.89 in. (100-pair) to 3.14 in. (1800-pair)

Insulation Thickness: 0.006 in.

Jacket Thickness: 0.047 in. (100-pair) to 0.108 in. (1800-pair)

Electrical Specifications

DC Resistance: 288 Ohms/loop mi at 68°F (maximum)

Mutual Capacitance: 83 nF/mi at 1000 Hz

Characteristic Impedance:

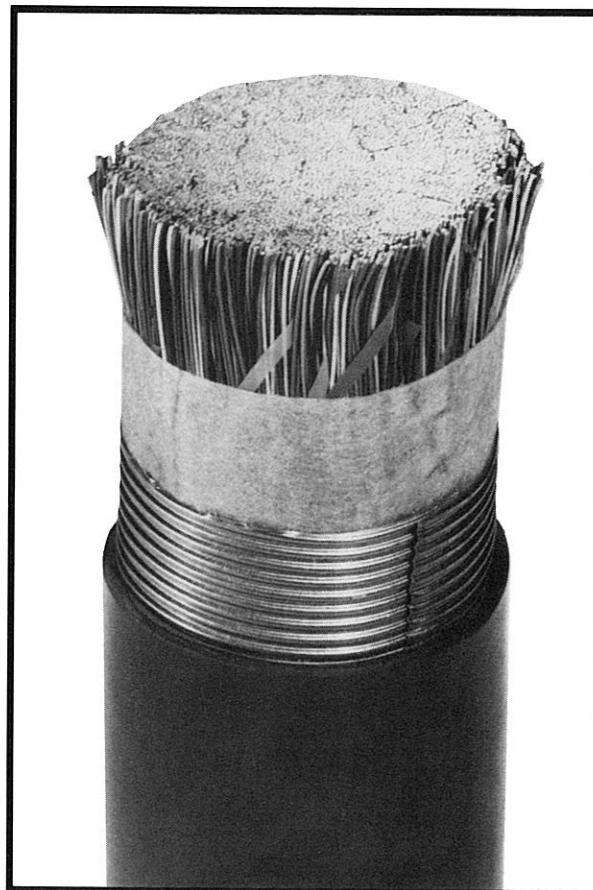
650 Ohms at 1 kHz

105 Ohms at 1 MHz

Attenuation:

0.062 dB/100 ft at 0.1 MHz

0.65 dB/100 ft at 1 MHz



Product Code	Pair Size	Outside Diameter (In.)	Weight/Foot (Lb)	Comcode
ARMM	100	0.89	0.43	103 562 609
ARMM	200	1.19	0.79	103 562 625
ARMM	300	1.41	1.13	103 562 633
ARMM	600	1.9	2.15	103 562 658
ARMM	900	2.28	3.15	103 562 666
ARMM	1200	2.6	4.14	103 562 674
ARMM	1500	2.78	5.14	103 730 198
ARMM	1800	3.14	6.13	103 562 682

Undercarpet Cable, Bulk

Applications

Bulk Undercarpet Cable is used to preserve aesthetic appearances and avoid obstruction when cable must be run in an open area under a carpet. It can be connectorized on site with modular plugs.

Description

Bulk Undercarpet Cable is a 4-pair flat cable that consists of 26-gauge solid copper conductors insulated with PVC and covered with a flat PVC tape.

Specifications

Physical Specifications

Gauge: 26 AWG

Pair Size: 4

Weight Per Foot: 0.0135 lb/ft

Outer Measurements: 0.041 in. thick x 0.33 in. wide (maximum)

Insulation Thickness: 0.0055 in. (nominal)

Jacket Thickness: 0.006 in. (nominal)

Maximum Break Strength: 80 lb

Minimum Bend Radius: Cable folds over onto itself

Electrical Specifications

DC Resistance: 40 Ohms/1000 ft

Mutual Capacitance: 0.038 μ F/1000 ft

Characteristic Impedance: 75 Ohms at 1 MHz

Attenuation: 2.2 dB/100 ft at 1 MHz

Dielectric Strength: 1500 Vac

NOTE: Undercarpet cable can be used in maximum lengths of 35 feet.



Length	Comcode
Customer-specified	403 724 404

Undercarpet Cable with Modular Plugs

Applications

Undercarpet Cable with Modular Plugs is used to connect information outlets to the horizontal wiring subsystem when the cable must be run under a carpet and needs to be connectorized.

Description

Undercarpet Cable with Modular Plugs is a 4-pair flat cable that consists of 26-gauge solid copper conductors insulated with plastic and covered with a PVC tape; it has modular plugs at each end.

Specifications

Physical Specifications

Gauge: 26 AWG

Pair Size: 4

Weight Per Foot: 0.0135 lb/ft

Outer Measurements: 0.041 in. thick x 0.33 in. wide (maximum)

Insulation Thickness: 0.0055 in. (nominal)

Jacket Thickness: 0.006 in. (nominal)

Maximum Break Strength: 80 lb

Minimum Bend Radius: Cable folds over onto itself

Electrical Specifications

DC Resistance: 40 Ohms/1000 ft

Mutual Capacitance: 0.038 μ F/1000 ft

Characteristic Impedance: 75 Ohms at 1 MHz

Attenuation: 2.2 dB/100 ft at 1 MHz

Dielectric Strength: 1500 Vac

NOTE: Undercarpet cable can be used in maximum lengths of 35 feet.



Length (Ft)	Comcode
5	403 385 024
10	402 956 908
15	403 385 032
20	402 956 916
25	403 385 040
30	403 200 322
35	402 956 924

Aerial Cable, Non-Self-Supporting, ALPETH

Applications

ALPETH Non-Self-Supporting Aerial Cable is designed for outdoor use where it can be strung from poles. It should not be used in buried applications or in areas susceptible to lightning.

Description

The cable consists of plastic-insulated solid conductors covered by a plastic core wrap surrounded by a corrugated aluminum shield. A nylon binder and tape overlay, applied longitudinally, fit between the shield and an outer, seamless jacket of extruded polyethylene.

Specifications

Physical Specifications

Gauge: 24 AWG

Pair Size: 25 to 1800

Weight Per Foot: 0.13 lb (25-pair) to 5.92 lb (1800-pair)

Outside Diameter: 0.54 in. (25-pair) to 3.15 in. (1800-pair)

Electrical Specifications

DC Resistance: 144 Ohms/sheath mi (maximum)

Mutual Capacitance:

83 nF/mi at 1 kHz (nominal)

87 nF/mi at 1 kHz (maximum)

Attenuation: 5.7 dB/1000 ft at 772 kHz



Product Code	Pair Size	Outside Diameter Nominal (In.)	Weight/Foot Nominal (Lbs)	Comcode
BKMA	25	0.54	0.13	100 023 043
BKMA	50	0.68	0.22	100 023 076
BKMA	100	0.86	0.39	100 023 134
BKMA	200*	1.17	0.73	100 023 191
BKMA	300*	1.39	1.06	100 023 225
BKMA	400*	1.61	1.41	100 023 258
BKMA	600*	1.92	2.06	100 023 282
BKMA	900*	2.29	3.03	100 023 316
BKMA	1200*	2.61	4.00	103 711 313
BKMA	1500*	2.89	4.95	103 711 305
BKMA	1800*	3.15	5.92	103 711 297

* A pulling eye is available on these pair sizes.

Warning

The National Electric Codes (NEC) of 1987 prohibit the use of outside plant copper telephone cables within the building, since they are not fire-resistant and do not pass any of the fire tests. If these cables are utilized within a building beyond a fifty (50) foot radius from the building cable entrance, they must be enclosed in heavy-duty metal conduit.

Aerial Cable, Non-Self-Supporting, PAP

Applications

PAP Non-Self-Supporting Aerial Cable is used in outdoor areas susceptible to damage from lightning.

Description

The cable consists of plastic-insulated conductors covered by a paper or plastic-core wrap and surrounded by an aluminum shield and a polyethylene jacket.

Specifications

Physical Specifications

Gauge: 24 AWG

Pair Size: 25 to 400

Weight Per Foot: 0.17 lb (25-pair) to 1.56 lb (400-pair)

Outside Diameter: 0.67 in. (25-pair) to 1.77 in. (400-pair)

Insulation Thickness: 0.003 in.

Electrical Specifications

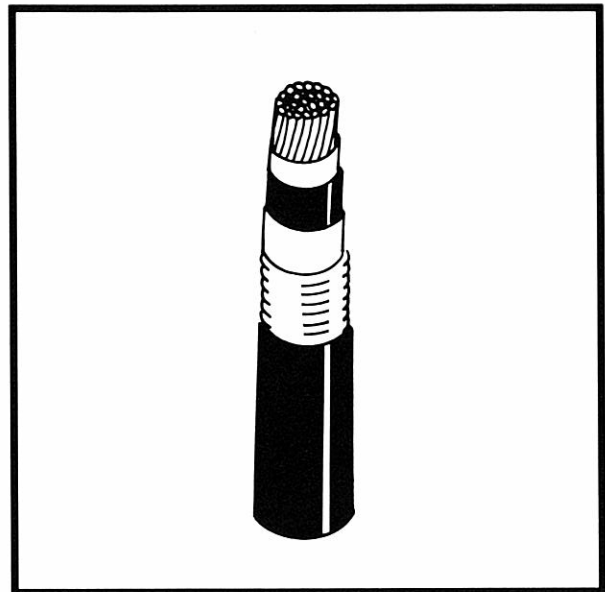
DC Resistance: 144 Ohms/sheath mi (maximum)

Mutual Capacitance:

83 nF/mi at 1 kHz (nominal)

87 nF/mi at 1 kHz (maximum)

Attenuation: 5.7 dB/1000 ft at 772 kHz



Product Code	Pair Size	Outside Diameter, Nominal (In.)	Weight/Foot, Nominal (Lb)	Comcode
BKMG	25	0.67	0.17	100 023 407
BKMG	50	0.81	0.27	100 023 431
BKMG	100	1.01	0.46	100 023 498
BKMG	200*	1.33	0.83	100 023 555
BKMG	300*	1.55	1.18	100 023 589
BKMG	400*	1.77	1.56	100 023 613

* A pulling eye is available for these pair sizes.

Warning

The National Electric Codes (NEC) of 1987 prohibit the use of outside plant copper telephone cables within the building, since they are not fire-resistant and do not pass any of the fire tests. If these cables are utilized within a building beyond a fifty (50) foot radius from the building cable entrance, they must be enclosed in heavy-duty metal conduit.

Aerial Cable, Non-Self-Supporting, PASP

Applications

PASP Non-Self-Supporting Aerial Cable is used in outdoor areas susceptible to mechanical damage or damage from lightning or rodents. It can also be used in ducts and pressurized direct buried applications.

Description

The cable consists of plastic-insulated conductors covered by a paper or plastic core wrap and surrounded by an inner polyethylene layer, an aluminum shield, a corrugated steel wrap, and a polyethylene jacket.

Specifications

Physical Specifications

Gauge: 24 AWG

Pair Size: 25 to 600

Weight Per Foot: 0.22 lb (25-pair) to 2.42 lb (600-pair)

Outside Diameter: 0.68 in. (25-pair) to 2.11 in. (600-pair)

Electrical Specifications

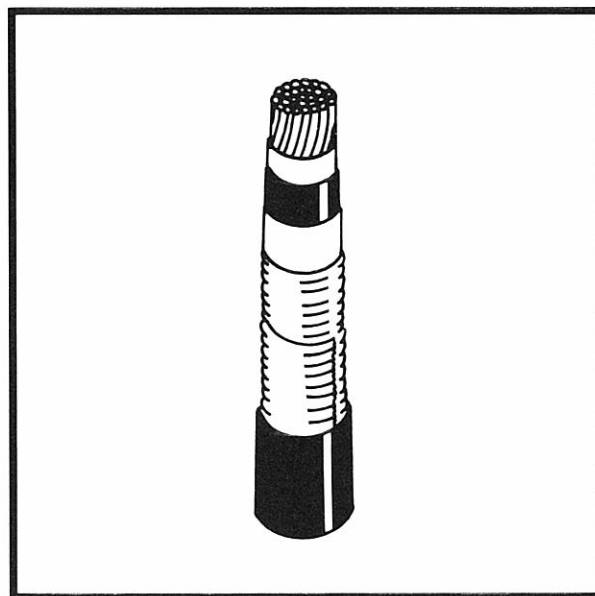
DC Resistance: 144 Ohms/sheath mi (maximum)

Mutual Capacitance:

83 nF/mi at 1 kHz (nominal)

87 nF/mi at 1 kHz (maximum)

Attenuation: 5.7 dB/1000 ft at 772 kHz



Product Code	Pair Size	Outside Diameter, Nominal (In.)	Weight/Foot, Nominal (Lb)	Comcode
BKMH	25	0.68	0.22	100 023 746
BKMH	50	0.82	0.33	100 023 761
BKMH	75	0.93	0.43	100 023 787
BKMH	100	1.01	0.53	100 023 803
BKMH	150*	1.22	0.75	100 023 829
BKMH	200*	1.36	0.94	100 023 845
BKMH	300*	1.58	1.31	100 023 860
BKMH	400*	1.79	1.70	100 023 886
BKMH	600*	2.11	2.42	100 023 902

* A pulling eye is available on these pair sizes.

Warning

The National Electric Codes (NEC) of 1987 prohibit the use of outside plant copper telephone cables within the building, since they are not fire-resistant and do not pass any of the fire tests. If these cables are utilized within a building beyond a fifty (50) foot radius from the building cable entrance, they must be enclosed in heavy-duty metal conduit.

Aerial Cable, Self-Supporting

Applications

Self-Supporting Aerial Cable is used outdoors in pole-to-pole and pole-to-building spans.

Description

This cable consists of a supporting strand and a cable core of plastic-insulated conductors combined into a figure-eight design. The supporting strand is made from 6.6-mm, extra-high-strength galvanized steel; the cable conductors are encased in a plastic core wrap inside an aluminum shield that is adhesively bonded to the outer jacket. It is available with either an undulated or nonundulated core.

Specifications

Physical Specifications

Gauge: 24 AWG

Pair Size: 25 to 200

Weight Per Foot: 0.28 lb (25-pair) to 0.89 lb (200-pair)

Outside Diameter: 0.61 in. (25-pair) to 1.24 in. (200-pair)

Electrical Specifications

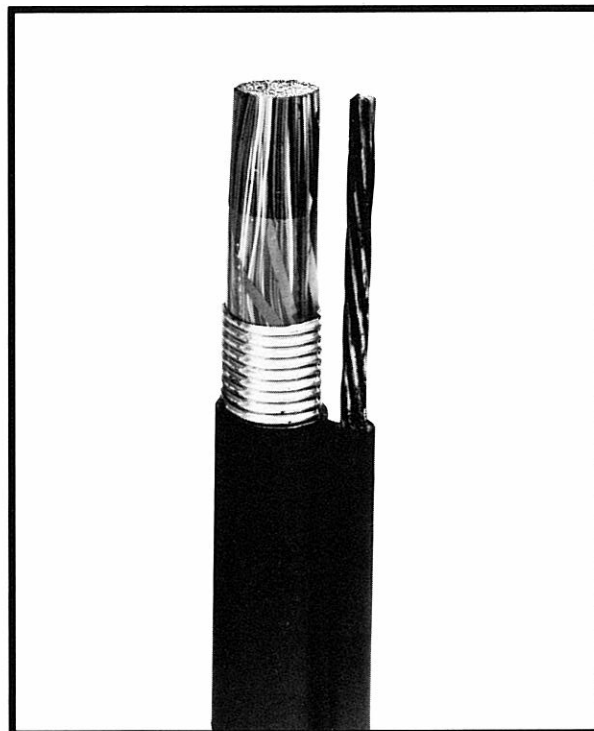
DC Resistance: 144 Ohms/sheath mi

Mutual Capacitance:

83 nF/mi at 1 kHz (nominal)

87 nF/mi at 1 kHz (maximum)

Attenuation: 5.7 dB/1000 ft at 772 kHz



Product Code	Pair Size	Outside Diameter, Nominal (In.)	Weight/Foot, Nominal (Lb)	Comcode
BKMS	25	0.61	0.28	100 023 944
BKMS	50	0.73	0.37	100 023 951
BKMS	75	0.92	0.46	101 452 092
BKMS	100	0.96	0.56	101 452 100
BKMS	150	1.12	0.73	101 452 118
BKMS	200	1.24	0.89	101 452 175

Warning

The National Electric Codes (NEC) of 1987 prohibit the use of outside plant copper telephone cables within the building, since they are not fire-resistant and do not pass any of the fire tests. If these cables are utilized within a building beyond a fifty (50) foot radius from the building cable entrance, they must be enclosed in heavy-duty metal conduit.

Aerial Cable, Reinforced Self-Supporting

Applications

Reinforced Self-Supporting Aerial Cable is used in areas prone to high sheath-related maintenance costs primarily due to wildlife damage.

Description

This cable consists of a supporting strand and a cable core of plastic insulated conductors combined into a figure-eight design. The supporting strand is made from 6.6-mm, extra-high-strength galvanized steel; the cable conductors are encased in an aluminum core wrap, a layer of polyethylene, a layer of steel, and an outer sheath of polyethylene.

Specifications

Physical Specifications

Gauge: 24 AWG

Pair Size: 25 to 200

Weight Per Foot: 0.45 lb (25-pair) to 1.18 lb (200-pair)

Outside Diameter: 0.90 in. (25-pair) to 1.52 in. (200-pair)

Electrical Specifications

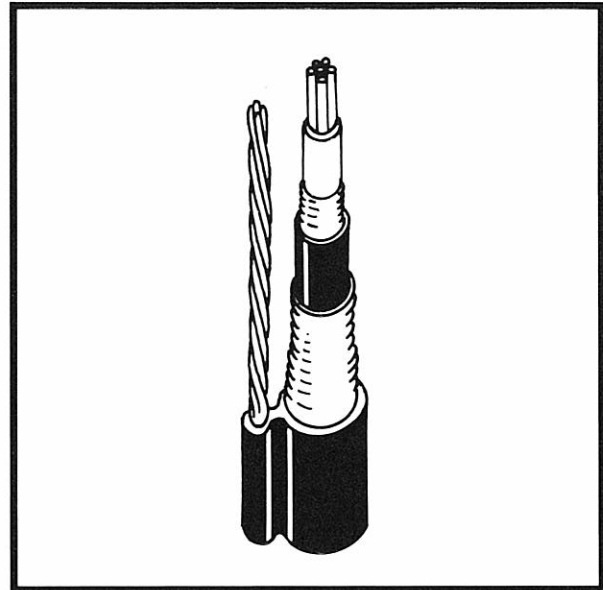
DC Resistance: 144 Ohms/sheath mi (maximum)

Mutual Capacitance:

83 nF/mi at 1 kHz (nominal)

87 nF/mi at 1 kHz (maximum)

Attenuation: 5.7 dB/1000 ft at 772 kHz



Product Code	Pair Size	Outside Diameter, Nominal (In.)	Weight/Foot, Nominal (Lb)	Comcode
BKMP	25	0.90	0.45	102 857 174
BKMP	50	1.02	0.56	102 857 182
BKMP	75	1.20	0.70	102 857 190
BKMP	100	1.28	0.80	102 857 208
BKMP	150	0.36	0.98	102 857 216
BKMP	200	1.52	1.18	102 857 224

Warning

The National Electric Codes (NEC) of 1987 prohibit the use of outside plant copper telephone cables within the building, since they are not fire-resistant and do not pass any of the fire tests. If these cables are utilized within a building beyond a fifty (50) foot radius from the building cable entrance, they must be enclosed in heavy-duty metal conduit.

Buried Cable, Filled, ASP

Applications

ASP Filled Buried Cable is used for direct buried applications where wet or moist soil conditions threaten the electrical performance of the cable. ASP is also the preferred sheath for mechanical and wildlife protection.

Description

The cable consists of a core of solid copper conductors, insulated with plastic and surrounded by FLEXGEL filling compound. The core is surrounded by a plastic core wrap and shielded with a corrugated aluminum and steel shield. Between the core wrap and shielding, additional filling compound is added. The cable's outer jacket is polyethylene.

Specifications

Physical Specifications

Gauge: 24 AWG

Pair Size: 25 to 1800

Weight Per Foot: 0.22 lb (25-pair) to 7.29 lb (1800-pair)

Outside Diameter: 0.62 in. (25-pair) to 3.26 in. (1800-pair)

Insulation Thickness: 0.002 in.

Electrical Specifications

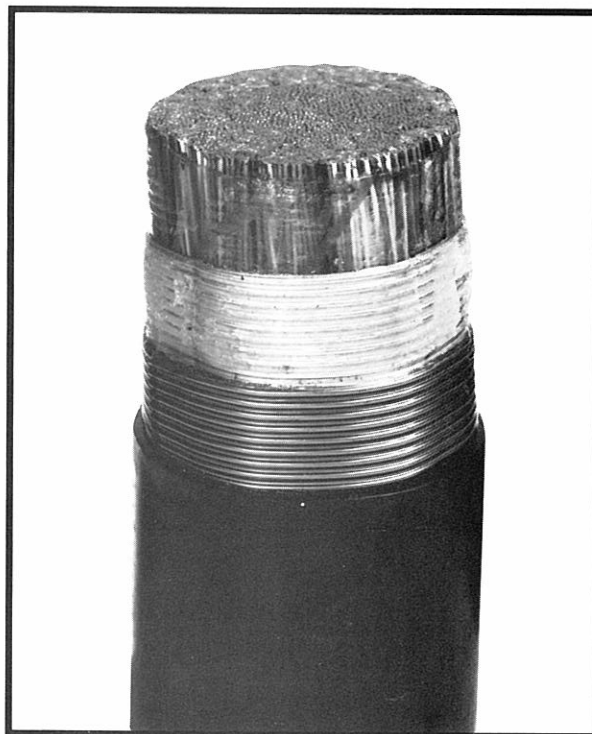
DC Resistance: 144 Ohms/sheath mi

Mutual Capacitance:

83 nF/mi at 1 kHz (nominal)

87 nF/mi at 1 kHz (maximum)

Attenuation: 5.0 dB/1000 ft at 772 kHz



Product Code	Pair Size	Outside Diameter, Nominal (In.)	Weight/Foot, Nominal (Lb)	Comcode
AFMW	25	0.62	0.22	103 266 888
AFMW	50	0.77	0.35	103 266 904
AFMW	100	0.98	0.59	103 266 920
AFMW	200*	1.31	1.05	103 266 946
AFMW	300*	1.52	1.45	103 266 961
AFMW	400*	1.71	1.86	103 266 987
AFMW	600*	2.05	2.71	103 267 001
AFMW	900*	2.44	3.90	103 267 027
AFMW	1200*	2.75	5.05	103 267 043
AFMW	1800*	3.26	7.29	103 267 084

* A pulling eye is available on these pair sizes.

Warning

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Outer Protection, UM

Applications

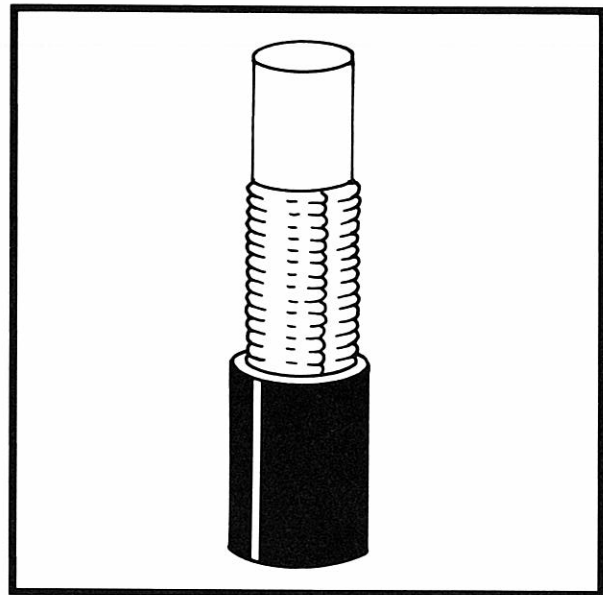
UM (Unsoldered Mechanical) Outer Protection is used in aerial or buried applications to provide additional mechanical protection on ALPETH, ASP, PAP, and PASP sheaths against a variety of sources such as animals, vandalism, rocky conditions, or rough pipes under roadways.

Description

UM protection consists of a longitudinal steel tape and polyethylene jacket installed in the factory over an ALPETH, ASP, PAP, or PASP cable sheath. This outer protection is ordered with the cable and is designated by a -UM after the sheath name (for example, PAP-UM).

Warning

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Underground Cable, Air-Core, DUCTPIC

Applications

DUCTPIC Air-Core Underground Cable is used where duct congestion is a prime concern. Because of its color-coded insulation, DUCTPIC cable allows for easier pair identification than standard plup cable.

Description

DUCTPIC cable is an air-core cable with dual expanded plastic insulated conductors (DEPICs), covered with a bonded STALPETH sheath; the sheath consists of a corrugated aluminum shield and a corrugated, polymer-coated steel shield bonded to an outer polyethylene jacket.

Specifications

Physical Specifications

Gauge: 26 AWG

Pair Size: 1200 to 1500

Weight Per Foot: 3.7 lb (1200-pair) to 4.7 lb (1500-pair)

Outside Diameter: 2.33 in. (1200-pair) to 2.55 in. (1500-pair)

Electrical Specifications

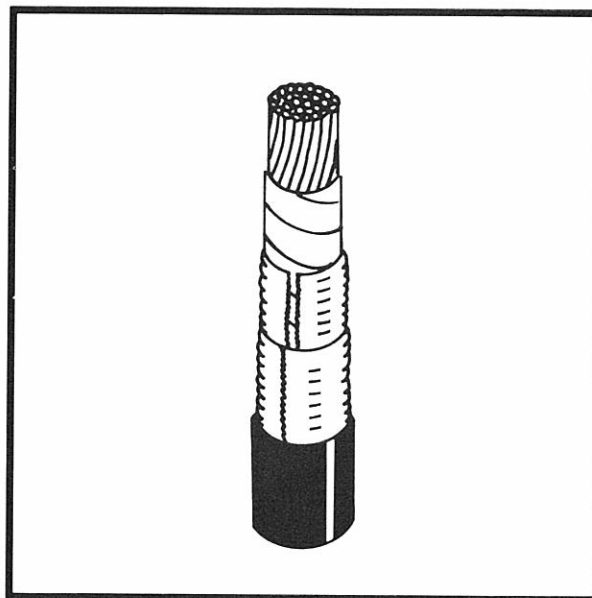
DC Resistance: 144 Ohms/sheath mi (maximum)

Mutual Capacitance:

83 nF/mi at 1 kHz (nominal)

87 nF/mi at 1 kHz (maximum)

Attenuation: 6.5 dB/1000 ft at 772 kHz



Warning

The National Electric Codes (NEC) of 1987 prohibit the use of outside plant copper telephone cables within the building, since they are not fire-resistant and do not pass any of the fire tests. If these cables are utilized within a building beyond a fifty (50) foot radius from the building cable entrance, they must be enclosed in heavy-duty metal conduit.

Product Code	Pair Size	Outside Diameter, Nominal (In.)	Weight/Foot, Nominal (Lb)	Comcode
DCMZ	1200*	2.33	3.70	104 246 749
DCMZ	1500*	2.55	4.70	103 716 692

* A pulling eye is available on these pair sizes.

Underground Cable, Air-Core, STEAMPETH

Applications

STEAMPETH Air-Core Underground Cable is used in underground systems where a high incidence of damage could occur if steam entered the duct.

Description

STEAMPETH cable consists of a standard air-core cable with a sheath similar to bonded STALPETH except that the outer sheath member is made of medium-density polyethylene. Pulp cable with a STEAMPETH sheath is recommended for working environments up to 170°F; it should not be installed when temperatures are below 30°F. For temperatures up to 230°F, PIC STEAMPETH cable is available.

Specifications

Physical Specifications

Gauge: 24 AWG

Pair Size: 600 to 1200

Weight Per Foot: PIC 2.19 lb (600-pair) to 4.16 lb (1200-pair)

Outside Diameter: 1.92 in. (600-pair) to 2.59 in. (1200-pair)

Electrical Specifications

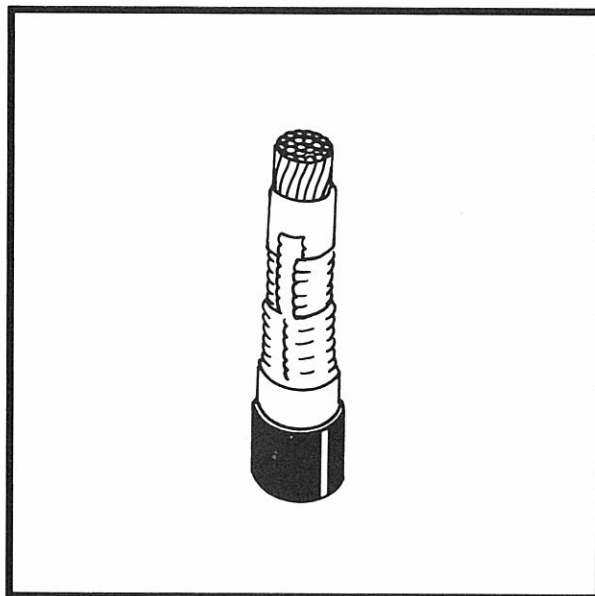
DC Resistance: 144 Ohms/sheath mi (maximum)

Mutual Capacitance:

83 nF/mi at 1 kHz (nominal)

87 nF/mi at 1 kHz (maximum)

Attenuation: 5.9 dB/1000 ft at 772 kHz



Warning

The National Electric Codes (NEC) of 1987 prohibit the use of outside plant copper telephone cables within the building, since they are not fire-resistant and do not pass any of the fire tests. If these cables are utilized within a building beyond a fifty (50) foot radius from the building cable entrance, they must be enclosed in heavy-duty metal conduit.

Copper-Bonded STEAMPETH

Product Code	Pair Size	Outside Diameter, Nominal (In.)	Weight/Foot, Nominal (Lbs)	Comcode
DKMN	600*	1.92	2.19	103 910 576
DKMN	900*	2.30	3.18	103 910 584
DKMN	1200*	2.59	4.16	103 886 891

Pulp-Bonded STEAMPETH

Product Code	Pair Size	Outside Diameter, Nominal (In.)	Weight/Foot, Nominal (Lbs)	Comcode
CDMN	1200*	2.55	4.02	103 886 545

* A pulling eye is available on these pair sizes.

Fiber Interconnection Cable, 1860A

Applications

The 1860A Fiber Interconnection Cable is used in the satellite closet or the equipment room to interconnect fiber cables and equipment in applications requiring field connectorization.

Description

The 1860A cable consists of a single, graded-index fiber, with a 62.5- μm core and a 125- μm cladding; it is covered by a core wrap and an overjacket of flame-retardant PVC. 1860A cable is unconnectorized and is available in a 328-foot reel, or in any length by the foot.

1860A cable is also available with a factory-installed ST (P2020A-C-125) Connector Plug on each end (see FL1P-P Fiber Interconnection Cable), with a data link 1005B Connector Plug on one end and an ST connector plug on the other (see FL1P-B Fiber Interconnection Cable), or with a biconic 1006A Connector Plug on one end and an ST connector plug on the other (see FL1P-A Fiber Interconnection Cable).

Specifications

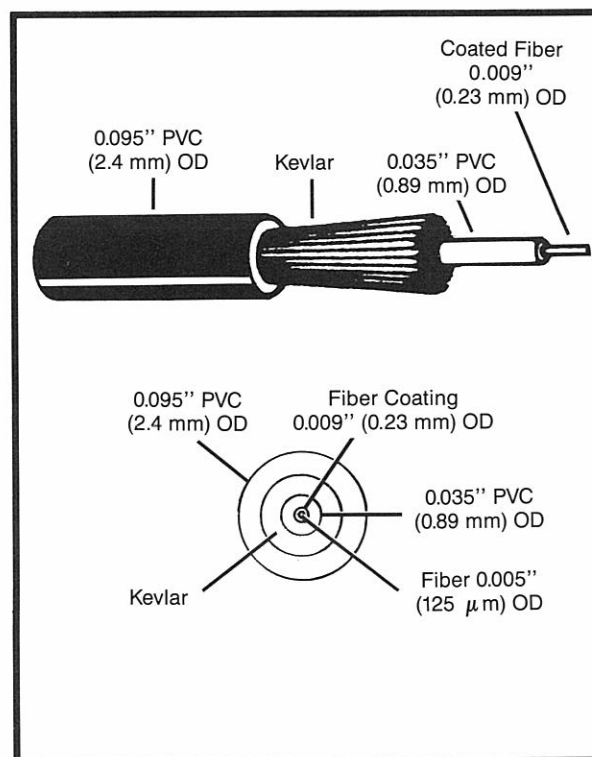
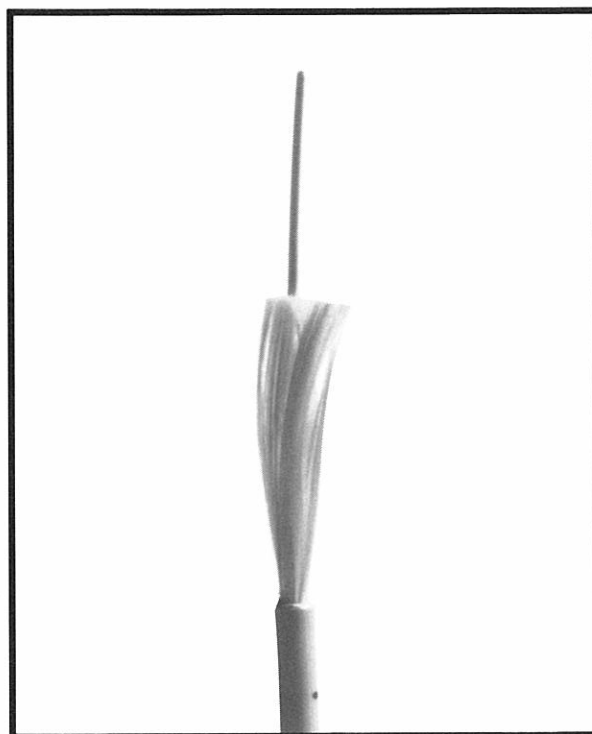
Physical Specifications

Number Of Fibers: 1
 Cable Diameter: 0.095 in.
 Weight: 6 oz/100 ft
 Maximum Length Per Reel: 10,000 ft
 Minimum Bend Radius: 0.5 in. short-term, 1.5 in. long-term without load
 Operating Temperature: 32 to 130°F (0 to 55°C)

Optical Specifications

Maximum Mean Fiber Loss:
 3.9 dB/km at 825 nm
 3 dB/km at 1300 nm
 Minimum Bandwidth:
 160 MHz-km at 850 nm
 200 MHz-km at 1300 nm

Product Code	Length	Comcode
1860A	328-ft reel	104 148 861
1860A	Order by footage	103 716 460



Fiber Interconnection Cable, 1861A

Applications

The 1861A Fiber Interconnection Cable is used in the satellite closet or the equipment room to interconnect fiber cables and equipment in applications requiring field connectorization.

Description

The 1861A cable is a dual fiber cable consisting of two single, parallel, graded-index fibers, with a 62.5- μ m core and a 125- μ m cladding; it is covered by a core wrap and an overjacket of flame-retardant PVC. It is unconnectorized and can be ordered in a 328-foot reel, or in any length by the foot.

1861A cable is also available with factory-installed ST (P2020A-C-125) Connector Plugs at each end (see FL2P-P Fiber Interconnection Cable), with data link 1005B Connector Plugs on one end and ST connector plugs on the other (see FL2P-B Fiber Interconnection Cable), or with biconic 1006A Connector Plugs on one end and ST connector plugs on the other (see FL2P-A Fiber Interconnection Cable).

Specifications

Physical Specifications

Number Of Fibers: 2

Cable Size: 0.214 in. x 0.119 in.

Weight: 19.6 oz/100 ft

Maximum Length Per Reel: 3280 ft

Minimum Bend Radius: 0.5 in. short-term, 1.5 in. long-term without load

Operating Temperature: 32 to 130°F (0 to 55°C)

Optical Specifications

Maximum Mean Fiber Loss:

3.9 dB/km at 825 nm

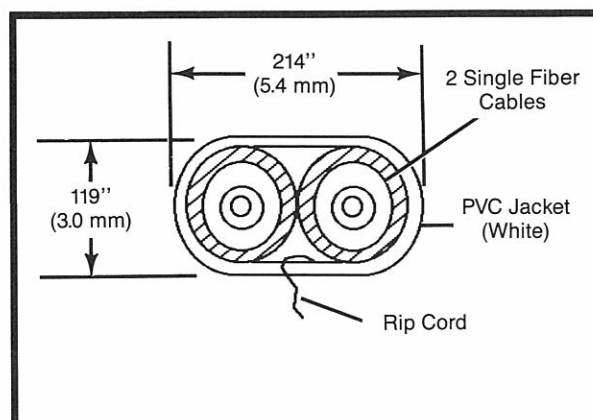
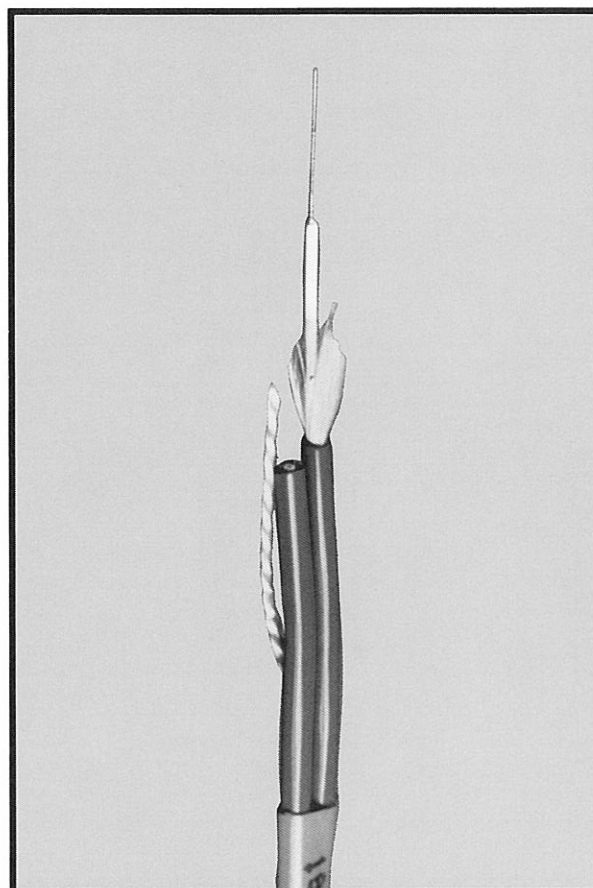
3 dB/km at 1300 nm

Minimum Bandwidth:

160 MHz-km at 850 nm

200 MHz-km at 1300 nm

Product Code	Length	Comcode
1861A	328-ft reel	104 148 879
1861A	Order by footage	103 910 170



Fiber Interconnection Cable, 1862A

Applications

The 1862A Fiber Interconnection Cable is used to interconnect fiber cables and equipment, in applications requiring field connectorization.

Description

The 1862A is a quad fiber cable consisting of four single, parallel, graded-index fibers, with a $62.5\text{-}\mu\text{m}$ core and a $125\text{-}\mu\text{m}$ cladding; it is covered by a core wrap and an overjacket of flame-retardant PVC. 1862A cable is unconnectorized and ordered by the foot.

Specifications

Physical Specifications

Number Of Fibers: 4

Cable Diameter: 0.285 in.

Weight: 42.6 oz/100 ft

Maximum Length Per Reel: 1000 ft

Minimum Bend Radius: 1.5 in. long-term without load

Operating Temperature: 32 to 130°F (0 to 55°C)

Optical Specifications

Maximum Mean Fiber Loss:

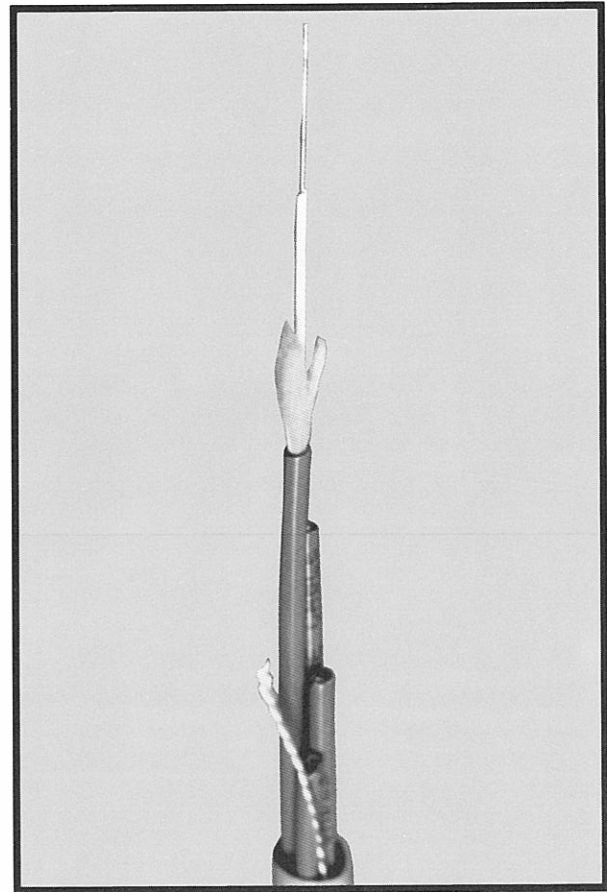
3.9 dB/km at 825 nm

3 dB/km at 1300 nm

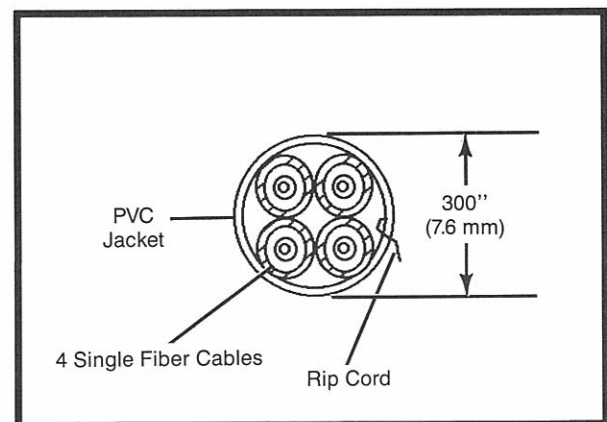
Minimum Bandwidth:

160 MHz-km at 850 nm

200 MHz-km at 1300 nm



Product Code	Length	Comcode
1862A	Order by footage	103 910 188



Fiber Interconnection Cable, FL1P-A, FL2P-A

Applications

The FL1P-A and FL2P-A Fiber Interconnection Cables are used to connect fiber optic equipment, such as multiplexers, to lightguide cross connects and interconnects.

Description

The FL1P-A consists of 1860A (62.5/125- μ m) single fiber cable with an ST (P2020A-C-125) Connector Plug on one end and a biconic 1006A Connector Plug on the other.

The FL2P-A consists of 1861A (62.5-/125- μ m) dual fiber cable with ST connector plugs on one end and biconic connector plugs on the other.

Specifications

FL1P-A Physical Specifications

Number Of Fibers: 1
Coated Fiber Diameter: 0.0089 in.
Outer Jacket Thickness: 0.094 in.
Weight: 6 oz/100 ft
Minimum Bend Radius: 0.5 in. short-term,
1.5 in. long-term without load
Operating Temperature: 32 to 130°F (0 to 55°C)

Optical Specifications

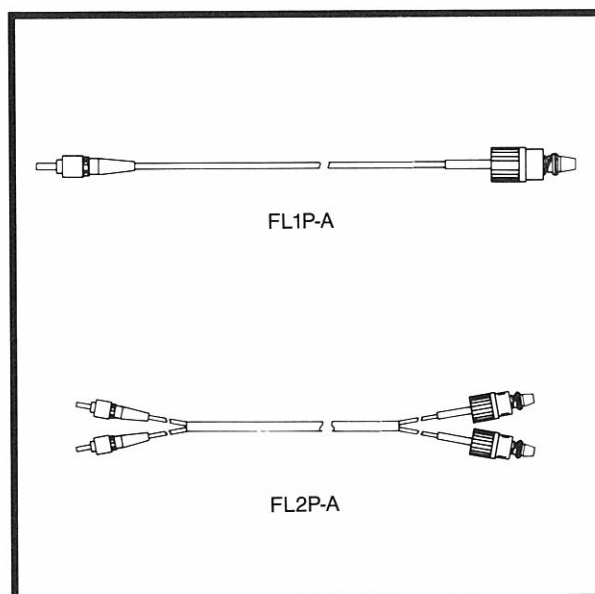
Approximate Connector Losses: 0.5 dB/mated connector
Minimum Bandwidth:
160 MHz-km at 850 nm
200 MHz-km at 1300 nm

FL2P-A Physical Specifications

Number Of Fibers: 2
Coated Fiber Diameter: 0.0089 in.
Outer Jacket Thickness: 0.0741 in. x 0.2206 in.
Weight: 19.6 oz/100 ft
Minimum Bend Radius: 0.5 in. short-term, 1.5 in. long-term without load
Operating Temperature: 32 to 130°F (0 to 55°C)

Optical Specifications

Approximate Connector Losses: 0.5 dB/mated connector
Minimum Bandwidth:
160 MHz-km at 850 nm
200 MHz-km at 1300 nm



Product Code	Length (Ft)	Comcode
FL1P-A-04	4	104 264 882
FL1P-A-08	8	104 264 890
FL1P-A-10	10	104 264 908
FL1P-A-15	15	104 264 916
FL1P-A-35	35	104 264 924
FL2P-A-04	4	104 266 333
FL2P-A-10	10	104 266 341
FL2P-A-15	15	104 266 358
FL2P-A-20	20	104 266 366
FL2P-A-25	25	104 266 374
FL2P-A-30	30	104 266 382
FL2P-A-35	35	104 266 390
FL2P-A-50	50	104 244 942

Fiber Interconnection Cable, FL1P-B, FL2P-B

Applications

The FL1P-B and FL2P-B Fiber Interconnection Cables are used to connect fiber optic equipment, such as multiplexers, to lightguide cross connects and interconnects.

Description

The FL1P-B consists of 1860A (62.5/125- μ m) single fiber cable with an ST (P2020A-C-125) Connector Plug on one end and a data link 1005B Connector Plug on the other.

The FL2P-B consists of 1861A (62.5/125- μ m) dual fiber cable with ST connector plugs on one end and data link connector plugs on the other.

Both the FL1P-B and the FL2P-B are available in standard lengths of up to 35 feet for single fiber and up to 50 feet for dual fiber.

Specifications

FL1P-B Physical Specifications

Number Of Fibers: 1
Coated Fiber Diameter: 0.0089 in.
Outer Jacket Thickness: 0.094 in.
Weight: 6 oz/100 ft
Minimum Bend Radius: 0.5 in. short-term, 1.5 in. long-term without load
Operating Temperature: 32 to 130°F (0 to 55°C)

Optical Specifications

Approximate Connector Losses: 0.5 dB/mated connector

Minimum Bandwidth:
160 MHz-km at 850 nm
200 MHz-km at 1300 nm

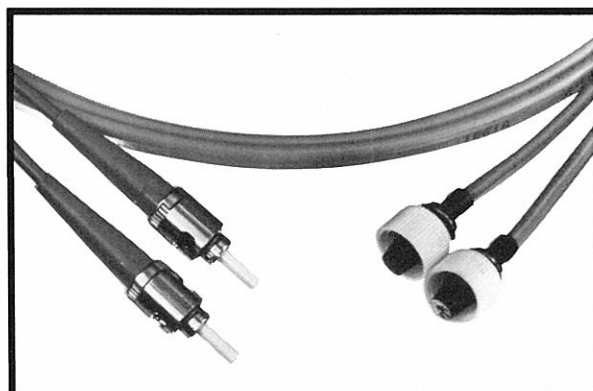
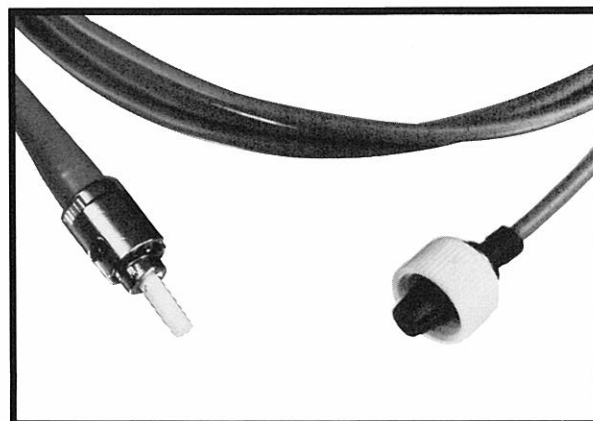
FL2P-B Physical Specifications

Number of Fibers: 2
Coated Fiber Diameter: 0.0089 in.
Outer Jacket Thickness: 0.0741 in. x 0.2206 in.
Weight: 19.6 oz/100 ft
Minimum Bend Radius: 0.5 in. short-term, 1.5 in. long-term without load
Operating Temperature: 32 to 130°F (0 to 55°C)

Optical Specifications

Approximate Connector Losses: 0.5 dB/mated connector

Minimum Bandwidth:
160 MHz-km at 850 nm
200 MHz-km at 1300 nm



Product Code	Length (Ft)	Comcode
FL1P-B-04	4	104 264 932
FL1P-B-08	8	104 264 940
FL1P-B-10	10	104 264 957
FL1P-B-15	15	104 264 965
FL1P-B-35	35	104 264 973
FL2P-B-04	4	104 244 959
FL2P-B-10	10	104 244 967
FL2P-B-15	15	104 244 975
FL2P-B-20	20	104 244 983
FL2P-B-25	25	104 244 991
FL2P-B-30	30	104 245 006
FL2P-B-35	35	104 244 014
FL2P-B-50	50	104 245 030

Fiber Interconnection Cable, FL1P-P, FL2P-P

Applications

The FL1P-P and FL2P-P Fiber Interconnection Cables are used to connect fiber optic equipment to lightguide cross connects and interconnects.

Description

The FL1P-P consists of 1860A (62.5/125- μ m) single fiber cable with an ST (P2020A-C-125) Connector Plug on each end. The FL2P-P consists of 1861A (62.5/125- μ m) dual fiber cable with ST connector plugs on each end. Both the FL1P-P and FL2P-P cables are available in standard lengths up to 100 feet.

Specifications

FL1P-P Physical Specifications

Number Of Fibers: 1
Coated Fiber Diameter: 0.0089 in.
Outer Jacket Thickness: 0.094 in.
Weight: 6 oz/100 ft
Minimum Bend Radius: 0.5 in. short-term,
1.5 in. long-term without load
Operating Temperature: 32 to 130°F (0 to 55°C)

Optical Specifications

Approximate Connector Losses: 0.5 dB/mated connector

Minimum Bandwidth:

160 MHz-km at 850 nm
200 MHz-km at 1300 nm

FL2P-P Physical Specifications

Number Of Fibers: 2
Coated Fiber Diameter: 0.0089 in.
Outer Jacket Thickness: 0.0741 in. x 0.2206 in.
Weight: 19.6 oz/100 ft
Minimum Bend Radius: 0.5 in. short-term,
1.5 in. long-term
Operating Temperature: 32 to 130°F (0 to 55°C)

Optical Specifications

Approximate Connector Losses: 0.5 dB/mated connector

Minimum Bandwidth:

160 MHz-km at 850 nm
200 MHz-km at 1300 nm



Product Code	Length (Ft)	Comcode	Product Code	Length (Ft)	Comcode
FL1P-P-02	2	104 264 981	FL2P-P-02	2	104 266 408
FL1P-P-04	4	104 264 999	FL2P-P-04	4	104 266 416
FL1P-P-06	6	104 265 004	FL2P-P-06	6	104 266 424
FL1P-P-08	8	104 265 012	FL2P-P-08	8	104 266 432
FL1P-P-10	10	104 265 020	FL2P-P-10	10	104 266 440
FL1P-P-15	15	104 265 038	FL2P-P-15	15	104 266 457
FL1P-P-20	20	104 265 046	FL2P-P-20	20	104 266 465
FL1P-P-25	25	104 265 053	FL2P-P-25	25	104 266 473
FL1P-P-30	30	104 265 061	FL2P-P-30	30	104 266 481
FL1P-P-35	35	104 265 079	FL2P-P-35	35	104 266 499
FL1P-P-40	40	104 265 087	FL2P-P-40	40	104 266 507
FL1P-P-50	50	104 265 103	FL2P-P-50	50	104 266 523
FL1P-P-75	75	104 245 137	FL2P-P-75	75	104 246 556
FL1P-L-100	100	104 245 145	FL2P-P-100	100	104 246 564

Lightguide Building Cable, LGBC Series

Applications

Lightguide Building Cable is used for both vertical and horizontal applications in buildings. It is UL listed for riser (PVC jacket) or plenum (fluoropolymer jacket) applications in accordance with sections 770-6 or 770-7 of the National Electrical Code (NEC), respectively.

Description

Lightguide Building Cable consists of 2, 4, 6, 12, 18, 24, or 36 individual 62.5/125- μ m fibers, each with a color-coded PVC buffer. LGBC cables are reinforced with KEVLAR® yarn for superior strength, and contain no metallic elements.

Specifications

LGBC Physical Specifications

Minimum Bend Radius: 3 in.

Operating Temperature: -14 to 131°F (-10 to 55°C)

LGBC Optical Specifications

Maximum Mean Fiber Loss:

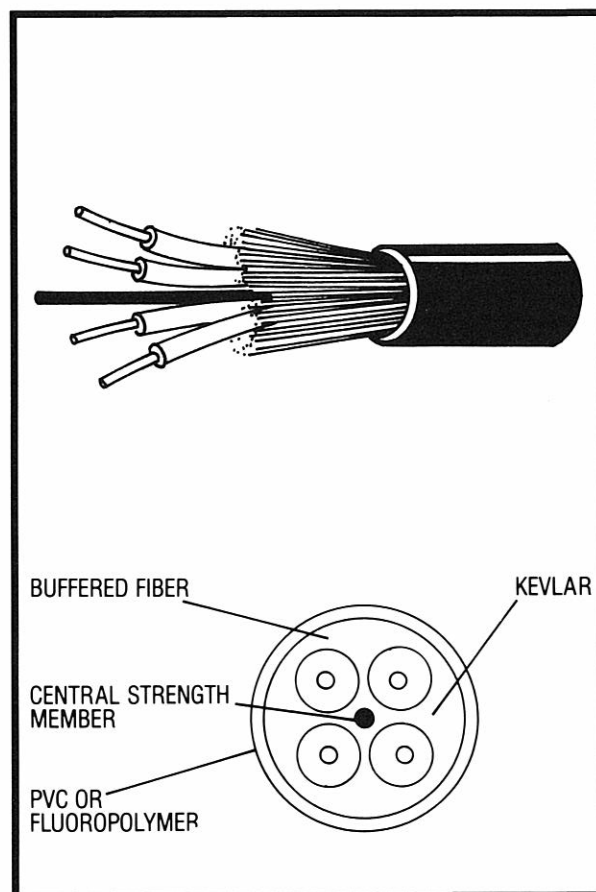
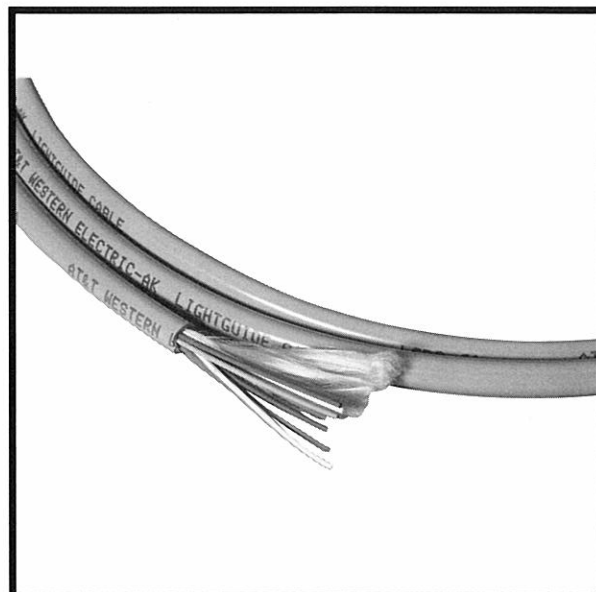
4.0 dB/km at 850 nm (typical)

1 dB/km at 1300 nm

Minimum Bandwidth:

160 MHz-km at 850 nm (typical)

500 MHz-km at 1300 nm



PVC Jacket (Riser Classified)

Product Code	Max. Length* (Ft/Reel)		Cable, Outside Diameter (In.)	Weight (Lb/100 Ft)	Pulling Tension, Max. (Lb)	Comcode
	C	D				
LGBC-002A-LRX	4,000	7,000	0.175	1.2	100	104 272 406
LGBC-004A-LRX	4,000	7,000	0.175	1.2	100	104 272 414
LGBC-006A-LRX	2,500	7,000	0.210	1.6	125	104 272 422
LGBC-012A-LRX	1,500	5,000	0.275	1.6	150	104 272 430
LGBC-018B-LRX	-	3,300	0.410	5.2	150	105 237 655
LGBC-024B-LRX	-	3,000	0.465	6.2	150	104 275 250
LGBC-036B-LRX	-	3,000	0.465	6.9	150	105 240 436

Fluoropolymer Jacket (Plenum Classified)

Product Code	Max. Length* (Ft/Reel)		Cable, Outside Diameter (In.)	Weight (Lb/100 Ft)	Pulling Tension, Max. (Lb)	Comcode
	C	D				
LGBC-002A-LPX	3,280	7,000	0.195	1.4	100	104 272 489
LGBC-004A-LPX	3,280	7,000	0.195	1.4	100	104 272 497
LGBC-006A-LPX	1,500	6,500	0.250	2.2	125	104 272 505
LGBC-012A-LPX	1,000	4,000	0.320	3.3	150	104 272 513
LGBC-018B-LPX	-	3,300	0.420	6.0	150	105 237 648
LGBC-024B-LPX	-	3,000	0.485	7.8	150	105 240 345
LGBC-036B-LPX	-	3,000	0.485	8.5	150	105 240 402

*Reel Dimensions:

	Width	Diameter	Weight
C =	13 in	18 in	10 lbs
D =	16 in	32 in	65 lbs

Lightguide Riser Cable, 3AEX

Applications

The 3AEX Lightguide Riser Cable is used in the riser subsystem and meets the requirements of section 770-6 of the National Electrical Code (NEC).

Description

The 3AEX lightguide cable has a core consisting of from 2 to 144 multimode, 62.5/125- μ m fibers, with 136 fibers guaranteed. The fibers are set side by side and laminated between pressure-sensitive adhesive tapes. The cable has an air-core ribbon structure with a cross-ply flame-retardant PVC sheath.

The cable core is protected by a tape heat barrier covered with an inner sheath layer of PVC, a vapor barrier, an inner layer of steel support strands, an intermediate jacket of PVC, polyester tape wrap, an outer layer of steel support strands, and an outer jacket of orange PVC.

This cable can be ordered with array connectors and factory Sheath Termination Hardware (see Section 6). It should be used only for applications that require a high fiber count. (Lightguide Building Cable can be used for other applications.)

Specifications

Physical Specifications

Number Of Fibers: 2 to 136

Cable Diameter: 0.49 in.

Weight: 110 lb/1000 ft

Minimum Bend Radius: 10 in. with load, 5 in. without load

Operating Temperature: -40 to 170°F

Optical Specifications

Fiber Loss:*

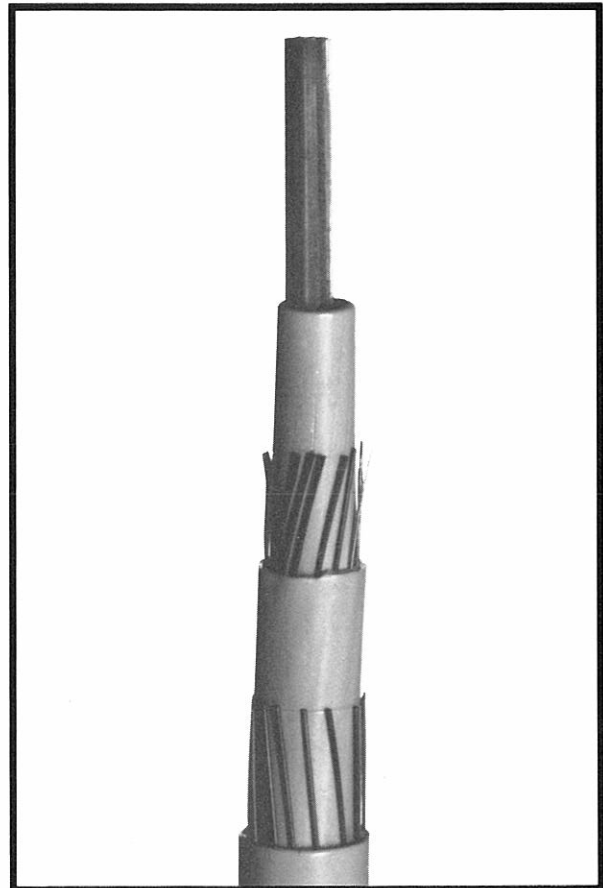
3.7 to 4.7 dB/km at 825 nm

0.95 to 2.7 dB/km at 1300 nm

Bandwidth:*

150 to 300 MHz-km at 850 nm

300 to 1,000 MHz-km at 1300 nm



Product Code	No. of Fibers	Comcode	Product Code	No. of Fibers	Comcode
3AEX-002	2	103 998 720	3AEX-050	50	103 998 969
3AEX-004	4	102 998 738	3AEX-052	52	103 998 977
3AEX-006	6	103 972 746	3AEX-054	54	103 998 985
3AEX-008	8	103 998 753	3AEX-056	56	103 998 993
3AEX-010	10	103 998 761	3AEX-058	58	103 999 009
3AEX-012	12	103 998 779	3AEX-060	60	103 999 017
3AEX-014	14	103 998 787	3AEX-062	62	103 999 025
3AEX-016	16	103 998 795	3AEX-064	64	103 999 033
3AEX-018	18	103 998 793	3AEX-066	66	103 999 041
3AEX-020	20	103 998 811	3AEX-068	68	103 999 058
3AEX-022	22	103 998 829	3AEX-070	70	103 999 066
3AEX-024	24	103 998 837	3AEX-072	72	103 999 074
3AEX-026	26	103 998 845	3AEX-074	74	103 999 090
3AEX-028	28	103 998 852	3AEX-078	78	103 999 108
3AEX-030	30	103 998 860	3AEX-080	80	103 999 116
3AEX-032	32	103 998 878	3AEX-082	82	103 999 124
3AEX-034	34	103 998 886	3AEX-084	84	103 999 132
3AEX-036	36	103 998 894	3AEX-086	86	103 999 140
3AEX-038	38	103 998 902	3AEX-088	88	103 999 157
3AEX-040	40	103 998 910	3AEX-090	90	103 999 165
3AEX-042	42	103 998 928	3AEX-102	102	103 999 223
3AEX-044	44	103 998 936	3AEX-112	112	103 999 272
3AEX-046	46	103 998 944	3AEX-124	124	103 999 330
3AEX-048	48	103 998 951	3AEX-136	136	103 885 380

* Customers may order this cable with a specific bandwidth or fiber loss within the ranges specified.

Lightguide Cable, 3BAX

Applications

The 3BAX Lightguide Cable is used for underground conduit, buried, or aerial applications where lightning and rodent hazards are not present, and in PVC ducts in areas where lightning susceptibility is small.

Description

The 3BAX Lightguide Cable has a core consisting of from 2 to 144 multimode, 62.5/125- μ m ribbon fibers, with 136 fibers guaranteed. These fibers are set side by side and laminated between pressure-sensitive adhesive tapes. The core is filled with a special compound and protected by a sheath consisting of two layers of polyethylene with steel strength strands embedded in each layer of polyethylene.

This cable can be ordered with array connectors and factory Sheath Termination Hardware (see Section 6).

Specifications

Physical Specifications

Number Of Fibers: 2 to 136

Cable Diameter: 0.49 in.

Weight: 100 lb/1000 ft

Minimum Bend Radius: 10 in. with load, 5 in. without load

Operating Temperature: -40 to 170°F

Optical Specifications

Fiber Loss:*

3.7 to 4.7 dB/km at 825 nm

0.95 to 2.7 dB/km at 1300 nm

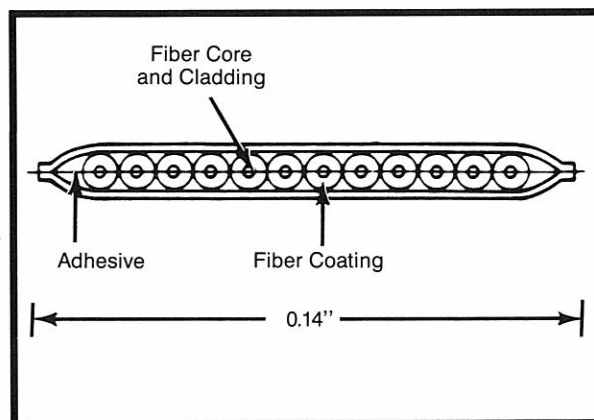
Bandwidth:*

150 to 300 MHz-km at 850 nm

300 to 1,000 MHz-km at 1300 nm

Warning

The National Electric Codes (NEC) of 1987 prohibit the use of outside plant fiber optic telephone cables within the building, since they are not fire-resistant and do not pass any of the fire tests. If these cables are utilized within a building beyond a fifty (50) foot radius from the building cable entrance, they must be enclosed in metallic conduit.



Product Code	No. of Fibers	Comcode	Product Code	No. of Fibers	Comcode
3BAX-002	2	104 000 237	3BAX-070	70	103 999 645
3BAX-004	4	104 000 245	3BAX-072	72	103 999 652
3BAX-006	6	104 000 252	3BAX-074	74	103 999 660
3BAX-008	8	104 000 260	3BAX-076	76	103 999 678
3BAX-010	10	104 000 278	3BAX-078	78	103 999 686
3BAX-012	12	103 999 397	3BAX-080	80	103 999 694
3BAX-014	14	103 999 405	3BAX-082	82	103 999 702
3BAX-016	16	103 999 413	3BAX-084	84	103 999 710
3BAX-018	18	103 999 421	3BAX-086	86	103 999 728
3BAX-020	20	103 999 439	3BAX-088	88	103 999 736
3BAX-022	22	103 999 447	3BAX-090	90	103 999 744
3BAX-024	24	103 881 207	3BAX-092	92	103 999 751
3BAX-026	26	103 999 454	3BAX-094	94	103 999 769
3BAX-028	28	103 999 462	3BAX-096	96	103 999 777
3BAX-030	30	103 999 470	3BAX-098	98	103 999 785
3BAX-032	32	103 999 488	3BAX-100	100	103 999 793
3BAX-034	34	103 999 496	3BAX-102	102	103 999 801
3BAX-036	36	103 885 521	3BAX-104	104	103 999 819
3BAX-038	38	103 999 504	3BAX-106	106	103 999 827
3BAX-040	40	103 999 512	3BAX-108	108	103 999 835
3BAX-042	42	103 999 520	3BAX-110	110	103 999 843
3BAX-044	44	103 999 538	3BAX-112	112	103 999 850
3BAX-046	46	103 999 546	3BAX-114	114	103 999 868
3BAX-048	48	103 885 513	3BAX-116	116	103 999 876
3BAX-050	50	103 999 553	3BAX-118	118	103 999 884
3BAX-052	52	103 999 561	3BAX-120	120	103 999 892
3BAX-054	54	103 999 579	3BAX-122	122	103 999 900
3BAX-056	56	103 999 587	3BAX-124	124	103 999 918
3BAX-058	58	103 999 595	3BAX-126	126	103 999 926
3BAX-060	60	103 885 505	3BAX-128	128	103 999 934
3BAX-062	62	103 999 603	3BAX-130	130	103 999 942
3BAX-064	64	103 999 611	3BAX-132	132	103 999 959
3BAX-066	66	103 999 629	3BAX-134	134	103 999 967
3BAX-068	68	103 999 637	3BAX-136	136	103 885 497

* Customers may order this cable with a specific bandwidth or fiber loss within the ranges specified.

Lightguide Cable, 3BFX

Applications

The 3BFX Lightguide Cable is used for underground, buried, or aerial applications. Its nonmetallic, fiberglass-reinforced sheath provides more than adequate lightning resistance in high lightning areas.

Description

The 3BFX Lightguide Cable has a core consisting of 4 to 144 multimode, 62.5/125- μ m ribbon fibers, with 136 fibers guaranteed. The fibers are set side by side and laminated between pressure-sensitive adhesive tapes. The core is filled with a special compound and covered by a nonmetallic sheath, consisting of fiberglass strength strands embedded in polyethylene.

This cable can be ordered with array connectors and factory Sheath Termination Hardware (see Section 6).

Specifications

Physical Specifications

Number Of Fibers: 4 to 136

Cable Diameter: 0.5 in.

Weight: 0.1 lb/ft

Maximum Pulling Tension: 600 lb

Operating Temperature: -40 to 170°F

Optical Specifications

Fiber Loss: *

3.7 to 4.7 dB/km at 825 nm

0.95 to 2.7 dB/km at 1300 nm

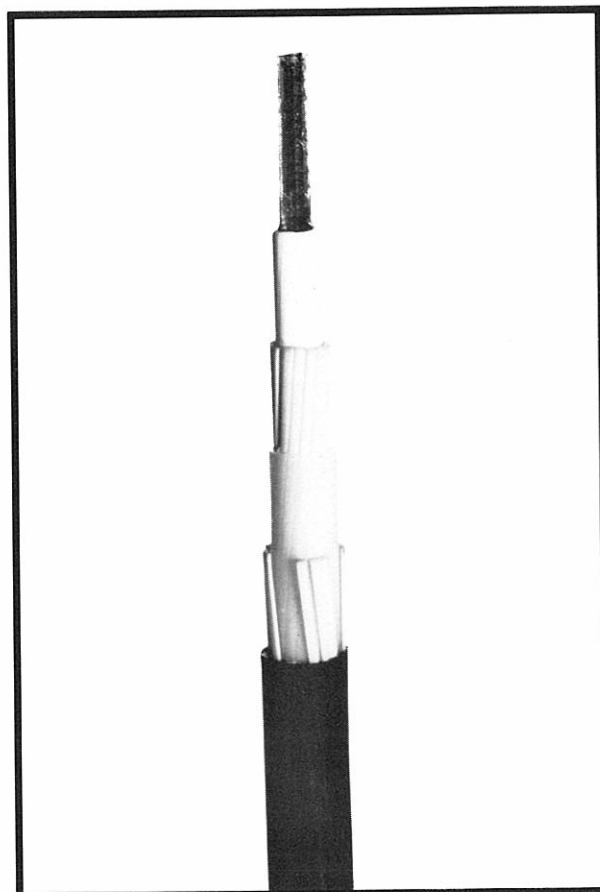
Bandwidth: *

150 to 300 MHz-km at 850 nm

300 to 1,000 MHz-km at 1300 nm

Warning

The National Electric Codes (NEC) of 1987 prohibit the use of outside plant fiber optic telephone cables within the building, since they are not fire-resistant and do not pass any of the fire tests. If these cables are utilized within a building beyond a fifty (50) foot radius from the building cable entrance, they must be enclosed in metallic conduit.



Product Code	No. of Fibers	Comcode	Product Code	No. of Fibers	Comcode
3BFX-002	2	105 166 532	3BFX-070	70	105 167 365
3BFX-004	4	105 166 540	3BFX-072	72	105 167 381
3BFX-006	6	105 166 557	3BFX-074	74	105 167 456
3BFX-008	8	105 166 565	3BFX-076	76	105 167 597
3BFX-010	10	105 166 573	3BFX-078	78	105 167 613
3BFX-012	12	105 166 581	3BFX-080	80	105 167 621
3BFX-014	14	105 166 599	3BFX-082	82	105 167 647
3BFX-016	16	105 166 607	3BFX-084	84	105 167 670
3BFX-018	18	105 166 615	3BFX-086	86	105 167 696
3BFX-020	20	105 166 904	3BFX-088	88	105 167 720
3BFX-022	22	105 166 920	3BFX-090	90	105 167 746
3BFX-024	24	105 166 946	3BFX-092	92	105 167 753
3BFX-026	26	105 166 953	3BFX-094	94	105 167 787
3BFX-028	28	105 166 961	3BFX-096	96	105 167 811
3BFX-030	30	105 166 979	3BFX-098	98	105 167 837
3BFX-032	32	105 166 987	3BFX-100	100	105 167 860
3BFX-034	34	105 166 995	3BFX-102	102	105 167 951
3BFX-036	36	105 167 001	3BFX-104	104	105 167 977
3BFX-038	38	105 167 035	3BFX-106	106	105 167 985
3BFX-040	40	105 167 084	3BFX-108	108	105 168 009
3BFX-042	42	105 167 092	3BFX-110	110	105 168 017
3BFX-044	44	105 167 100	3BFX-112	112	105 168 033
3BFX-046	46	105 167 118	3BFX-114	114	105 168 041
3BFX-048	48	105 167 126	3BFX-116	116	105 168 058
3BFX-050	50	105 167 217	3BFX-118	118	105 168 066
3BFX-052	52	105 167 258	3BFX-120	120	105 168 074
3BFX-054	54	105 191 845	3BFX-122	122	105 168 082
3BFX-056	56	105 191 852	3BFX-124	124	105 168 090
3BFX-058	58	105 191 860	3BFX-126	126	105 168 124
3BFX-060	60	105 167 274	3BFX-128	128	105 168 132
3BFX-062	62	105 167 290	3BFX-130	130	105 168 157
3BFX-064	64	105 167 308	3BFX-132	132	105 168 165
3BFX-066	66	105 167 332	3BFX-134	134	105 168 181
3BFX-068	68	105 167 357	3BFX-136	136	105 168 199

* Customers may order this cable with a specific bandwidth or fiber loss within the ranges specified.

Lightguide Cable, 3BHX

Applications

The 3BHX Lightguide Cable is used for underground, buried, or aerial applications where extra protection is needed from lightning or wildlife.

Description

The 3BHX Lightguide Cable has a core consisting of 4 to 144 multimode, 62.5/125- μ m ribbon fibers, with 136 fibers guaranteed. The fibers are arranged side by side and laminated between pressure-sensitive adhesive tapes. The core is filled with a special compound and covered by a sheath that includes two layers of polyethylene with steel strength strands embedded in each layer, and a layer of corrugated, bonded stainless steel and copper underneath the outer layer of steel reinforcement wires.

This cable can be ordered with array connectors and factory Sheath Termination Hardware (see Section 6).

Specifications

Physical Specifications

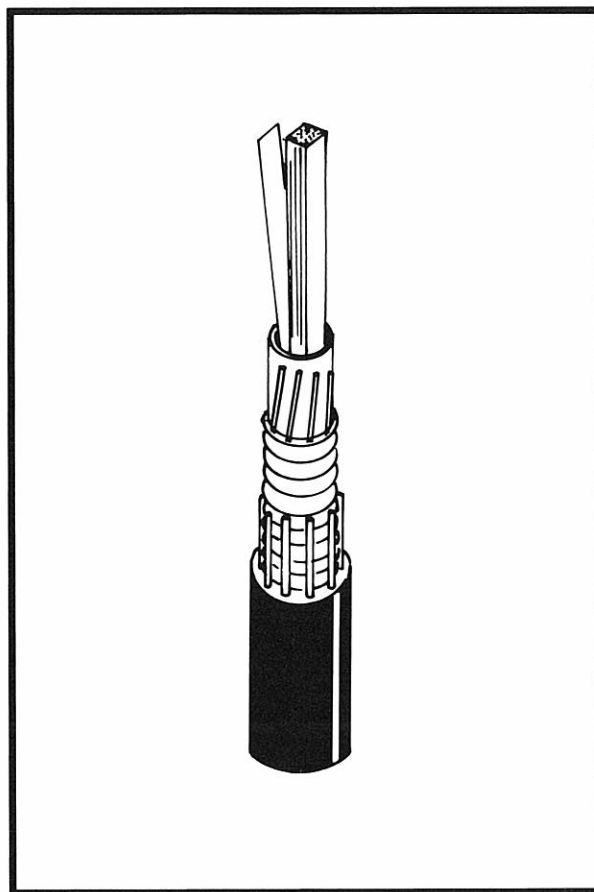
Number Of Fibers: 4 to 136
Cable Diameter: 0.5 in.
Weight: 0.12 lb/ft
Maximum Pulling Tension: 600 lb
Operating Temperature: -40 to 170°F

Optical Specifications

Fiber Loss: *
3.7 to 4.7 dB/km at 825 nm
0.95 to 2.7 dB/km at 1300 nm
Bandwidth: *
150 to 300 MHz-km at 850 nm
300 to 1,000 MHz-km at 1300 nm

Warning

The National Electric Codes (NEC) of 1987 prohibit the use of outside plant fiber optic telephone cables within the building, since they are not fire-resistant and do not pass any of the fire tests. If these cables are utilized within a building beyond a fifty (50) foot radius from the building cable entrance, they must be enclosed in metallic conduit.



Product Code	No. of Fibers	Comcode	Product Code	No. of Fibers	Comcode
3BHX-004	4	105 081 814	3BHX-072	72	105 082 150
3BHX-006	6	105 081 822	3BHX-074	74	105 082 168
3BHX-008	8	105 081 830	3BHX-076	76	105 082 176
3BHX-010	10	105 081 848	3BHX-078	78	105 082 184
3BHX-012	12	105 081 855	3BHX-080	80	105 082 192
3BHX-014	14	105 081 863	3BHX-082	82	105 082 200
3BHX-016	16	105 081 871	3BHX-084	84	105 082 218
3BHX-018	18	105 081 889	3BHX-086	86	105 082 226
3BHX-020	20	105 081 897	3BHX-088	88	105 082 234
3BHX-022	22	105 081 905	3BHX-090	90	105 082 242
3BHX-024	24	105 081 913	3BHX-092	92	105 082 259
3BHX-026	26	105 081 921	3BHX-094	94	105 082 267
3BHX-028	28	105 081 939	3BHX-096	96	105 082 275
3BHX-030	30	105 081 947	3BHX-098	98	105 082 283
3BHX-032	32	105 081 954	3BHX-100	100	105 082 291
3BHX-034	34	105 081 962	3BHX-102	102	105 082 309
3BHX-036	36	105 081 970	3BHX-104	104	105 082 317
3BHX-038	38	105 081 988	3BHX-106	106	105 081 657
3BHX-040	40	105 081 996	3BHX-108	108	105 081 640
3BHX-042	42	105 082 002	3BHX-110	110	105 081 665
3BHX-044	44	105 082 010	3BHX-112	112	105 081 673
3BHX-046	46	105 082 028	3BHX-114	114	105 081 681
3BHX-048	48	105 082 036	3BHX-116	116	105 081 699
3BHX-050	50	105 082 044	3BHX-118	118	105 081 707
3BHX-052	52	105 082 051	3BHX-120	120	105 081 715
3BHX-054	54	105 082 069	3BHX-122	122	105 081 723
3BHX-056	56	105 082 077	3BHX-124	124	105 081 731
3BHX-058	58	105 082 085	3BHX-126	126	105 081 749
3BHX-060	60	105 082 093	3BHX-128	128	105 081 756
3BHX-062	62	105 082 101	3BHX-130	130	105 081 764
3BHX-064	64	105 082 119	3BHX-132	132	105 081 772
3BHX-066	66	105 082 127	3BHX-134	134	105 081 780
3BHX-068	68	105 082 135	3BHX-136	136	105 081 798
3BHX-070	70	105 082 143			

* Customers may order this cable with a specific bandwidth or fiber loss within the range specified.

Lightpack Cable, 3DAX

Applications

The 3DAX is the standard LIGHTPACK cable. Like the 3BAX Lightguide Cable, it is used for underground conduit, buried, or aerial applications where lightning and rodent hazards are not present, and in PVC ducts where lightning susceptibility is small.

Description

The 3DAX LIGHTPACK Cable has a core consisting of from 4 to 96 multimode, 62.5/125- μ m fibers. The fibers are separated into color-coded binder groups surrounded by a plastic core tube, which is filled with a special compound. The metallic crossply sheath includes an inner jacket and an outer polyethylene jacket, with steel strength strands embedded in each jacket layer.

Specifications

Physical Specifications

Number Of Fibers: 4 to 96
 Cable Diameter: 0.42 in.
 Weight: 0.08 lb/ft
 Maximum Pulling Tension: 600 lb
 Operating Temperature: -40 to 170°F

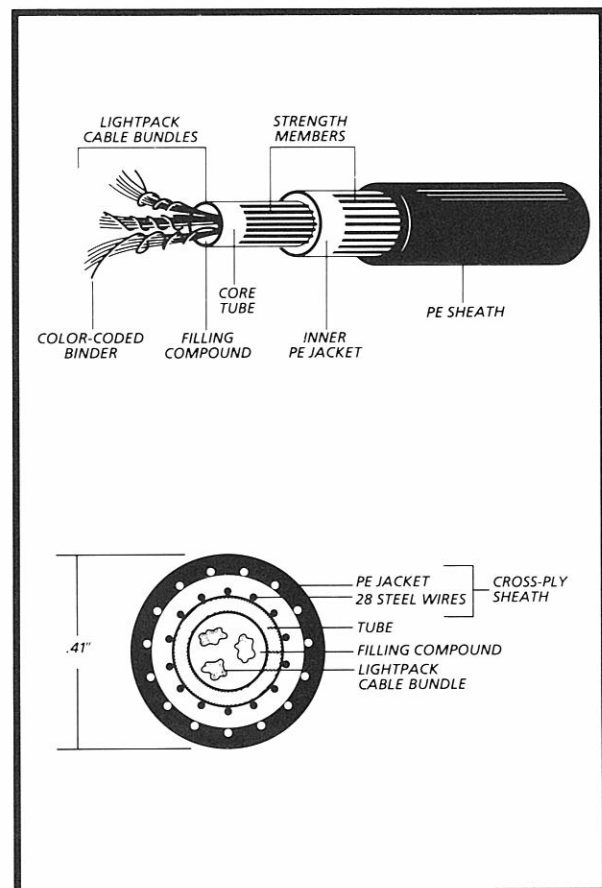
Optical Specifications

Fiber Loss: *

3.7 to 4.7 dB/km at 825 nm
 0.95 to 2.7 dB/km at 1300 nm

Bandwidth: *

150 to 300 MHz-km at 850 nm
 300 to 1,000 MHz-km at 1300 nm



Product Code	No. of Fibers	Comcode	Product Code	No. of Fibers	Comcode
3DAX-004	4	104 309 786	3DAX-052	52	105 140 818
3DAX-006	6	105 054 811	3DAX-054	54	105 140 826
3DAX-008	8	105 054 829	3DAX-056	56	105 140 842
3DAX-010	10	105 054 845	3DAX-058	58	105 140 867
3DAX-012	12	105 054 878	3DAX-060	60	105 140 883
3DAX-014	14	104 268 768	3DAX-062	62	105 140 891
3DAX-016	16	104 268 776	3DAX-064	64	105 140 909
3DAX-018	18	104 268 784	3DAX-066	66	105 140 917
3DAX-020	20	104 268 792	3DAX-068	68	105 140 933
3DAX-022	22	104 268 800	3DAX-070	70	105 140 941
3DAX-024	24	104 268 818	3DAX-072	72	105 140 958
3DAX-026	26	104 268 826	3DAX-074	74	105 279 681
3DAX-028	28	104 268 834	3DAX-076	76	105 279 699
3DAX-030	30	104 268 842	3DAX-078	78	105 279 707
3DAX-032	32	104 268 859	3DAX-080	80	105 279 715
3DAX-034	34	104 268 867	3DAX-082	82	105 279 723
3DAX-036	36	104 268 875	3DAX-084	84	105 279 731
3DAX-038	38	104 268 883	3DAX-086	86	105 279 749
3DAX-040	40	104 268 891	3DAX-088	88	105 279 756
3DAX-042	42	104 268 909	3DAX-090	90	105 279 764
3DAX-044	44	104 268 917	3DAX-092	92	105 279 772
3DAX-046	46	104 268 925	3DAX-094	94	105 279 780
3DAX-048	48	104 268 933	3DAX-096	96	105 279 798
3DAX-050	50	105 140 792			

* Customers may order this cable with a specific bandwidth or fiber loss within the ranges specified.

Warning

The National Electric Codes (NEC) of 1987 prohibit the use of outside plant fiber optic telephone cables within the building, since they are not fire-resistant and do not pass any of the fire tests. If these cables are utilized within a building beyond a fifty (50) foot radius from the building cable entrance, they must be enclosed in metallic conduit.

Lightpack Cable, 3DFX

Applications

The 3DFX LIGHTPACK Cable is used for underground conduit, buried, or aerial applications. Its nonmetallic, fiberglass-reinforced sheath provides more than adequate lightning resistance in high lightning areas.

Description

The 3DFX LIGHTPACK Cable has a core consisting of 4 to 96 multimode, 62.5/125- μ m fibers. The fibers are separated into color-coded binder groups surrounded by a plastic core tube. The core is filled with a special compound and covered by a nonmetallic crossply sheath that consists of fiberglass strength strands embedded in polyethylene.

Specifications

Physical Specifications

Number Of Fibers: 4 to 96
Cable Diameter: 0.43 in.
Weight: 0.08 lb/ft
Maximum Pulling Tension: 600 lb
Operating Temperature: -40 to 170°F

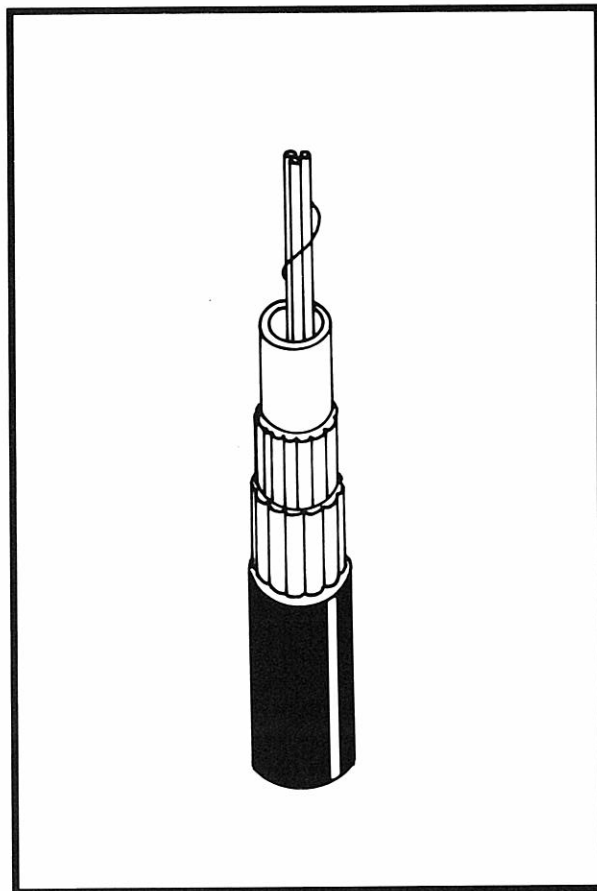
Optical Specifications

Fiber Loss:*

3.7 to 4.7 dB/km at 825 nm
0.95 to 2.7 dB/km at 1300 nm

Bandwidth:*

150 to 300 MHz-km at 850 nm
300 to 1,000 MHz-km at 1300 nm



Product Code	No. of Fibers	Comcode	Product Code	No. of Fibers	Comcode
3DFX-004	4	105 168 215	3DFX-052	52	105 168 538
3DFX-006	6	105 168 231	3DFX-054	54	105 168 546
3DFX-008	8	105 168 249	3DFX-056	56	105 168 553
3DFX-010	10	105 168 264	3DFX-058	58	105 168 561
3DFX-012	12	105 168 272	3DFX-060	60	105 168 579
3DFX-014	14	105 168 298	3DFX-062	62	105 168 587
3DFX-016	16	105 168 322	3DFX-064	64	105 168 595
3DFX-018	18	105 168 348	3DFX-066	66	105 168 603
3DFX-020	20	105 168 355	3DFX-068	68	105 168 611
3DFX-022	22	105 168 371	3DFX-070	70	105 168 629
3DFX-024	24	105 168 389	3DFX-072	72	105 168 637
3DFX-026	26	105 168 397	3DFX-074	74	105 280 077
3DFX-028	28	105 168 405	3DFX-076	76	105 280 085
3DFX-030	30	105 168 413	3DFX-078	78	105 280 093
3DFX-032	32	105 168 421	3DFX-080	80	105 280 101
3DFX-034	34	105 168 439	3DFX-082	82	105 280 119
3DFX-036	36	105 168 447	3DFX-084	84	105 280 127
3DFX-038	38	105 168 454	3DFX-086	86	105 280 135
3DFX-040	40	105 168 462	3DFX-088	88	105 280 143
3DFX-042	42	105 168 470	3DFX-090	90	105 280 150
3DFX-044	44	105 168 488	3DFX-092	92	105 280 168
3DFX-046	46	105 168 504	3DFX-094	94	105 280 176
3DFX-048	48	105 168 512	3DFX-096	96	105 280 184
3DFX-050	50	105 168 520			

* Customers may order this cable with a specific bandwidth or fiber loss within the ranges specified.

Warning

The National Electric Codes (NEC) of 1987 prohibit the use of outside plant fiber optic telephone cables within the building, since they are not fire-resistant and do not pass any of the fire tests. If these cables are utilized within a building beyond a fifty (50) foot radius from the building cable entrance, they must be enclosed in metallic conduit.

Lightpack Cable, 3DHX

Applications

The 3DHX LIGHTPACK Cable is used for underground conduit, buried, or aerial applications where extra protection is needed from lightning or wildlife.

Description

The 3DHX LIGHTPACK Cable has a core consisting of from 4 to 96 multimode, 62.5/125- μ m fibers. The fibers are separated into color-coded binder groups surrounded by a plastic core tube, which is filled with FLEXGEL filling compound. The sheath includes an inner jacket and an outer jacket of polyethylene with steel strength strands embedded in each jacket layer, and a layer of corrugated, bonded stainless steel and copper under the outer jacket.

Specifications

Physical Specifications

Number Of Fibers: 4 to 96

Cable Diameter: 0.43 in.

Weight: 0.1 lb/ft

Maximum Pulling Tension: 600 lb

Optical Specifications

Fiber Loss:*

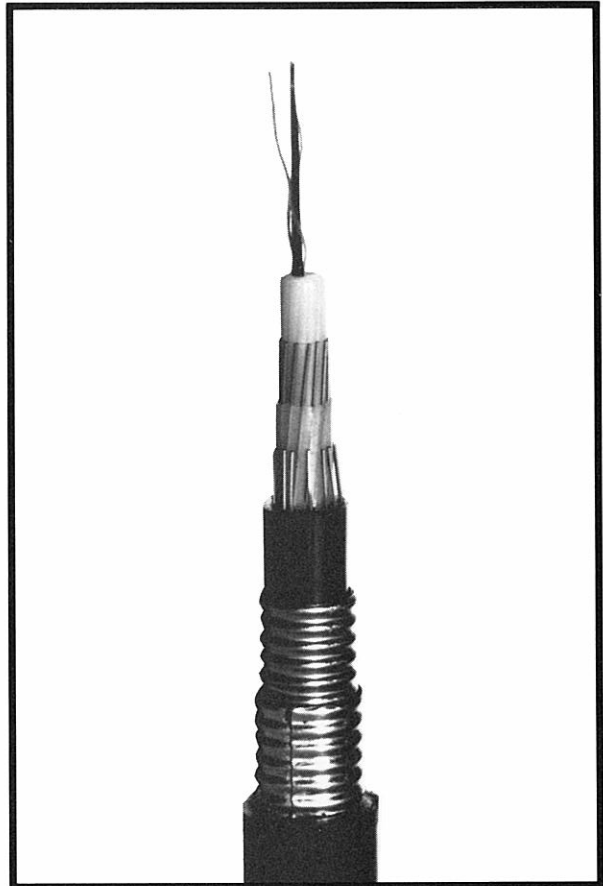
3.7 to 4.7 dB/km at 825 nm

0.95 to 2.7 dB/km at 1300 nm

Bandwidth:*

150 to 300 MHz-km at 850 nm

300 to 1,000 MHz-km at 1300 nm



Product Code	No. of Fibers	Comcode	Product Code	No. of Fibers	Comcode
3DHX-004	4	105 080 253	3DHX-052	52	105 080 501
3DHX-006	6	105 080 261	3DHX-054	54	105 080 519
3DHX-008	8	105 080 287	3DHX-056	56	105 080 527
3DHX-010	10	105 080 295	3DHX-058	58	105 080 535
3DHX-012	12	105 080 303	3DHX-060	60	105 080 543
3DHX-014	14	105 080 311	3DHX-062	62	105 080 550
3DHX-016	16	105 080 329	3DHX-064	64	105 080 568
3DHX-018	18	105 080 337	3DHX-066	66	105 080 576
3DHX-020	20	105 080 345	3DHX-068	68	105 080 584
3DHX-022	22	105 080 352	3DHX-070	70	105 080 592
3DHX-024	24	105 080 360	3DHX-072	72	105 080 600
3DHX-026	26	105 080 378	3DHX-074	74	105 280 192
3DHX-028	28	105 080 286	3DHX-076	76	105 280 200
3DHX-030	30	105 080 394	3DHX-078	78	105 280 218
3DHX-032	32	105 080 402	3DHX-080	80	105 280 226
3DHX-034	34	105 080 410	3DHX-082	82	105 280 242
3DHX-036	36	105 080 428	3DHX-084	84	105 280 259
3DHX-038	38	105 080 436	3DHX-086	86	105 280 267
3DHX-040	40	105 080 444	3DHX-088	88	105 280 416
3DHX-042	42	105 080 451	3DHX-090	90	105 280 432
3DHX-044	44	105 080 469	3DHX-092	92	105 280 457
3DHX-046	46	105 080 477	3DHX-094	94	105 280 481
3DHX-048	48	105 080 485	3DHX-096	96	105 280 499
3DHX-050	50	105 080 493			

* Customers may order this cable with a specific bandwidth or fiber loss within the ranges specified.

Warning

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