General Cable

DATACOM

GenSPEED®

DELIVERING SOLUTIONS
That Keep You
Connected™

AUGUST 2009

Datacom

This catalog contains in-depth information on the most comprehensive line of copper Datacom products available today for voice and data communications.

In a rapidly changing industry with ever-growing demands, General Cable continues to stay ahead of the curve with engineered products that guarantee future performance. Choose from the best cable in its class—Gen*SPEED*® Enhanced Cables.

Our products are readily available through our network of authorized stocking distributors and distribution centers.

General Cable

Delivering Solutions

THAT KEEP YOU CONNECTED

QUALITY

General Cable is committed to meeting customer requirements through continuous quality improvements. As a significant part of our commitment to quality, General Cable's manufacturing facilities are certified to the ISO 9001:2000 quality standard. Our telecommunications cable manufacturing facility has received TL 9000 quality standards registration as a supplement to the ISO program. This quality system is based on the ISO 9001 program with added telecommunications-specific performance metrics. We strive to provide value optimization through innovation and quality solutions.

- Our in-house testing capabilities are extensive, with strict adherence to our product specifications as well as industry standards.
- Cables are safety listed and verified.
- Third-party testing labs like ETL are utilized to quantify and confirm our quality and provide final qualification data that sets the foundation for our extended product warranty.
- General Cable products have stood the test of time with proven reliability and performance.

CUSTOMER SERVICE

General Cable is dedicated to customer service and satisfaction. Call our team of professionally trained sales associates at

800-424-5666

with any questions to meet your application needs.

GENERALCABLE.COM

What's New?

GEN*SPEED*® 10 MTP™

An Unshielded 6A Cable That Performs Like a Shielded Cable

One of the biggest challenges in 10 Gigabit operations is to mitigate noise between individual cables used for high speed data communication. You could incur the costs and time to upgrade to a shielded solution, or you can install General Cable's industry-leading solution, Gen*SPEED*® 10 MTP™ Category 6A cable. Gen*SPEED* 10 MTP utilizes revolutionary Mosaic Crossblock™ technology to shield the cable from noise coming from external cable sources, referred to as alien crosstalk (PSANEXT and PSAACRF) – without the need for grounding. This patented technology was carefully designed with metallic blocks separated by an insulating layer. Since there is no metal-to-metal contact, there is no path for current to flow longitudinally, and thus, no need for grounding. Therefore, you get all the benefits of an STP/FTP cable with a UTP cable.

GEN*SPEED*® CATEGORY 6

Product Enhancements

General Cable is pleased to announce the realignment, expansion and improvement of our Category 6 product line. New to the market is Gen*SPEED*® 6, Gen*SPEED*® 6000 Enhanced, and Gen*SPEED*® 6500 Premium. The introduction of Gen*SPEED* 6 allows for a true standard-compliant Cat 6 product, and the enhanced performance of the Gen*SPEED* 6000 and 6500 products provides mid- and high-tier Category 6 options. This "good, better, best" strategy allows you to choose a Category 6 cable that meets your bandwidth needs for each application you deploy.

GEN*SPEED*® NEWS

General Cable has initiated a Datacom newsletter to better communicate industry news and product information. Our Best Ideas Come from You! To share your ideas or to request to be added as a newsletter recipient, send an email to Datacom@GeneralCable.com.

NEXTGEN® BRAND FIBER OPTIC

We have added a NextGen® Brand Fiber Optic section to our Data Communications catalog for your convenience. For the complete product line, request a Fiber Optic catalog: 800-424-5666 or Datacom@GeneralCable.com.

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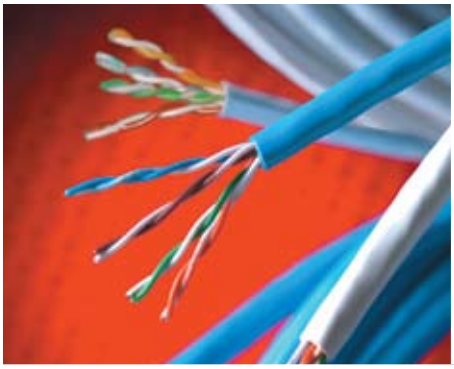
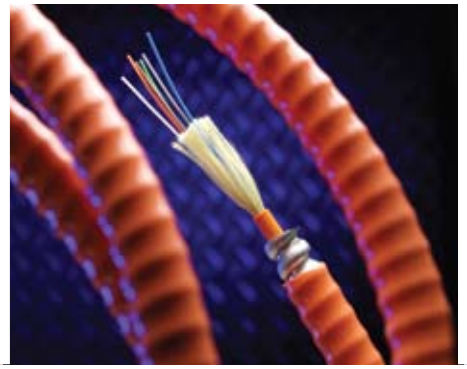
General Cable

GenAssurance℠ Product Warranty for General Cable Datacom Products


General Cable is committed to exceeding our customers' expectations for quality and performance. We strive to ensure this quality through extensive in-house and third-party testing with strict adherence to our product specifications and industry standards. As such, our Datacom products carry a standard one-year limited warranty. Additionally, a 25-year extended warranty protection plan is available for registered products.

Standard Warranty

General Cable offers a one-year limited cable warranty for Datacom products. Products covered are Voice and Data Communications cables, including Category 3 cable and higher, Fiber Optic cables, Central Office cables (e.g., switchboard cable), Terminating cable and Distribution Frame Wire.

Standard Warranty Term and Conditions

General Cable warrants that its product will conform to its applicable specifications and will be otherwise free from defects in material and workmanship for a period of 12 months from the date the product is shipped from its factory (the "Warranty Period").

General Cable must be given immediate written notice of any defect and the opportunity to inspect the product to determine whether a breach of warranty has occurred. This warranty covers only products installed at the original installation location. All repairs or replacements covered by this warranty will be shipped to the destination point specified in the original order. The defective product will, at General Cable's option, be either scrapped or returned to General Cable at its expense and per its shipping instructions.

If General Cable replaces a product under this warranty, the replacement will be warranted for the balance of the original Warranty Period.

General Cable

Count on us to deliver the solutions that keep you connected.

General Cable's sole responsibility under this warranty will be to repair or replace, at its option and expense, any length of product found to be defective during either installation or normal or proper use. This warranty does not apply to normal wear and tear or damage caused by negligence, lack of maintenance, accident, abnormal operation, improper installation or service, unauthorized repair, fire, floods, and acts of God. All costs incidental to repairing or replacing defective products, including but not limited to removal, disassembly, reinstallation and reconstruction, will be borne by the buyer, and in no event will General Cable be liable for such costs.

THE FOREGOING CONSTITUTES GENERAL CABLE'S SOLE AND EXCLUSIVE OBLIGATIONS AND LIABILITIES. GENERAL CABLE MAKES NO OTHER WARRANTIES ON ITS PRODUCTS, EXPRESSED OR IMPLIED, INCLUDING WITHOUT LIMITATION ANY WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. ALL OTHER WARRANTIES ARE EXPRESSLY DISCLAIMED. In no event will General Cable be liable for any incidental, special, consequential or punitive damages of any nature or kind, however arising, whether in contract, tort or otherwise, even if General Cable is deemed to be aware of the possibility of such damages.

General Cable, in no event, will be responsible for any claims or damage arising out of or connected with this warranty or the manufacture, sale, delivery, installation, or use of the product in excess of the purchase price of the product.

Extended Warranty

General Cable offers a 25-year limited cable warranty. Registration is required and warranty administered by General Cable. To register, please complete the registration form, found at www.generalcable.com in the Products/Datacom Cables section, and return along with required documents.

System Warranties

System warranties include the link and channel. End-to-end warranties are typically issued by the connectivity partner.

Premier Connectivity Partner – Panduit

PanGen™
STRUCTURED CABLING SOLUTIONS

Registered PanGen solutions have a 25-year warranty that covers repair or replacement of defective components and one point of contact for all cable and component inquiries. The warranty is issued by Panduit and maintained by both Panduit and General Cable. Additional program information can be found at www.pangensolutions.com.

Additional Connectivity Partners include:

- Allen Tel
- Hubbell
- Leviton
- Siemon

General Cable

"Quality is not something that is achieved and then forgotten, but something that we work to improve every day by continuously focusing on design, technology, and control. Improved product designs and investment in people and equipment are all part of our quality commitment to you."

Greg Lampert,
President and CEO,
General Cable
North America

DESIGN

Compliances

ISO – General Cable's manufacturing facilities are certified to the ISO 9001:2000 quality standard. This standard assures that formalized business processes are being implemented to ensure efficiency, quality, and continuous improvement.

RoHS is the restriction on hazardous substances, a European Union directive that restricts use of heavy metal substances. At General Cable, we strive to be an environmentally responsible company. As such, all of our applicable Datacom products are certified or being upgraded to the RoHS standard.

Materials

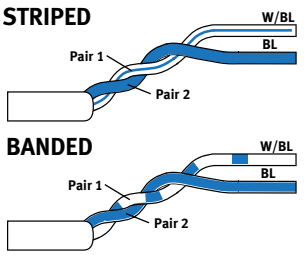
Quality is what you put in your product. General Cable is proud to be partnered with industry-leading material suppliers. Names such as DuPont and Corning are synonymous with product excellence and innovation. Their premium materials are infused into General Cable's copper and fiber optic data communication cables, making our products top-line quality.

plus CORNING Optical Fiber

DuPont™ Teflon®

Striping and Color

General Cable Datacom Category 6 products are transitioning to striped marking. This extruded marking method provides for deeper, continuous differentiating colors along the entire length of the insulated conductors. General Cable has increased the color chip used for our category cables for maximum color vibrancy.



Packaging

General Cable made packaging enhancements to address tangling and kinking of cable during installation. The standard spool-in-a-box for our Category 6 family of products is now offered in an EZ-Brake Spool-Pac® box with knobs to adjust tension control and pulling speeds. We also redesigned our Pull-Pac® cartons by shaving off the tabs, lengthening the tube and securing the collar to the box.

TECHNOLOGY

Testing Equipment – General Cable replaced differing quality testing equipment in every plant. Consistency increases among test results throughout the plants, since all test parameters are set to exact specifications while checking attenuation and return loss.

Remote Plant Monitoring – General Cable transfers all data tests from every product sampling to a universal database. Any General Cable employee can access the database and confirm the results of all products shipped from our plants.

Trending – General Cable observes test result patterns for every single product originated in the plants. If any product veers from top performance, our proactive steps will correct the issue instantaneously.

Outside Vapor Deposition – General Cable uses optical fiber manufactured by an outside vapor deposition (OVD) process. This produces fiber with greater consistency of bandwidth across the entire length of the cable, translating into better performance and higher quality.

CONTROL

General Cable employs Lean Sigma, which is a management philosophy that combines the views of Lean and Six Sigma. Lean focuses on the continuous process of eliminating waste and non-value-added activities to improve the flow of information and materials. Six Sigma utilizes the DMAIC problem-solving methodology to identify and eliminate sources of variation that affect product characteristics that are critical to the customer's perception of quality. Combining and applying these systems across all business processes maximizes quality and service to the customer while improving overall value.

General Cable has more than doubled product sampling rates for quality and control. Including several checks and balances in the process at both pre- and post-packaging steps ensures our products maintain electrical and physical specifications before leaving the plant. General Cable improved production lines by investing in new manufacturing and test equipment. These updates increase the consistency of all products manufactured throughout the plants. Centralized databases provide constant monitoring of product quality and "Engineering on the Fly" capabilities to aid in the development of new products.

Quality is Forethought.

General Cable is committed to exceeding our customers' expectations for quality and performance. We strive to ensure this quality through extensive in-house and third-party testing, with strict adherence to our product specifications and industry standards. At General Cable, quality is not just a process, it is forethought. It is the forethought of using the best materials and proactive prevention. This level of quality is best represented in three core steps: **Design, Technology, and Control.**

General Cable Corporation is committed to developing, producing, and marketing products that meet the performance, quality, value and safety requirements of our customers by continuously improving all areas of our business. We apply Lean Sigma Company-wide, seeking innovative ways to differentiate our products and services and to serve as our customers' and suppliers' most valued business partner.

GREEN INITIATIVE

Our Green Initiative symbol recognizes our role and responsibility in promoting sustainability. The symbol also reflects our commitment to achieving industry-leading standards and responding proactively to environmental global issues.

Look for our products with the RoHS symbol for your green building initiatives.

RoHS Compliant
Directive 2002/95/EC

Visit www.generalcable.com
Select "company", then select "environmental"

General Cable

General Cable

One Company
Connecting the World

General Cable is a leader in the development, design, manufacture, marketing and distribution of copper, aluminum and fiber optic wire and cable for the energy, industrial, specialty and communications markets.

Our products inspire progress worldwide … customers use our value-added products to create global infrastructure that improves the standard of living for people everywhere.

Each day we're building business momentum — developing ideas into innovative solutions and industry-leading products, expanding geographic access and furthering our investment in highly capable associates, Lean Manufacturing, material science and technology resources.

General Cable is influencing the world … with more than two-thirds of our sales generated outside North America and more than 13,000 associates in 46 manufacturing facilities throughout 23 countries. As the fifth largest wire and cable manufacturer, we are the *One Company Connecting the World.*

Energy Cables

Our cables carry energy across the world — through the air, underground and under the sea. Increasing demand for energy is accelerating investment in exploration, extraction, power generation, transmission and distribution — whether based on coal, natural gas, oil, nuclear, wind or water.

Industrial & Specialty Cables

We have the competitive product mix and global reach to support the production of oil, gas and petrochemical; construction of new factories and maintenance of existing industrial facilities; factory automation; and special applications such as military, nuclear, marine, mining, transit and automotive.

Communications Cables

Our cables keep information flowing — facilitating a non-stop stream of words and images around the world. We meet the high-speed bandwidth needs of global communications networks from fiber optic submarine communications cables, copper and fiber aerial and underground cables to copper and fiber optic enterprise cables and system solutions.

World Headquarters

General Cable
4 Tesseneer Drive
Highland Heights, KY
41076-9753 U.S.A.

Gen*SPEED*® Category 6A Enhanced Cables 1

General Cable recognizes that application and performance needs may vary, which is why the Company is pleased to now offer four 10 Gigabit solutions: Gen*SPEED*® 10 MTP™ Category 6A 10 Gig Cable; Gen*SPEED*® 10,000 Category 6a 10 Gig Cable; Gen*SPEED*® 10,000 Shielded Category 6a 10 Gig Cable; and NextGen® OM3 Fiber Optic 10 Gig Cable.

General Cable's industry-leading 10 Gig solution, **Gen*SPEED* 10 MTP Category 6A Cable,** featuring the new revolutionary **Mosaic Crossblock™** technology, provides an Unshielded-Twisted Pair (UTP) cable that performs like a Shielded or Foiled-Twisted Pair (STP/FTP) cable.

Gen*SPEED* 10 MTP's Mosaic Crossblock technology shields the cable from noise coming from external cable sources, which is referred to as alien crosstalk (PSANEXT and PSAACRF). The Mosaic Crossblock was carefully designed with metallic blocks separated by an insulating layer. Since there is no metal-to-metal contact, there is no path for current to flow longitudinally, and thus, no need for grounding.

General Cable's second offering, **Gen*SPEED* 10,000 Category 6a Cable**, is a cost-effective, standard-compliant 10 Gig UTP cabling option designed to meet ANSI/TIA 568 B.2-10. Perfect for component upgrades, this cable is fully backward-compatible to legacy infrastructures and prepares your system for future 10 Gigabit applications. Gen*SPEED* 10,000 solves the One Gigabit limitation of Category 5e and Category 6 and is an ideal solution for bandwidth-intensive applications.

Next is General Cable's **Gen*SPEED* 10,000 Category 6a Shielded 10 Gig Cable.** Gen*SPEED* 10,000 Shielded is an STP cable with individually shielded pairs for optimized isolation between pairs and immunity from external noise characterized by powersum alien crosstalk (PSANEXT) in cable bundles. Shields are an extremely effective way of protecting the cable from outside noise ("alien sources") by moving the electromagnetic energy away from the pairs and directing it through the shield and drain wire to the ground. Of course, STP cables are only effective if they are properly grounded. Gen*SPEED* 10,000 Shielded offers you the ultimate PSANEXT protection.

Last but not least, General Cable rounds out its 10 Gig offering with **NextGen OM3 Fiber Optic Cable,** the optimum in 10 Gb/s fiber (which can be found in our Fiber Optic Catalog). General Cable has partnered with Corning® Optical Fiber to supply you the world's most technologically advanced optical fiber cables. The bandwidth is ensured by minEMBc, and uniformity provides field performance of shorter lengths. With 100% testing on this product, you don't have to worry about performance and reliability. Your cabling system will be future-proofed, because all NextGen 10 Gb/s fiber exceeds the specifications to which it is sold, typically allowing for more system margin and extended reach.

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GenSPEED® Category 6A Quick Reference Guide

JACKET COLOR	PACKAGE	STANDARD Category 6a GenSPEED® 10,000 CMR	STANDARD Category 6a GenSPEED® 10,000 CMP	ENHANCED Category 6a GenSPEED® 10,000 Shielded CMR	ENHANCED Category 6a GenSPEED® 10,000 Shielded CMP	PREMIUM Enhanced Category 6A GenSPEED® 10 MTP™ CMR	PREMIUM Enhanced Category 6A GenSPEED® 10 MTP™ CMP
Blue							
	Pull-Pac®						
	Spool-Pac®						
	Spool	7133819	7131819	7133786	7131786	7133849	7131849
White							
	Pull-Pac®						
	Spool-Pac®						
	Spool	7133820	7131820	7133787	7131787	7133850	7131850
Yellow							
	Pull-Pac®						
	Spool-Pac®						
	Spool	7133822	7131822	7133788	7131788	7133852	7131852
Gray							
	Pull-Pac®						
	Spool-Pac®						
	Spool	7133821	7131821	7133789	7131789	7133851	7131851
Red							
	Pull-Pac®						
	Spool-Pac®						
	Spool	7133824	7131824	7133790	7131790	7133854	7131854
Orange							
	Pull-Pac®						
	Spool-Pac®						
	Spool	7133826	7131826	7133791	7131791	7133856	7131856
Green							
	Pull-Pac®						
	Spool-Pac®						
	Spool	7133823	7131823	7133792	7131792	7133853	7131853
Black							
	Pull-Pac®						
	Spool-Pac®						
	Spool	7133828	7131828			7133858	7131858
Pink							
	Pull-Pac®						
	Spool-Pac®						
	Spool	7133827	7131827			7133857	7131857
Purple							
	Pull-Pac®						
	Spool-Pac®						
	Spool	7133825	7131825	7133830	7131830	7133855	7131855

Note: Non-stock items may be subject to minimum order quantities.

General Cable

GenSPEED® 10 MTP™ Category 6A Cable

Features And Benefits

- 10 MTP™ unshielded-twisted pair (UTP) design performs like a shielded or foiled-twisted pair (STP/FTP) cable, providing industry-leading protection from external cable noise sources, also known as alien crosstalk (PSANEXT and PSAACRF)
- Mosaic Crossblock™ is a thin tape made up of individual metallic blocks separated by an insulating layer. Since there is no metal-to-metal contact, there is no path for current to flow longitudinally, and thus, no need for grounding
- The Flex-Separator™ optimizes internal pair geometry to yield superior electrical performance and maintain flexibility. This unique cross-web stabilizes each pair to create a smaller, **round** cable profile
- TRU-Mark® print legend contains footage markings from 1000' to 0'

Applications

- IEEE 802.3 10G BASE-T, 100 BASE-T
- 100 BASE-TX, 10 BASE-T, 1000 BASE-TX
- 155 Mb/s ATM
- IEEE 802.3af for PoE
- Draft IEEE 802.3at for PoE Plus
- ANSI X3.263: 100Mb/s

Standard Compliances

- ANSI/TIA 568 B.2-10
- TIA 568 C Draft
- RoHS Compliant Directive 2002/95/EC
- UL 444

VERIFIED

TIA/EIA 568B

RoHS Compliant Directive 2002/95/EC

featuring mosaic CROSSBLOCK™

Data subject to change without notice.

CONSTRUCTION

Conductors
- 23 AWG solid bare annealed copper

Insulation
- Non-Plenum: Polyolefin
- Plenum: Fluoropolymer

Color Code
- Pair 1: Blue-White
- Pair 2: Orange-White
- Pair 3: Green-White
- Pair 4: Brown-White

Separator
- Cross-Web

Jacket
- Non-Plenum: Flame-Retardant PVC
- Plenum: Low-Smoke, Flame-Retardant PVC

PHYSICAL DATA

	CMR (Non-Plenum)	CMP (Plenum)
Nominal Cable Diameter (in)	0.305	0.305
Nominal Cable Weight (lbs/1000ft)	35	44
Minimum Bend Radius (in)	1.25	1.25
Maximum Pulling Force (lbs)	40	40
Temperature Rating (˚C)		
Installation:	0 to +60	0 to +60
Operation:	-20 to +75	-20 to +75

PART NUMBERS

Standard packaging: 1000' Spool

Jacket Color	Spool	
	CMR (Non-Plenum)	CMP (Plenum)
Blue	**7133849**	**7131849**
White	**7133850**	**7131850**
Yellow	**7133852**	**7131852**
Gray	**7133851**	**7131851**
Red	**7133854**	**7131854**
Orange	**7133856**	**7131856**
Green	**7133853**	**7131853**
Black	**7133858**	**7131858**
Pink	**7133857**	**7131857**
Purple	**7133855**	**7131855**

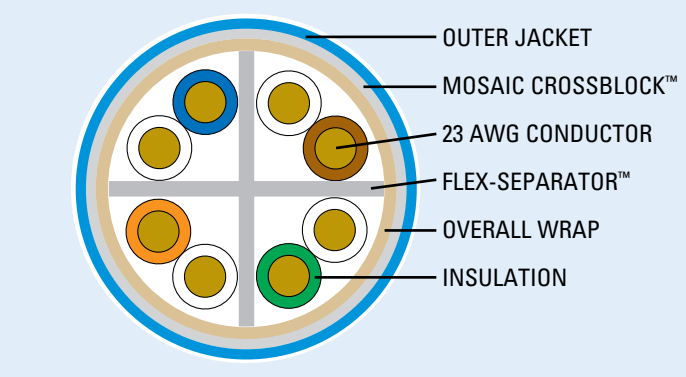
Note: Non-stock items may be subject to minimum order quantities.

ELECTRICAL PERFORMANCE

Frequency MHz	PSACR (min)	ACR (min)	Attenuation (min)	PSNEXT (min)	NEXT (min)	PSELFEXT (min)	ELFEXT (min)	Return Loss (min)	TCL (min)	PSANEXT (min)			PSAACRF (min)		
	TIA 568 B.2-10	TIA 568 B.2-10	TIA 568 B.2-10	TIA 568 B.2-10	TIA 568 B.2-10	TIA 568 B.2-10	TIA 568 B.2-10	TIA 568 B.2-10	TIA 568 B.2-10	TIA 568 B.2-10	General Cable Guaranteed	General Cable Typical	TIA 568 B.2-10	General Cable Guaranteed	General Cable Typical
1	70.2	72.2	2.1	72.3	74.3	64.6	67.8	20.0	40.0	67.0	73.0	79.0	67.0	73.0	79.0
4	59.5	61.5	3.8	63.3	65.3	52.8	55.8	23.0	40.0	67.0	73.0	79.0	66.2	72.2	78.2
10	51.4	53.4	5.9	57.3	59.3	44.8	47.8	25.0	40.0	67.0	73.0	79.0	58.2	64.2	70.2
16	46.8	48.8	7.5	54.2	56.2	40.7	43.7	25.0	38.0	67.0	73.0	79.0	54.1	60.1	66.1
20	44.4	46.4	8.4	52.8	54.8	38.8	41.8	25.0	37.0	67.0	73.0	79.0	52.2	58.2	64.2
31.25	39.4	41.4	10.5	49.9	51.9	34.9	37.9	23.6	35.1	67.0	73.0	79.0	48.3	54.3	60.3
62.5	30.4	32.4	15.0	45.4	47.4	28.9	31.9	21.5	32.0	65.6	71.6	77.6	42.3	48.3	54.3
100	23.2	25.2	19.1	42.3	44.3	24.8	27.8	20.1	30.0	62.5	68.5	74.5	38.2	44.2	50.2
150	16.0	18.0	23.7	39.7	41.7	21.3	24.3	18.9	28.2	59.9	65.9	71.9	34.7	40.7	46.7
200	10.2	12.2	27.6	37.8	39.8	18.8	21.8	18.0	27.0	58.0	64.0	70.0	32.2	38.2	44.2
250	5.2	7.2	31.1	36.3	38.3	16.8	19.8	17.3	26.0	56.5	62.5	68.5	30.2	36.2	42.2
300	0.9	2.9	34.3	35.1	37.1	15.3	18.3	16.8	25.2	55.3	61.3	67.3	28.7	34.7	40.7
400	—	—	40.1	33.3	35.3	12.8	15.8	15.9	24.0	53.5	59.5	65.5	26.2	32.2	38.2
500	—	—	45.3	31.8	33.8	10.8	13.8	15.2	23.0	52.0	58.0	64.0	24.2	30.2	36.2

Note: Values are expressed in dB per 100m (328 ft.) length.

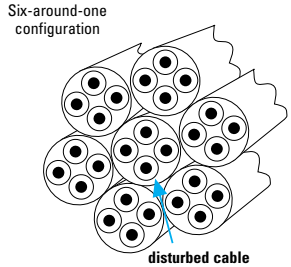
TYPICAL Gen*SPEED*® 10 MTP™ CATEGORY 6A CROSS-SECTION



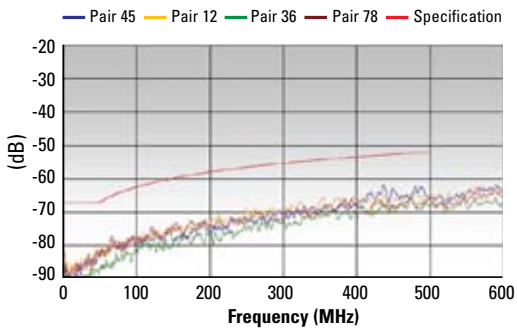
ELECTRICAL CHARACTERISTICS

DC Resistance (max) Ohms/100m (328ft) @ 20˚C	9.38 ohms/100m
DC Resistance Unbalanced (max) Individual Pair %	4%
Delay Skew (max) ns/100m	35 ns/100m
Nom. Velocity of Propagation % Speed of Light	70%
Characteristic Impedance Frequency (f): 1-500 MHz	100 ohms ± 15 ohms

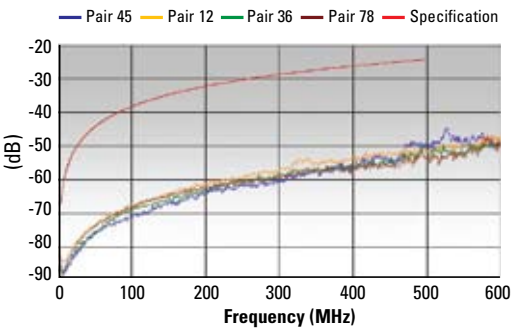
4 PAIR CABLES: Bundles of 7 Test Results



PSANEXT



PSAACRF



GenSPEED® 10,000 Category 6a Shielded Cable

Features And Benefits
- Shielded design allowing for maximum pair separation, increasing key electrical performance parameters
- Individual pair shielding for EMI protection
- Typical positive PSACR beyond 500 MHz for increased available bandwidth
- TRU-Mark® print legend contains footage markings from 1000' to 0'

Applications
- IEEE 802.3an: 10G BASE-T (10 Gigabit Ethernet) supporting 100 meters
- 1000 BASE-TX (Gigabit Ethernet)
- 2.4/1.2 Gb/s ATM

Standard Compliances
- ANSI/TIA/EIA 568 B.2-10
- TIA 568 C Draft
- ISO/IEC 11801 Ed. 2.0 (Class E)
- ICEA S-102-700 (Category 6)
- NEC/CEC Type CMR (UL 1666) for Non-Plenum
- NEC/CEC Type CMP (NFPA 262) for Plenum
- RoHS Compliant Directive 2002/95/EC
- UL 444

TIA/EIA 568B

RoHS Compliant Directive 2002/95/EC

CONSTRUCTION

Conductors
- 23 AWG solid bare annealed copper

Insulation
- Non-Plenum: HDPE
- Plenum: Foamed Fluoropolymer

Color Code
- Pair 1: Blue-White
- Pair 2: Orange-White
- Pair 3: Green-White
- Pair 4: Brown-White

Shield
- Each pair is individually shielded with an aluminum foil
- 24 AWG drain wire

Jacket
- Non-Plenum: Flame-Retardant PVC
- Plenum: Low-Smoke, Flame-Retardant PVC

PHYSICAL DATA

	CMR (Non-Plenum)	CMP (Plenum)
Nominal Cable Diameter (in)	0.310	0.290
Nominal Cable Weight (lbs/1000ft)	50	45
Minimum Bend Radius (in)	3.10	2.90
Maximum Pulling Force (lbs)	32	32
Temperature Rating (°C)		
Installation:	0 to +60	0 to +60
Operation:	-20 to +75	-20 to +75

PART NUMBERS

Standard packaging: 1000' Spool

Jacket Color	Spool	
	CMR (Non-Plenum)	CMP (Plenum)
Blue	**7133786**	**7131786**
White	**7133787**	**7131787**
Yellow	**7133788**	**7131788**
Gray	**7133789**	**7131789**
Red	**7133790**	**7131790**
Orange	**7133791**	**7131791**
Green	**7133792**	**7131792**
Purple	**7133830**	**7131830**

Note: Non-stock items may be subject to minimum order quantities.

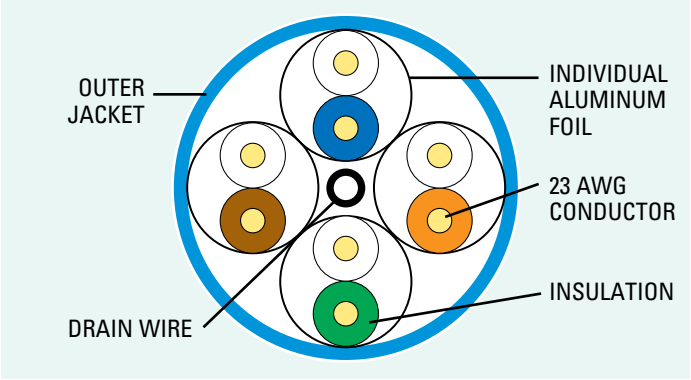
Data subject to change without notice.

ELECTRICAL PERFORMANCE

Frequency MHz	PSACR (min)	ACR (min)	Attenuation (max)	PSNEXT (min)	NEXT (min)	PSELFEXT (min)	ELFEXT (min)	Return Loss (min)	LCL/TCL (min)	PSANEXT (min)	PSAACRF (min)
1	70.2	72.2	2.1	72.3	74.3	70.8	73.8	20.0	50.0	77.0	77.0
4	68.5	70.5	3.8	72.3	74.3	58.8	61.8	23.0	44.0	77.0	76.2
10	66.3	68.3	5.9	72.3	74.3	50.8	53.8	25.0	40.0	77.0	68.2
16	63.6	66.6	7.5	71.2	74.2	46.7	49.7	25.0	38.0	77.0	64.1
20	61.3	64.3	8.4	69.8	72.8	44.8	47.8	25.0	37.0	77.0	62.2
31.25	56.1	59.1	10.5	66.9	69.9	40.9	43.9	23.6	35.1	77.0	58.3
62.5	46.9	49.9	15.0	62.4	65.4	34.9	37.9	21.5	32.0	75.6	52.3
100	39.4	42.4	19.1	59.3	62.3	30.8	33.8	20.1	30.0	72.5	48.2
200	25.6	28.6	27.6	54.8	57.8	24.8	27.8	18.0	27.0	68.0	42.2
250	20.3	23.3	31.1	53.3	56.3	22.8	25.8	17.3	26.0	66.5	40.2
300	15.5	18.5	34.3	52.1	55.1	21.3	24.3	16.8	25.2	65.3	38.7
350	11.2	14.2	37.2	51.1	54.1	19.9	22.9	16.3	24.6	64.3	37.3
400	7.1	10.1	40.1	50.3	53.3	18.8	21.8	15.9	24.0	63.5	36.2
500	—	2.7	45.3	48.8	51.8	16.8	19.8	15.2	23.0	62.0	34.2
600	—	—	50.1	47.6	50.6	15.2	18.2	14.7	22.2	60.8	32.6

Note: Values are expressed in dB per 100m (328 ft.) length.

GenSPEED® 10,000 SHIELDED CATEGORY 6a CROSS-SECTION



ELECTRICAL CHARACTERISTICS

DC Resistance (max) Ohms/100m (328ft) @ 20˚C	8.9
DC Resistance Unbalance (max) Individual Pair %	3.0
Delay Skew (max) ns/100m	35
Nom. Velocity of Propagation % Speed of Light	CMP: 78 CMR: 75
Characteristic Impedance Frequency (f): 1-600 MHz	Ohms 100 ± 15
Input Impedance Frequency (f): 1-100 MHz 100-200 MHz 200-600 MHz	Ohms 100 ± 15 100 ± 22 100 ± 32

GenSPEED® 10,000 Category 6a Cable

Features And Benefits

- Extensive design development conducted to find the perfect blend of product performance and consistent manufacturability
- Innovative T-Top cross-web provides superior internal electrical characteristics by locking the pairs into a systematic orientation within the cable
- Superior flame and smoke characteristics achieved through innovative design and careful selection of materials with certified suppliers
- TRU-Mark® print legend contains footage markings from 1000' to 0'

Applications

- IEEE 802.3: 10G BASE-T, 100 BASE-T
- 100 BASE-TX, 10 BASE-T, 1000 BASE-TX
- ANSI/TIA/EIA-854: 1000 BASE-TX
- 155 Mb/s ATM
- ANSI X3.263: 100 Mb/s
- IEEE 802.3af for PoE
- Draft IEEE 802.3at for PoE Plus

Standard Compliances

- ANSI/TIA 568 B.2-10
- TIA 568 C Draft
- RoHS Compliant Directive 2002/95/EC
- UL 444

VERIFIED

TIA/EIA 568B

RoHS Compliant Directive 2002/95/EC

Data subject to change without notice.

CONSTRUCTION

Conductors
- 23 AWG solid bare annealed copper

Insulation
- Non-Plenum: Polyolefin
- Plenum: Fluoropolymer

Color Code
- Pair 1: Blue-White
- Pair 2: Orange-White
- Pair 3: Green-White
- Pair 4: Brown-White

Separator
- T-Top cross-web

Jacket
- Non-Plenum: Flame-Retardant PVC
- Plenum: Low-Smoke, Flame-Retardant PVC

PHYSICAL DATA

	CMR (Non-Plenum)	CMP (Plenum)
Nominal Cable Diameter (in)	0.330	0.320
Nominal Cable Weight (lbs/1000ft)	42	45
Minimum Bend Radius (in)	1.5	1.5
Maximum Pulling Force (lbs)	40	40
Temperature Rating (°C)		
Installation:	0 to +60	0 to +60
Operation:	-20 to +75	-20 to +75

PART NUMBERS

Standard packaging: 1000' Spool

Jacket Color	Spool	
	CMR (Non-Plenum)	CMP (Plenum)
Blue	**7133819**	**7131819**
White	**7133820**	**7131820**
Yellow	**7133822**	**7131822**
Gray	**7133821**	**7131821**
Red	**7133824**	**7131824**
Orange	**7133826**	**7131826**
Green	**7133823**	**7131823**
Black	**7133828**	**7131828**
Pink	**7133827**	**7131827**
Purple	**7133825**	**7131825**

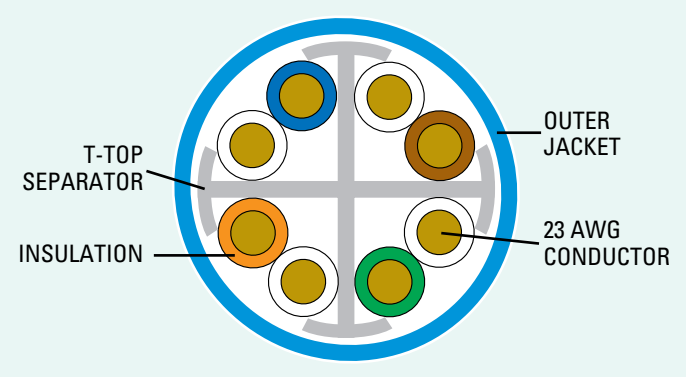
Note: Non-stock items may be subject to minimum order quantities.

ELECTRICAL PERFORMANCE

Frequency MHz	PSACR (min)	ACR (min)	Attenuation (max)	PSNEXT (min)	NEXT (min)	PSACRF (min)	ACRF (min)	Return Loss (min)	TCL (min)	PSANEXT (min)	PSAACRF (min)
1	70.2	72.2	2.1	72.3	74.3	64.8	67.8	20.0	40.0	67.0	67.0
4	59.5	61.5	3.8	63.3	65.3	52.8	55.8	23.0	40.0	67.0	66.2
8	53.5	55.5	5.3	58.8	60.8	46.7	49.7	24.5	40.0	67.0	60.1
10	51.4	53.4	5.9	57.3	59.3	44.8	47.8	25.0	40.0	67.0	58.2
16	46.7	48.7	7.5	54.2	56.2	40.7	43.7	25.0	38.0	67.0	54.1
20	44.4	46.4	8.4	52.8	54.8	38.8	41.8	25.0	37.0	67.0	52.2
25	41.9	43.9	9.4	51.3	53.3	36.8	39.8	24.3	36.0	67.0	50.2
31.25	39.4	41.4	10.5	49.9	51.9	34.9	37.9	23.6	35.1	67.0	48.3
62.5	30.4	32.4	15.0	45.4	47.4	28.9	31.9	21.5	32.0	65.6	42.3
100	23.2	25.2	19.1	42.3	44.3	24.8	27.8	20.1	30.0	62.5	38.2
200	10.2	12.2	27.6	37.8	39.8	18.8	21.8	18.0	27.0	58.0	32.2
250	5.2	7.2	31.1	36.3	38.3	16.8	19.8	17.3	26.0	56.5	30.2
300	0.8	2.8	34.3	35.1	37.1	15.3	18.3	16.8	25.2	55.3	28.7
400	—	—	40.1	33.3	35.3	12.8	15.8	15.9	24.0	53.5	26.2
500	—	—	45.3	31.8	33.8	10.8	13.8	15.2	23.0	52.0	24.2

Note: Values are expressed in dB per 100m (328 ft.) length.

GenSPEED® 10,000 CATEGORY 6a CROSS-SECTION



ELECTRICAL CHARACTERISTICS

DC Resistance (max) Ohms/100m (328ft) @ 20˚C	9.38
DC Resistance Unbalance (max) Individual Pair %	4.0
Delay Skew (max) ns/100m	35
Nom. Velocity of Propagation % Speed of Light	70
Characteristic Impedance Frequency (f): 1-500 MHz	Ohms 100 ± 15

Gen*SPEED*® Category 6 Cables 2

General Cable offers a complete line-up of Category 6 cables to meet all your networking needs. This “standard, enhanced, premium” strategy allows you to choose a cable that meets your bandwidth needs for each application you deploy. When you need a reliable cable with warranty assurance, choose from the series of Gen*SPEED*® Category 6 Cables.

Gen*SPEED*® 6 is a standard-compliant Category 6 cable that features a unique tape design engineered for consistent electrical performance. Its TRU-Mark® print legend contains footage markings from 1000' to 0', making usage easier to track.

General Cable’s **Gen*SPEED*® 6000** has been enhanced to provide the market with a cost-effective, high-bandwidth and high-performance cabling solution for more robust and complex applications at Gigabit speed and full duplex transmissions. The Gen*SPEED* 6000 solution provides a cable system infrastructure with assurance for advanced applications demanding more bandwidth.

Featuring a revolutionary design, **Gen*SPEED*® 6500** Premium provides the industry with one of the best-performing Category 6 cables in its class. Gen*SPEED* 6500 Premium offers high power-sum attenuation-to-crosstalk ratio (PSACR) and low attenuation performance for better signal strength and power.

All Gen*SPEED* Category 6 cables are third-party verified for guaranteed performance and conform to ANSI/TIA/EIA 568 B.2-1 standards. Gen*SPEED* 6 and 6000 Enhanced are offered in a variety of colors and can be shipped in General Cable’s easy-to-use Pull-Pac® or Spool-Pac® cartons or on a spool. Gen*SPEED* 6500 Premium is available in a Spool-Pac or on a spool.

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GenSPEED® Category 6 Quick Reference Guide

JACKET COLOR	PACKAGE	STANDARD Category 6 GenSPEED® 6 CMR	STANDARD Category 6 GenSPEED® 6 CMP	ENHANCED Category 6 GenSPEED® 6000 Enhanced CMR	ENHANCED Category 6 GenSPEED® 6000 Enhanced CMP	PREMIUM Category 6 GenSPEED® 6500 Premium CMR	PREMIUM Category 6 GenSPEED® 6500 Premium CMP
Blue							
	Pull-Pac®	7133800	7131800	7133900	7131900		
	Spool-Pac®	7133840	7131840	7133940	7131940	7133930	7131930
	Spool	7133860	7131860	7133960	7131960	7133970	7131970
	Bulk*	7133860.2R	7131860.2.5R	7133960.3R	7131960.3R	7133970.2R	7131970.2R
White							
	Pull-Pac®	7133801	7131801	7133901	7131901		
	Spool-Pac®	7133841	7131841	7133941	7131941	7133931	7131931
	Spool	7133861	7131861	7133961	7131961	7133971	7131971
	Bulk*	7133861.2R	7131861.2.5R	7133961.3R	7131961.3R	7133971.2R	7131971.2R
Yellow							
	Pull-Pac®	7133802	7131802	7133902	7131902		
	Spool-Pac®	7133842	7131842	7133942	7131942	7133932	7131932
	Spool	7133862	7131862	7133962	7131962	7133972	7131972
	Bulk*	7133862.2R	7131862.2.5R	7133962.3R	7131962.3R	7133972.2R	7131972.2R
Gray							
	Pull-Pac®	7133803	7131803	7133903	7131903		
	Spool-Pac®	7133843	7131843	7133943	7131943	7133933	7131933
	Spool	7133863	7131863	7133963	7131963	7133973	7131973
	Bulk*	7133863.2R	7131863.2.5R	7133963.3R	7131963.3R	7133973.2R	7131973.2R
Red							
	Pull-Pac®	7133804	7131804	7133904	7131904		
	Spool-Pac®	7133844	7131844	7133944	7131944	7133934	7131934
	Spool	7133864	7131864	7133964	7131964	7133974	7131974
	Bulk*	7133864.2R	7131864.2.5R	7133964.3R	7131964.3R	7133974.2R	7131974.2R
Orange							
	Pull-Pac®	7133805	7131805	7133905	7131905		
	Spool-Pac®	7133845	7131845	7133945	7131945	7133935	7131935
	Spool	7133865	7131865	7133965	7131965	7133975	7131975
	Bulk*	7133865.2R	7131865.2.5R	7133965.3R	7131965.3R	7133975.2R	7131975.2R
Green							
	Pull-Pac®	7133806	7131806	7133906	7131906		
	Spool-Pac®	7133846	7131846	7133946	7131946	7133936	7131936
	Spool	7133866	7131866	7133966	7131966	7133976	7131976
	Bulk*	7133866.2R	7131866.2.5R	7133966.3R	7131966.3R	7133976.2R	7131976.2R
Black							
	Pull-Pac®	7133807	7131807	7133907	7131907		
	Spool-Pac®	7133847	7131847	7133947	7131947	7133937	7131937
	Spool	7133867	7131867	7133967	7131967	7133977	7131977
	Bulk*	7133867.2R	7131867.2.5R	7133967.3R	7131967.3R	7133977.2R	7131977.2R
Pink							
	Pull-Pac®	7133808	7131808	7133908	7131908		
	Spool-Pac®	7133848	7131848	7133948	7131948	7133938	7131938
	Spool	7133868	7131868	7133968	7131968	7133978	7131978
	Bulk*	7133848.2R	7131848.2.5R	7133968.3R	7131968.3R	7133978.2R	7131978.2R
Purple							
	Pull-Pac®	7133809	7131809	7133909	7131909		
	Spool-Pac®	7133859	7131859	7133959	7131959	7133939	7131939
	Spool	7133869	7131869	7133969	7131969	7133979	7131979
	Bulk*	7133869.2R	7131869.2.5R	7133969.3R	7131969.3R	7133979.2R	7131979.2R

Note: Non-stock items may be subject to minimum order quantities.
* Bulk reels are available in 2000' (2R), 2500' (2.5R), and 3000' (3R) lengths.

General Cable

GenSPEED® 6500 Premium Category 6 Cable

Features And Benefits

- Designed and engineered with precision balance to offer ultimate headroom
- High-end optimized performance to support the most bandwidth-intense applications
- New and improved separator construction allowing for more pair separation
- Performance guaranteed to 350 MHz
- TRU-Mark® print legend contains footage markings from 1000' to 0'
- Third-party verified for guaranteed performance

Applications

- IEEE 802.3: 1000 BASE-T (Gigabit Ethernet), 100 BASE-TX, 10 BASE-T
- ANSI/TIA/EIA 854: 1000 BASE-TX
- 155 Mp/s, 1.2 Gb/s ATM
- ANSI X3.263: 100 Mb/s
- IEEE 802.3af DTE Power (PoE)
- Digital Video
- Broadband and Baseband Analog Video
- Draft IEEE 802.3at for PoE Plus

Standard Compliances

- ANSI/TIA/EIA 568 B.2-1 (Category 6)
- ANSI/TIA/EIA 862 (Building Automation)
- ISO/IEC 11801 Ed. 2.0 (Class E)
- ICEA S-102-700 (Category 6)
- NEC/CEC Type CMR (UL 1666) for Non-Plenum
- NEC/CEC Type CMP (NFPA 262) for Plenum
- RoHS Compliant Directive 2002/95/EC
- UL 444

VERIFIED

TIA/EIA 568B

RoHS Compliant Directive 2002/95/EC

Data subject to change without notice.

CONSTRUCTION

Conductors
- 23 AWG solid bare annealed copper

Insulation
- Non-Plenum: Polyolefin
- Plenum: Fluoropolymer

Color Code
- Pair 1: Blue-White/Blue
- Pair 2: Orange-White/Orange
- Pair 3: Green-White/Green
- Pair 4: Brown-White/Brown

Separator
- Cross-web

Rip Cord
- Applied longitudinally under jacket

Jacket
- Non-Plenum: Flame-Retardant PVC
- Plenum: Low-Smoke, Flame-Retardant PVC

PHYSICAL DATA

	CMR (Non-Plenum)	CMP (Plenum)
Nominal Cable Diameter (in)	0.260	0.250
Nominal Cable Weight (lbs/1000ft)	30	32
Minimum Bend Radius (in)	1.0	1.0
Maximum Pulling Force (lbs)	50	50
Temperature Rating (˚C)		
Installation:	0 to +60	0 to +60
Operation:	-20 to +75	-20 to +75

PART NUMBERS

Standard packaging: 1000' Spool-Pac®

	Spool-Pac®		Spool	
Jacket Color	CMR (Non-Plenum)	CMP (Plenum)	CMR (Non-Plenum)	CMP (Plenum)
Blue	**7133930**	**7131930**	**7133970**	**7131970**
White	**7133931**	**7131931**	**7133971**	**7131971**
Yellow	**7133932**	**7131932**	**7133972**	**7131972**
Gray	**7133933**	**7131933**	**7133973**	**7131973**
Red	**7133934**	**7131934**	**7133974**	**7131974**
Orange	**7133935**	**7131935**	**7133975**	**7131975**
Green	**7133936**	**7131936**	**7133976**	**7131976**
Black	**7133937**	**7131937**	**7133977**	**7131977**
Pink	**7133938**	**7131938**	**7133978**	**7131978**
Purple	**7133939**	**7131939**	**7133979**	**7131979**

Note: Bulk reels are available as a special request with a maximum allowable length of 3000 feet per reel. Minimum run and lead-time may apply.

Non-stock items may be subject to minimum order quantities.

GenSPEED® 6500 Electrical Performance

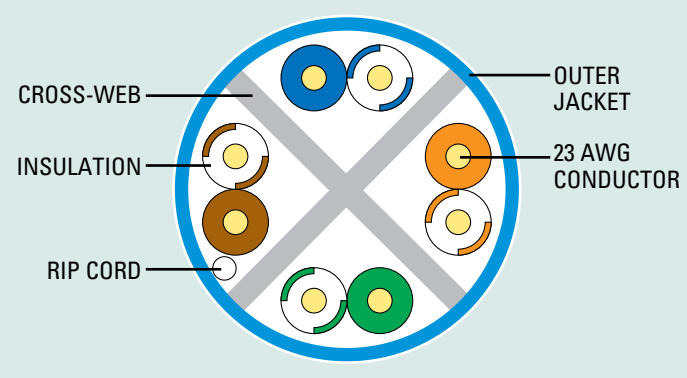
	PSACR (min)		ACR (min)		Attenuation (max)		PSNEXT (min)		NEXT (min)	
Frequency MHz	TIA 568 B.2-1	Guaranteed	TIA 568 B.2-1	Guaranteed	TIA 568 B.2-1	Guaranteed	TIA 568 B.2-1	Guaranteed	TIA 568 B.2-1	Guaranteed
1	70.3	77.4	72.3	79.4	2.0	1.9	72.3	79.3	74.3	81.3
4	59.3	66.8	61.5	68.8	3.8	3.5	63.3	70.3	65.3	72.3
10	51.3	58.8	53.3	60.8	6.0	5.5	57.3	64.3	59.3	66.3
16	46.7	54.2	48.7	56.2	7.6	7.0	54.2	61.2	56.2	63.2
20	44.3	51.9	46.3	53.9	8.5	7.8	52.8	59.8	54.8	61.8
31.25	39.2	47.0	41.2	49.0	10.7	9.9	49.9	56.9	51.9	58.9
62.5	29.9	38.0	32.0	40.0	15.4	14.3	45.4	52.4	47.4	54.4
100	22.5	30.8	24.5	32.8	19.8	18.5	42.3	49.3	44.3	51.3
200	8.8	17.5	10.8	19.5	29.0	27.2	37.8	44.8	39.8	46.8
250	3.5	12.4	5.5	14.4	32.8	30.9	36.3	43.3	38.3	45.3
350	—	3.5	—	5.5	—	37.6	—	41.1	—	43.1
500	—	—	—	—	—	46.5	—	38.8	—	40.8

Note: Values are expressed in dB per 100m (328 ft.) length. Results beyond 350 MHz for reference only.

	PSELFEXT (min)		ELFEXT (min)		Return Loss (min)		LCL (min)		ELTCTL (min)	
Frequency MHz	TIA 568 B.2-1	Guaranteed	TIA 568 B.2-1	Guaranteed	TIA 568 B.2-1	Guaranteed	TIA 568 B.2-1	Guaranteed	TIA 568 B.2-1	Guaranteed
1	64.8	70.8	67.8	73.8	20.0	20.0	40.0	40.0	35.0	35.0
4	52.8	58.8	55.7	61.8	23.0	23.0	40.0	40.0	23.0	23.0
10	44.8	50.8	47.8	53.8	25.0	25.0	40.0	40.0	15.0	15.0
16	40.7	46.7	43.7	49.7	25.0	25.0	38.0	38.0	10.9	10.9
20	38.8	44.8	41.7	47.8	25.0	25.0	37.0	37.0	9.0	9.0
31.25	34.9	40.9	37.9	43.9	23.6	25.0	35.1	35.1	5.1	5.1
62.5	28.9	34.9	31.8	37.9	21.5	23.5	32.0	32.0	5.0	5.0
100	24.8	30.8	27.8	33.8	20.1	22.1	30.0	30.0	5.0	5.0
200	18.8	24.8	21.8	27.8	18.0	20.0	27.0	27.0	5.0	5.0
250	16.8	22.8	19.8	25.8	17.3	19.3	26.0	26.0	5.0	5.0
350	—	19.9	—	22.9	—	18.3	—	—	—	—
500	—	16.8	—	19.8	—	17.2	—	—	—	—

Note: Values are expressed in dB per 100m (328 ft.) length. Results beyond 350 MHz for reference only.

GenSPEED® 6500 PREMIUM CATEGORY 6 CROSS-SECTION



ELECTRICAL CHARACTERISTICS

DC Resistance (max) Ohms/100m (328ft) @ 20˚C		8.9
DC Resistance Unbalance (max) Individual Pair %		3.0
Delay Skew (max) ns/100m		45
Nom. Velocity of Propagation % Speed of Light		CMP: 72 CMR: 70
Characteristic Impedance Frequency (f):	1-500 MHz	Ohms 100 ± 15
Input Impedance Frequency (f):	1-100 MHz 100-350 MHz 350-500 MHz	Ohms 100 ± 15 100 ± 22 100 ± 32

GenSPEED® 6000 Enhanced Category 6 Cable

Features And Benefits
- Innovative cross-web design allowing for maximum pair separation, increasing key electrical performance parameters
- Performance guaranteed to 350 MHz
- TRU-Mark® print legend contains footage markings from 1000' to 0'
- Third-party verified for guaranteed performance

Applications
- IEEE 802.3: 1000 BASE-T (Gigabit Ethernet), 100 BASE-TX, 10 BASE-T
- ANSI/TIA/EIA 854: 1000 BASE-TX
- 155 Mp/s, 1.2 Gb/s ATM
- ANSI X3.263: 100 Mb/s
- IEEE 802.3af DTE Power (PoE)
- Digital Video
- Broadband and Baseband Analog Video
- Draft IEEE 802.3at for PoE Plus

Standard Compliances
- ANSI/TIA/EIA 568 B.2-1
- TIA 568 C Draft
- ANSI/TIA/EIA 862 (Building Automation)
- ISO/IEC 11801 Ed. 2.0 (Class E)
- ICEA S-102-700 (Category 6)
- NEC/CEC Type CMR (UL 1666) for Non-Plenum
- NEC/CEC Type CMP (NFPA 262) for Plenum
- RoHS Compliant Directive 2002/95/EC
- UL 444

VERIFIED

TIA/EIA 568B

RoHS Compliant Directive 2002/95/EC

Data subject to change without notice.

CONSTRUCTION

Conductors
- 23 AWG solid bare annealed copper

Insulation
- Non-Plenum: Polyolefin
- Plenum: Fluoropolymer

Color Code
- Pair 1: Blue-White/Blue
- Pair 2: Orange-White/Orange
- Pair 3: Green-White/Green
- Pair 4: Brown-White/Brown

Separator
- Cross-web

Rip Cord
- Applied longitudinally under jacket

Jacket
- Non-Plenum: Flame-Retardant PVC
- Plenum: Low-Smoke, Flame-Retardant PVC

PHYSICAL DATA

	CMR (Non-Plenum)	CMP (Plenum)
Nominal Cable Diameter (in)	0.235	0.225
Nominal Cable Weight (lbs/1000ft)	28	31
Minimum Bend Radius (in)	1.0	1.0
Maximum Pulling Force (lbs)	32	32
Temperature Rating (˚C)		
Installation:	0 to +60	0 to +60
Operation:	-20 to +75	-20 to +75

PART NUMBERS

Standard packaging: 1000' Pull-Pac® II

	Pull-Pac® II		Spool-Pac®		Spool	
Jacket Color	CMR (Non-Plenum)	CMP (Plenum)	CMR (Non-Plenum)	CMP (Plenum)	CMR (Non-Plenum)	CMP (Plenum)
Blue	**7133900**	**7131900**	**7133940**	**7131940**	**7133960**	**7131960**
White	**7133901**	**7131901**	**7133941**	**7131941**	**7133961**	**7131961**
Yellow	**7133902**	**7131902**	**7133942**	**7131942**	**7133962**	**7131962**
Gray	**7133903**	**7131903**	**7133943**	**7131943**	**7133963**	**7131963**
Red	**7133904**	**7131904**	**7133944**	**7131944**	**7133964**	**7131964**
Orange	**7133905**	**7131905**	**7133945**	**7131945**	**7133965**	**7131965**
Green	**7133906**	**7131906**	**7133946**	**7131946**	**7133966**	**7131966**
Black	**7133907**	**7131907**	**7133947**	**7131947**	**7133967**	**7131967**
Pink	**7133908**	**7131908**	**7133948**	**7131948**	**7133968**	**7131968**
Purple	**7133909**	**7131909**	**7133959**	**7131959**	**7133969**	**7131969**

Note: Bulk reels are available as a special request with a maximum allowable length of 3000 feet per reel. Minimum run and lead-time may apply.

Non-stock items may be subject to minimum order quantities.

GenSPEED® 6000 Electrical Performance

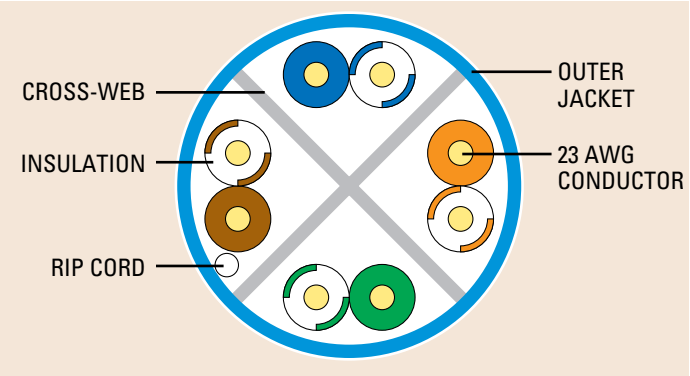
Frequency MHz	PSACR (min) TIA 568 B.2-1	PSACR (min) Guaranteed	ACR (min) TIA 568 B.2-1	ACR (min) Guaranteed	Attenuation (max) TIA 568 B.2-1	Attenuation (max) Guaranteed	PSNEXT (min) TIA 568 B.2-1	PSNEXT (min) Guaranteed	NEXT (min) TIA 568 B.2-1	NEXT (min) Guaranteed
1	70.3	75.3	72.3	77.3	2.0	2.0	72.3	77.3	74.3	79.3
4	59.3	64.5	61.5	66.5	3.8	3.8	63.3	68.3	65.3	70.3
10	51.3	56.4	53.3	58.4	6.0	5.9	57.3	62.3	59.3	64.3
16	46.7	51.7	48.7	53.8	7.6	7.5	54.2	59.3	56.2	61.3
20	44.3	49.4	46.3	51.4	8.5	8.4	52.8	57.8	54.8	59.8
31.25	39.2	44.3	41.2	46.3	10.7	10.6	49.9	54.9	51.9	56.9
62.5	29.9	35.1	32.0	37.1	15.4	15.3	45.4	50.4	47.4	52.4
100	22.5	27.6	24.5	29.6	19.8	19.7	42.3	47.3	44.3	49.3
150	14.9	20.0	16.9	22.0	24.7	24.7	39.7	44.7	41.7	46.7
200	8.8	13.8	10.8	15.8	29.0	29.0	37.8	42.8	39.8	44.8
250	3.5	8.7	5.5	10.7	32.8	32.6	36.3	41.3	38.3	43.3
350	—	—	—	1.7	—	39.5	—	39.2	—	41.2
500	—	—	—	—	—	48.6	—	36.8	—	38.8

Note: Values are expressed in dB per 100m (328 ft.) length. Results beyond 350 MHz for reference only.

Frequency MHz	PSELFEXT (min) TIA 568 B.2-1	PSELFEXT (min) Guaranteed	ELFEXT (min) TIA 568 B.2-1	ELFEXT (min) Guaranteed	Return Loss (min) TIA 568 B.2-1	Return Loss (min) Guaranteed	LCL (min) TIA 568 B.2-1	LCL (min) Guaranteed	ELTCTL (min) TIA 568 B.2-1	ELTCTL (min) Guaranteed
1	64.8	69.8	67.8	72.8	20.0	20.0	40.0	40.0	35.0	35.0
4	52.8	57.7	55.7	60.7	23.0	23.6	40.0	40.0	23.0	23.0
10	44.8	49.8	47.8	52.8	25.0	26.0	40.0	40.0	15.0	15.0
16	40.7	45.7	43.7	48.7	25.0	26.0	38.0	38.0	10.9	10.9
20	38.8	43.7	41.7	46.7	25.0	26.0	37.0	37.0	9.0	9.0
31.25	34.9	39.9	37.9	42.9	23.6	25.0	35.1	35.1	5.1	5.1
62.5	28.9	33.8	31.8	36.8	21.5	23.5	32.0	32.0	5.0	5.0
100	24.8	29.8	27.8	32.8	20.1	22.5	30.0	30.0	5.0	5.0
150	21.3	26.3	24.3	29.3	18.9	21.6	28.2	28.2	5.0	5.0
200	18.8	23.8	21.8	26.8	18.0	21.0	27.0	27.0	5.0	5.0
250	16.8	21.8	19.8	24.8	17.3	20.5	26.0	26.0	5.0	5.0
350	—	18.9	—	21.9	—	19.8	—	—	—	—
500	—	15.8	—	18.8	—	19.0	—	—	—	—

Note: Values are expressed in dB per 100m (328 ft.) length. Results beyond 350 MHz for reference only.

GenSPEED® 6000 ENHANCED CATEGORY 6 CROSS-SECTION



ELECTRICAL CHARACTERISTICS

DC Resistance (max) Ohms/100m (328ft) @ 20˚C		9.38
DC Resistance Unbalance (max) Individual Pair %		4.0
Delay Skew (max) ns/100m		CMP: 35 CMR: 38
Nom. Velocity of Propagation % Speed of Light		CMP: 70 CMR: 68
Characteristic Impedance Frequency (f):	1-500 MHz	Ohms 100 ± 15
Input Impedance Frequency (f):	1-100 MHz 100-250 MHz 250-500 MHz	Ohms 100 ± 15 100 ± 22 100 ± 32

GenSPEED® 6 Category 6 Cable

Features And Benefits
- Unique tape design engineered for consistent electrical performance
- Performance guaranteed to 350 MHz
- TRU-Mark® print legend contains footage markings from 1000' to 0'
- Third-party verified for guaranteed performance

Applications
- IEEE 802.3: 1000 BASE-T (Gigabit Ethernet), 100 BASE-TX, 10 BASE-T
- ANSI/TIA/EIA 854: 1000 BASE-TX
- 155 Mp/s, 1.2 Gb/s ATM
- ANSI X3.263: 100 Mb/s
- IEEE 802.3af DTE Power (PoE)
- Digital Video
- Broadband and Baseband Analog Video
- Draft IEEE 802.3at for PoE Plus

Standard Compliances
- ANSI/TIA/EIA 568 B.2-1
- TIA 568 C Draft
- ANSI/TIA/EIA 862 (Building Automation)
- ISO/IEC 11801 Ed. 2.0 (Class E)
- ICEA S-102-700 (Category 6)
- NEC/CEC Type CMR (UL 1666) for Non-Plenum
- NEC/CEC Type CMP (NFPA 262) for Plenum
- RoHS Compliant Directive 2002/95/EC
- UL 444

VERIFIED

TIA/EIA 568B

RoHS Compliant Directive 2002/95/EC

Data subject to change without notice.

CONSTRUCTION

Conductors
- 23 AWG solid bare annealed copper

Insulation
- Non-Plenum: Polyolefin
- Plenum: Fluoropolymer

Color Code
- Pair 1: Blue-White/Blue
- Pair 2: Orange-White/Orange
- Pair 3: Green-White/Green
- Pair 4: Brown-White/Brown

Separator
- Tape

Rip Cord
- Applied longitudinally under jacket

Jacket
- Non-Plenum: Flame-Retardant PVC
- Plenum: Low-Smoke, Flame-Retardant PVC

PHYSICAL DATA

	CMR (Non-Plenum)	CMP (Plenum)
Nominal Cable Diameter (in)	0.205	0.200
Nominal Cable Weight (lbs/1000ft)	28	28
Minimum Bend Radius (in)	1.0	1.0
Maximum Pulling Force (lbs)	32	32
Temperature Rating (˚C)		
Installation:	0 to +60	0 to +60
Operation:	-20 to +75	-20 to +75

PART NUMBERS

Standard packaging: 1000' Pull-Pac® II

	Pull-Pac® II		Spool-Pac®		Spool	
Jacket Color	CMR (Non-Plenum)	CMP (Plenum)	CMR (Non-Plenum)	CMP (Plenum)	CMR (Non-Plenum)	CMP (Plenum)
Blue	**7133800**	**7131800**	**7133840**	**7131840**	**7133860**	**7131860**
White	**7133801**	**7131801**	**7133841**	**7131841**	**7133861**	**7131861**
Yellow	**7133802**	**7131802**	**7133842**	**7131842**	**7133862**	**7131862**
Gray	**7133803**	**7131803**	**7133843**	**7131843**	**7133863**	**7131863**
Red	**7133804**	**7131804**	**7133844**	**7131844**	**7133864**	**7131864**
Orange	**7133805**	**7131805**	**7133845**	**7131845**	**7133865**	**7131865**
Green	**7133806**	**7131806**	**7133846**	**7131846**	**7133866**	**7131866**
Black	**7133807**	**7131807**	**7133847**	**7131847**	**7133867**	**7131867**
Pink	**7133808**	**7131808**	**7133848**	**7131848**	**7133868**	**7131868**
Purple	**7133809**	**7131809**	**7133859**	**7131859**	**7133869**	**7131869**

Note: Bulk reels are available as a special request with a maximum allowable length of 3000 feet per reel. Minimum run and lead-time may apply.

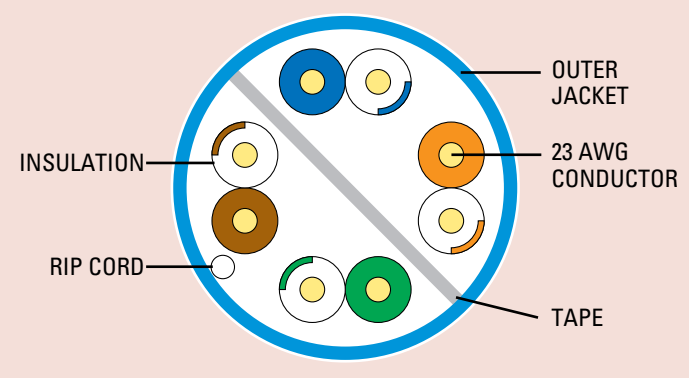
Non-stock items may be subject to minimum order quantities.

GenSPEED® 6 Electrical Performance TIA/EIA 568 B.2-1*

Frequency MHz	PSACR (min)	ACR (min)	Attenuation (max)	PSNEXT (min)	NEXT (min)	PSELFEXT (min)	ELFEXT (min)	Return Loss (min)	LCL (min)	ELTCTL (min)
1	70.3	72.3	2.0	72.3	74.3	64.8	67.8	20.0	40.0	35.0
4	59.3	61.5	3.8	63.3	65.3	52.8	55.7	23.0	40.0	23.0
10	51.3	53.3	6.0	57.3	59.3	44.8	47.8	25.0	40.0	15.0
16	46.7	48.7	7.6	54.2	56.2	40.7	43.7	25.0	38.0	10.9
20	44.3	46.3	8.5	52.8	54.8	38.8	41.7	25.0	37.0	9.0
31.25	39.2	41.2	10.7	49.9	51.9	34.9	37.9	23.6	35.1	5.1
62.5	29.9	32.0	15.4	45.4	47.4	28.9	31.8	21.5	32.0	5.0
100	22.5	24.5	19.8	42.3	44.3	24.8	27.8	20.1	30.0	5.0
150	14.9	16.9	24.7	39.7	41.7	21.3	24.3	18.9	28.2	5.0
200	8.8	10.8	29.0	37.8	39.8	18.8	21.8	18.0	27.0	5.0
250	3.5	5.5	32.8	36.3	38.3	16.8	19.8	17.3	26.0	5.0
350	—	—	39.8	34.1	36.1	13.9	16.9	16.3	—	—
400	—	—	43.0	33.3	35.3	12.8	15.8	15.9	—	—
500	—	—	48.9	31.8	33.8	10.8	13.8	15.2	—	—

Note: Values are expressed in dB per 100m (328 ft.) length. Results beyond 350 MHz are for reference only.
*Specs meet TIA/EIA 568 B.2-1 Standard for Cat 6 UTP Cabling.

GenSPEED® 6 CATEGORY 6 CROSS-SECTION



ELECTRICAL CHARACTERISTICS

DC Resistance (max) Ohms/100m (328ft) @ 20˚C	9.38
DC Resistance Unbalance (max) Individual Pair %	4.0
Delay Skew (max) ns/100m	45
Nom. Velocity of Propagation % Speed of Light	CMP: 70 CMR: 68
Characteristic Impedance Frequency (f): 1-350 MHz	Ohms 100 ± 15
Input Impedance Frequency (f): 1-100 MHz 100-350 MHz	Ohms 100 ± 15 100 ± 22

GenSPEED® 6 Category 6 Interlock Armored Cable

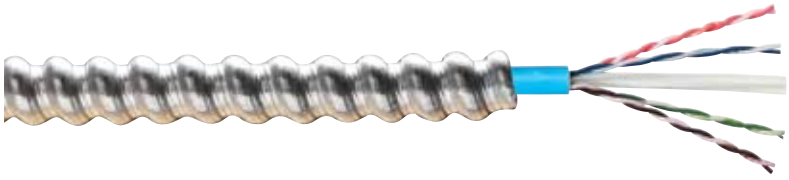
Features And Benefits
- Interlock armor provides outstanding mechanical protection
- Flexible and easy to install
- Eliminates the need for conduit, reducing installation time
- Single-pull installation
- Application assurance warranty

Applications
- IEEE 802.3: 1000 BASE-T (Gigabit Ethernet), 100 BASE-TX, 10 BASE-T
- ANSI/TIA/EIA 854: 100 BASE-TX
- 155 Mp/s, 1.2 Gb/s ATM
- ANSI X3.263: 100 Mb/s
- Indoor applications only

Standard Compliances
- ANSI/TIA/EIA 568 B.2-1
- ANSI/TIA/EIA 862 (Building Automation)
- ISO/IEC 11801 Ed. 2.0 (Class E)
- ICEA S-102-700 (Category 6)
- UL 444

TIA/EIA 568B

LISTED



CONSTRUCTION

Conductors
- 23 AWG solid bare annealed copper

Insulation
- Polyolefin

Rip Cord
- Applied longitudinally under jacket

Color Code
- Pair 1: Blue-White/Blue
- Pair 2: Orange-White/Orange
- Pair 3: Green-White/Green
- Pair 4: Brown-White/Brown

Jacket
- Flame-Retardant PVC

PHYSICAL DATA

	CMR (Non-Plenum)
	1 Cable
Nominal Cable Diameter (in)	0.450
Nominal Cable Weight (lbs/1000ft)	67.8
Minimum Bend Radius (in)	1.0
Maximum Pulling Force (lbs)	25
Temperature Rating (˚C)	
Installation:	0 to +60
Operation:	-20 to +75

PART NUMBERS

Color	Part Number	Spool Unit 1	Spool Reel
Blue	**9133300**	6R Blue	1000' reel
Blue	**9133300.2R**	6R Blue	2000' reel
White	**9133305**	6R White	1000' reel
White	**9133305.2R**	6R White	2000' reel

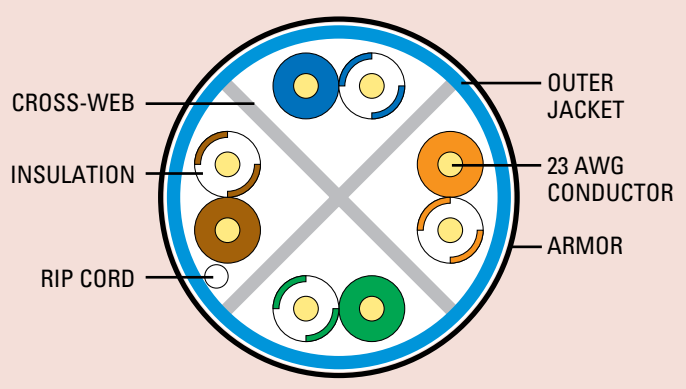
Data subject to change without notice.

ELECTRICAL PERFORMANCE

	PSACR (min)	ACR (min)	Attenuation (max)	PSNEXT (min)	NEXT (min)	PSELFEXT (min)	ELFEXT (min)	Return Loss (min)	LCL (min)	ELTCTL (min)
1	70.3	72.3	2.0	72.3	74.3	64.8	67.8	20.0	40.0	35.0
4	59.3	61.5	3.8	63.3	65.3	52.8	55.7	23.0	40.0	23.0
10	51.3	53.3	6.0	57.3	59.3	44.8	47.8	25.0	40.0	15.0
16	46.7	48.7	7.6	54.2	56.2	40.7	43.7	25.0	38.0	10.9
20	44.3	46.3	8.5	52.8	54.8	38.8	41.7	25.0	37.0	9.0
31.25	39.2	41.2	10.7	49.9	51.9	34.9	37.9	23.6	35.1	5.1
62.5	29.9	32.0	15.4	45.4	47.4	28.9	31.8	21.5	32.0	5.0
100	22.5	24.5	19.8	42.3	44.3	24.8	27.8	20.1	30.0	5.0
150	14.9	16.9	24.7	39.7	41.7	21.3	24.3	18.9	28.2	5.0
200	8.8	10.8	29.0	37.8	39.8	18.8	21.8	18.0	27.0	5.0
250	3.5	5.5	32.8	36.3	38.3	16.8	19.8	17.3	26.0	5.0
350	–	–	39.8	34.1	36.1	13.9	16.9	16.3	–	–
400	–	–	43.0	33.3	35.3	12.8	15.8	15.9	–	–
500	–	–	48.9	31.8	33.8	10.8	13.8	15.2	–	–

Note: Values are expressed in dB per 100m (328 ft.) length. Results beyond 250 MHz are for reference only.

GenSPEED® 6 INTERLOCK ARMORED CABLE CROSS-SECTION



ELECTRICAL CHARACTERISTICS

DC Resistance (max) Ohms/100m (328ft) @ 20˚C	9.38
DC Resistance Unbalance (max) Individual Pair %	3.0
Delay Skew (max) ns/100m	45
Nom. Velocity of Propagation % Speed of Light	CMR: 70
Characteristic Impedance Frequency (f): 1-250 MHz	Ohms 100 ± 15

GenSPEED® 6 Category 6 Outside Plant Cable

Features And Benefits
- Innovative cross-web design allowing for maximum pair separation, increasing key electrical performance parameters
- Gel-filled construction to prevent moisture migration in underground and wet applications
- Wide temperature range for extreme weather environments
- TRU-Mark® print legend contains footage markings from 1000' to 0'

Applications
- Data transmission rates up to 2.4 Gb/s
- 1000 BASE-T (Gigabit Ethernet)
- 100/10 BASE-T (IEEE 802.3)
- 52/155 Mbps ATM
- Duct and conduit installations
- Not to be used aerially or direct buried

Standard Compliances
- ANSI/TIA/EIA 568 B.2-1
- TIA 568 C Draft
- ISO 11801 (Category 6)
- ICEA S-102-700 (Category 6)
- MIL-C-24640A Water Penetration Requirement
- RoHS Compliant Directive 2002/95/EC

TIA/EIA 568B

RoHS Compliant Directive 2002/95/EC

CONSTRUCTION

Conductors
- 23 AWG solid bare annealed copper

Insulation
- Polyolefin

Color Code
- Pair 1: Blue-White/Blue
- Pair 2: Orange-White/Orange
- Pair 3: Green-White/Green
- Pair 4: Brown-White/Brown

Separator
- Cross-web

Flooding Compound
- Waterproof gel prevents moisture migration

Jacket
- UV- and Abrasion-Resistant Polyethylene (PE)

PHYSICAL DATA

Nominal Cable Diameter (in)	0.230
Nominal Cable Weight (lbs/1000ft)	25
Minimum Bend Radius (in)	1.0
Maximum Pulling Force (lbs)	32
Temperature Rating (˚C)	
Installation:	-30 to +60
Operation:	-45 to +80

PART NUMBER

Standard packaging: 1000' Reel

Jacket Color	Reel
Black	**7136100**

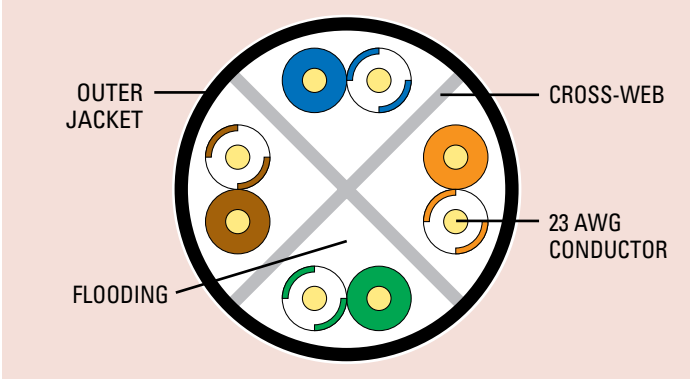
Data subject to change without notice.

ELECTRICAL PERFORMANCE

Frequency MHz	PSACR (min)	ACR (min)	Attenuation (max)	PSNEXT (min)	NEXT (min)	PSELFEXT (min)	ELFEXT (min)	Return Loss (min)
0.772	72.2	74.2	1.8	74.0	76.0	67.0	70.0	—
1	70.3	72.3	2.0	72.3	74.3	64.8	67.8	20.0
4	59.5	61.5	3.8	63.3	65.3	52.8	55.8	23.0
10	51.3	53.3	6.0	57.3	59.3	44.8	47.8	25.0
16	47.0	49.0	7.6	54.3	56.3	40.7	43.7	25.0
20	44.3	46.3	8.5	52.8	54.8	38.8	41.8	25.0
31.25	39.2	41.2	10.7	49.9	51.9	36.8	37.9	23.6
62.5	30.0	32.0	15.4	45.4	47.4	28.9	31.9	21.5
100	22.5	24.5	19.8	42.3	44.3	24.8	27.8	20.1
200	9.0	11.0	29.0	37.8	39.8	18.8	21.8	18.0
250	3.5	5.5	32.8	36.3	38.3	16.8	19.8	17.3

Note: Values are expressed in dB per 100m (328 ft.) length.

GenSPEED® 6 CATEGORY 6 OUTSIDE PLANT CROSS-SECTION



ELECTRICAL CHARACTERISTICS

DC Resistance (max) Ohms/100m (328ft) @ 20˚C	9.38
DC Resistance Unbalance (max) Individual Pair %	3.0
Delay Skew (max) ns/100m	45
Nom. Velocity of Propagation % Speed of Light	69
Characteristic Impedance Frequency (f): 1-250 MHz	Ohms 100 ± 15
Input Impedance Frequency (f): 1-100 MHz 100-250 MHz	Ohms 100 ± 15 100 ± 22

Gen*SPEED*® Category 5e Cables 3

Gen*SPEED*® Category 5e cables are available in a wide variety of performance levels and constructions. With many options to pick from, you can select the Gen*SPEED* Category 5e product that meets your specific performance requirements.

Gen*SPEED*® 5500 Premium Category 5e cable ensures increased headroom, lower bit-error rates and higher signal transmission quality. **Gen*SPEED*® 5350** exceeds Category 5e transmission requirements, offering electrical performance for 1000 BASE-T and beyond Ethernet applications.

With steady, continuous performance, **Gen*SPEED*® 5000** meets Category 5e requirements for present and future network requirements. Offered in a variety of constructions, there is a Gen*SPEED* 5000 cable for nearly every application — including backbone, horizontal, outside, outside plant and residential cabling.

All Gen*SPEED* cables are are safety listed to the NEC and CEC requirements, and most are verified for electrical performance. This independent third-party testing further confirms the quality and performance of all Gen*SPEED* Enhanced Cables.

Gen*SPEED*'s installer-friendly design means that customers won't lose valuable time and money. Gen*SPEED* cables feature unique product-specific packaging for easy identification and TRU-Mark® footage marking so installers don't waste time pulling cable that's too short.

Through leadership and participation on industry committees, technical expertise and a focus on cultivating strong relationships, General Cable provides customers with first-class technical support and a competitive advantage. General Cable's comprehensive warranty program means that all Gen*SPEED* cables conform to standard specifications and are free from defects in material and workmanship.

For more than a century and a half, General Cable has stayed ahead of the industry's changing needs with products that meet future performance requirements and provide the best value in cabling solutions.

GenSPEED® Category 5e Quick Reference Guide

JACKET COLOR	PACKAGE	STANDARD Category 5e GenSPEED® 5000 CMR	STANDARD Category 5e GenSPEED® 5000 CMP	ENHANCED Category 5e GenSPEED® 5350 Enhanced CMR	ENHANCED Category 5e GenSPEED® 5350 Enhanced CMP	PREMIUM Category 5e GenSPEED® 5500 Premium CMR	PREMIUM Category 5e GenSPEED® 5500 Premium CMP
Blue							
	Pull-Pac®	5133299E	5131278E	6133712	6131690	6133299	6131278
	Spool-Pac®	5133374E	5131431E	6133707	6131688	6133403	6131433
	Spool	5133300E	5131282E	6133703	6131686	6133282	6131282
	Bulk*	5133300E.2.5R	5131282E.3R	6133703.2.5R	6131686.3R	6133282.2.5R	6131282.3R
White							
	Pull-Pac®	5133255E	5131361E	6133713	6131691	6133255	6131361
	Spool-Pac®	5133342E	5131450E	6133708	6131689	6133339	6131449
	Spool	5133250E	5131365E	6133704	6131687	6133492	6131618
	Bulk*	5133250E.2.5R	5131365E.3R	6133704.2.5R	6131687.3R	6133492.2.5R	6131618.3R
Yellow							
	Pull-Pac®	5133289E	5131379E	6133715	6131693	6133289	6131546
	Spool-Pac®	5133448E	5131546E	6133717	6131695	6133369	6131379
	Spool		5131648E	6133719	6131697	6133348	6131382
	Bulk*	5133251E.2.5R	5131648E.3R	6133719.2.5R	6131697.3R	6133348.2.5R	6131382.3R
Gray							
	Pull-Pac®	5133200E	5131418E	6133714	6131692	6133200	6131418
	Spool-Pac®	5133329E	5131456E	6133716	6131694	6133331	6131619
	Spool	5133204E	5131475E	6133718	6131696	6133334	
	Bulk*						
Red							
	Pull-Pac®	5133274E	5131477E			6133274	6131477
	Spool-Pac®	5133427E	5131553E		6131732		6131635
	Spool		5131383E				
	Bulk*						
Orange							
	Pull-Pac®	5133383E	5131422E	6133761		6133746	6131422
	Spool-Pac®					6133383	6131576
	Spool	5133667E			6131733		
	Bulk*						
Green							
	Pull-Pac®	5133512E	5131547E		6131699	6133512	6131547
	Spool-Pac®	5133693E	5131575E		6131731	6133615	6131575
	Spool	5133649E	5131649E		6131700	6133616	6131757
	Bulk*	5133649E.2.5R	5131649E.3R		6131700.3R	6133616.2.5R	6131757.3R
Black							
	Pull-Pac®	5133696E	5131683E		6131707	6133696	6131683
	Spool-Pac®						6131829
	Spool		5131689E				
	Bulk*						
Pink							
	Pull-Pac®	5133290E	5131380E			6133290	6131709
	Spool-Pac®	5133447E	5131478E			6133447	6131478
	Spool					6133341	
	Bulk*						
Purple							
	Pull-Pac®	5133445E	5131730E			6133445	6131710
	Spool-Pac®					6133446	
	Spool						
	Bulk*						

Note: Non-stock items may be subject to minimum order quantities.
* Bulk reels are available in 2000' (2R) and 3000' (3R) lengths.

General Cable

GenSPEED® 5500 Premium Category 5e Cable

Features And Benefits
- Ensures increased headroom for future applications, lower bit-error rates, and higher signal transmission quality
- Enhanced signal-to-noise ratio, improving bit-error rate
- Performance guaranteed to 350 MHz
- TRU-Mark® print legend contains footage markings from 1000' to 0'
- Third-party verified for guaranteed performance

Applications
- IEEE 802.3: 1000 BASE-T (Gigabit Ethernet), 100 BASE-TX, 10 BASE-T
- 155 Mp/s, 622 Mp/s ATM
- ANSI X3.263: 100 Mb/s
- 4/16 Mb/s Token Ring
- Broadband and Baseband Analog Video

Standard Compliances
- ANSI/TIA/EIA 568 B.2 (Category 5e)
- ANSI/TIA/EIA 862 (Building Automation)
- ISO/IEC 11801 Ed. 2.0 (Class D)
- ICEA S-90-661 (Category 5e)
- NEC/CEC Type CMR (UL 1666) for Non-Plenum
- NEC/CEC Type CMP (NFPA 262) for Plenum
- RoHS Compliant Directive 2002/95/EC
- UL 444

VERIFIED

TIA/EIA 568B

RoHS Compliant Directive 2002/95/EC

Data subject to change without notice.

CONSTRUCTION

Conductors
- 24 AWG solid bare annealed copper

Insulation
- Non-Plenum: Polyolefin
- Plenum: Fluoropolymer

Color Code
- Pair 1: Blue-White/Blue
- Pair 2: Orange-White/Orange
- Pair 3: Green-White/Green
- Pair 4: Brown-White/Brown

Rip Cord
- Applied longitudinally under jacket

Jacket
- Non-Plenum: Flame-Retardant PVC
- Plenum: Low-Smoke, Flame-Retardant PVC

PHYSICAL DATA

	CMR (Non-Plenum)	CMP (Plenum)
Nominal Cable Diameter (in)	0.210	0.190
Nominal Cable Weight (lbs/1000ft)	22	20
Minimum Bend Radius (in)	1.0	1.0
Maximum Pulling Force (lbs)	25	25
Temperature Rating (˚C)		
Installation:	0 to +60	0 to +60
Operation:	-20 to +75	-20 to +75

PART NUMBERS

Standard packaging: 1000' Pull-Pac® II

	Pull-Pac® II		Spool-Pac®		Spool	
Jacket Color	CMR (Non-Plenum)	CMP (Plenum)	CMR (Non-Plenum)	CMP (Plenum)	CMR (Non-Plenum)	CMP (Plenum)
Blue	6133299	6131278	6133403	6131433	6133282	6131282
White	6133255	6131361	6133339	6131449	6133492	6131618
Yellow	6133289	6131546	6133369	6131379	6133348	6131382
Gray	6133200	6131418	6133331	6131619	6133334	
Red	6133274	6131477		6131635		
Orange	6133746	6131422	6133383	6131576		
Green	6133512	6131547	6133615	6131575	6133616	6131757
Black	6133696	6131683		6131829		
Pink	6133290	6131709	6133447	6131478	6133341	
Purple	6133445	6131710	6133446			

Note: Bulk reels are available as a special request with a maximum allowable length of 3000 feet per reel. Minimum run and lead-time may apply.

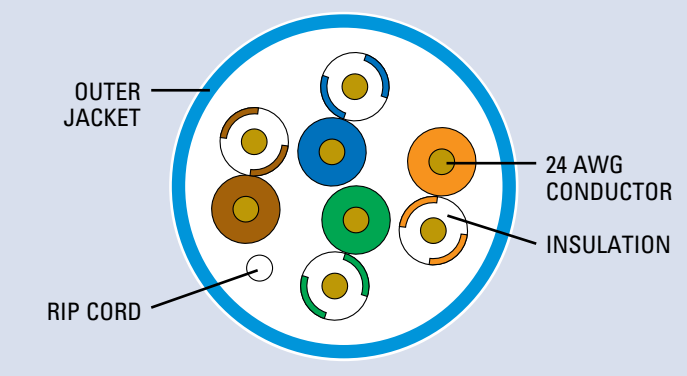
Non-stock items may be subject to minimum order quantities.

GenSPEED® 5500 ELECTRICAL PERFORMANCE

Frequency MHz	PSACR (min)	ACR (min)	Attenuation (max)	PSNEXT (min)	NEXT (min)	PSELFEXT (min)	ELFEXT (min)	Return Loss (min)
1	66.3	68.3	2.0	68.3	70.3	62.0	65.0	20.0
4	55.4	57.4	3.9	59.3	61.3	50.0	53.0	23.0
10	47.1	49.1	6.2	53.3	55.3	42.0	45.0	25.0
16	42.3	44.3	7.9	50.2	52.2	37.9	40.9	25.0
20	39.9	41.9	8.9	48.8	50.8	36.0	39.0	25.0
25	37.4	39.4	10.0	47.3	49.3	34.0	37.0	24.3
31.25	34.7	36.7	11.2	45.9	47.9	32.1	35.1	23.6
62.5	25.1	27.1	16.3	41.4	43.4	26.1	29.1	21.5
100	17.3	19.3	21.0	38.3	40.3	22.0	25.0	20.1
155	8.6	10.6	26.9	35.4	37.4	18.2	21.2	18.8
200	2.8	4.8	31.0	33.8	35.8	16.0	19.0	18.0
250	—	—	35.3	32.3	34.3	14.0	17.0	17.3
300	—	—	39.2	31.1	33.1	12.5	15.5	16.8
350	—	—	42.9	30.1	32.1	11.1	14.1	16.3

Note: Values are expressed in dB per 100m (328 ft.) length.

GenSPEED® 5500 PREMIUM CATEGORY 5e CROSS-SECTION



ELECTRICAL CHARACTERISTICS

DC Resistance (max) Ohms/100m (328ft) @ 20˚C		8.9
DC Resistance Unbalance (max) Individual Pair %		3.0
Delay Skew (max) ns/100m		45
Nom. Velocity of Propagation % Speed of Light		CMP: 72 CMR: 70
Characteristic Impedance Frequency (f):	1-350 MHz	Ohms 100 ± 15
Input Impedance Frequency (f):	1-100 MHz 100-250 MHz 250-350 MHz	Ohms 100 ± 15 100 ± 22 100 ± 32

GenSPEED® 5350 Enhanced Category 5e Cable

Features And Benefits

- For applications that require optimal Cat 5e performance with flexibility for the future
- Performance guaranteed to 350 MHz
- TRU-Mark® print legend contains footage markings from 1000' to 0'
- Third-party verified for guaranteed performance

Applications

- IEEE 802.3: 1000 BASE-T (Gigabit Ethernet), 100 BASE-TX, 10 BASE-T
- 155 Mp/s, 622 Mp/s ATM
- ANSI X3.263: 100 Mb/s
- 4/16 Mb/s Token Ring
- Broadband and Baseband Analog Video

Standard Compliances

- ANSI/TIA/EIA 568 B.2 (Category 5e)
- ANSI/TIA/EIA 862 (Building Automation)
- ISO/IEC 11801 Ed. 2.0 (Class D)
- ICEA S-90-661 (Category 5e)
- NEC/CEC Type CMR (UL 1666) for Non-Plenum
- NEC/CEC Type CMP (NFPA 262) for Plenum
- RoHS Compliant Directive 2002/95/EC
- UL 444

VERIFIED

TIA/EIA 568B

RoHS Compliant Directive 2002/95/EC

Data subject to change without notice.

CONSTRUCTION

Conductors
- 24 AWG solid bare annealed copper

Insulation
- Non-Plenum: Polyolefin
- Plenum: Fluoropolymer

Color Code
- Pair 1: Blue-White/Blue
- Pair 2: Orange-White/Orange
- Pair 3: Green-White/Green
- Pair 4: Brown-White/Brown

Rip Cord
- Applied longitudinally under jacket

Jacket
- Non-Plenum: Flame-Retardant PVC
- Plenum: Low-Smoke, Flexguard® Flame-Retardant PVC

PHYSICAL DATA

	CMR (Non-Plenum)	CMP (Plenum)
Nominal Cable Diameter (in)	0.200	0.180
Nominal Cable Weight (lbs/1000ft)	21	19
Minimum Bend Radius (in)	1.0	1.0
Maximum Pulling Force (lbs)	25	25
Temperature Rating (˚C)		
Installation:	0 to +60	0 to +60
Operation:	-20 to +75	-20 to +75

PART NUMBERS

Standard packaging: 1000' Pull-Pac® II

	Pull-Pac® II		Spool-Pac®		Spool	
Jacket Color	CMR (Non-Plenum)	CMP (Plenum)	CMR (Non-Plenum)	CMP (Plenum)	CMR (Non-Plenum)	CMP (Plenum)
Blue	6133712	6131690	6133707	6131688	6133703	6131686
White	6133713	6131691	6133708	6131689	6133704	6131687
Yellow	6133715	6131693	6133717	6131695	6133719	6131697
Gray	6133714	6131692	6133716	6131694	6133718	6131696
Red				6131732		
Orange	6133761					6131733
Green		6131699		6131731		6131700
Black		6131707				
Pink						
Purple						

Note: Bulk reels are available as a special request with a maximum allowable length of 3000 feet per reel. Minimum run and lead-time may apply.

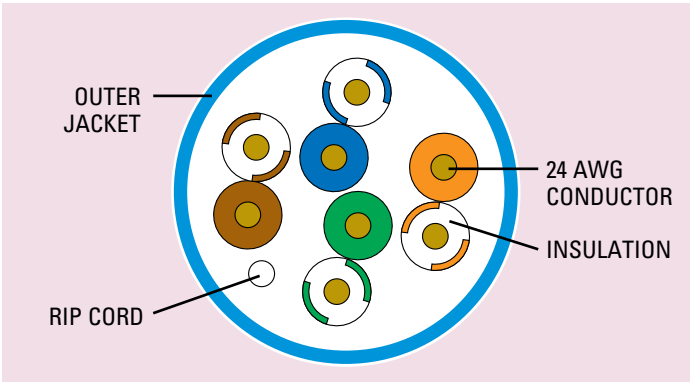
Non-stock items may be subject to minimum order quantities.

GenSPEED® 5350 ELECTRICAL PERFORMANCE

Frequency MHz	PSACR (min)	ACR (min)	Attenuation (max)	PSNEXT (min)	NEXT (min)	PSELFEXT (min)	ELFEXT (min)	Return Loss (min)
1	63.3	64.3	2.0	65.3	66.3	61.0	64.0	25.0
4	52.3	53.3	4.0	56.3	57.3	49.0	52.0	25.0
10	43.9	44.9	6.4	50.3	51.3	41.0	44.0	25.0
16	39.1	40.1	8.1	47.2	48.2	36.9	39.9	25.0
20	36.6	37.6	9.2	45.8	46.8	35.0	38.0	25.0
25	34.0	35.0	10.3	44.3	45.3	33.0	36.0	24.3
31.25	31.3	32.3	11.6	42.9	43.9	31.1	34.1	23.6
62.5	21.6	22.6	16.8	38.4	39.4	25.1	28.1	21.5
100	13.6	14.6	21.7	35.3	36.3	21.0	24.0	20.1
155	4.7	5.7	27.7	32.4	33.4	17.2	20.2	—
200	—	—	32.0	30.8	31.8	15.0	18.0	—
250	—	—	36.4	29.3	30.3	13.0	16.0	—
300	—	—	40.5	28.1	29.1	11.5	14.5	—
350	—	—	44.3	27.1	28.1	10.1	13.1	—

Note: Values are expressed in dB per 100m (328 ft.) length.

GenSPEED® 5350 ENHANCED CATEGORY 5e CROSS-SECTION



ELECTRICAL CHARACTERISTICS

DC Resistance (max) Ohms/100m (328ft) @ 20˚C		8.9
DC Resistance Unbalance (max) Individual Pair %		3.0
Delay Skew (max) ns/100m		45
Nom. Velocity of Propagation % Speed of Light		CMP: 72 CMR: 70
Characteristic Impedance Frequency (f):	1-350 MHz	Ohms 100 ± 15
Input Impedance Frequency (f):	1-100 MHz 100-250 MHz 250-350 MHz	Ohms 100 ± 15 100 ± 22 100 ± 32

GenSPEED® 5000 Category 5e Cable

Features And Benefits
- Engineered to provide stable and continuous performance
- Performance guaranteed to 200 MHz
- TRU-Mark® print legend contains footage markings from 1000' to 0'
- Third-party verified for guaranteed performance

Applications
- IEEE 802.3: 1000 BASE-T (Gigabit Ethernet), 100 BASE-TX, 10 BASE-T
- 52/155 Mp/s ATM
- ANSI X3.263: 100 Mb/s
- 4/16 Mb/s Token Ring

Standard Compliances
- ANSI/TIA/EIA 568 B.2 (Category 5e)
- ANSI/TIA/EIA 862 (Building Automation)
- ISO/IEC 11801 Ed. 2.0 (Class D)
- ICEA S-90-661 (Category 5e)
- NEC/CEC Type CMR (UL 1666) for Non-Plenum
- NEC/CEC Type CMP (NFPA 262) for Plenum
- RoHS Compliant Directive 2002/95/EC
- UL 444

VERIFIED

TIA/EIA 568B

RoHS Compliant Directive 2002/95/EC

Data subject to change without notice.

CONSTRUCTION

Conductors
- 24 AWG solid bare annealed copper

Insulation
- Non-Plenum: Polyolefin
- Plenum: Fluoropolymer

Rip Cord
- Applied longitudinally under jacket

Color Code
- Pair 1: Blue-White/Blue
- Pair 2: Orange-White/Orange
- Pair 3: Green-White/Green
- Pair 4: Brown-White/Brown

Jacket
- Non-Plenum: Flame-Retardant PVC
- Plenum: Low-Smoke, Flexguard® Flame-Retardant PVC

PHYSICAL DATA

	CMR (Non-Plenum)	CMP (Plenum)
Nominal Cable Diameter (in)	0.200	0.180
Nominal Cable Weight (lbs/1000ft)	21	19
Minimum Bend Radius (in)	1.0	1.0
Maximum Pulling Force (lbs)	25	25
Temperature Rating (˚C)		
Installation:	0 to +60	0 to +60
Operation:	-20 to +75	-20 to +75

PART NUMBERS

Standard packaging: 1000' Pull-Pac® II

	Pull-Pac® II		Spool-Pac®		Spool	
Jacket Color	CMR (Non-Plenum)	CMP (Plenum)	CMR (Non-Plenum)	CMP (Plenum)	CMR (Non-Plenum)	CMP (Plenum)
Blue	5133299E	5131278E	5133374E	5131431E	5133300E	5131282E
White	5133255E	5131361E	5133342E	5131450E	5133250E	5131365E
Yellow	5133289E	5131379E	5133448E	5131546E		5131648E
Gray	5133200E	5131418E	5133329E	5131456E	5133204E	5131475E
Red	5133274E	5131477E	5133427E	5131553E		5131383E
Orange	5133383E	5131422E			5133667E	
Green	5133512E	5131547E	5133693E	5131575E	5133649E	5131649E
Black	5133696E	5131683E				5131689E
Pink	5133290E	5131380E	5133447E	5131478E		
Purple	5133445E	5131730E				

Note: Bulk reels are available as a special request with a maximum allowable length of 3000 feet per reel. Minimum run and lead-time may apply.

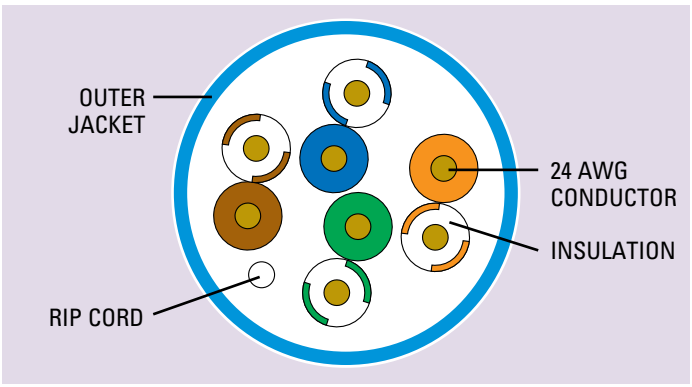
Non-stock items may be subject to minimum order quantities.

GenSPEED® 5000 ELECTRICAL PERFORMANCE

Frequency MHz	PSACR (min)	ACR (min)	Attenuation (max)	PSNEXT (min)	NEXT (min)	PSELFEXT (min)	ELFEXT (min)	Return Loss (min)
1	60.3	63.3	2.0	62.3	65.3	60.8	63.8	20.0
4	49.2	52.2	4.1	53.3	56.3	48.8	51.8	23.0
10	40.8	43.8	6.5	47.3	50.3	40.8	43.8	25.0
16	36.0	39.0	8.2	44.2	47.2	36.7	39.7	25.0
20	33.5	36.5	9.3	42.8	45.8	34.8	37.8	25.0
25	30.9	33.9	10.4	41.3	44.3	32.8	35.8	24.3
31.25	28.2	31.2	11.7	39.9	42.9	30.9	33.9	23.6
62.5	18.4	21.4	17.0	35.4	38.4	24.9	27.9	21.5
100	10.3	13.3	22.0	32.3	35.3	20.8	23.8	20.1
155	1.4	4.4	28.1	29.4	32.4	17.0	20.0	—
200	—	—	32.4	27.8	30.8	14.8	17.8	—
250	—	—	36.9	26.3	29.3	12.8	15.8	—
300	—	—	41.0	25.1	28.1	11.3	14.3	—
350	—	—	44.9	24.1	27.1	9.9	12.9	—

Note: Values are expressed in dB per 100m (328 ft.) length. Values above 200 MHz are for information only.

GenSPEED® 5000 CATEGORY 5e CROSS-SECTION



ELECTRICAL CHARACTERISTICS

DC Resistance (max) Ohms/100m (328ft) @ 20˚C	8.9
DC Resistance Unbalance (max) Individual Pair %	3.0
Mutual Capacitance (nom) pF/ft @ 1 KHz	14
Delay Skew (max) ns/100m	45
Nom. Velocity of Propagation % Speed of Light	CMP: 72 CMR: 70
Characteristic Impedance Frequency (f): 1-200 MHz	Ohms 100 ± 15

GenSPEED® 5000 Category 5e Interlock Armored Cable

Features And Benefits
- Interlock armor provides outstanding mechanical protection
- Flexible and easy to install
- Eliminates the need for conduit, reducing installation time
- Single-pull installation

Applications
- IEEE 802.3: 1000 BASE-T (Gigabit Ethernet), 100 BASE-TX, 10 BASE-T
- 52/155 Mp/s ATM
- ANSI X3.263: 100 Mb/s
- 4/16 Mb/s Token Ring
- Indoor applications only

Standard Compliances
- ANSI/TIA/EIA 568 B.2 (Category 5e)
- ANSI/TIA/EIA 862 (Building Automation)
- ISO/IEC 11801 Ed. 2.0 (Class D)
- ICEA S-90-661 (Category 5e)
- RoHS Compliant Directive 2002/95/EC

TIA/EIA 568B

RoHS Compliant Directive 2002/95/EC

CONSTRUCTION

Conductors
- 24 AWG solid bare annealed copper

Insulation
- Polyolefin

Rip Cord
- Applied longitudinally under jacket

Color Code
- Pair 1: Blue-White/Blue
- Pair 2: Orange-White/Orange
- Pair 3: Green-White/Green
- Pair 4: Brown-White/Brown

Jacket
- Flame-Retardant PVC

PHYSICAL DATA

	CMR (Non-Plenum)	
	1 Cable	2 Cables
Nominal Cable Diameter (in)	0.450	0.620
Nominal Cable Weight (lbs/1000ft)	58.5	96.0
Minimum Bend Radius (in)	1.0	1.0
Maximum Pulling Force (lbs)	25	25
Temperature Rating (˚C) Installation: Operation:	0 to +60 -20 to +75	

PART NUMBERS

Color	Part Number	Reel Unit 1	Reel Unit 2	Reel
Blue	**8133300**	5000R Blue		1000' reel
Blue	**8133300.2R**	5000R Blue		2000' reel
Blue/Blue	**8133301**	5000R Blue	5000R Blue	1000' reel
Blue/Blue	**8133301.2R**	5000R Blue	5000R Blue	2000' reel
Blue/White	**8133307**	5000R Blue	5000R White	1000' reel
Blue/White	**8133307.2R**	5000R Blue	5000R White	2000' reel
White	**8133305**	5000R White		1000' reel
White	**8133305.2R**	5000R White		2000' reel
White/White	**8133306**	5000R White	5000R White	1000' reel
White/White	**8133306.2R**	5000R White	5000R White	2000' reel

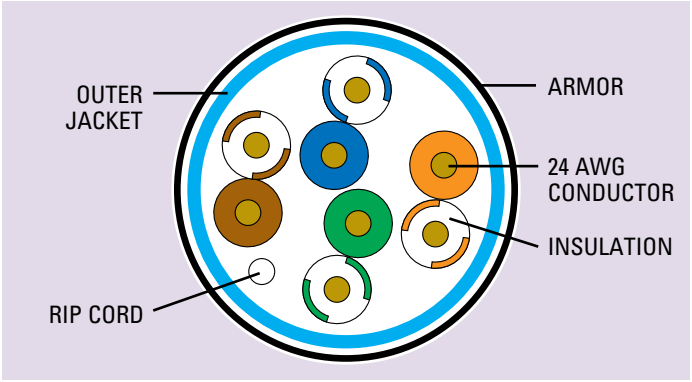
Data subject to change without notice.

ELECTRICAL PERFORMANCE

Frequency MHz	PSACR (min)	ACR (min)	Attenuation (max)	PSNEXT (min)	NEXT (min)	PSELFEXT (min)	ELFEXT (min)	Return Loss (min)
1	60.3	63.3	2.0	62.3	65.3	60.8	63.8	20.0
4	49.2	52.2	4.1	53.3	56.3	48.8	51.8	23.0
10	40.8	43.8	6.5	47.3	50.3	40.8	43.8	25.0
16	36.0	39.0	8.2	44.2	47.2	36.7	39.7	25.0
20	33.5	36.5	9.3	42.8	45.8	34.8	37.8	25.0
25	30.9	33.9	10.4	41.3	44.3	32.8	35.8	24.3
31.25	28.2	31.2	11.7	39.9	42.9	30.9	33.9	23.6
62.5	18.4	21.4	17.0	35.4	38.4	24.9	27.9	21.5
100	10.3	13.3	22.0	32.3	35.3	20.8	23.8	20.1

Note: Values are expressed in dB per 100m (328 ft.) length.

GenSPEED® 5000 CATEGORY 5e INTERLOCK ARMORED CROSS-SECTION



ELECTRICAL CHARACTERISTICS

DC Resistance (max) Ohms/100m (328ft) @ 20˚C	8.9
DC Resistance Unbalance (max) Individual Pair %	3.0
Mutual Capacitance (nom) pF/ft @ 1 KHz	14
Delay Skew (max) ns/100m	45
Nom. Velocity of Propagation % Speed of Light	CMR: 70
Characteristic Impedance Frequency (f): 1-100 MHz	Ohms 100 ± 15

GenSPEED® 5000 Category 5e Screened Cable

Features And Benefits
- Foil shield reduces electromagnetic interference (EMI) for optimal performance
- TRU-Mark® print legend contains footage markings from 1000' to 0'

Applications
- 1000 BASE-T (Gigabit Ethernet)
- E52/155 Mbps ATM
- E100/10 BASE-T (IEEE 802.3)
- 4/16 Mbps Token Ring (IEEE 802.5)
- T1
- Voice

Standard Compliances
- ANSI/TIA/EIA 568 B (Category 5e)
- ANSI/ICEA S-90-661 (Category 5e)
- NEC/CEC Type CMP for Plenum
- NEC/CEC Type CMR for Non-Plenum
- RoHS Compliant Directive 2002/95/EC

LISTED

TIA/EIA 568B

RoHS Compliant Directive 2002/95/EC

CONSTRUCTION

Conductors
- 24 AWG solid bare annealed copper

Insulation
- Plenum: Fluoropolymer
- Non-Plenum: Polyolefin

Color Code
- Pair 1: Blue-White/Blue
- Pair 2: Orange-White/Orange
- Pair 3: Green-White/Green
- Pair 4: Brown-White/Brown

Core Tape
- Polyester

Drain Wire
- 24 AWG stranded (7/32) solid tinned copper

Shield
- Polyester-backed aluminum foil (aluminum side in)

Jacket
- Flame-Retardant PVC

PHYSICAL DATA

	CMR (Non-Plenum)	CMP (Plenum)
Nominal Cable Diameter (in)	0.250	0.225
Nominal Cable Weight (lbs/1000ft)	36	32
Minimum Bend Radius (in)	1.0	1.0
Maximum Pulling Force (lbs)	25	25
Temperature Rating (°C)		
Installation:	0 to +60	0 to +60
Operation:	-20 to +75	-20 to +75

PART NUMBERS

Standard packaging: 1000' Spool

	Jacket Color	Spool	
		CMR (Non-Plenum)	CMP (Plenum)
	Blue	**2133496E**	**2131611E**
	White	**2133774E**	**2131778E**
	Yellow	**2133777E**	**2131777E**
	Gray	**2133495E**	**2131673E**
	Red	**2133778E**	**2131774E**
	Orange	**2133776E**	**2131776E**
	Green	**2133775E**	**2131775E**
	Black	**2133779E**	**2131779E**

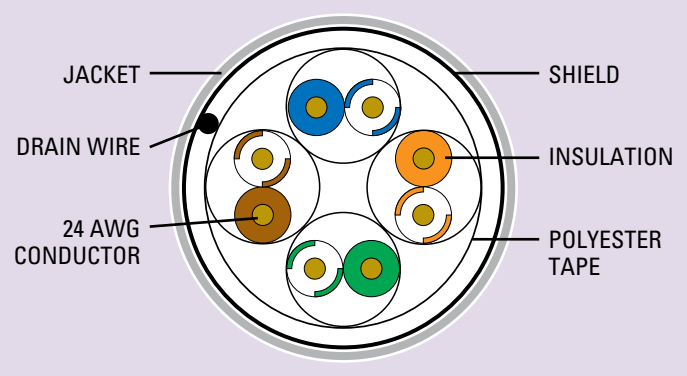
Data subject to change without notice.

ELECTRICAL PERFORMANCE

Frequency MHz	PSACR (min)	ACR (min)	Attenuation (max)	PSNEXT (min)	NEXT (min)	PSELFEXT (min)	ELFEXT (min)	Return Loss (min)
1	60.3	63.3	2.0	62.3	65.3	60.8	63.8	20.0
4	49.2	52.2	4.1	53.3	56.3	48.8	51.8	23.0
10	40.8	43.8	6.5	47.3	50.3	40.8	43.8	25.0
16	36.0	39.0	8.2	44.2	47.2	36.7	39.7	25.0
20	33.5	36.5	9.3	42.8	45.8	34.8	37.8	25.0
25	30.9	33.9	10.4	41.3	44.3	32.8	35.8	24.3
31.25	28.2	31.2	11.7	39.9	42.9	30.9	33.9	23.6
62.5	18.4	21.4	17.0	35.4	38.4	24.9	27.9	21.5
100	10.3	13.3	22.0	32.3	35.3	20.8	23.8	20.1
155	1.4	4.4	28.1	29.4	32.4	17.0	20.0	—
200	—	—	32.4	27.8	30.8	14.8	17.8	—
250	—	—	36.9	26.3	29.3	12.8	15.8	—
300	—	—	41.0	25.1	28.1	11.3	14.3	—
350	—	—	44.9	24.1	27.1	9.9	12.9	—

Note: Values are expressed in dB per 100m (328 ft.) length. Values above 100 MHz are for information only.

GenSPEED® 5000 CATEGORY 5e SCREENED CROSS-SECTION



ELECTRICAL CHARACTERISTICS

DC Resistance (max) Ohms/100m (328ft) @ 20˚C	9.38
Mutual Capacitance (nom) pF/ft @ 1 KHz	14
Delay Skew (max) ns/100m	45
Propagation Delay (max) ns @ 100 MHz	538
Nom. Velocity of Propagation (NVP) % Speed of Light	CMP: 72 CMR: 70
Characteristic Impedance Frequency (f): 1-100 MHz	Ohms 100 ± 15

GenSPEED® 5000 Category 5e Outside Plant Cable

Features And Benefits
- Protects against environmental elements that can cause electrical performance failures
- TRU-Mark® print legend contains footage markings from 1000' to 0'

Applications
- Aerial, duct and buried installations (the non-armored design is for duct installation only)
- 1000 BASE-T (Gigabit Ethernet)
- 52/155 Mbps ATM
- 100/10 BASE-T (IEEE 802.3)
- Voice/T1

Standard Compliances
- ANSI/TIA/EIA 568 B (Category 5e)
- ISO 11801 (Category 5e)
- ANSI/ICEA S-90-661 (Category 5e)
- MIL-C-24640A Water Penetration Requirements
- NEMA WC63.1 (Category 5e)
- RoHS Compliant Directive 2002/95/EC

TIA/EIA 568B

RoHS Compliant Directive 2002/95/EC

CONSTRUCTION

Conductors
- 24 AWG solid bare annealed copper

Insulation
- Polyolefin

Color Code
- Pair 1: Blue-White/Blue
- Pair 2: Orange-White/Orange
- Pair 3: Green-White/Green
- Pair 4: Brown-White/Brown

Flooding Compound
- Waterproof gel prevents moisture migration

Optional Armor
- Aluminum applied helically (inner jacket is used with this construction)
- Armor diameter 12mm

Jacket
- UV- and abrasion-resistant Polyethylene (PE)

PHYSICAL DATA

	No Armor	Aluminum Armor
Nominal Cable Diameter (in)	0.230	0.340
Nominal Cable Weight (lbs/1000ft)	25	50
Minimum Bend Radius (in)	1.0	1.0
Maximum Pulling Force (lbs)	25	25
Temperature Rating (˚C)		
Installation:	-30 to +60	-30 to +60
Operation:	-45 to +80	-45 to +80

PART NUMBERS

Standard packaging: 1000' Reel

Jacket Color	Reel	Armor
Black	**5136100**	None
Black	**5136101**	Aluminum

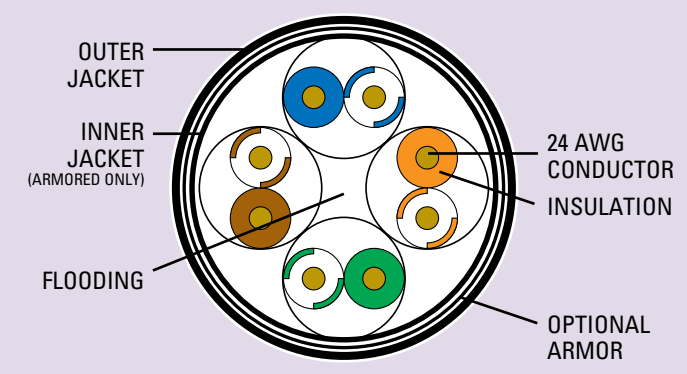
Data subject to change without notice.

ELECTRICAL PERFORMANCE

Frequency MHz	PSACR (min)	ACR (min)	Attenuation (max)	PSNEXT (min)	NEXT (min)	PSELFEXT (min)	ELFEXT (min)	Return Loss (min)
1	60.3	63.3	2.0	62.3	65.3	60.8	63.8	20.0
4	49.2	52.2	4.1	53.3	56.3	48.8	51.8	23.0
10	40.8	43.8	6.5	47.3	50.3	40.8	43.8	25.0
16	36.0	39.0	8.2	44.2	47.2	36.7	39.7	25.0
20	33.5	36.5	9.3	42.8	45.8	34.8	37.8	25.0
25	30.9	33.9	10.4	41.3	44.3	32.8	35.8	24.3
31.25	28.2	31.2	11.7	39.9	42.9	30.9	33.9	23.6
62.5	18.4	21.4	17.0	35.4	38.4	24.9	27.9	21.5
100	10.3	13.3	22.0	32.3	35.3	20.8	23.8	20.1
155	1.4	4.4	28.1	29.4	32.4	17.0	20.0	—
200	—	—	32.4	27.8	30.8	14.8	17.8	—
250	—	—	36.9	26.3	29.3	12.8	15.8	—
300	—	—	41.0	25.1	28.1	11.3	14.3	—
350	—	—	44.9	24.1	27.1	9.9	12.9	—

Note: Values are expressed in dB per 100m (328 ft.) length. Values above 100 MHz are for information only.

GenSPEED® 5000 CATEGORY 5e OUTSIDE PLANT CROSS-SECTION



ELECTRICAL CHARACTERISTICS

DC Resistance (max) Ohms/100m (328ft) @ 20˚C	9.38
Mutual Capacitance (nom) pF/ft @ 1 KHz	17
Delay Skew (max) ns/100m	45
Propagation Delay (max) ns @ 100 MHz	583
Nom. Velocity of Propagation (NVP) % Speed of Light	69
Characteristic Impedance Frequency (f): 1-100 MHz	Ohms 100 ± 15

GenSPEED® 5000 Category 5e Residential CMX Outdoor-CMR Cable

Features And Benefits
- CMX rating allows the cable to be exposed to temperature variations for short distances from the Network Interface Device on the outside of a house to the point where the cable enters the house
- Sunlight-resistant
- Sequential footage markings

Applications
- 1000 BASE-T (Gigabit Ethernet)
- 52/155 Mbps ATM
- 100/10 BASE-T (IEEE 802.3)
- 4/16 Mbps Token Ring (IEEE 802.5)
- T1
- Voice

Standard Compliances
- ANSI/TIA/EIA 568 B.2 (Category 5e)
- ANSI/ICEA S-100-685
- NEC/CEC Type CMX OUTDOOR-CMR
- RoHS Compliant Directive 2002/95/EC

VERIFIED

TIA/EIA 568B

RoHS Compliant Directive 2002/95/EC

CONSTRUCTION

Conductors
- 24 AWG solid bare annealed copper

Insulation
- Polyolefin

Color Code
- Pair 1: Blue-White/Blue
- Pair 2: Orange-White/Orange
- Pair 3: Green-White/Green
- Pair 4: Brown-White/Brown

Jacket
- Flame-Retardant PVC

Rip Cord
- Applied longitudinally under jacket

PHYSICAL DATA

	CMR (Non-Plenum)
Nominal Cable Diameter (in)	0.210
Nominal Cable Weight (lbs/1000ft)	26
Temperature Rating (˚C)	
Installation:	-10 to +60
Operation:	-40 to +75

PART NUMBERS

Standard packaging: 600' Pull-Pac® II

	Pull-Pac® II
Jacket Color	CMR (Non-Plenum)
Ivory	**2137113E**
Gray	**2137114E**

Note: For installations using staple guns, the 4-pair construction requires the use of T-25 size staples.

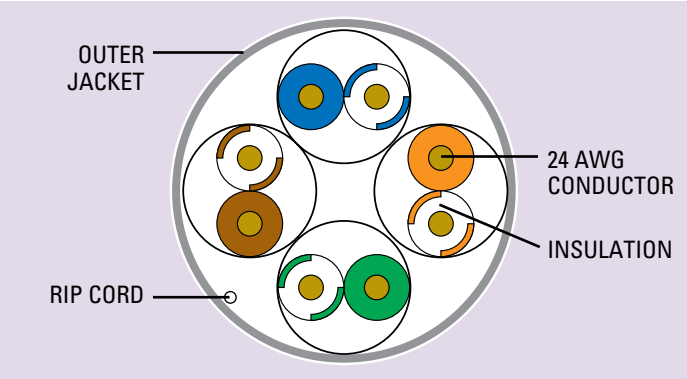
Data subject to change without notice.

ELECTRICAL PERFORMANCE

Frequency MHz	PSACR (min)	ACR (min)	Attenuation (max)	PSNEXT (min)	NEXT (min)	PSELFEXT (min)	ELFEXT (min)	Return Loss (min)
1	60.3	63.3	2.0	62.3	65.3	60.8	63.8	20.0
4	49.2	52.2	4.1	53.3	56.3	48.8	51.8	23.0
10	40.8	43.8	6.5	47.3	50.3	40.8	43.8	25.0
16	36.0	39.0	8.2	44.2	47.2	36.7	39.7	25.0
20	33.5	36.5	9.3	42.8	45.8	34.8	37.8	25.0
25	30.9	33.9	10.4	41.3	44.3	32.8	35.8	24.3
31.25	28.2	31.2	11.7	39.9	42.9	30.9	33.9	23.6
62.5	18.4	21.4	17.0	35.4	38.4	24.9	27.9	21.5
100	10.3	13.3	22.0	32.3	35.3	20.8	23.8	20.1
155	1.4	4.4	28.1	29.4	32.4	17.0	20.0	—
200	—	—	32.4	27.8	30.8	14.8	17.8	—
250	—	—	36.9	26.3	29.3	12.8	15.8	—
300	—	—	41.0	25.1	28.1	11.3	14.3	—
350	—	—	44.9	24.1	27.1	9.9	12.9	—

Note: Values are expressed in dB per 100m (328 ft.) length. Values above 100 MHz are for information only.

GenSPEED® 5000 CATEGORY 5e CMX/CMR CROSS-SECTION



ELECTRICAL CHARACTERISTICS

DC Resistance (max) Ohms/100m (328ft) @ 20˚C	9.38
Mutual Capacitance (nom) pF/ft @ 1 KHz	17
Delay Skew (max) ns/100m	45
Nom. Velocity of Propagation (NVP) % Speed of Light	70
Impedance Frequency (f): 1-100 MHz	Ohms 100 ± 15

Note: CMX outdoor rating allows the cable to be exposed for short distances from the Network Interface Device on the outside of the house to the point where the cable enters the house. This type of cable is not to be buried, direct buried or aerially lashed.

GenSPEED® 5000 Category 5e Backbone 25 Pair Cable

Features And Benefits
- Connects all systems of a multi-level distributed system to an intermediate system
- Sequential footage markings

Applications
- 1000 BASE-T (Gigabit Ethernet)
- 100/10 BASE-T
- 100 VG-AnyLAN
- 52/155 Mp/s ATM
- 4/16 Mb/s Token Ring
- T1
- Voice

Standard Compliances
- ANSI/TIA/EIA 568 B.2 (Category 5e)
- ANSI/ICEA S-90-661 (Category 5e)
- NEC/CEC Type CMR for Non-Plenum
- RoHS Compliant Directive 2002/95/EC

VERIFIED LISTED TIA/EIA 568B

RoHS Compliant Directive 2002/95/EC

CONSTRUCTION

Conductors
- 25 pairs of 24 AWG solid bare annealed copper

Insulation
- Polyolefin

Color Code
- See Color Code Chart on page 86, except no bandmarking; only solid colors

Rip Cord
- Applied longitudinally under jacket

Jacket
- PVC

PHYSICAL DATA

	CMR (Non-Plenum)
Nominal Cable Diameter (in)	0.500
Nominal Cable Weight (lbs/1000ft)	125
Temperature Rating (°C)	
Installation:	0 to +60
Operation:	-20 to +75

PART NUMBERS

Standard packaging: 1000' Reel

	Reel
Jacket Color	CMR (Non-Plenum)
Gray	**2133269E**
Blue	**2133694E**
White	**2133781E**

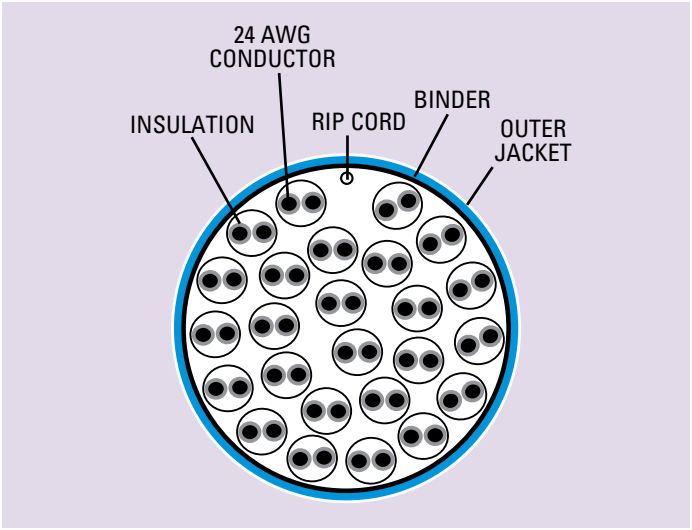
Data subject to change without notice.

ELECTRICAL PERFORMANCE

Frequency MHz	Attenuation (max)	PSNEXT (min)	NEXT (min)	PSELFEXT (min)	Return Loss (min)
0.772	1.8	64.3	67.3	63.0	—
1	2.0	62.3	65.3	60.8	20.0
4	4.1	53.3	56.3	48.7	23.0
8	5.8	48.3	51.3	42.7	24.5
10	6.5	47.3	50.3	40.8	25.0
16	8.2	44.3	47.3	36.7	25.0
20	9.3	42.3	45.3	34.7	25.0
25	10.4	41.3	44.3	32.8	24.3
31.25	11.7	39.3	42.3	30.9	23.6
62.5	17.0	35.3	38.3	24.8	21.5
100	22.0	32.3	35.3	20.8	20.1

Note: Values are expressed in dB per 100m (328 ft.) length.

GenSPEED® 5000 CATEGORY 5e BACKBONE 25 PAIR CROSS-SECTION



ELECTRICAL CHARACTERISTICS

DC Resistance (max) Ohms/100m (328ft) @ 20°C	9.38
Mutual Capacitance (nom) pF/ft @ 1 KHz	14
Delay Skew (max) ns/100m	45
Propagation Delay (max) ns @ 100 MHz	538
Nom. Velocity of Propagation (NVP) % Speed of Light	68
Characteristic Impedance Frequency (f): 1-100 MHz	Ohms 100 ± 15

Category 3 Cables 4

As your one-stop resource, General Cable provides a comprehensive line of Category 3 wiring products. General Cable offers a mix of quality plenum, riser and multi-dwelling residential cables designed for sophisticated voice and data systems.

General Cable's **Category 3 Plenum** Cable is installed in a building's return air plenums for both convenience and aesthetics. **Category 3 Riser** Cable is ideal for installation in vertical riser and general horizontal applications. Available from two to 300 pair counts, Category 3 Plenum and Riser Cables meet all your Power Sum NEXT backbone voice transmission requirements.

Heavy EMI/RFMI is common in hostile workplaces where equipment and machinery generate noises that can compromise voice and data signals. General Cable's **Category 3 Shielded** Plenum and Riser Cables feature Mylar® tape and polyester-backed aluminum foil shields to reduce the effects of EMI/RFI in electromagnetic environments.

All General Cable's Category Cables meet applicable TIA/EIA 568 B safety standards. Each safety-listed cable meets the Canadian Standards Association (CSA) and the National Electric Code (NEC) requirements. Independent third-party testing further confirms the quality and performance of all cables.

Dual listed for **CMX Outdoor-CMR**, General Cable's Category 3 station wire withstands and operates at the low temperatures found in colder regions, down to -40°C without jacket cracking.

Available in various jacket colors and pair counts, General Cable's category cables meet installers' needs for virtually every application. Fabricated in state-of-the-art facilities, these cables are backed by years of technical expertise and are guaranteed to meet your expectations.

Index	Page

Category 3 Plenum

PRODUCT NUMBER	PAIRS	JACKET COLOR	PKG	O.D. (INCHES)	WEIGHT (LBS/KFT)
Flexguard® Flame-Retardant PVC Jacket					
2131243	2	White	PP	0.13	10
2131244	3	White	PP	0.15	13
2131248	3	White	SP	0.15	13
2131245	4	White	PP	0.17	17
2131313	4	Gray	PP	0.17	17
2131249	4	White	SP	0.17	17
2131419	4	Gray	SP	0.17	17
2131453	4	Blue	PP	0.17	17
2131458	4	White	SPC	0.17	17
2131462	4	Yellow	PP	0.17	17
2131463	4	Green	PP	0.17	17
2131246	6	White	PP	0.18	24
2131250	6	White	SP	0.18	24
2131505	25	White	RL	0.42	102
2131505.99	25	White	POL	0.42	102
2131757	50	White	RL	0.59	220
2131757.99	50	White	POL	0.59	220
2131758	100	White	RL	0.84	440
2131758.99	100	White	POL	0.84	440
PVDF Fluoropolymer Jacket					
2131442.99	200	Natural	POL	1.10	728
2131474.99	300	Natural	POL	1.45	1243

Data subject to change without notice.

Product Construction

Conductors:
- 24 AWG solid bare annealed copper

Insulation:
- Flame-retardant semi-rigid PVC

Color Code:
- See Color Code Chart on page 86

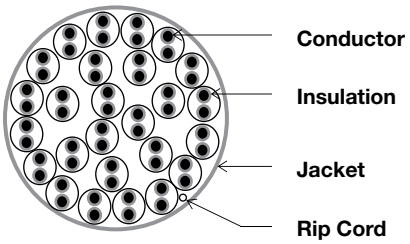
Rip Cord:
- Applied longitudinally under jacket (except 3 and 4 pair)

Jacket:
- Flexguard® flame-retardant PVC
- Tough low-friction PVDF fluoropolymer
- Sequential footage markings

Packaging
- 1000' Pull-Pac® (PP)
- 1000' spool (SP)
- 1000' Spool-Pac® (SPC)
- 1000' reel (RL)
- Per order length (POL)

Applications
- 100 VG-AnyLAN
- 52 Mbps ATM
- 4 Mbps Token Ring (IEEE 802.5)
- 10 BASE-T (IEEE 802.3)
- T1
- Voice

Compliances
- ANSI/TIA/EIA 568 B.2 (Category 3)
- ANSI/ICEA S-90-661 (Category 3)
- NEC/CEC Type CMP
- RoHS Compliant Directive 2002/95/EC



Electrical Characteristics

	24 AWG
DC Resistance (max) Ohms/100m (328ft) @ 20°C	9.38
Mutual Capacitance (nom) pF/ft @ 1 kHz	18
Characteristic Impedance *Frequency (f):* 1.0-16.0 MHz	Ohms 100 ± 15
Structural Return Loss (SRL) *Frequency (f):* 1.0-10.0 MHz	dB (min) 12
10.0-16.0 MHz	12-10 log (f/10)

Frequency	Attenuation dB/100m (max)	Power Sum Near-End Crosstalk dB (min)
772 kHz	2.2	43
1 MHz	2.6	41
4 MHz	5.6	32
8 MHz	8.5	27
10 MHz	9.7	26
16 MHz	13.1	23

Physical Data

	CMP (Plenum)
Temperature Rating (°C)	
Installation:	0 to +75
Operation:	-10 to +75

UL LISTED ETL VERIFIED 2-6 Pair EIA TIA/EIA 568B ICEA RoHS Compliant Directive 2002/95/EC 2-6 Pair

General Cable

Category 3 Non-Plenum

Product Construction

Conductors:
- 24 AWG solid bare annealed copper

Insulation:
- Flame-retardant semi-rigid PVC

Color Code:
- See Color Code Chart on page 86

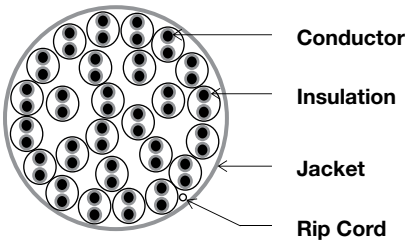
Rip Cord:
- Applied longitudinally under jacket

Jacket:
- Flame-retardant PVC
- Sequential footage markings

Packaging
- 1000' Pull-Pac® (PP)
- 1000' Spool-Pac® (SPC)
- 1000' spool (SP)
- 1000' reel (RL)
- Per order length (POL)

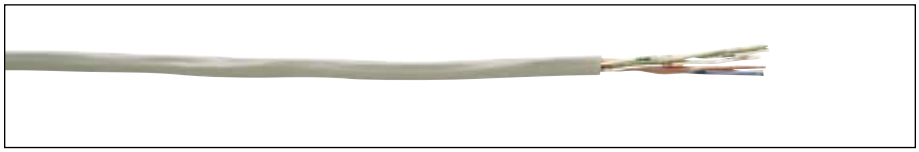
Applications
- 100 VG-AnyLAN
- 52 Mbps ATM
- 4 Mbps Token Ring (IEEE 802.5)
- 10 BASE-T (IEEE 802.3)
- T1
- Voice

Compliances
- ANSI/TIA/EIA 568 B.2 (Category 3)
- ANSI/ICEA S-90-661 (Category 3)
- NEC/CEC Type CMR
- RoHS Compliant Directive 2002/95/EC



Physical Data

	CMR (Non-Plenum)
Temperature Rating (˚C)	
Installation:	0 to +60
Operation:	-10 to +60



PRODUCT NUMBER	PAIRS	JACKET COLOR	PKG.	O.D. (INCHES)	WEIGHT (LBS/KFT)
2133008	2	Beige	PP	0.14	9
2133009	2	Gray	PP	0.14	9
2133011	2	Gray	SP	0.14	9
2133012	3	Beige	PP	0.15	13
2133013	3	Gray	PP	0.15	13
2133015	3	Gray	SP	0.15	13
2133016	4	Beige	PP	0.17	16
2133017	4	Gray	PP	0.17	16
2133359	4	White	SPC	0.17	16
2133358	4	Gray	SPC	0.17	16
2133018	4	Beige	SP	0.17	16
2133019	4	Gray	SP	0.17	16
2133275	4	Blue	PP	0.17	16
2133296	4	White	PP	0.17	16
2133020	6	Beige	PP	0.21	23
2133021	6	Gray	PP	0.21	23
2133022	6	Beige	SP	0.21	23
2133023	6	Gray	SP	0.21	23
2133026	12	Beige	RL	0.27	47
2133027	12	Gray	RL	0.27	47
2133033	25	Gray	RL	0.42	105
2133033.99	25	Gray	POL	0.42	105
2133161	50	Gray	RL	0.56	185
2133161.99	50	Gray	POL	0.56	185
2133144	100	Gray	RL	0.74	375
2133144.99	100	Gray	POL	0.74	375
2133323	200	Gray	RL	1.02	724
2133323.99	200	Gray	POL	1.02	724
2133373.99	300	Gray	POL	1.23	1077

Data subject to change without notice.

Note: Non-stock items may be subject to minimum order quantities.

Electrical Characteristics

	24 AWG
DC Resistance (max) Ohms/100m @ 20˚C	9.38
Mutual Capacitance (nom) pF/ft @ 1 kHz	18
Characteristic Impedance *Frequency (f):* 1.0-16.0 MHz	Ohms 100 ± 15
Structural Return Loss (SRL) *Frequency (f):* 1.0-10.0 MHz 10.0-16.0 MHz	dB (min) 12 12-10 log (f/10)

Frequency	Attenuation dB/100m (max)	Power Sum Near-End Crosstalk dB (min)
772 kHz	2.2	43
1 MHz	2.6	41
4 MHz	5.6	32
8 MHz	8.5	27
10 MHz	9.7	26
16 MHz	13.1	23

General Cable

RoHS Compliant Directive 2002/95/EC

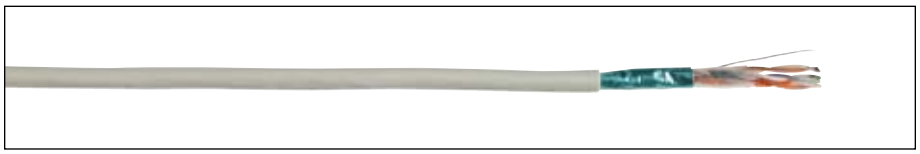
TIA/EIA 568B

VERIFIED 2-6, 25 Pair

Category 3 Screened

CMP (Plenum)

PRODUCT NUMBER	PAIRS	O.D. (INCHES)	WEIGHT (LBS/KFT)
2131537	2	0.13	14
2131216	3	0.15	18
2131217	4	0.20	23
2131218	6	0.26	32



CMR (Non-Plenum)

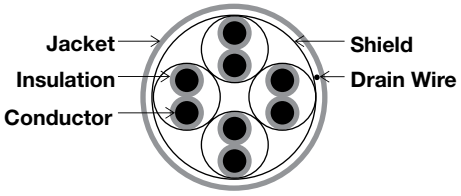
PRODUCT NUMBER	PAIRS	O.D. (INCHES)	WEIGHT (LBS/KFT)
2133175	2	0.19	18
2133176	3	0.22	23
2133177	4	0.23	28

Data subject to change without notice.

Electrical Characteristics

		24 AWG
DC Resistance (max) Ohms/100m (328ft) @ 20°C		9.38
Mutual Capacitance (nom) PF/ft @ 1kHz		18
Characteristic Impedance		Ohms
Frequency (f):	1.0-16.0 MHz	100 ± 15
Structural Return Loss (SRL)		dB (min)
Frequency (f):	1.0-10.0 MHz	12
	10.0-16.0 MHz	12-10 log (f/10)

Frequency	Attenuation dB/100m (max)	Power Sum Near-End Crosstalk dB (min)
772 kHz	2.2	43
1 MHz	2.6	41
4 MHz	5.6	32
8 MHz	8.5	27
10 MHz	9.7	26
16 MHz	13.1	23



Physical Data

	CMR (Non-Plenum)	CMP (Plenum)
Temperature Rating (°C)		
Installation:	0 to +60	0 to +75
Operation:	-10 to +60	-10 to +75

LISTED TIA/EIA 568B

Product Construction

Conductors:
- 24 AWG solid bare annealed copper

Insulation:
- Plenum: Fluoropolymer
- Non-Plenum: Flame-retardant semi-rigid PVC

Color Code:
- Pair 1: Blue-White/Blue
- Pair 2: Orange-White/Orange
- Pair 3: Green-White/Green
- Pair 4: Brown-White/Brown
- Pair 5: Slate-White/Slate
- Pair 6: Blue-Red/Blue

Rip Cord:
- Plenum: None
- Non-Plenum: Applied longitudinally under jacket

Drain Wire:
- 24 AWG solid tinned copper

Shield:
- Polyester-backed aluminum foil

Jacket:
- Plenum: Natural Flexguard® flame-retardant PVC (2pr) tough low-friction PVDF fluoropolymer (3-6 pair)
- Non-Plenum: Gray flame-retardant PVC
- Sequential footage markings

Packaging
- 1000' spool (SP)

Applications
- 100 BASE VG-AnyLAN
- 52 Mbps ATM
- 4 Mbps Token Ring (IEEE 802.5)
- 10 BASE-T (IEEE 802.3)
- T1
- Voice

Compliances
- ANSI/TIA/EIA 568 B.2 (Category 3)
- ANSI/ICEA S-90-661 (Category 3)
- Plenum: NEC/CEC Type CMP
- Non-Plenum: NEC/CEC Type CMR

General Cable

Category 3 Residential CMX Outdoor-CMR

Product Construction

Conductors:
- 4 pairs of 24 AWG solid annealed bare copper

Insulation:
- Polyolefin

Color Code:
Co-extruded stripe
- Pair 1: Blue-White/Blue
- Pair 2: Orange-White/Orange
- Pair 3: Green-White/Green
- Pair 4: Brown-White/Brown

Rip Cord:
- Applied longitudinally under jacket

Jacket
- Flame-retardant PVC
- Sequential footage markings
- Installation Temperature: -10°C to 60°C
- Operation Temperature: -40°C to 75°C

Physical Data

Nominal Cable Diameter (in)
- 0.19

Nominal Cable Weight (lbs/1000ft)
- 20

Packaging
- 600' Pull-Pac® Carton (PP)

Applications
- 100 BASE VG-AnyLAN
- 52 Mbps ATM
- 4 Mbps Token Ring (IEEE 802.5)
- 10 BASE-T (IEEE 802.3)
- T1
- Voice

Compliances
- ANSI/TIA/EIA 568 B.2 (Category 3)
- ANSI/ICEA S-100-685
- NEC CMX Outdoor-CMR
- RoHS Compliant Directive 2002/95/EC

PRODUCT NUMBER	JACKET COLOR
2137088	Ivory
2137087	L.O. Gray

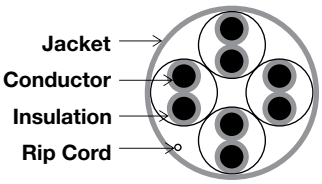
Data subject to change without notice.
Note: For installations using staple guns, the 4-pair construction requires the use of T-25 size staple.

Electrical Characteristics

	24 AWG
DC Resistance (max) Ohms/100m (328ft) @ 20°C	9.38
Mutual Capacitance (nom) pF/ft @ 1 kHz	17
Characteristic Impedance *Frequency (f):* 1.0-16.0 MHz	Ohms 100 ± 15
Structural Return Loss (SRL) *Frequency (f):* 1.0-10.0 MHz 10.0-16.0 MHz	dB (min) 12 12-10 log (f/10)

Frequency	Attenuation dB/100m (max)	NEXT Power Sum dB (min)
772 kHz	2.2	43
1 MHz	2.6	41
4 MHz	5.6	32
8 MHz	8.5	27
10 MHz	9.7	26
16 MHz	13.1	23

Note: CMX outdoor rating allows the cable to be exposed for short distances from the Network Interface Device on the outside of the house to the point where the cable enters the house. This type of cable is not to be buried or direct buried.



Physical Data

	CMR (Non-Plenum)
Temperature Rating (°C)	
Installation:	0 to +60
Operation:	-10 to +60

Cross-Connect and Distribution Frame Wire 5

With extended experience in the field of cross-connect wires, General Cable provides a variety of indoor and outdoor UL-listed cross-connect and distributing frame wire for interconnecting equipment and supplying service in central offices, distribution cabinets and point-to-point hookups.

General Cable meets installers' needs with a breadth of products for virtually any application. Aimed at providing convenience and flexibility, all cables are manufactured, tested and approved to UL, the NEC and applicable TIA/EIA and Telcordia standards.

With years of technical expertise and a focus on cultivating strong relationships, General Cable provides customers with first-class technical support and a competitive advantage. For more than a century and a half, General Cable has stayed ahead of the industry's changing needs with a variety of products that meet future performance requirements and provide the best value in cabling solutions. General Cable's cross-connect and distribution frame wire offer unparalleled, world-class quality.

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Customer Premise Cross-Connect Wire Spec. 5006

Product Construction

Conductors:

- 22 and 24 AWG solid bare annealed copper

Insulation:

- Flame-retardant semi-rigid PVC

Pairing:

- Two twists per foot minimum
- For ease of identification, a variety of different color options are available

Packaging

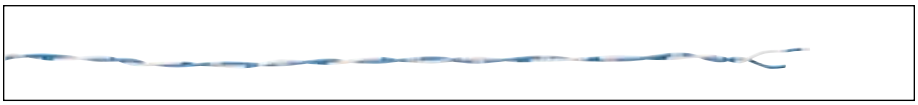
- 1000' spool (SP)
- Other lengths and put-ups are also available

Applications

- Suitable for voice and data transmission up to 4 Mbps
- For cross-connecting between terminals of a distribution frame or other premise equipment

Compliances

- UL and c(UL) Type CM
- Category 2 compatible



PRODUCT NUMBER	PAIRS	AWG	COLOR CODE				PKG./ CARTON	O.D. (INCHES)	WEIGHT (LBS/ KFT)
			PAIR 1	PAIR 2	PAIR 3	PAIR 4			
2114200	1	24	R/G-G/R				8	0.06	3
2114363	1	22	W/O-O/W				4	0.08	5
2114364	1	22	W/G-G/W				4	0.08	5
2114369	1	24	R/BL-BL/R				8	0.06	3
2114385	1	24	R/Y-Y/R				8	0.06	3
7041973	1	22	BL/W-W/BL				4	0.08	5
7042047	1	22	R/W-W/R				4	0.08	5
7023708	1	24	BL/W-W/BL				8	0.06	3
7041916	1	24	BL/Y-Y/BL				8	0.06	3
7023773	1	24	O/W-W/O				8	0.06	3
7023781	1	24	G/W-W/G				8	0.06	3
7036759	1	24	BK/W-W/BK				8	0.06	3
7023864	1	24	R/W-W/R				8	0.06	3
2114212	2	22	BL/W-W/BL	O/W-W/O			4	0.12	10
7023716	2	24	BL/W-W/BL	O/W-W/O			3	0.09	6
7023724	3	24	BL/W-W/BL	O/W-W/O	G/W-W/G		4	0.10	9
2114211	4	24	BL/W-W/BL	O/W-W/O	G/W-W/G	BR/W-W/BR	4	0.12	12

Data subject to change without notice.

Electrical Characteristics

	22 AWG 1 PR.	24 AWG 1-4 PR.
DC Resistance (max) Ohms/1000ft @ 20°C	18.0	28.6
Characteristic Impedance Ohms @ 1 MHz (nom)	100	100

Customer Premise Cross-Connect Wire Type "F" • Spec. 5008

Product Construction

Conductors:

- 24 AWG solid bare annealed copper

Insulation:

- Flame-retardant semi-rigid PVC

Pairing:

- Four twists per foot minimum

Packaging

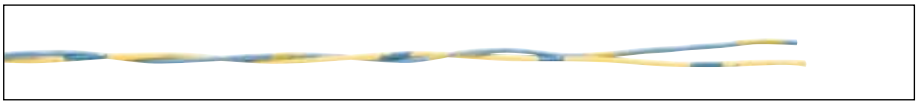
- Supplied on non-returnable spools as shown in table (SP)

Applications

- Suitable for voice and data transmission up to 16 Mbps
- For cross-connecting between terminals of a distribution frame or other premise equipment

Compliances

- UL and c(UL) Type CM
- Bellcore Specification TA-TSY-000130
- Category 3 compatible



PRODUCT NUMBER	PAIRS	COLOR CODE			PKG.	PKG./ CARTON	O.D. (INCHES)	WEIGHT (LBS/KFT)
		PAIR 1	PAIR 2	PAIR 3				
2113055	1	O/W-W/O			1000' SP	8	0.07	3
2134023	1	G/W-W/G			1000' SP	8	0.07	3
2114327	1	BL/R-R/BL			1000' SP	8	0.07	3
2114375	1	R/W-W/R			1000' SP	8	0.07	3
2114374	1	BK/W-W/BK			1000' SP	8	0.07	3
7042500	1	BL/Y-Y/BL			1000' SP	8	0.07	3
7051543	1	BL/Y-BL			600' SP	8	0.07	3
2113054	1	BL/W-W/BL			1000' SP	8	0.07	3
7042518	2	BL/R-R/BL	O/R-R/O		1150' SP	4	0.09	6
2114307	2	BL/W-W/BL	O/W-W/O		1000' SP	4	0.09	6
7042526	3	BL/W-W/BL	O/W-W/O	G/W-W/G	600' SP	4	0.12	10

Data subject to change without notice.

Electrical Characteristics

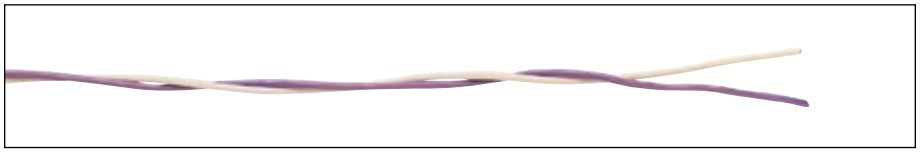
	24 AWG
DC Resistance (max) Ohms/1000ft @ 20°C	28.6
Coaxial Capacitance (max) microfarads/kft @ 23°C	0.15
Insulation Resistance (min) Megohm - kft @ 23°C	300

General Cable

c UL us LISTED

Network Outdoor Cross-Connect Wire

Type “G” • Spec. 5010



PRODUCT NUMBER	COLOR CODE PAIR 1	PKG./ CARTON	WEIGHT (LBS/KFT)
7042427	W/V	8	5
2114357	R/W	8	5

Data subject to change without notice.

Electrical Characteristics

	22 AWG
DC Resistance (max) Ohms/1000ft @ 20˚C	17.8
Coaxial Capacitance (max) microfarads/kft @ 23˚C	0.09
Insulation Resistance (min) Megohm - kft @ 23˚C	5000

Product Construction

Conductors:

- 1 pair of 22 AWG solid bare annealed copper

Insulation:

- Dual-insulated polypropylene with a flame-retardant semi-rigid PVC skin

Pairing:

- Five twists per foot minimum

Packaging

- 400' spool (SP)
- 8 per carton

Applications

- Suitable for voice and data transmission up to 16 Mbps
- For cross-connecting between feeder and distribution circuits within the confines of outdoor distribution cabinets

Compliances

- Bellcore Specification TA-NWT-000126
- Category 3 compatible

c UL us LISTED

General Cable

Universal Cross-Connect Wire

Type “N” • Spec. 5013

Product Construction

Conductors:

- 22 AWG solid bare annealed copper

Insulation:

- Flame-retardant semi-rigid PVC

Pairing:

- Four twists per foot minimum

Packaging

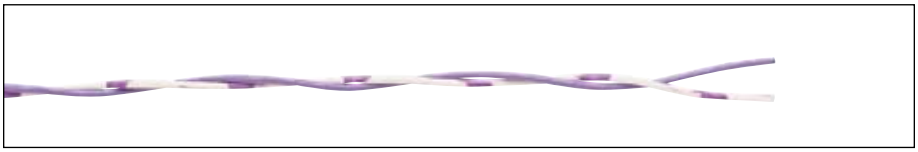
- Supplied on non-returnable spools as shown in table (SP)

Applications

- Suitable for voice and data transmission up to 16 Mbps
- UL Listed cross-connect wire for indoor use in distributing frames and cross-connect arrays; suitable for use outdoors in cross-connect cabinets and terminal boxes. Has excellent low-temperature characteristics for installation in cold climates

Compliances

- UL and c(UL) Type CM
- Bellcore Specification TA-NWT-000126
- Category 3 compatible



PRODUCT NUMBER	PAIRS	COLOR CODE			PKG.	PKG./ CARTON	WEIGHT (LBS/KFT)
		PAIR 1	PAIR 2	PAIR 3			
2113057	1	W/V-V			400' SP	8	4.9
2113058	1	W/V-V			1000' SP	4	4.9
2113059	1	W/R-R			1000' SP	4	4.9
2113060	2	R/BL-BL	R/O-O		1000' SP	3	9.9
2113061	3	W/BL-BL	W/O-O	W/G-G	500' SP	3	14.7

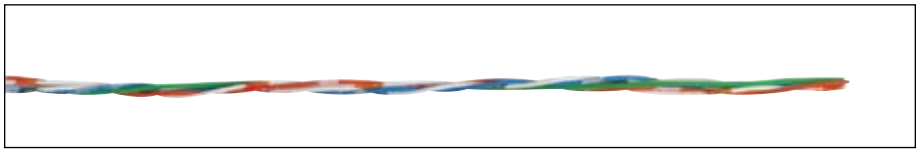
Data subject to change without notice.

Electrical Characteristics

	22 AWG
DC Resistance (max) Ohms/1000ft @ 20°C	18.0
Coaxial Capacitance (max) microfarads/kft @ 23°C	0.15
Insulation Resistance (min) Megohm - kft @ 23°C	500
Near-End Cross Talk (min) dB @ 772 kHz	44

DSX Distribution Frame Wire

Type “Y2” • Spec. 5506



PRODUCT NUMBER	PAIRS	PKG.	PKG./ CARTON
2114388	2.5	5000' SP	1
2114395	2.5	660' SP	4
2114396	2.5	1350' SP	2
7026156	2.5	1000' SP	4

Data subject to change without notice.

Electrical Characteristics

	24 AWG
DC Resistance (max) Ohms/1000ft @ 20˚C	28.6
Coaxial Capacitance (max) microfarads/kft @ 23˚C	0.15
Insulation Resistance (min) Megohm - kft @ 23˚C	300
Capacitance Unbalance (max) Picofarads - 100ft @ 1.0 kilohertz	70

Product Construction

Conductors:

- 24 AWG solid tinned annealed copper

Insulation:

- Flame-retardant semi-rigid PVC, 90°C
- Insulation thickness = 0.008"

Pairing:

- Six twists per foot minimum

Color Code:

- Pair 1: Blue-White/White-Blue
- Pair 2: Orange-White/White-Orange
- Single: Green

Physical Data

- Nominal cable diameter (in): 0.10
- Nominal cable weight (lbs/1000ft): 8.2

Packaging

- Spool (SP)
- Cardboard coil (CL)

Applications

- Suitable for voice and data transmission up to 16 Mbps
- For cross-connecting equipment units in telephone central offices and point-to-point hookups

Compliances

- UL and c(UL) Type CM
- Category 3 compatible

c UL us LISTED

General Cable

Distributing Frame Wire

Type “DT” • Spec. 5009

Product Construction

Conductors:

- 22 and 24 AWG solid tinned annealed copper

Insulation:

- Flame-retardant semi-rigid PVC
- Insulation thickness = 0.008"

Pairing:

- Four twists per foot minimum

Packaging

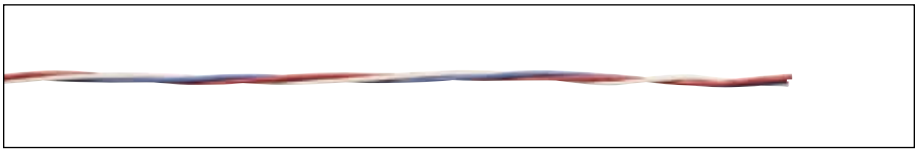
- Standard spool (SP)
- Bell spool (BSP)
- Bell spool dimensions (tapered)
  Inner Drum: 7.25" tapered to 6.25"
  Flange: 12.25"
  Traverse: 4.25"
- Other lengths and put-ups are also available
- Tight pair twist cables are available upon request

Applications

- Suitable for voice and data transmission up to 16 Mbps
- For cross-connecting equipment units in telephone central offices and point-to-point hookups

Compliances

- UL and c(UL) Type CM
- Bellcore Specification TA-TSY-000136
- Cat 3 compatible



PRODUCT NUMBER	PAIRS	AWG	COLOR CODE	PKG.	PKG./ CARTON	O.D. (INCHES)	WEIGHT (LBS/KFT)
7051576	1	24	R/BK	1000' SP	4	0.074	3.1
7051535	1	24	O/W	1000' SP	4	0.074	3.1
7051592	1	24	R/W	1000' SP	4	0.074	3.1
7051600	1	24	BK/W	1000' SP	4	0.074	3.1
7022551	1	24	Y/BL	6000' BSP	2	0.074	3.1
7022569	1	24	Y/O	6000' BSP	2	0.074	3.1
7022577	1	24	Y/G	6000' BSP	2	0.074	3.1
7022585	1	24	Y/R	6000' BSP	2	0.074	3.1
7056534	1	24	G/W	1000' SP	4	0.074	3.1
7022593	3C	24	Y/BL/R	4500' BSP	1	0.080	4.7
7022601	2	24	Y/BL-R/G	3000' BSP	2	0.098	6.2
2113063	1	22	Y/BL	1000' SP	4	0.084	4.7
7051618	1	22	BK/W	1000' SP	4	0.084	4.7
7051626	1	22	R/W	1000' SP	4	0.084	4.7
7051634	1	22	BL/W	1000' SP	4	0.084	4.7
7022460	1	22	W/BL	4500' BSP	2	0.084	4.7
7022478	1	22	W/O	4500' BSP	2	0.084	4.7
7022486	1	22	W/G	4500' BSP	2	0.084	4.7
7022494	1	22	W/R	4500' BSP	2	0.084	4.7
7022502	1	22	R/G	4500' BSP	2	0.084	4.7
2113184	2	22	W/BL-R/G	2000' BSP	2	0.116	9.4

Data subject to change without notice.

Electrical Characteristics

	22 AWG	24 AWG
DC Resistance (max) Ohms/5ft	0.089	0.143
Coaxial Capacitance (nom) microfarads/kft @ kHz	0.150	0.125
Characteristic Impedance Ohms @ 1 MHz (nom)	100	100

Central Office Cables 6

General Cable is a highly recognized manufacturer of a comprehensive line of Central Office cable. As a primary national supplier, our top-quality product line includes cables with the ability to run both analog and digital services from 75 Ohm DS3/4 interconnect cable and switchboard cable to ALVYN terminating cable and two-way digital transmission cable. General Cable's preferred central office cables are engineered for T1, DS1, DS1C, DS2 and other broadband services.

Designed to provide the optimum in performance, the products' transmission, physical and mechanical characteristics are committed to the highest standards of product quality. All of these cables provide enhanced crosstalk and attenuation performance for customers who need broadband solutions. In addition, Telcordia test reports are available upon request for the terminating cable line of products.

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734D Series for DS-3 and DS-4

75 Ohm Cross-Connect Cable

Product Construction

Conductor:
- 20 AWG silver-plated copper

Insulation:
- Gas-injected foamed PE (O.D.: 0.146")

Shield:
- Foil: Aluminum
- Braid: 85% tinned copper

Jacket:
- Flame-retardant PVC

Temperature/Voltage Rating
- 75˚ C/300 V

Packaging
- 1000' wood reels

Applications
- Interconnect and cross-connecting central offices
- Plenum cable is also available upon request

Compliances
- UL and c(UL) Type CMR

CMR (Non-Plenum)

PRODUCT NUMBER	CONDUCTORS	HFA PRODUCT NUMBER
7340201	1	CO20C0012410
7340201T	1 + 22 AWG Tracer	ZO20C0022010
7340202	2	CO20C0022410
7340203	3	CO20C0032410
7340206	6	CO20C0061110
7340208	8	CO20C0082410
7340209	9	CO20C0092410
7340212	12	CO20C0122410
7340216	16	CO20C0162410

Data subject to change without notice.

ELECTRICAL CHARACTERISTICS

SRL 5-90 MHz (dB MIN.)	DC RESISTANCE (OHMS/KFT NOM.)	SHIELD DC RESISTANCE (OHMS/KFT NOM.)	NOMINAL CAPACITANCE (pF/ft)	NVP %
30	10.1	5.6	17.3	80

ATTENUATION (NOMINAL)

MHz/SIGNAL	dB/100ft	dB/100m
0.772	0.24	0.79
CEPT1	0.25	0.82
CEPT2	0.50	1.64
5	0.54	1.77
10	0.75	2.46
CEPT3	0.98	3.21
DS3	1.15	3.77
STS1	1.21	3.97
44.736	1.65	5.41
50	1.70	5.58
CEPT4	2.01	6.59
STS3	2.19	7.18
100	2.69	8.82
DS4	2.94	9.64
200	3.58	11.74

Data subject to change without notice.

735A/C Series for DS-3 and DS-4

75 Ohm Cross-Connect Cable

CMR (Non-Plenum)

PRODUCT NUMBER	CONDUCTORS	HFA PRODUCT NUMBER
7356201	1	CO26C0012010
7356201T	1 + 22 AWG Tracer	ZO26C0022010
7356202	2	CO26C0022010
7356203	3	CO26C0032010
7356206	6	CO26C0062010
7356208	8	CO26C0082010
7356209	9	CO26C0092010
7356212	12	CO26C0122010
7356216	16	CO26C0162010
7356224	24	NOT SET UP

Data subject to change without notice.

Product Construction

Conductor:

- 26 AWG silver-plated copper

Insulation:

- Gas-injected foamed PE (O.D.: 0.077")

Shield:

- Foil: Aluminum
- Braid: 95% tinned copper

Jacket:

- Flame-retardant PVC

Temperature/Voltage Rating

- 75° C/300V

Packaging:

- 1000' reels

Applications

- Interconnect and cross-connecting central offices

Compliances

- UL and c(UL) Type CMR

735A ELECTRICAL CHARACTERISTICS

SRL 5-90 MHz (dB MIN.)	DC RESISTANCE (OHMS/KFT MAX.)	SHIELD DC RESISTANCE (OHMS/KFT NOM.)	NOMINAL CAPACITANCE (pF/ft)	NVP %
30	40.0	2.70	17.0	83

735C ELECTRICAL CHARACTERISTICS

SRL 5-150 MHz (dB MIN.)	DC RESISTANCE (OHMS/KFT MAX.)	SHIELD DC RESISTANCE (OHMS/KFT NOM.)	NOMINAL CAPACITANCE (pF/ft)	NVP %
35	40.0	2.70	17.0	83

ATTENUATION (MAXIMUM)

MHz/SIGNAL	dB/100ft
0.772	0.50
CEPT1	0.54
CEPT2	1.02
5	1.10
10	1.50
CEPT3	2.02
DS3	2.30
STS1	2.56
44.736	3.28
50	3.40
CEPT4	4.12
STS3	4.36
100	4.99
DS4	5.84
200	7.08

Data subject to change without notice.

c UL us LISTED

General Cable

Switchboard Cable

Spec. 4753 • Type CMR • TIW Series

Product Construction

Conductors:
- 24 AWG solid tinned annealed copper

Insulation:
- Flame-retardant semi-rigid PVC
- Insulation thickness = 0.006"

Pairing:
- Three twists per foot minimum

Color Code:
- See Color Code Chart on page 86

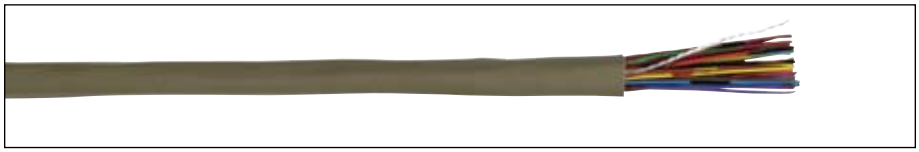
Rip Cord:
- Applied longitudinally under jacket

Jacket:
- Gray, tough, flame-retardant PVC

Packaging
- 1000' reel (RL)
- Bulk reels are available upon request

Applications
- Voice
- T1 Fractional
- Category 2 applications
- Basic rate ISDN

Compliances
- ANSI/ICEA S-80-576
- UL and c(UL) Type CMR



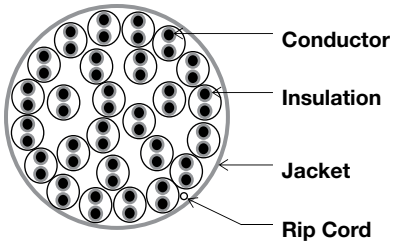
PRODUCT NUMBER	PAIRS	O.D. (INCHES)	WEIGHT (LBS/KFT)
7023039	3	0.13	13
2114621	4	0.16	16
6970073	12	0.24	42
6970065	25	0.36	84
7023021	32	0.37	106
6970123	50	0.46	168
7002975	75	0.56	247

Data subject to change without notice.

Note: Non-stock items may be subject to minimum order quantities.

Electrical Characteristics

	24 AWG	
	3-6 pr	over 6 pr
DC Resistance (max) Ohms/1000ft @ 20°C	31.5	31.5
Mutual Capacitance (nom) pF/ft @ 1kHz	19	22
Attenuation (nom)		
dB/1000ft @ 0.772 MHz	6.2	7.1
dB/1000ft @ 4.224 MHz	16	18
Characteristic Impedance Ohms @ 1 MHz (nom)	100 ± 15	100 ± 20



Shielded Switchboard Cable

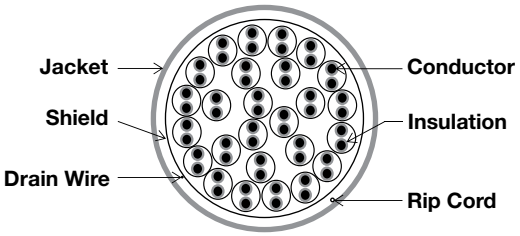
Spec. 4754 • Type CMR

PRODUCT NUMBER	PAIRS	O.D. (INCHES)	WEIGHT (LBS/KFT)
2114628	25	0.350	90
2114627	32	0.380	120

Data subject to change without notice.

Electrical Characteristics

	24 AWG
DC Resistance (max) Ohms/1000ft @ 20°C	31.5
Coaxial Capacitance (max) microfarads/kft @ 23°C	22
Attenuation (nom) dB/1000ft @ 0.772 MHz dB/1000ft @ 4.224 MHz	 7.1 18
Characteristic Impedance Ohms @ 1 MHz (nom)	100 ± 20



Product Construction

Conductors:

- 24 AWG solid tinned annealed copper

Insulation:

- Flame-retardant semi-rigid PVC
- Insulation thickness = 0.006"

Pairing:

- Three twists per foot minimum

Color Code:

- See Color Code Chart on page 86

Rip Cord:

- Applied longitudinally under jacket

Shield:

- Polyester-backed aluminum foil shield
- Aluminum facing in

Drain Wire:

- 24 AWG solid tinned copper drain wire is placed on aluminum side

Jacket:

- Tough, gray, flame-retardant PVC

Packaging

- 1000' reel (RL)
- Bulk reels are available upon request

Applications

- Voice
- T1 Fractional
- Category 2 applications
- Basic rate ISDN

Compliances

- ANSI/ICEA S-80-576
- UL and c(UL) Type CMR

c UL us LISTED

General Cable

100 Ohm Individually Braided Shielded Twisted Pair Cable

Terminating Cable for Digital Transmission • Spec. 4162 • Type CMR/CM

Product Construction

Conductors:

- 22 AWG solid tinned annealed copper

Insulation:

- High-density polyethylene with a layer of flame-retardant PVC overall
- Primary insulation, nominal O.D. = 0.051"
- Secondary insulation, nominal O.D. = 0.072"

Drain Wire:

- 22 AWG solid tinned annealed copper

Shield:

- 34 AWG tinned copper braid 90% coverage

Pair Jacket:

- Flame-retardant PVC jacket over each braid shielded twisted pair

Color Code:

- Pair jackets are color-coded by use of jacket printing
- Marking or printing will correspond with the colors of the insulated pairs (e.g., white/blue printed on the pair jacket indicates the insulation colors of the pairs enclosed)

Jacket:

- Flame-retardant PVC
- Sequential footage markings

Packaging

- 500' reel (RL)
- Bulk reels are available upon request

Applications

- T1/DS1
- Suitable for use in terminating high-frequency lines to carrier equipment in central offices

Compliances

- 1 pair: UL and c(UL) Type CM
- 2 pair through 12 pair: UL and c(UL) Type CMR

PRODUCT NUMBER	PAIRS	COLOR CODE	JACKET COLOR	O.D. (INCHES)	WEIGHT (LBS/KFT)
2117037	1	W/BL	Orange	0.18	26
2117046	1	BK/O	Gray	0.18	26
2117047	1	R/G	Gray	0.18	26
2117048	1	W/BL	Red	0.18	26
7056898	1	W/BL	Gray	0.18	26
7056906	1	W/O	Gray	0.18	26
7056880	2	See Chart	Gray	0.46	75
7056930	5	See Chart	Gray	0.57	160
7056948	8	See Chart	Gray	0.72	244
7056955	10	See Chart	Gray	0.80	302
7056963	12	See Chart	Gray	0.87	355

Data subject to change without notice.

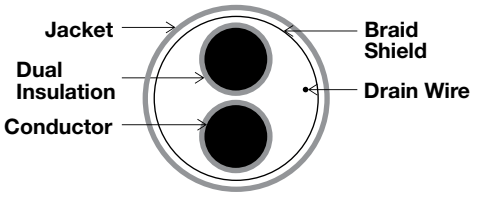
Electrical Characteristics

	22 AWG
DC Resistance (max) Ohms/1000ft @ 20°C	18
Resistance Unbalanced (max) (of a pair) @ 20°C	5
Shield Resistance (nom) Ohms @ 1000ft	3.3
Mutual Capacitance (max) pF/ft @ 1 kHz	19
Impedance Ohms/772 kHz	100 ± 5

Frequency	Attenuation dB/1000ft	NEXT dB/1000ft	FEXT dB/1000ft
.100 MHz	2.2	97	109
.772 MHz	6.1	93	94
1.000 MHz	7.0	88	92
1.600 MHz	9.1	85	90
3.150 MHz	13.2	82	88
6.300 MHz	19.1	80	83
10.000 MHz	25.0	72	71

Color Code Chart

PAIR NO.	COLOR CODE
1	White & Blue
2	White & Orange
3	White & Green
4	White & Brown
5	White & Slate
6	Red & Blue
7	Red & Orange
8	Red & Green
9	Red & Brown
10	Red & Slate
11	Black & Blue
12	Black & Orange



1 Pair Construction

General Cable

c UL us LISTED

Dual Insulated Dual Shielded Flexible Terminating Cable

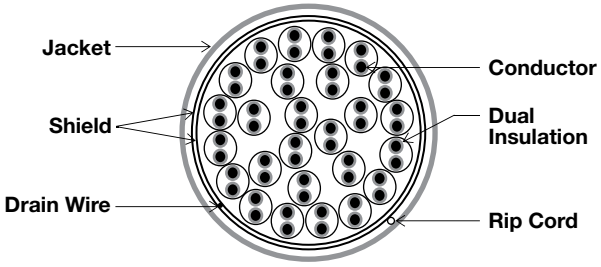
Spec. 4502 • Type CMR • 600C Series

PRODUCT NUMBER	PAIRS	JACKET COLOR	PKG	O.D. (INCHES)	WEIGHT (LBS/KFT)
2117005	6	DK. Gray	1000'	0.37	66
2117039	6	L.O. Gray	Bulk	0.37	66
2117006	12	DK. Gray	Bulk	0.48	108
2117040	12	L.O. Gray	Bulk	0.48	108
2117007	16	DK. Gray	1000'	0.50	134
2117041	16	L.O. Gray	Bulk	0.50	134
2117051	20	L.O. Gray	1000'	0.55	160
2117008	25	DK. Gray	1000'	0.63	191
2117042	25	L.O. Gray	Bulk	0.63	191
2117045	28	L.O. Gray	Bulk	0.64	208
2117003	30	DK. Gray	1000'	0.65	222
2117043	30	L.O. Gray	Bulk	0.65	222
2117009	32	DK. Gray	1000'	0.68	234
2117044	32	L.O. Gray	Bulk	0.68	234
2117020	50	DK. Gray	1000'	0.82	343
2117056	50	L.O. Gray	Bulk	0.82	343
2117010	75	DK. Gray	1000'	0.95	489

Data subject to change without notice.

Electrical Characteristics

	22 AWG
DC Resistance (max) Ohms/1000ft @ 20°C	18
Insulation Resistance (min) Megohm - 1000ft @ 23°C	5000
Mutual Capacitance (nom) nF/1000ft @ 1 kHz	20.1
Attenuation (nom)	
dB/1000ft @ 1 MHz	5.0
dB/1000ft @ 1.6 MHz	6.6
dB/1000ft @ 4.0 MHz	11.3
PSNEXT	
dB/1000ft @ 0.772 MHz	42
dB/1000ft @ 1.600 MHz	38
dB/1000ft @ 3.150 MHz	33
dB/1000ft @ 6.300 MHz	29
Characteristic Impedance (nom) Ohms @ 1 MHz	100 ± 15



Product Construction

Conductors:

- 22 AWG solid tinned copper conductors

Insulation:

- Inner layer of polyethylene covered by an outer layer of flame-retardant PVC
- Primary insulation, nominal O.D. = 0.042"
- Secondary insulation, nominal O.D. = 0.050"

Color Code:

- See Color Code Chart on page 86

Core Wrap:

- Non-hygroscopic dielectric tape applied longitudinally with an overlap

Shield:

- Two polyester-backed aluminum foil shields

Drain Wire:

- 22 AWG solid tinned copper drain wire is placed between the two shields

Rip Cord:

- Applied longitudinally under jacket

Jacket:

- Flame-retardant PVC
- Sequential footage markings

Packaging

- 1000' reel (RL)
- Bulk reels are available upon request

Applications

- T1/DS1
- DS1C
- DS2
- For interconnecting (DSI) digital equipment to digital cross-connects (DSX) and computers

Compliances

- Telcordia (Bellcore) analyzed the General Cable 4502 Series - Type 600C Family of Central Office Cables to the criteria in Telcordia GR-137-CORE. Copies of the analysis report are available from General Cable upon request.
- UL and c(UL) Type CMR

c UL US LISTED

General Cable

Tight Twisted Pair Digital Terminating Cable

Spec. 4129 • Type CMR • 1249C Series

26 AWG Dual Insulated/Shielded/Jacketed

Product Construction

Conductors:

- 26 AWG solid tinned annealed copper

Insulation:

- Inner layer of polyethylene, outer layer of PVC
- Primary insulation, nominal O.D. = 0.022"
- Secondary insulation, nominal O.D. = 0.029"

Color Code:

- See chart below

Inner Jacket:

- Flame-retardant gray PVC

Shields:

- Two polyester-backed aluminum foil shields

Drain Wire:

- 24 AWG solid tinned copper is placed between the two shields

Rip Cord:

- Applied longitudinally under jacket

Jacket:

- Flame-retardant gray PVC

Packaging

- 1000' reel (RL)
- Bulk reels are available upon request

Applications

- T1/DS1
- DS1C
- DS2

Compliances

- Telcordia (Bellcore) analyzed the General Cable 4129 Series - Type 1249C Family of Central Office Cables to the criteria in Telcordia GR-137-CORE. Copies of the analysis report are available from General Cable upon request.
- UL and c(UL) Type CMR

Features

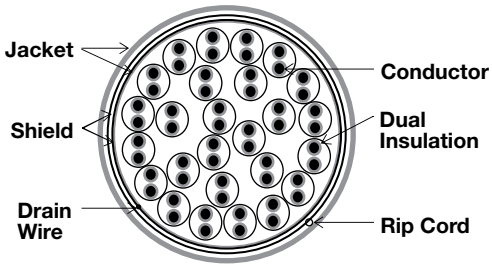
- Nominal 100 Ohm impedance
- Dual-shielded digital terminating cable is designed for switching and transmission equipment cabling for telephone central office
- Shielding from EMI
- Short twist length for better crosstalk performance

PRODUCT NUMBER	PAIRS	O.D. (INCHES)	WEIGHT (LBS/KFT)
7412920	20	0.41	72
7412928	28	0.44	91

Data subject to change without notice.
Other pair counts available as special order.

Electrical Characteristics

		26 AWG
DC Resistance (max) Ohms/100m (328ft) @ 20°C		13.7
Mutual Capacitance (nom) nF/100m @ 1 kHz		5.25
Conductor Resistance Unbalance (max)		5%
Characteristic Impedance		Ohms
Frequency (f):	1.0 MHz	100 ± 15
Capacitance Unbalance		
pF/100m	Pr to Pr	52.5 (max)
	Pr to Ground	330 (max)
Attenuation (nom)		dB/100m
Frequency (f):	0.772 MHz	2.1
	1.024 MHz	2.5
	1.576 MHz	3.0
	3.156 MHz	4.3
	4.224 MHz	4.9



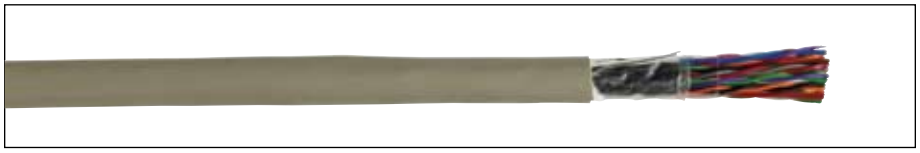
Color Code Chart

PAIR NO.	TIP	RING	PAIR NO.	TIP	RING
1	White	Blue	**14**	Black	Brown
2	White	Orange	**15**	Black	Slate
3	White	Green	**16**	Yellow	Blue
4	White	Brown	**17**	Yellow	Orange
5	White	Slate	**18**	Yellow	Green
6	Red	Blue	**19**	Yellow	Brown
7	Red	Orange	**20**	Yellow	Slate
8	Red	Green	**21**	Violet	Blue
9	Red	Brown	**22**	Violet	Orange
10	Red	Slate	**23**	Violet	Green
11	Black	Blue	**24**	Violet	Brown
12	Black	Orange	**25**	Violet	Slate
13	Black	Green			

Tight Twisted Pair Digital Terminating Cable

Spec. 7271 • Type CMR • 1161A Series

24 AWG Shielded/Extended Frequency



PRODUCT NUMBER	PAIRS	O.D. (INCHES)	WEIGHT (LBS/KFT)
7271.01224.S1R	12	0.35	60
7271.02524.S1R	25	0.48	109
7271.02824.S1R	28	0.51	132

Data subject to change without notice.

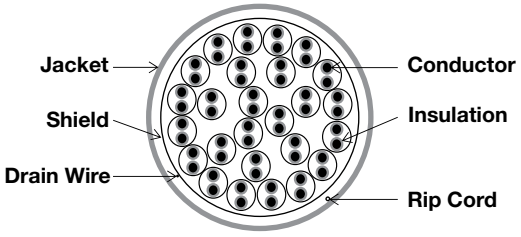
Electrical Characteristics

	24 AWG
DC Resistance (max) Ohms/100m (328ft) @ 20°C	9.38
Mutual Capacitance (max) pF/ft @ 1 kHz	17
Insulation Resistance (min) (mohms - 1000')	500
Characteristic Impedance *Frequency (f):* 1.0 MHz	Ohms 100 ± 15
Capacitance Unbalance pF/100m Pr to Pr	70 (max)
Pr to Ground	330 (max)

Frequency	Attenuation dB/100m	NEXT dB
0.772 MHz	1.9	56
1 MHz	2.2	55
4 MHz	4.1	45
8 MHz	5.0	41
10 MHz	5.7	39
16 MHz	7.2	35

Color Code Chart

PAIR NO.	TIP	RING	PAIR NO.	TIP	RING
1	White	Blue	14	Black	Brown
2	White	Orange	15	Black	Slate
3	White	Green	16	Yellow	Blue
4	White	Brown	17	Yellow	Orange
5	White	Slate	18	Yellow	Green
6	Red	Blue	19	Yellow	Brown
7	Red	Orange	20	Yellow	Slate
8	Red	Green	21	Violet	Blue
9	Red	Brown	22	Violet	Orange
10	Red	Slate	23	Violet	Green
11	Black	Blue	24	Violet	Brown
12	Black	Orange	25	Violet	Slate
13	Black	Green			



Product Construction

Conductors
- 24 AWG solid tinned annealed copper

Insulation:
- High-density polyethylene, nom. = 0.036"

Pairing:
- Tight pair lays

Color Code:
- See chart below

Shield:
- Polyester-backed aluminum foil shield

Drain Wire:
- 24 AWG solid tinned copper

Rip Cord:
- Applied longitudinally under jacket

Jacket:
- Flame-retardant gray PVC

Packaging
- 1000' reel (RL)
- Bulk reels are available upon request

Applications
- T1/DS1
- DS1C
- DS2
- 10 BASE-T
- Shielded digital terminating cable is designed for switching and transmission equipment cabling for telephone central office

Compliances
- TIA/EIA 568 B.2 (Category 3)
- UL and c(UL) Type CMR

Features
- Nominal 100 Ohm impedance
- Shielding from EMI
- Short twist length for better crosstalk performance

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TIA/EIA 568B

General Cable

Dual Insulated ALVYN Sheathed Terminating Cable

Terminating Cable for Voice and Digital Transmission • Spec. 4513 • Type CMR
Bell System Type: ABAM (22 AWG) • ABMM (24 AWG)

Product Construction

Conductors:

- 22 and 24 AWG solid tinned copper conductors

Insulation:

- Inner layer of polyethylene covered by an outer layer of flame-retardant PVC
- 22 AWG
  - Primary insulation, nominal O.D. = 0.039"
  - Secondary insulation, nominal O.D. = 0.048"
- 24 AWG
  - Primary insulation, nominal O.D. = 0.032"
  - Secondary insulation, nominal O.D. = 0.039"

Color Code:

- See Color Code Chart on page 86

Core Wrap:

- Polyester core wrap

Shield:

- 0.008" corrugated polymer-coated aluminum bonded to jacket

Jacket:

- Dark gray flame-retardant PVC
- Sequential footage markings

Packaging

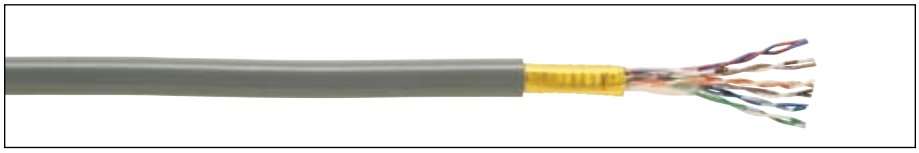
- 1000' reel (RL)
- Bulk reels are available upon request

Applications

- Voice
- T1
- Suitable for voice and carrier transmission between the outside plant entrance cables to station protector frames and to carrier equipment bays and for use in riser applications

Compliances

- REA PE-87
- GTS-8510
- Bellcore Specification TR-TSY-000141
- TIA/EIA 568 B.2 (Category 3)
- UL and c(UL) Type CMR



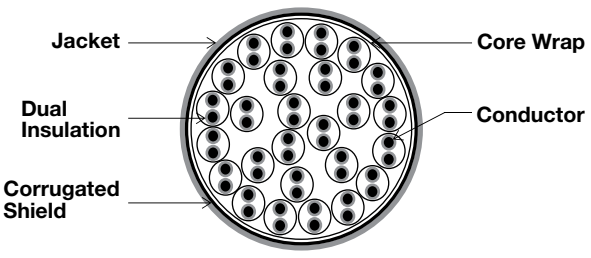
PRODUCT NUMBER	PAIRS	AWG	O.D. (INCHES)	WEIGHT (LBS/KFT)
7043938	6	22	0.45	80
7043946	12	22	0.50	120
7043953	16	22	0.58	150
7043961	25	22	0.67	230
2110020	28	22	0.74	250
7044001	30	22	0.75	265
7044118	50	22	0.93	410
7043979	75	22	1.10	570
7043987	100	22	1.20	730
7043995	200	22	1.60	1350
2110021	300	22	1.90	1970
2110022	600	22	2.80	2590
2110013	25	24	0.56	150
2110014	50	24	0.74	255
2110015	100	24	1.00	460
2110016	200	24	1.30	860
2110017	300	24	1.50	1240
2110023	400	24	1.80	1750
2110018	600	24	2.20	2440
2110019	900	24	2.70	3190

Data subject to change without notice.

Electrical Characteristics

	22 AWG 6-600 pr.	24 AWG 25-900 pr.
DC Resistance (max) Ohms/1000ft @ 20°C	17.2	27.3
Insulation Resistance (min) Megohm - 1000 @ 23°C	5000	5000
Mutual Capacitance (nom) nF/mile @ 1 kHz	83	83
pF/ft@ 1 kHz	16	16
Characteristic Impedance (nom) Ohms @ 1 MHz	100	100

Frequency	Attenuation dB/100m (max)	NEXT dB
0.772 MHz	2.2	43
1 MHz	2.6	41
4 MHz	5.6	32
8 MHz	8.5	28
10 MHz	9.7	26
16 MHz	13.1	23



General Cable

TIA/EIA 568B

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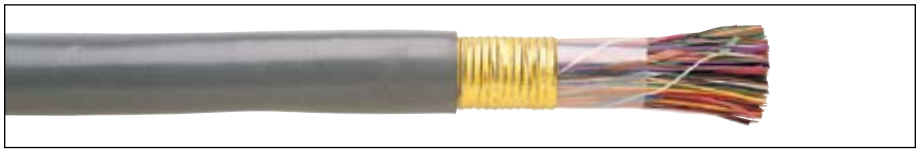
Foam Skin ALVYN Riser Riser Cable For Voice and Digital Transmission

Spec. 2507 • Type CMR • Bell System Type: ARMM (24 AWG) • ARTM (26 AWG)



PRODUCT NUMBER	PAIRS	AWG	O.D. (INCHES)	WEIGHT (LBS/KFT)	STANDARD LENGTH (FT)
2019000	25	24	0.53	142	5000
2019001	50	24	0.66	234	5000
7507601	100	24	0.85	410	5000
7507619	200	24	1.20	760	2500
7507627	300	24	1.40	1105	2500
7507635	400	24	1.50	1445	2500
7507643	600	24	1.90	2150	1250
7507650	900	24	2.20	3170	1250
7507668	1200	24	2.60	4185	1000
2019005	50	26	0.56	165	5000
2019003	100	26	0.71	280	5000
2019004	200	26	0.92	495	5000
7507544	300	26	1.10	710	3000
7507551	400	26	1.20	930	3000
7507569	600	26	1.50	1365	1000
7507577	900	26	1.80	2025	1000
7507536	1200	26	2.00	2665	1000

Data subject to change without notice.
Note: Non-stock items may be subject to minimum order quantities.

Electrical Characteristics

	24 AWG	26 AWG
DC Resistance (max) Ohms/1000ft @ 20°C	27.3	43.9
Mutual Capacitance (nom) nF/mile @ 1 kHz	83	83

Frequency	Attenuation dB/100m (max)	NEXT dB
0.772 MHz	2.2	43
1 MHz	2.6	41
4 MHz	5.6	32
8 MHz	8.5	28
10 MHz	9.7	26
16 MHz	13.1	23

Product Construction

Conductors:

- 24 and 26 AWG solid bare annealed copper

Insulation:

- Dual insulation consisting of an inner layer of foamed polyolefin surrounded by a solid PVC skin
- 24 AWG
  - Primary insulation, nominal O.D. = 0.031"
  - Secondary insulation, nominal O.D. = 0.035"
- 26 AWG
  - Primary insulation, nominal O.D. = 0.023"
  - Secondary insulation, nominal O.D. = 0.027"

Color Code:

- See Color Code Chart on page 86, except no bandmarking, only solid colors

Core Wrap:

- Non-hygroscopic dielectric tape applied longitudinally with an overlap

Shield:

- 0.008" corrugated, adhesive-coated aluminum bonded to jacket

Jacket:

- Gray flame-retardant PVC jacket bonded to the coated aluminum

Packaging

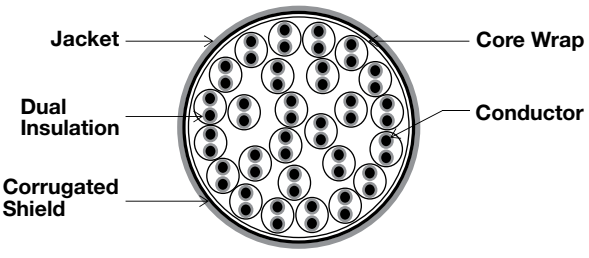
- Standard lengths are shipped on returnable steel reels or on non-returnable wood reels when requested
- ARAM (22 AWG) is available upon request

Applications

- Intended primarily for placement in vertical risers in buildings and may be used in general horizontal applications
- Designed for voice and carrier transmission between the station protector frames and other equipment terminals

Compliances

- TIA/EIA 568 B.2 (Category 3 for 24 AWG only)
- Bellcore Specification TR-TSY-000111
- UL and c(UL) Type CMR



c UL us LISTED

TIA/EIA 568B

General Cable

General Cable

plus CORNING® Optical Fiber

Optical Fiber

General Cable, Corning® Optical Fiber. Names that are synonymous with cable and fiber combine to create the ultimate in fiber optics. General Cable partners with Corning Optical Fiber to deliver the world's most reliable and technologically advanced optical fiber cables.

Singlemode

Standard

General Cable utilizes Corning® SMF-28e+™ fiber as its standard singlemode offering. This is a full-spectrum fiber that is fully backward-compatible with legacy singlemode fiber. It enables increased optical launch power of legacy singlemode fiber, improved macrobend specifications from 0.05 dB to 0.03 dB, and tighter zero dispersion wavelength (λ_0) tolerance from a range of ± 10 nm to ± 7 nm. This fiber supports all broadband applications and complies with the most stringent industry standards, such as:

- ITU-T G.652 (Tables A, B, C and D)
- IEC 60793-2-50 Type B1.3
- TIA/EIA 492-CAAB
- Telecordia GR-20-CORE

Long-Haul

For long-haul applications, rely on General Cable's long history of cable experience and the technology of Corning® LEAF® fiber. This is the most widely deployed non-zero dispersion shifted (NZ-DSF) fiber in the world and the first low water peak NZ-DSF fiber. Its large effective area and industry-leading polarization mode dispersion (PMD) specifications enable 10 Gb/s and 40 Gb/s network systems of the future.

Multimode

ClearCurve® Multimode Fiber

Corning® ClearCurve® ultra-bendable laser-optimized™ multimode optical fiber delivers the best macrobending performance in the industry while maintaining compatibility with current optical fibers, equipment, practices and procedures. ClearCurve OM3/OM4 multimode fiber is designed to withstand tight bends and challenging cable routes with substantially less signal loss than conventional multimode fiber.

InfiniCor® Multimode Fiber

For enterprise networks, turn to General Cable utilizing Corning® InfiniCor® fibers. These are the world's first laser-optimized™ fibers. These fibers allow higher data aggregation in premise applications compared with non-laser-optimized fibers, full compatibility with legacy protocols and applications, superior measurement technology and manufacturing control, and industry-leading CPC® coatings for superior microbend and environmental performance. InfiniCor fiber performance is ensured by minEMBc, the industry's leading standards-approved bandwidth measurement for OM3 fibers. InfiniCor fibers are the only ones to use this measurement to ensure 10 Gb/s performance.

62.5 micron

These fibers support data rates of 1 Gb/s in both the 850 nm and 1300 nm windows. They comply with the most stringent industry standards, such as:

- ISO/IEC 11801, type OM1 fiber
- IEC 60793-2-10, type A1b fiber
- TIA/EIA, 492AAAA-A

50 micron

These fibers support data rates of 10 Gb/s at 850 nm. They also comply with the most stringent industry standards, such as:

- ISO/IEC 11801, type OM2, OM3 and OM4* fibers
- IEC 60793-2-10, type A1a.1, A1a.2 and A1a.3* fibers
- TIA/EIA, 492AAAB, 492AAAC-A and 492AAAD

* Assumes IEC draft standard is harmonized with 492AAAD, which was approved by TIA

NEXTGEN® BRAND

Optical Fiber Code Cross-Reference

Fiber Type	General Cable	Corning® Optical Fiber	Description
Standard Loose Tube SM	AQ	SMF-28e+™ Fiber	Full spectrum, low water peak singlemode, ITU-T G.652.D
Performance Loose Tube SM	AT	SMF-28e+™ Fiber	Full spectrum, high performance low water peak singlemode with 0.35/0.25 attenuation, ITU-T G.652.D
Tight Buffer SM	AP	SMF-28e+™ Fiber	Full spectrum, low water peak singlemode with 900µm PVC buffer, ITU-T G.652.D
Long-Haul SM	AL	LEAF® Fiber	Large A_{eff}, low water peak, NZ-DSF singlemode, ITU-T G.655
Bend-Insensitive SM	AB	SMF-28e® XB Fiber	Full spectrum with improved macrobending performance, ITU-T G.652.D and ITU-T G.657.A
62.5 µm MM	CG	InfiniCor® 300 Fiber	1 Gb/s ≤ 300 m at 850 nm, OM1* 1 Gb/s ≤ 550 m at 1300 nm
62.5 µm MM	CL	InfiniCor® CL™ 1000 Fiber	1 Gb/s ≤ 500 m at 850 nm, OM1* 1 Gb/s ≤ 1000 m at 1300 nm
50 µm MM	BI	InfiniCor® SXi Fiber	10 Gb/s ≤ 150 m at 850 nm, OM2* 1 Gb/s ≤ 750 m at 850 nm
50 µm MM	BE	InfiniCor® SX+ Fiber	10 Gb/s ≤ 300 m at 850 nm, OM3* 1 Gb/s ≤ 1000 m at 850 nm
50 µm MM	BL	InfiniCor® eSX+ Fiber	10 Gb/s ≤ 550 m at 850 nm, OM4* 1 Gb/s ≤ 1100 m at 850 nm
50 µm MM	BM	InfiniCor® eSX+ Fiber	10 Gb/s ≤ 600 m at 850 nm, OM4* 1 Gb/s ≤ 1100 m at 850 nm
Ultra-bendable 50 µm MM	BC	ClearCurve® OM3 Fiber	10 Gb/s ≤ 300 m at 850 nm, OM3* 1 Gb/s ≤ 1000 m at 850 nm
Ultra-bendable 50 µm MM	BB	ClearCurve® OM4 Fiber	10 Gb/s ≤ 550 m at 850 nm, OM4* 1 Gb/s ≤ 1100 m at 850 nm

* Designation per ISO 11801 Fiber Standards

MULTIMODE FIBER SELECTION GUIDE

Optical Characteristics:		50/125 PRODUCT FAMILY						62.5/125 PRODUCT FAMILY		UNITS
		OM2 Type-BI	OM3 Type-BE	OM4 Type-BL	OM4 Type-BM	OM3 Type-BC	OM4 Type-BB	OM1 Type-CG	OM1 Type-CL	
Maximum Finished Cable Attenuation Coefficient	@850nm	3.0	3.0	3.0	3.0	3.0	3.0	3.5	3.5	dB/km
	@1300nm	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	dB/km
Overfill Launch Bandwidth	@850nm	700	1500	1500	1500	1500	1500	200	200	MHz.km
	@1300nm	500	500	500	500	500	500	500	500	MHz.km
Laser Bandwidth	@850nm	850	2000	4700	5350*	2000	4700	220	385	MHz.km
Gigabit Ethernet Link Length (1 Gbps)	1000BASE-SX (850nm)	750	1000	1100	1100	1000	1100	300	500	meters
	1000BASE-LX (1300nm)	550	550	550	550	550	550	550	1000	meters
10 Gigabit Ethernet Length (10 Gbps)	10GBASE-SR (850nm)	150	300	550	600	300	550	33	33	meters

* Using 3.0 dB cable attenuation and 0.7 dB connector allocation

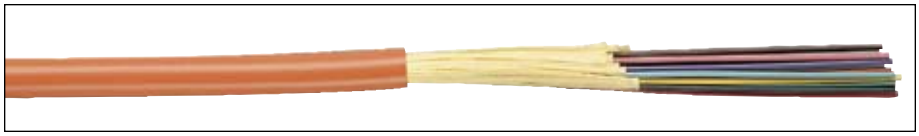
SINGLEMODE FIBER SELECTION GUIDE

FIBER DESCRIPTION	FIBER TYPE	TYPICAL ATTENUATION (dB/km)				GIGABIT ETHERNET DISTANCE (METERS)	10 GIGABIT ETHERNET DISTANCE (METERS)	
		1310nm	1383nm	1550nm	1625nm	1310nm	1310nm	1550nm
Singlemode - Loose Tube								
Premium	AQ	0.40	0.40	0.30	0.35	10,000	5,000	30,000
High Performance	AT	0.35	0.35	0.25	0.30	10,000	5,000	30,000
Singlemode - Tight Buffer								
Super	AP	0.65	–	0.65	–	10,000	5,000	30,000
Breakout	AP	1.00	–	1.00	–	10,000	5,000	30,000

Fiber Optic Part Number Reference Guide 6

TIGHT BUFFER DISTRIBUTION RISER CABLE

Type OFNR, CSA FT-4
Indoor*



CATALOG NUMBER	FIBER COUNT	NO. OF SUB-UNITS	NOMINAL CABLE DIAMETER		NOMINAL CABLE WEIGHT		MAXIMUM TENSILE LOAD			
							INSTALLATION		IN-SERVICE	
			IN	mm	LBS/1000'	kg/km	LBS	N	LBS	N
XX0021PNR	2	—	0.19	5	14	20	225	1000	65	290
XX0061PNR	6	—	0.22	6	18	27	225	1000	65	290
XX0121PNR	12	—	0.25	6	24	36	320	1425	112	500
XX0241PNR	24	—	0.34	9	47	70	320	1425	112	500

XX Denotes glass type.

TIGHT BUFFER DISTRIBUTION PLENUM CABLE

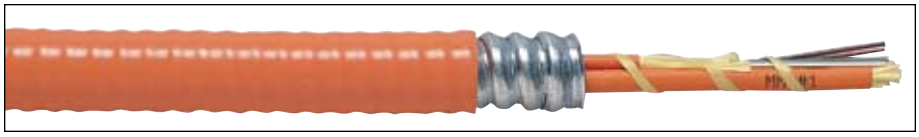
Type OFNP, CSA FT-6
Indoor*

CATALOG NUMBER	FIBER COUNT	NO. OF SUB-UNITS	NOMINAL CABLE DIAMETER		NOMINAL CABLE WEIGHT		MAXIMUM TENSILE LOAD			
							INSTALLATION		IN-SERVICE	
			IN	mm	LBS/1000'	kg/km	LBS	N	LBS	N
XX0021PNU	2	—	.17	4	12	17	225	1000	65	290
XX0061PNU	6	—	.20	5	16	24	225	1000	65	290
XX0121PNU	12	—	.23	6	23	34	320	1423	112	500
XX0241PNU	24	—	.32	8	45	67	320	1423	112	500

XX Denotes glass type.

TIGHT BUFFER DISTRIBUTION INTERLOCK ARMORED RISER CABLE

Type OFCR, CSA FT-4
Indoor*



CATALOG NUMBER	FIBER COUNT	NO. OF SUB-UNITS	NOMINAL CABLE DIAMETER		NOMINAL CABLE WEIGHT		MAXIMUM TENSILE LOAD			
							INSTALLATION		IN-SERVICE	
			IN	mm	LBS/1000'	kg/km	LBS	N	LBS	N
XX0021PNR-ILRA	2	1	0.52	13.2	90	134	550	2447	165	734
XX0041PNR-ILRA	4	1	0.52	13.2	92	137	550	2447	165	734
XX0061PNR-ILRA	6	1	0.52	13.2	94	140	550	2447	165	734
XX0121PNR-ILRA	12	1	0.52	13.2	100	149	550	2447	165	734
XX0241PNR-ILRA	24	1	0.67	17.0	150	223	550	2447	165	734

XX Denotes glass type.

NOTE: More fiber counts are available upon request. See Fiber Optic Catalog for complete product information.
*** Not for aerial or direct burial applications**

General Cable

NEXTGEN® BRAND

Fiber Optic Part Number Reference Guide

TIGHT BUFFER DISTRIBUTION INTERLOCK ARMORED PLENUM CABLE

Type OFCP, CSA FT-6
Indoor*

CATALOG NUMBER	FIBER COUNT	NO. OF SUB-UNITS	NOMINAL CABLE DIAMETER		NOMINAL CABLE WEIGHT		MAXIMUM TENSILE LOAD			
							INSTALLATION		IN-SERVICE	
			IN	mm	LBS/1000'	kg/km	LBS	N	LBS	N
XX0021PNU-ILPA	2	1	0.49	12.4	78.5	117	550	2447	165	734
XX0041PNU-ILPA	4	1	0.49	12.4	80.5	120	550	2447	165	734
XX0061PNU-ILPA	6	1	0.49	12.4	82.5	123	550	2447	165	734
XX0121PNU-ILPA	12	1	0.49	12.4	89.5	133	550	2447	165	734
XX0241PNU-ILPA	24	1	0.61	15.5	143.0	213	1000	4448	300	1334

XX Denotes glass type.

TIGHT BUFFER DISTRIBUTION RISER CABLE

Type OFNP, CSA FT-4
Indoor/Outdoor*

CATALOG NUMBER	FIBER COUNT	NO. OF SUB-UNITS	NOMINAL CABLE DIAMETER		NOMINAL CABLE WEIGHT		MAXIMUM TENSILE LOAD			
							INSTALLATION		IN-SERVICE	
			IN	mm	LBS/1000'	kg/km	LBS	N	LBS	N
XX0021ANR.BK	2	—	0.19	5	14	20	300	1334	90	400
XX0061ANR.BK	6	—	0.22	6	18	27	320	1423	96	427
XX0121ANR.BK	12	—	0.25	6	24	36	400	1780	120	534
XX0241ANR.BK	24	—	0.34	9	47	70	320	1425	112	500

XX Denotes glass type.

TIGHT BUFFER DISTRIBUTION PLENUM CABLE

Indoor/Outdoor Dry Water Block,
Type OFNP, CSA FT-6
Indoor/Outdoor*

CATALOG NUMBER	FIBER COUNT	NO. OF SUB-UNITS	NOMINAL CABLE DIAMETER		NOMINAL CABLE WEIGHT		MAXIMUM TENSILE LOAD			
							INSTALLATION		IN-SERVICE	
			IN	mm	LBS/1000'	kg/km	LBS	N	LBS	N
XX0021ANU.BK	2	—	0.171	4.3	11.7	17.4	300	1334	90	400
XX0061ANU.BK	6	—	0.195	4.9	16.0	23.8	320	1423	96	427
XX0121ANU.BK	12	—	0.227	5.8	22.7	33.8	400	1780	120	534
XX0241ANU.BK	24	—	0.320	8.0	45.0	67.0	320	1423	112	500

XX Denotes glass type.

NOTE: More fiber counts are available upon request. See Fiber Optic Catalog for complete product information.
*** Not for aerial or direct burial applications**

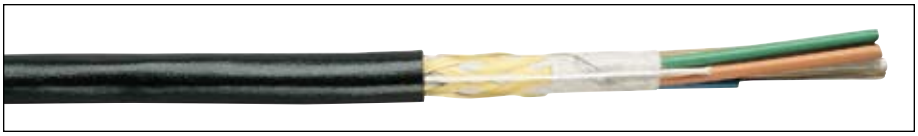
NEXTGEN® BRAND

General Cable

Fiber Optic Part Number Reference Guide

LOOSE TUBE SINGLE JACKET PLENUM CABLE

Type OFNP, CSA FT-6
Indoor/Outdoor*



CATALOG NUMBER	FIBER COUNT	NO. OF LOOSE TUBES	NOMINAL CABLE DIAMETER		NOMINAL CABLE WEIGHT		MAXIMUM TENSILE LOAD			
							INSTALLATION		IN-SERVICE	
			IN	mm	LBS/1000'	kg/km	LBS	N	LBS	N
XX0064M1D-DT	6	1	0.31	8	48	71	300	1334	100	445
XX0124M1D-DT	12	2	0.31	8	47	69	300	1334	100	445
XX0244M1D-DT	24	4	0.31	8	44	65	300	1334	100	445

XX Denotes glass type.

LOOSE TUBE SINGLE JACKET RISER CABLE

Type OFNR, CSA FT-4
Indoor/Outdoor*

CATALOG NUMBER	FIBER COUNT	NO. OF LOOSE TUBES	NOMINAL CABLE DIAMETER		NOMINAL CABLE WEIGHT		MAXIMUM TENSILE LOAD			
							INSTALLATION		IN-SERVICE	
			IN	mm	LBS/1000'	kg/km	LBS	N	LBS	N
XX0064M1M-DT	6	1	.36	9	53	80	600	2670	200	890
XX0124M1M-DT	12	2	.36	9	52	78	600	2670	200	890
XX0244M1M-DT	24	4	.36	9	51	76	600	2670	200	890

XX Denotes glass type.

LOOSE TUBE SINGLE JACKET CABLE

Outdoor

CATALOG NUMBER	FIBER COUNT	NO. OF LOOSE TUBES	NO. OF FILLERS	NOMINAL CABLE DIAMETER		NOMINAL CABLE WEIGHT		MAXIMUM TENSILE LOAD			
								INSTALLATION		IN-SERVICE	
				IN	mm	LBS/1000'	kg/km	LBS	N	LBS	N
XX0124M1A-DWB	12	1	4	.440	11.1	52.0	78.0	600	2670	180	800
XX0244M1A-DWB	24	2	3	.440	11.1	52.0	78.0	600	2670	180	800
XX0484M1A-DWB	48	4	1	.440	11.1	52.0	78.0	600	2670	180	800
XX0724M1A-DWB	72	6	0	.470	12.0	62.0	93.0	600	2670	180	800

XX Denotes glass type.

NOTE: More fiber counts are available upon request. See Fiber Optic Catalog for complete product information.
*** Not for direct burial applications**

General Cable

NEXTGEN® BRAND

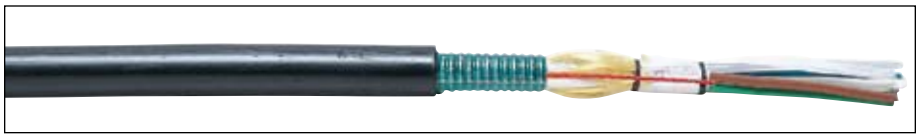
Fiber Optic Part Number Reference Guide

LOOSE TUBE DUAL JACKET CABLE

Outdoor

CATALOG NUMBER	FIBER COUNT	NO. OF LOOSE TUBES	NO. OF FILLERS	NOMINAL CABLE DIAMETER		NOMINAL CABLE WEIGHT		MAXIMUM TENSILE LOAD			
								INSTALLATION		IN-SERVICE	
				IN	mm	LBS/1000'	kg/km	LBS	N	LBS	N
XX0124H1A-DWB	12	1	4	0.511	13.0	76.0	113.1	600	2670	200	890
XX0244H1A-DWB	24	2	3	0.511	13.0	76.6	114.0	600	2670	200	890
XX0484H1A-DWB	48	4	1	0.511	13.0	77.8	115.8	600	2670	200	890
XX0724H1A-DWB	72	6	0	0.540	13.7	90.0	133.9	600	2670	200	890

XX Denotes glass type.

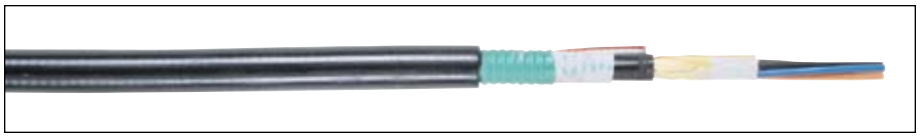


LOOSE TUBE SINGLE JACKET ARMORED CABLE

Outdoor

CATALOG NUMBER	FIBER COUNT	NO. OF LOOSE TUBES	NO. OF FILLERS	NOMINAL CABLE DIAMETER		NOMINAL CABLE WEIGHT		MAXIMUM TENSILE LOAD			
								INSTALLATION		IN-SERVICE	
				IN	mm	LBS/1000'	kg/km	LBS	N	LBS	N
XX0124M1F-DWB	12	1	4	.450	12.1	91	135	600	2670	125	220
XX0244M1F-DWB	24	2	3	.450	12.1	91	135	600	2670	125	220
XX0484M1F-DWB	48	4	1	.450	12.1	91	135	600	2670	125	220
XX0724M1F-DWB	72	6	0	.540	13.6	109	162	600	2670	125	220

XX Denotes glass type.



LOOSE TUBE DUAL JACKET ARMORED CABLE

Outdoor

CATALOG NUMBER	FIBER COUNT	NO. OF LOOSE TUBES	NO. OF FILLERS	NOMINAL CABLE DIAMETER		NOMINAL CABLE WEIGHT		MAXIMUM TENSILE LOAD			
								INSTALLATION		IN-SERVICE	
				IN	mm	LBS/1000'	kg/km	LBS	N	LBS	N
XX0124H1F-DWB	12	1	4	0.59	15.0	128	190	600	2670	180	800
XX0244H1F-DWB	24	2	3	0.59	15.0	128	190	600	2670	180	800
XX0484H1F-DWB	48	4	1	0.59	15.0	128	190	600	2670	180	800
XX0724H1F-DWB	72	6	0	0.63	15.9	143	212	600	2670	180	800

XX Denotes glass type.

NOTE: More fiber counts are available upon request. See Fiber Optic Catalog for complete product information.

NEXTGEN® BRAND

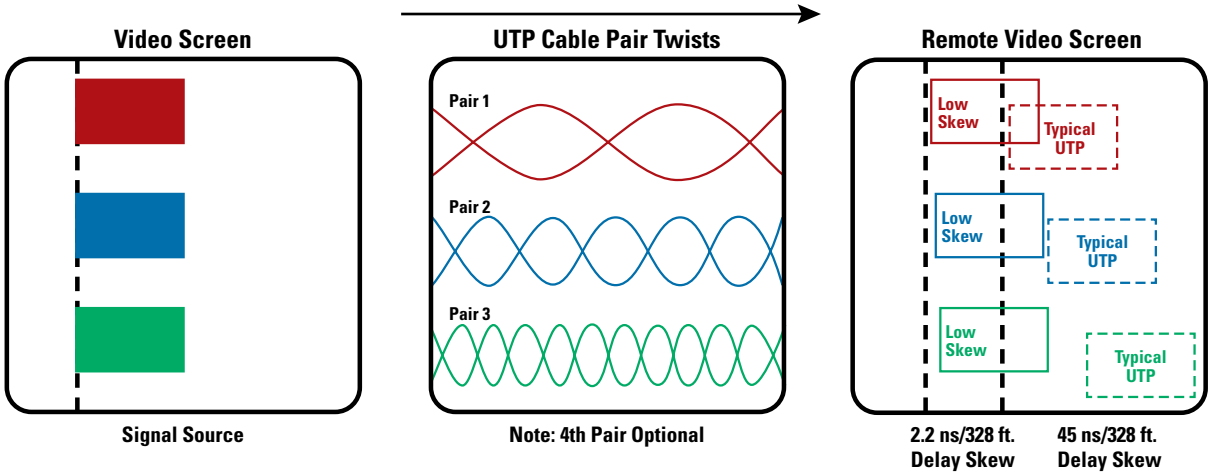
General Cable

CAROL BRAND Low Skew 4 Pair UTP Cables for RGB Video

General Cable's **Carol® Brand Low Skew UTP Cable** is manufactured for your RGB video and Digital CCTV camera needs. While the basic elements of the Low Skew Cable construction are similar to a UTP Cable (Category cable) used for data transmission, the design of the pair twists is the secret to delivering information in a manner necessary for streaming high-quality video.

Your cable selection should be based on your application's electrical and mechanical needs, optimizing your system performance and cost. All Carol Brand coaxial cable and UTP cables are manufactured to the highest standards, providing low structural return loss (signal noise in the form of Echo), providing maximum performance.

The cable performance chart shown below is intended to provide comparative data to assist you in choosing the right cable. The values are based on maximum distance while maintaining minimum acceptable skew. Note that TIA/EIA standards for RGB require a maximum of 40 nsec per 328' and Cat 5e maximum of 45 nsec per 328' for Time Delay Skew (the difference between the fastest and slowest signal). Carol Brand Low Skew Cable allows for a compact, cost-effective cable solution over considerably longer cable run options. A prudent design also considers maximum allowed attenuation based on active and passive components and installation considerations within your system design. A more typical installation length is 328 feet, which allows for optimum signal clarity and crisp, brilliant video resolution.



Cable Typical 24 AWG Conductors	Time Delay Skew nsec/328 ft. (max)	RGB (TIA/EIA Spec calls for Max 40 ns/328 ft.)			Cost* $/328 ft.	Applications
		Max Distance ft.	Typical Attenuation @ 100MHz dB/328 ft.	Test Frequency MHz		
Cat 3 LAN	**45**	292	16.0	55	1	Paging and Video Intercom
Cat 5e LAN	**45**	328	19.3	100	2	Private CCTV
10G BASE-T (Cat 6A)	**35**	370	39.5	500	7	Mass Data Centers less than 55 ft.
Cat 6 LAN	**30**	440	41.0	250	4	Monitor and Analog Video
Cat 6+ LAN	**25**	530	43.5	350	5	Projection on large auditorium
Cat 6++ LAN	**10**	1300	45.6	500	6	Monitor and VDT display
Coax Component Video	**9**	1460	16.2	3000	8	HDTV, Broadcast, RF
Low Skew UTP	**2.2**	5960	22.0	450	3	Analog Video or Digital CCTV, RGB Video (Not intended for CATV)

*Lowest cost = $1

For more information, contact your local General Cable representative.

General Cable

CAROL BRAND

24 AWG 4 PAIR UTP

CATALOG NUMBER	AWG SIZE	NOM. DCR	NOM. O.D. INCHES	INSULATION MATERIAL		NOMINAL IMPEDANCE, OHMS	PROPAGATION DELAY SKEW	NOMINAL ATTENUATION		BELDEN PART NO.
				INCHES	mm			MHz	dB/328 ft.	
Low Skew Type										
E3842S CMP 	24 AWG Solid Bare Copper	27.4Ω/Mft.	0.185	Fluorinated Ethylene Propylene (FEP)		100	2.2 ns/328 ft.	1 4 8 10 16 20 25 31.25 62.5 100 155 200 250* 300* 350*	2.0 4.1 5.8 6.5 8.2 9.3 10.4 11.7 17.0 22.0 28.1 32.0 36.4 41.0 44.8	7987P
				0.035	0.9					
E1842S CMR 	24 AWG Solid Bare Copper	27.4Ω/Mft.	0.185	High Density Propylene (HDPE)		100	2.2 ns/328 ft.	1 4 8 10 16 20 25 31.25 62.5 100 155 200 250* 300* 350*	2.0 4.1 5.8 6.5 8.2 9.3 10.4 11.7 17.0 22.0 28.1 32.0 36.4 41.0 44.8	7987R
				0.035	0.9					

* For information only

23 AWG 4 PAIR UTP

CATALOG NUMBER	AWG SIZE	NOM. DCR	NOM. O.D. INCHES	INSULATION MATERIAL		NOMINAL IMPEDANCE, OHMS	PROPAGATION DELAY SKEW	NOMINAL ATTENUATION		BELDEN PART NO.
				INCHES	mm			MHz	dB/328 ft.	
Low Skew Type										
E3843S CMP 	23 AWG Solid Bare Copper	22.0Ω/Mft.	0.200	Fluorinated Ethylene Propylene (FEP)		100	2.2 ns/328 ft.	1 4 8 10 16 20 25 31.25 62.5 100 155 200 250 300* 350*	2.0 3.8 5.3 6.0 7.6 8.5 9.5 10.7 15.4 19.8 25.2 29.0 32.8 35.2 39.8	7989P
				0.040	1.0					
E1843S CMR 	23 AWG Solid Bare Copper	22.0Ω/Mft.	0.213	High Density Propylene (HDPE)		100	2.2 ns/328 ft.	1 4 8 10 16 20 25 31.25 62.5 100 155 200 250* 300* 350*	2.0 3.8 5.3 6.0 7.6 8.5 9.5 10.7 15.4 19.8 25.2 29.0 32.8 35.2 39.8	7989R
				0.040	1.0					

* For information only

Product Construction:

Conductor: • 23 or 24 AWG Solid Bare Copper
Insulation: • Fluorinated Ethylene Propylene (FEP)
• High Density Propylene (HDPE)
Jacket: • Plenum - Flexguard® Green
• Riser - PVC Maroon

Applications:

- Suitable for RGB Video Applications
- Digital CCTV Cameras

Industry Approvals:

- NEC Article 800 Type CMR (UL), c(UL)
- NEC Article 800 Type CMP (UL), c(UL)

Packaging:

- 1000' Pull-Pacs®
- Contact Customer Service for Additional Packing Options

c UL LISTED
UL Listed Type CM
UL Listed Type CMP

Color Code Chart

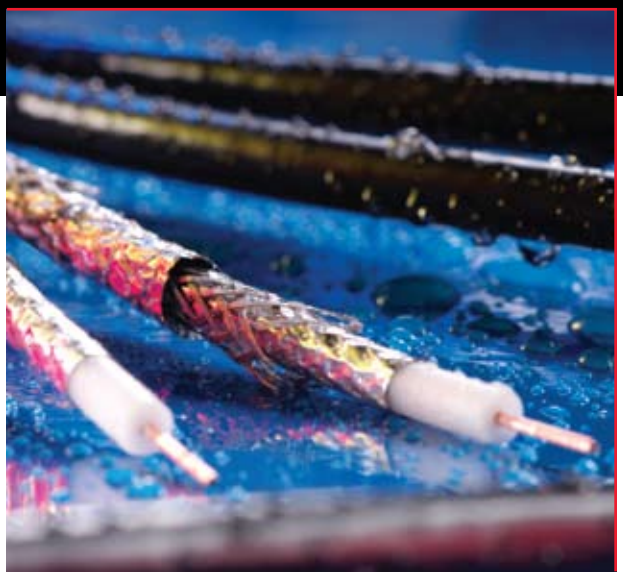
Pair	Color Combination
1	White/Blue Stripe & Blue
2	White/Orange Stripe & Orange
3	White/Green Stripe & Green
4	White/Brown Stripe & Brown

CAROL BRAND

General Cable

Coaxial Cable Solutions Guide

CAROL® BRAND ELECTRONICS WIRE & CABLE



General Cable offers a complete line of Carol® Brand Coaxial Cables for today's sophisticated high-speed, wide-bandwidth electronics products that run over long distances with minimal signal loss or degradation.

General Cable has the right coaxial cable to serve every application, including:

- CATV/MATV/DBS
- HDTV/SDI
- CCTV

The General Cable Coaxial Cable Solutions Guide is a quick-reference tool to make it easier to specify and sell the right cable for the required application – residential, commercial, entertainment and security. Whatever the application calls for, we have a coaxial cable that delivers the performance your customers need.

CATV/MATV/DBS

Broadband signal, 5MHz–3GHz, VHF/UHF, is traditionally transmitted as an analog signal received directly off air (MATV) or delivered as a community access television (CATV) service and uses a 75 Ohm system.

Recommended Coaxial Cable Construction: Copper clad steel (CCS) conductor with a foam polyethylene or Teflon* core, an aluminum/Mylar* foil, a minimum of 60% braid, which is typically aluminum (AL) for this application, and a PVC jacket.

For home use, a CM rated coax should be used. A commercial application may require a National Electrical Code (NEC 800 or 725) Riser (CMR) or Plenum (CMP) rated cable. Economical cable solutions use low smoke PVC (75˚C) jackets. Teflon* (FEP) and other fluoropolymer materials (150˚C) may be used to provide a more durable and higher-temperature cable alternative.

It is a common misconception that RG 6 coax is "better" than RG 59. While RG 6 has become the industry standard and is an excellent value, it is a larger cable than RG 59. RG 6 allows the same signal level to be delivered a greater distance. This is expressed as a decibel value at particular frequencies. For example, at 100 MHz, General Cable's Carol® Brand part number C5775 RG 6 coax cable has an attenuation value of 2.05 db/100'. A similar construction Carol® Brand part number C5782 RG 59 coax cable exhibits an attenuation value (loss) at 100 MHz frequency of 2.70 db/100'. This may or may not be significant, depending on the input signal level and distance of the cable run.

For a longer cable run, or if the coax cable is planned for use as the backbone in a system, Carol® Brand part number C5039 RG 11 coax cable should be used, because its attenuation at 100 MHz frequency is 1.30 db/100'.

CATV/MATV/DBS *RG 59, RG 6 and RG 11 Ratings*

Coax Solution	Carol	Belden	Genesis	West Penn	Commscope
RG 6 CCS/Foil/60% AL Braid CATV/CM	C5775	9116/1829A	5303	841	5726
RG 6 CCS/Foil/60% AL Braid CATVR/CMR	C5886	9116R	—	—	—
RG 6 CCS/Quad/Foil/60%/40% AL Braid CATV/CM	C5785	1189A	5307	Q841	5740
RG 6 CCS/Quad/Foil/60%/40% AL Braid CATVR/CMR	C5889	1884A	—	—	—
RG 6 CCS/Foil/60% AL Braid CMP - Plenum	C3524	9116P	—	25841	2275K
RG 6 CCS/Quad/Foil/60%/40% AL Braid CMP - Plenum	C3525	1189AP	—	25Q841	—
RG 11 CCS/Foil/60% AL Braid CATV/CM	C5039	1525A	—	—	5913
RG 11 CCS/Foil/60% AL Braid CL2P/CMP - Plenum	C3528	1523AP	—	—	2285K

*Note: DuPont™ trademark

General Cable

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HDTV/SDI

A DTV signal is a television signal provided in a digital form. Data bits, like in a computer, provide a dramatically better picture and better sound quality called High Definition TV (HDTV). HDTV is the highest quality of DTV and is only one of the available formats. In addition to enhanced picture quality, the DTV signal allows several program streams (multicasting) on one channel, providing more program potential, as well as interactive services.

Serial Digital Interface (SDI) is the standard for digital video transmission over coaxial cable. The SMPTE 295M standard provides maximum distances (300 meters; 140 meters for High Definition), typically at 270 Mbps with 540 Mbps possible over a coaxial cable.

Recommended Coax Cable Construction: Cable providing signal to and within the home/building will continue to be CCS construction (C5775, C5785). Cables with SBC conductors (395011, 495025) are recommended for the interconnect between the decoder box and other electronic devices (TV, DVD, DVR, CD, Bluray).

HDTV/SDI—Interconnect Cables *RG 59, RG 6 and RG 11 Ratings*

Coax Solution	Carol	Belden	Genesis	West Penn	Commscope
RG 59 SBC/Foil/95% TC Braid CMR	395025	1505A	5361	819	5553
RG 59 SBC/Miniature/Foil/95% TC Braid CMR - Single RGB - Overall jacket containing 3 x 395031 RGB - Overall jacket containing 5 x 395031	395031 395031X3 395031X5	1855A — —	— — —	— — —	— — —
RG 59 SBC/Foil/95% TC Braid CMP - Plenum	495023	1506A	—	—	—
RG 6 SBC/Foil/95% TC Braid CMR	395011	1694A	—	—	5765
RG 6 SBC/Foil/95% TC Braid CMP - Plenum	495025	1695A	—	—	—
RG 11 SBC/Foil/95% TC Braid CMR	395029	7731A	—	—	—
RG 11 SBC/Foil/95% TC Braid CMP - Plenum	495027	7732A	—	—	2286K

CCTV

Closed Circuit TV (CCTV) signals are typically lower-frequency analog signals. Attenuation increases as frequency increases, therefore lower baseband signals are able to travel longer distances on an RG 59 type coaxial cable than a higher-frequency television signal. This is why RG 59 is the most common coax for CCTV. It is becoming more common for Unshielded Twisted Pair (UTP) products, like Category 5e and 6 cables, to be used for Closed Circuit over Twisted Pair (CCTP) or Web-enabled cameras implemented over a Power over Ethernet network architecture; however, these solutions require the use of specialized equipment.

Recommended Coax Cable Construction: Solid bare copper (SBC) conductor and a bare copper (BC) braid shield with coverage of 90-95% to minimize signal loss of both the horizontal and vertical sync signals. Stranded conductors are recommended for pan, zoom, tilt (PZT) cameras.

CCTV *RG 59 and RG 11 Ratings*

Coax Solution	Carol	Belden	Genesis	West Penn	Commscope
RG 59 SBC/95% BC Braid CM	C1142	543945	5001	—	—
RG 59 Stranded (7/30) BC/95% BC Braid CM	C1103	9259	—	—	—
RG 59 Stranded (7/30) BC/95% BC Braid + 22 AWG (7/30) Shielded Pair CM	C8025	9265	—	—	—
RG 59 SBC/95% BC Braid + 18 AWG (7/26) Unshielded Pair CM	C8028	549945	—	—	—
RG 59 SBC/95% BC Braid + 18 AWG (7/26) Unshielded Pair CMP - Plenum	C8030	649948	—	—	—
RG 59 SBC/95% BC Braid CMP - Plenum	495028	643948	5351	25815	2037V
RG 11 SBC/95% BC Braid CM	395058	513945	—	811	5905
RG 11 SBC/95% BC Braid CMP - Plenum	495015	613948	—	—	2286K
RG 6 BC/95% BC Braid CMP - Plenum	495035	—	—	—	2277V

***Abbreviation Key** AL - aluminum | SBC - solid bare copper | CCS- copper clad steel | BC - bare copper | TC - tinned copper

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Carol® Brand Alarm & Security Solutions

General Cable's Carol® Brand is the right solution for alarm and security wire and cable. Carol offers as broad an offering as anyone in the industry. Our Alarm and Security Solutions Guide makes it easier to specify and sell the right cables for every application in this ever-growing market.

There are five basic areas where alarm and security cables are used. General Cable has the right product to serve every application, including:

- Access Control
- Video Surveillance/CCTV
- Fire Alarm and Life Safety
- Home Theater and Burglar Alarms
- Data Communications

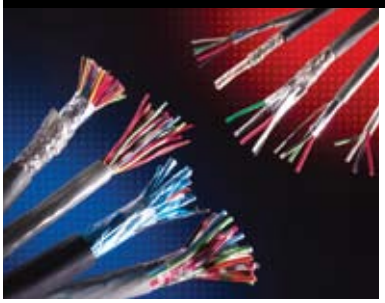
Our alarm and security cables offer solutions in all these major security applications markets, including:

- Commercial Buildings
- Residential Housing
- Business and Office Campus Environments
- Public Stadiums and Arenas
- Airport, Train, Bus and Other Transportation Hubs
- Schools, Colleges and Universities

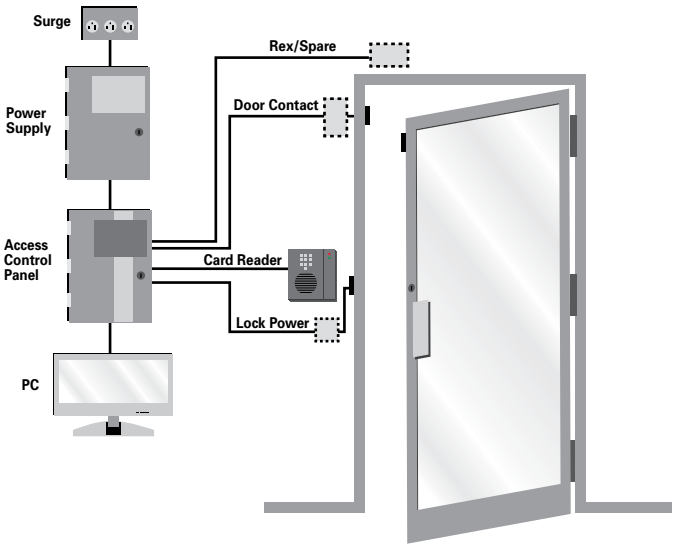
Many cables also available in ARMORED CONSTRUCTIONS for easy plenum installations

The General Cable Alarm and Security Solutions Guide provides a quick and easy reference tool to identify every Carol® Brand cable for the appropriate alarm and security application. Whatever the security application need calls for, we have a cable that delivers the performance you need.

Access Control



Applications:
Door Controllers
Prox Sensors
Key Pads
Card Readers
Gate Access



Cable Solution	Description
4EPL4S*	4 Shielded Elements Overall Jacket Access Control Plenum
4EPL1S*	4 Elements 1 Shielded Overall Jacket Access Control Plenum
4ERS4S**	4 Shielded Elements Overall Jacket Access Control Riser
4ERS1S**	4 Elements 1 Shielded Overall Jacket Access Control Riser
E2002S	22/2 Conductor Shielded Riser
E2004S	22/4 Conductor Shielded Riser
E2006S	22/6 Conductor Shielded Riser
E2008S	22/8 Conductor Shielded Riser
E2010S	22/10 Conductor Shielded Riser
E2012S	22/12 Conductor Shielded Riser
E2102S	22/2 Conductor Shielded Plenum
E2104S	22/4 Conductor Shielded Plenum
E2106S	22/6 Conductor Shielded Plenum
E2108S	22/8 Conductor Shielded Plenum
E2032S	18/2 Conductor Shielded Riser
E2034S	18/4 Conductor Shielded Riser
E2036S	18/6 Conductor Shielded Riser
E2038S	18/8 Conductor Shielded Riser

Cable Solution	Description
E2202S	18/2 Conductor Shielded Plenum
E2204S	18/4 Conductor Shielded Plenum
E2206S	18/6 Conductor Shielded Plenum
E2208S	18/8 Conductor Shielded Plenum

*

Carol® Brand Composite Access Control Cable – Plenum
(3) Multi-Conductors • (1) Multi-Pair • Overall Jacket
60˚C 300 Volt (UL) & C(UL) Type CMP

Catalog Number	Overall Nominal OD Inch (mm)	Component No.	Component Descriptions	Conductors Color Code	Component Nominal OD Inch (mm)	Insulation Thickness Inch (mm)
4EPL4S	0.430	1	4 Cond, 18 AWG, Shielded	White, Black, Red, Green	0.180 (4.572)	0.008 (0.2032)
		2	3 Pair, 22 AWG, Shielded	White & Green, Orange & Brown, Red & Black	0.195 (4.593)	0.008 (0.2032)
		3	2 Cond, 22 AWG, Shielded	Red, Black	0.125 (3.175)	0.008 (0.2032)
		4	4 Cond, 22 AWG, Shielded	White, Black, Red, Green	0.145 (3.683)	0.008 (0.2032)
4EPL1S	0.420	1	4 Cond, 18 AWG, Unshielded	White, Black, Red, Green	0.180 (4.572)	0.008 (0.2032)
		2	3 Pair, 22 AWG, Shielded	White & Green, Orange & Brown, Red & Black	0.195 (4.593)	0.008 (0.2032)
		3	2 Cond, 22 AWG, Unshielded	Red, Black	0.125 (3.175)	0.008 (0.2032)
		4	4 Cond, 22 AWG, Unshielded	White, Black, Red, Green	0.145 (3.683)	0.008 (0.2032)

**

Carol® Brand Composite Access Control Cable – Riser
(3) Multi-Conductors • (1) Multi-Pair • Overall Jacket
60˚C 300 Volt (UL) & C(UL) Type CMR

Catalog Number	Overall Nominal OD Inch (mm)	Component No.	Component Descriptions	Conductors Color Code	Component Nominal OD Inch (mm)	Insulation Thickness Inch (mm)
4ERS4S	0.430	1	4 Cond, 18 AWG, Shielded	White, Black, Red, Green	0.180 (4.572)	0.008 (0.2032)
		2	3 Pair, 22 AWG, Shielded	White & Green, Orange & Brown, Red & Black	0.195 (4.593)	0.008 (0.2032)
		3	2 Cond, 22 AWG, Shielded	Red, Black	0.125 (3.175)	0.008 (0.2032)
		4	4 Cond, 22 AWG, Shielded	White, Black, Red, Green	0.145 (3.683)	0.008 (0.2032)
4ERS1S	0.420	1	4 Cond, 18 AWG, Unshielded	White, Black, Red, Green	0.180 (4.572)	0.008 (0.2032)
		2	3 Pair, 22 AWG, Shielded	White & Green, Orange & Brown, Red & Black	0.195 (4.593)	0.008 (0.2032)
		3	2 Cond, 22 AWG, Unshielded	Red, Black	0.125 (3.175)	0.008 (0.2032)
		4	4 Cond, 22 AWG, Unshielded	White, Black, Red, Green	0.145 (3.683)	0.008 (0.2032)

General Cable

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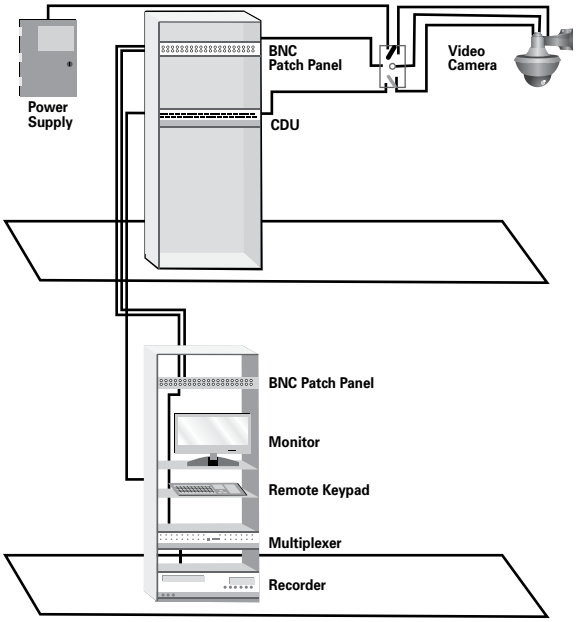
Video Surveillance/CCTV

Applications:

CCTV
Satellites
Digital Video
Analog Video
Switchers/Multiplexers
Digital Recorders



CATV/MATV/DBS *RG 59, RG 6 and RG 11 Ratings*

Cable Solution	Description
C3521	RG 6/U 18/1 FL + 95% TC CL2P
C3523	RG 6 SBC/Foil/61% TC Braid Plenum
C3524	RG 6 CCS/Foil/60% AL Braid Plenum
C3525	RG 6 CCS/Quad 60/40% AL Braid Plenum
C5761	RG 6 SBC Foil/95% BC Braid CATV/CM
C5775	RG 6 CCS/Foil/60% AL Braid CATV/CM
C5785	RG 6 CCS/Quad 60/40% AL Braid CATV/CM
C5886	RG 6 CCS/Foil/60% AL Braid CATVR/CMR
C5889	RG 6 CCS/Quad 60/40% AL Braid CATVR/CMR
C3528	RG 11 CCS/Foil/60%/AL Braid CATV/CMP Plenum
C5039	RG 11 CCS/Foil/60%/AL Braid CATV/CM
C5043	RG 11/U CCS Burial FL 60% AL
C5044	RG 11/U CCS Quad Shield CL2/CM
C1135	RG 59/U CCS 95% BC Braid CM
C3500	RG 59 CCS/95% BC Braid Plenum
C3526	RG 59/U CCS AMA/80% AL Braid CLP2/CMP

HDTV/SDI—Interconnect Cables *RG 59, RG 6 and RG 11 Ratings*

Cable Solution	Description
395011	RG 6 SBC/Foil/95% TC Braid CMR
395014	RG 6/U 18/1 SBC Quad Shield 60%/40% CMR
495025	RG 6/U 18 AWG SBC 95% Dual Foil TC Braid CMP Plenum
395025	RG 59 SBC/Foil/95% TC Braid CMR
395031	RG 59 Single/Miniature/Foil/95% TC Braid CMR
495023	RG 59/U SBC/Foil/95% TC Braid CMP Plenum

Low Skew - 4 Pair UTP Cables for RGB Video

Cable Solution	Description
E3842S	Low Skew 24/4 UTP CMP for RGB Video
E1842S	Low Skew 24/4 UTP CMR for RGB Video
E3843S	Low Skew 23/4 UTP CMP for RGB Video
E1843S	Low Skew 23/4 UTP CMR for RGB Video

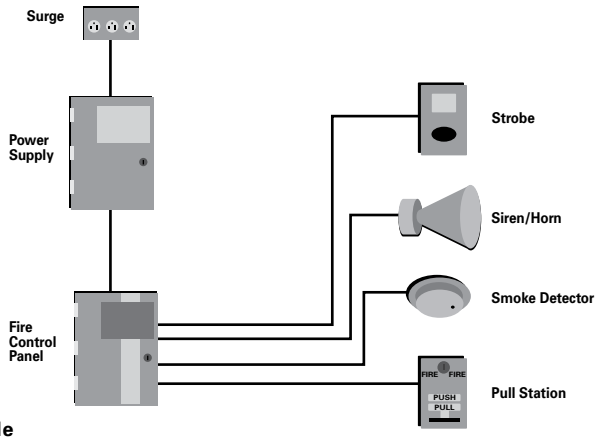
CCTV *RG 59 and RG 11 Ratings*

Cable Solution	Description
C8029	RG 6 + 18/2 Unshielded CATV/CM
C8031	RG 6/U SBC/95% + 18/2 Unshielded Pair CMP Plenum
495035	RG 6/U 18 AWG SBC 95% BC CMP Plenum
395058	RG 11 SBC/95% BC Braid CM
495015	RG 11 SBC/95% BC Braid CMP Plenum
C1103	RG 59 BC/95% BC Braid CATV/CM
C1142	RG 59 SBC/95% BC Braid CATV/CM
C8025	RG 59/U STR (7/30) BC/95% + 22/2 SH Pair CCTV/CM
C8027	RG 59 + 18/2 Shielded CATV/CM
C8028	RG 59 + 18/2 Unshielded CATV/CM
C8030	RG 59/U SBC/95% + 18/2 Unshielded Pair CCTV Plenum
495028	RG 59 SBC/95% BC Braid CMP Plenum

Fire Alarm and Life Safety

Applications:

Smoke Detectors
Strobes/Sirens
Pull Stations
Microprocessor/
Addressable
Controlled Systems



Cable Solution	Description
E1502S	18/2 Conductor Riser FPLR
E1504S	18/4 Conductor Riser FPLR
E1522S	14/2 Conductor Riser FPLR
E1524S	14/4 Conductor Riser FPLR
E2502S	18/2 Conductor Shielded Riser FPLR
E2504S	18/4 Conductor Shielded Riser FPLR
E2532S	14/2 Conductor Shielded Riser FPLR
E2534S	14/4 Conductor Shielded Riser FPLR
E3502S	18/2 Conductor Plenum FPLP
E3504S	18/4 Conductor Plenum FPLP
E3522S	14/2 Conductor Plenum FPLP
E3524S	14/4 Conductor Plenum FPLP

Cable Solution	Description
E3602S	18/2 Conductor Shielded Plenum FPLP
E3604S	18/4 Conductor Shielded Plenum FPLP
E3622S	14/2 Conductor Shielded Plenum FPLP
E3624S	14/4 Conductor Shielded Plenum FPLP

Carol® Brand Alarm & Security Solutions

Home Theater and Burglar Alarms

Applications:

Intercoms
PA Systems
Sound Systems
Emergency Phones
Speakers
Burglar Alarms
Home Theater

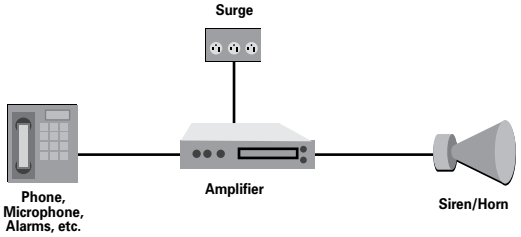
Cable Solution	Description
E1002S	22/2 Conductor Riser
E1004S	22/4 Conductor Riser
C4408	22/2 Solid Conductor CMR/CMX
C4408ST	22/2 Stranded Conductor CMR/CMX
C4412	22/4 Solid Conductor Solid CMR/CMX
C4412ST	22/4 Stranded Conductor CMR/CMX
C4408.86.XX	22/2 Solid Conductor CM/CMX*
C4408ST.86.XX	22/2 Stranded Conductor CM/CMX*
C4412.86.XX	22/4 Solid Conductor CM/CMX*
C4412ST.86.XX	22/4 Stranded Conductor CM/CMX*
E1006S	22/6 Conductor Riser
E1008S	22/8 Conductor Riser
E1032S	18/2 Conductor Riser
E1034S	18/4 Conductor Riser
E1042S	16/2 Conductor Riser
E1044S	16/4 Conductor Riser
E1052S	14/2 Conductor Riser
E1054S	14/4 Conductor Riser
E1062S	12/2 Conductor Riser
E1064S	12/4 Conductor Riser

Burglar Alarm Cable in 500' Coil Packs*

*Available Colors for Burglar Alarm Coil Packs
XX= White Gray Green Beige Yellow Dark Blue

Cable Solution	Description
C1000	Command® Series Twisted Pair Speaker, 22/2, 7x30 Stranding, 500' Reels
C1001	Command Series Twisted Pair Speaker, 20/2, 7x28 Stranding, 500' Reels
C1002	Command Series Twisted Pair Speaker, 18/2, 7x26 Stranding, 500' Reels
C1003	Command Series Twisted Pair Speaker, 16/2, 19x29 Stranding, 500' Reels
C1004	Command Series Twisted Pair Speaker, 14/2, 42x30 Stranding, 500' Reels
C1005	Command Series Twisted Pair Speaker, 12/2, 65x30 Stranding, 500' Reels
C1362	22/2 Conductor Zip (not for inwall use)
C1357	18/2 Conductor Zip (not for inwall use)
C1458	16/2 Conductor Zip CL2
C1461	14/2 Conductor Zip CL2
C1463	12/2 Conductor Zip CL2
C1702	14/2 Command Series Home Grade Speaker
C1703	14/4 Command Series Home Grade Speaker
C1704	16/2 Command Series Home Grade Speaker
C1705	16/4 Command Series Home Grade Speaker
C1800	Command Series "High Def" Speaker Type NEC, 12/2, 105x32 Stranding, 500' Reels
C1801	Command Series "High Def" Speaker Type NEC, 12/4, 105x32 Stranding, 500' Reels
C1802	Command Series "High Def" Speaker Type NEC, 14/2, 105x34 Stranding, 500' Boxes
C1803	Command Series "High Def" Speaker Type NEC, 14/4, 105x34 Stranding, 500' Reels
C1804	Command Series "High Def" Speaker Type NEC, 16/2, 65x34 Stranding, 500' Boxes
C1805	Command Series "High Def" Speaker Type NEC, 16/4, 65x34 Stranding, 500' Boxes
395031X3	23/3 Command Series RGB Cables, Solid BC, Foam PE, Dual Foil + 95% TC Braid
395031X5	23/5 Command Series RGB Cables, Solid BC, Foam PE, Dual Foil + 95% TC Braid

Oxygen-Free + ETP High-Performance Home Theater Cables



Data Communications

Applications:

Telephones
Cat 5e and 6 Connections
Networking
Workstations
Video Conferencing
Telco Closets
Home Automation
IP Cameras

Cat 5e PPC®

Standard packaging: 1000' Pull-Pac® II

Jacket Color	Pull-Pac® II CMR (Non-Plenum)	Pull-Pac® II CMP (Plenum)
Blue	CR5.30.07	CP5.30.07
White	CR5.30.02	CP5.30.02
Gray	CR5.30.10	CP5.30.10
Green	CR5.30.06	CP5.30.06
Yellow	CR5.30.05	CP5.30.05
Red	CR5.30.03	CP5.30.03

Cat 6 PPC®

Standard packaging: 1000' Pull-Pac® II

Jacket Color	Pull-Pac® II CMR (Non-Plenum)	Pull-Pac® II CMP (Plenum)
Blue	CR6.30.07	CP6.30.07
White	CR6.30.02	CP6.30.02
Gray	CR6.30.10	CP6.30.10
Green	CR6.30.06	CP6.30.06
Yellow	CR6.30.05	CP6.30.05
Red	CR6.30.03	CP6.30.03

Cat 5e SPC®

Standard packaging: 1000' Spool-Pac®

Jacket Color	Spool-Pac® CMR (Non-Plenum)	Spool-Pac® CMP (Plenum)
Blue	CR5.A3.07	CP5.A3.07
White	CR5.A3.02	CP5.A3.02
Gray	CR5.A3.10	CP5.A3.10
Green	CR5.A3.06	CP5.A3.06
Yellow	CR5.A3.05	CP5.A3.05
Red	CR5.A3.03	CP5.A3.03

Cat 6 SPC®

Standard packaging: 1000' Spool-Pac®

Jacket Color	Spool-Pac® CMR (Non-Plenum)	Spool-Pac® CMP (Plenum)
Blue	CR6.A3.07	CP6.A3.07
White	CR6.A3.02	CP6.A3.02
Gray	CR6.A3.10	CP6.A3.10
Green	CR6.A3.06	CP6.A3.06
Yellow	CR6.A3.05	CP6.A3.05
Red	CR6.A3.03	CP6.A3.03

General Cable

CAROL BRAND

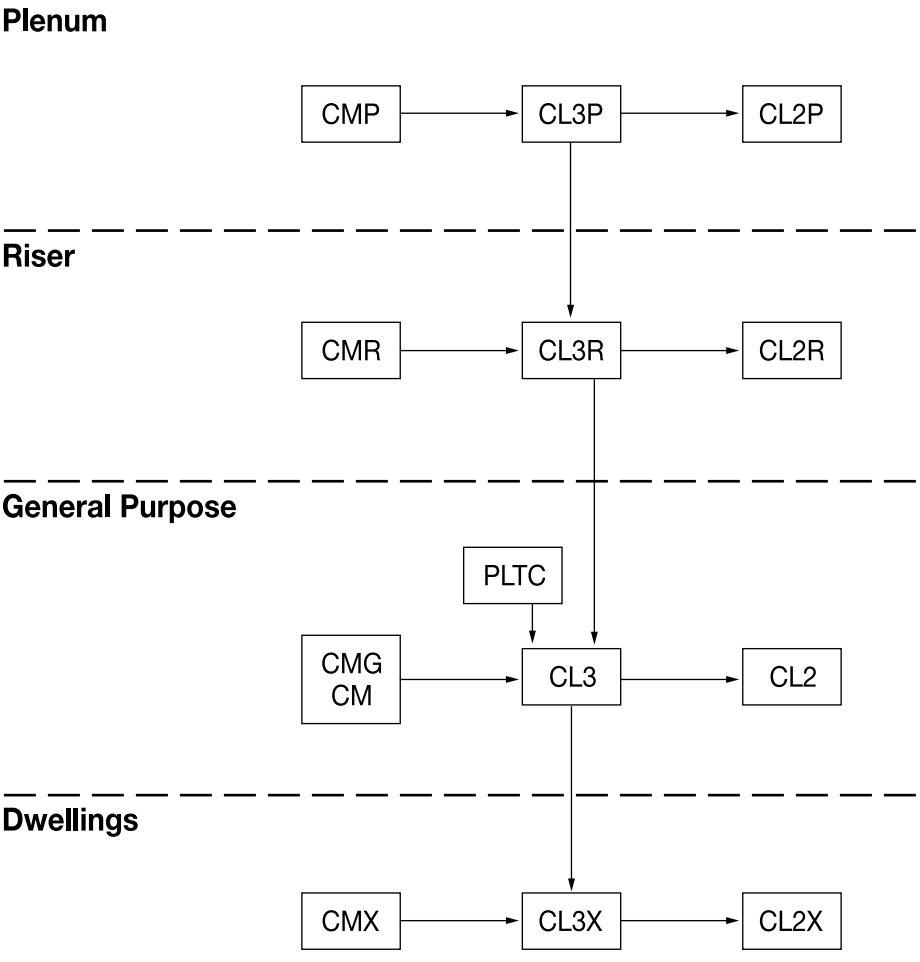
Technical Information 9

NEC and CSA Fire Resistance Levels

FIRE RESISTANCE LEVEL	TEST REQUIREMENT	NEC ARTICLE		
		800	725	760
(Highest) Plenum Cables	NFPA 262 (Steiner tunnel) CSA-FT6 (Steiner tunnel)	CMP	CL3P CL2P	FPLP
Riser Cables Multiple Floors	UL-1666 (Vertical Shaft) CSA-FT4 (Vertical Tray)	CMR	CL3R CL2R	FPLR
General Purpose Cables	UL-1581 (Vertical Tray) CSA-FT4 (Vertical Tray)	CMG	CL3 CL2	FPL
(Lowest) Residential Cables Restricted Use	UL-1581 VW-1 CSA-FT	CMX	CL3X CL2X	

Notes: 1. Cables with a higher fire resistance level may be substituted for those with a lower fire resistance level.
2. Non-fire-rated outside plant telephone cables may not run outside of a rigid metal conduit more than 50 feet from the point of entrance into a building.
3. Cables rated CMG or CM may be used in runs penetrating one floor (NEC 800-53).

Communications wire and cable for premise installations are in accordance with Article 800 and other applicable parts of the National Electrical Code (NEC), latest issue. Communications wire and cables for Canada are in accordance with the harmonized Canadian Standard Association C22.2 No. 214, Underwriters Laboratories UL 444, latest issue.



TYPE	DESCRIPTION
CM	Communications Wires and Cables
CL2 and CL3	Class 2 and Class 3 Remote-Control, Signaling and Power-Limited Cables
PLTC	Power-Limited Tray Cable

(From 2008 NEC Handbook)

[A] → [B] Cable A shall be permitted to be used in place of Cable B

Temperature Conversion Chart

To use this chart, find your known temperature (˚F or ˚C) in the shaded column. If the known temperature is in ˚C and you wish to know its value in ˚F, move to the adjacent right-hand column. If the known temperature is in ˚F and you wish to know its value in ˚C, move to the adjacent left-hand column.

°C	KNOWN TEMP	°F	°C	KNOWN TEMP	°F	°C	KNOWN TEMP	°F	°C	KNOWN TEMP	°F	°C	KNOWN TEMP	°F
-45.0	**-49.0**	-56.2	-17.2	**1.0**	33.8	10.6	**51.0**	123.8	38.3	**101.0**	213.8	66.1	**151.0**	303.8
-43.9	**-47.0**	-52.6	-16.1	**3.0**	37.4	11.7	**53.0**	127.4	39.4	**103.0**	217.4	67.2	**153.0**	307.4
-42.8	**-45.0**	-49.0	-15.0	**5.0**	41.0	12.8	**55.0**	131.0	40.6	**105.0**	221.0	68.3	**155.0**	311.0
-41.7	**-43.0**	-45.4	-13.9	**7.0**	44.6	13.9	**57.0**	134.6	41.7	**107.0**	224.6	69.4	**157.0**	314.6
-40.6	**-41.0**	-41.8	-12.8	**9.0**	48.2	15.0	**59.0**	138.2	42.8	**109.0**	228.2	70.6	**159.0**	318.2
-39.4	**-39.0**	-38.2	-11.7	**11.0**	51.8	16.1	**61.0**	141.8	43.9	**111.0**	231.8	71.7	**161.0**	321.8
-38.3	**-37.0**	-34.6	-10.6	**13.0**	55.4	17.2	**63.0**	145.4	45.0	**113.0**	235.4	72.8	**163.0**	325.4
-37.2	**-35.0**	-31.0	-9.4	**15.0**	59.0	18.3	**65.0**	149.0	46.1	**115.0**	239.0	73.9	**165.0**	329.0
-36.1	**-33.0**	-27.4	-8.3	**17.0**	62.6	19.4	**67.0**	152.6	47.2	**117.0**	242.6	75.0	**167.0**	332.6
-35.0	**-31.0**	-23.8	-7.2	**19.0**	66.2	20.6	**69.0**	156.2	48.3	**119.0**	246.2	76.1	**169.0**	336.2
-33.9	**-29.0**	-20.2	-6.1	**21.0**	69.8	21.7	**71.0**	159.8	49.4	**121.0**	249.8	77.2	**171.0**	339.8
-32.8	**-27.0**	-16.6	-5.0	**23.0**	73.4	22.8	**73.0**	163.4	50.6	**123.0**	253.4	78.3	**173.0**	343.4
-31.7	**-25.0**	-13.0	-3.9	**25.0**	77.0	23.9	**75.0**	167.0	51.7	**125.0**	257.0	79.4	**175.0**	347.0
-30.6	**-23.0**	-9.4	-2.8	**27.0**	80.6	25.0	**77.0**	170.6	52.8	**127.0**	260.6	80.6	**177.0**	350.6
-29.4	**-21.0**	-5.8	-1.7	**29.0**	84.2	26.1	**79.0**	174.2	53.9	**129.0**	264.2	81.7	**179.0**	354.2
-28.3	**-19.0**	-2.2	-0.6	**31.0**	87.8	27.2	**81.0**	177.8	55.0	**131.0**	256.8	82.8	**181.0**	357.8
-27.2	**-17.0**	-1.4	0.6	**33.0**	91.4	28.3	**83.0**	181.4	56.1	**133.0**	271.4	83.9	**183.0**	361.4
-26.1	**-15.0**	5.0	1.7	**35.0**	95.0	29.4	**85.0**	185.0	57.2	**135.0**	275.0	85.0	**185.0**	365.0
-25.0	**-13.0**	8.6	2.8	**37.0**	98.6	30.6	**87.0**	188.6	58.3	**137.0**	278.6	86.1	**187.0**	368.6
-23.9	**-11.0**	12.2	3.9	**39.0**	102.2	31.7	**89.0**	192.2	59.4	**139.0**	282.2	87.2	**189.0**	372.2
-22.8	**-9.0**	15.8	5.0	**41.0**	105.8	32.8	**91.0**	195.8	60.6	**141.0**	285.8	88.3	**191.0**	375.8
-21.7	**-7.0**	19.4	6.1	**43.0**	109.4	33.9	**93.0**	199.4	61.7	**143.0**	289.4	89.4	**193.0**	379.4
-20.6	**-5.0**	23.0	7.2	**45.0**	113.0	35.0	**95.0**	203.0	62.8	**145.0**	293.0	90.6	**195.0**	383.0
-19.4	**-3.0**	26.6	8.3	**47.0**	116.6	36.1	**97.0**	206.6	63.9	**147.0**	296.6	91.7	**197.0**	386.6
-18.3	**-1.0**	30.2	9.4	**49.0**	120.2	37.2	**99.0**	210.2	65.0	**149.0**	300.2	92.8	**199.0**	390.2

Temperature Conversion Formulas	
°C =	$\frac{5}{9}$ (°F - 32)
°F =	($\frac{9}{5}$ x °C) + 32

Color Code Chart

BINDER GROUP COLOR	PAIR COUNT
White-Blue	001-025
White-Orange	026-050
White-Green	051-075
White-Brown	076-100
White-Slate	101-125
Red-Blue	126-150
Red-Orange	151-175
Red-Green	176-200
Red-Brown	201-225
Red-Slate	226-250
Black-Blue	251-275
Black-Orange	276-300
Black-Green	301-325
Black-Brown	326-350
Black-Slate	351-375
Yellow-Blue	376-400
Yellow-Orange	401-425
Yellow-Green	426-450
Yellow-Brown	451-475
Yellow-Slate	476-500
Violet-Blue	501-525
Violet-Orange	526-550
Violet-Green	551-575
Violet-Brown	576-600

PAIR NO.	RING CONDUCTOR		TIP CONDUCTOR	
	INSULATION COLOR	BAND MARK	INSULATION COLOR	BAND MARK
1	Blue	White	White	Blue
2	Orange	White	White	Orange
3	Green	White	White	Green
4	Brown	White	White	Brown
5	Slate	White	White	Slate
6	Blue	Red	Red	Blue
7	Orange	Red	Red	Orange
8	Green	Red	Red	Green
9	Brown	Red	Red	Brown
10	Slate	Red	Red	Slate
11	Blue	Black	Black	Blue
12	Orange	Black	Black	Orange
13	Green	Black	Black	Green
14	Brown	Black	Black	Brown
15	Slate	Black	Black	Slate
16	Blue	Yellow	Yellow	Blue
17	Orange	Yellow	Yellow	Orange
18	Green	Yellow	Yellow	Green
19	Brown	Yellow	Yellow	Brown
20	Slate	Yellow	Yellow	Slate
21	Blue	Violet	Violet	Blue
22	Orange	Violet	Violet	Orange
23	Green	Violet	Violet	Green
24	Brown	Violet	Violet	Brown
25	Slate	Violet	Violet	Slate

Note: Bandmarking on the ring conductors is omitted on cables with 5 pairs or less.

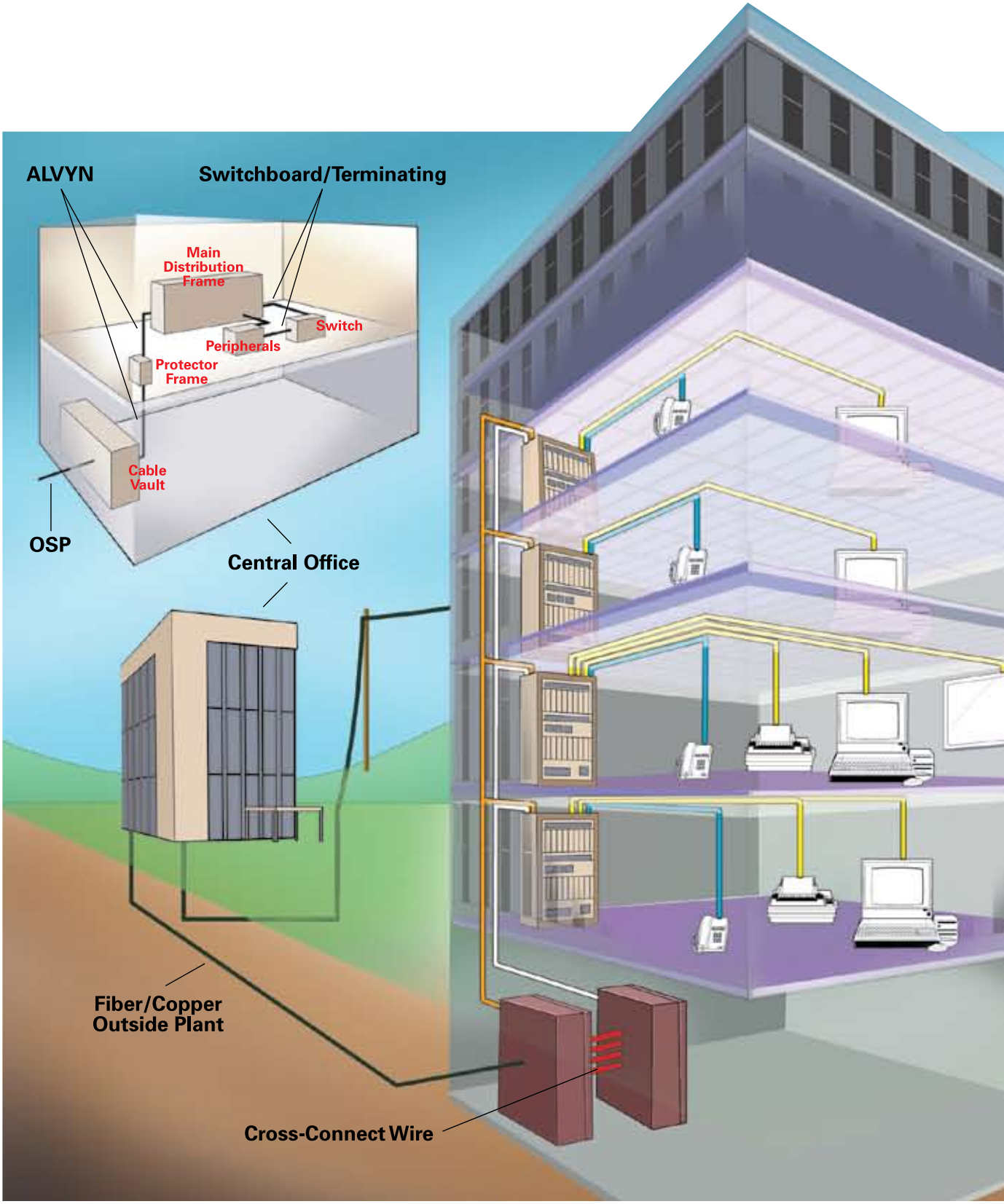
Conduit Capacities by Wire or Cable Diameter

	TRADE SIZES IN INCHES[1]											
	½	¾	1	1¼	1½	2	2½	3	3½	4	4½	5
I.D., Inches	.622	.824	1.049	1.380	1.610	2.067	2.469	3.068	3.548	4.026	4.506	5.047
O.D., Inches-Conduit	.840	1.05	1.315	1.660	1.900	2.375	2.875	3.500	4.000	4.500	5.000	5.563
Internal Area, Sq. In.	.304	.533	.864	1.496	2.036	3.356	4.788	7.393	9.887	12.730	15.947	20.006
Permissible Fill, Sq. In.[2]	.12	.21	.35	.60	.81	1.34	1.92	2.96	3.95	5.09	6.38	8.00

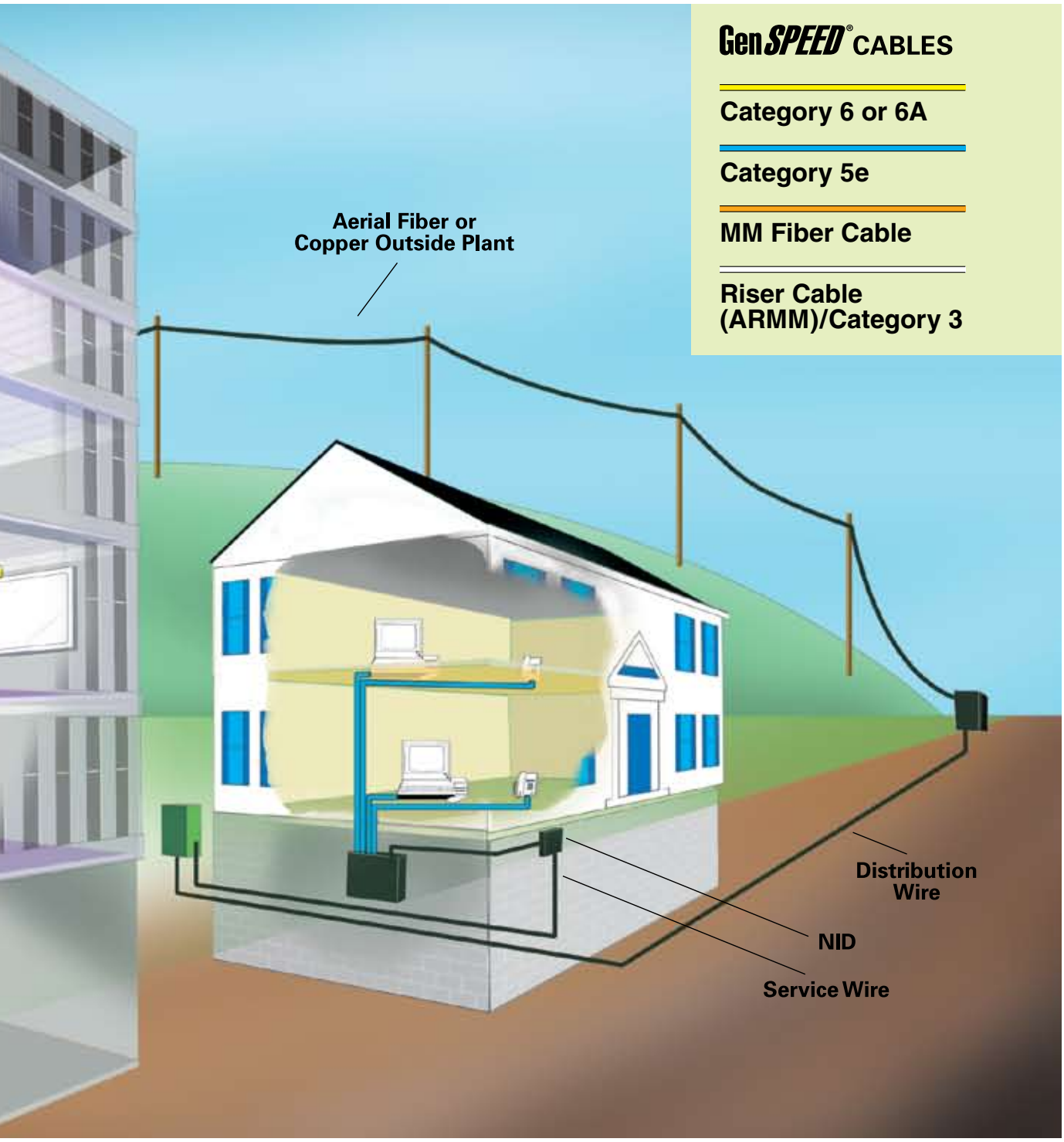
WIRE/CABLE O.D. (INCHES)	AREA (SQ. IN.)											
.100	.008	15	27	44	76	103	170	243	376	503	648	812	1018
.125	.012	9	17	28	48	66	109	156	240	322	414	519	652
.150	.018	6	12	19	33	46	75	108	167	223	288	360	452
.175	.024	5	8	14	24	33	55	79	122	164	211	265	332
.200	.031	3	6	11	19	25	42	60	94	125	162	203	254
.225	.040	3	5	8	15	20	33	48	74	99	128	160	201
.250	.049	2	4	7	12	16	27	39	60	80	103	129	163
.275	.059	2	3	5	10	13	22	32	49	66	85	107	134
.300	.071	1	3	4	8	11	18	27	41	55	72	90	113
.325	.083	1	2	4	7	9	16	23	35	47	61	76	96
.350	.096	1	2	3	6	8	13	19	30	41	52	66	83
.375	.110	1	1	3	5	7	12	17	26	35	46	57	72
.400	.126	0	1	2	4	6	10	15	23	31	40	50	63
.425	.142	0	1	2	4	5	9	13	20	27	35	44	56
.450	.159	0	1	2	3	5	8	12	18	24	32	40	50
.475	.177	0	1	1	3	4	7	10	16	22	28	35	45
.500	.196	0	1	1	3	4	6	9	15	20	25	32	40
.600	.283	0	0	1	2	2	4	6	10	13	18	22	28
.700	.385	0	0	0	1	2	3	4	7	10	13	16	20
.800	.503	0	0	0	1	1	2	3	5	7	10	12	15
.900	.636	0	0	0	0	1	2	3	4	6	8	10	12
1.000	.785	0	0	0	0	1	1	2	3	5	6	8	10
1.200	1.084	0	0	0	0	0	1	1	2	3	4	5	7
1.400	1.485	0	0	0	0	0	0	1	1	2	3	4	5
1.600	1.948	0	0	0	0	0	0	0	1	2	2	3	4
1.800	2.474	0	0	0	0	0	0	0	1	1	2	2	3
2.000	3.142	0	0	0	0	0	0	0	0	0	1	1	2

[1] Table developed for steel or aluminum conduit.
[2] Permissible occupied area based on NEC-prescribed 40% fill factor.
Note: The reader is cautioned to consult the NEC or BICSI installation manual for specific information regarding conduit fill. Fill rates must be adjusted down based on distances and number of bends.

Commercial Building Datacom/Topology



Commercial Building Datacom/Topology



OUR BEST IDEAS COME FROM YOU

You asked us to think outside the box, so we started with the box. Our Gen*SPEED*® Spool-Pac® Cat 6 cartons have been redesigned in response to your recommendations.

Share your ideas. We're listening:
Datacom@GeneralCable.com

General Cable
4 Tesseneer Drive
Highland Heights, KY 41076
Telephone: (800) 424-5666
(859) 572-8000
www.generalcable.com

Packaging Information

Gen*SPEED*® Packaging Options:

- Pull-Pac® cartons offer wide-mouth payouts that enhance cable pulling while preventing tangling and kinks.
- Spool-Pac® cartons offer the option of pulling cable from spools packaged within a carton, which also prevents tangling.
- Spools are a packaging of choice for most category cables.
- Cartons have been designed and preprinted with pertinent information such as brand name, category of cable and cable type. Cartons are also labeled with pertinent product information such as UL listing, category of cable, cable type, color, footage and product description.
- The plenum cable cartons have a green color band for ease of identification, and the riser cartons are identified by a blue color band.
- All Gen*SPEED* cables have the TRU-Mark® sequential footage marking system, from 1000 ft to 0 ft, to reduce waste on the job.
- Most packages are made with partially recycled cardboard. Please recycle.

Other Communications Product Packaging Options:

- Standard Pull-Pac cartons, Spool-Pac cartons and spools
- Sequential footage marking
- Cartons are labeled with pertinent product information such as UL listing, category of cable, cable type, color, footage and product description.

▲Spool-Pac® Cat 3

▲ Gen*SPEED*® Pull-Pac® II

5000 CMR/CMP
5350 CMR/CMP
5500 CMR/CMP
6000E CMR/CMP
6 CMR/CMP

▲ Gen*SPEED*® Basic Spool-Pac®

5000 CMR/CMP
5350 CMR/CMP
5500 CMR/CMP

◀Gen*SPEED*® EZ-Brake™ Spool-Pac®

6000E CMR/CMP
6500P CMR/CMP

Spool▶

Available for all Datacom products

General Cable

Industry Standards, Typical Uses and Electrical Requirements

For Twisted Pair Horizontal Wiring Cable

CATEGORY	INDUSTRY STANDARDS	TYPICAL USES	FREQUENCY	ATTEN. dB/100M (MAX)	CHARACTERISTICS IMPEDANCE OHMS MIN	CHARACTERISTICS IMPEDANCE OHMS MAX	NEXT dB (MIN)	PSNEXT dB (MIN)	RETURN LOSS dB (MIN)	PSACRF (PSELFEXT) dB (MIN)	PSAACRF dB (MIN)	PSANEXT dB (MIN)
Category 3	ANSI/TIA/EIA 568 B.2 ANSI/ICEA S-90-661 NEMA WC63.1	10 BASE-T 4 Mbps TOKEN RING 52 Mbps ATM 100 BASE VG AnyLAN	772kHz 1MHz 4MHz 8MHz 10MHz 16MHz	2.2 2.6 5.6 8.5 9.7 13.1	87 85 85 85 85 85	117 115 115 115 115 115	43 41 32 28 26 23	— — — — — —	— — — — — —	— — — — — —	— — — — — —	— — — — — —
Category 5e	ANSI/TIA/EIA 568 B.2 ANSI/ICEA S-90-661 NEMA WC63.1 ISO 11801	16 Mbps TOKEN RING 100 BASE-T 52/155 Mbps ATM 100 BASE VG AnyLAN 100 Mbps TP PMD 1000 BASE-T (Gigabit Ethernet)	772kHz 1MHz 4MHz 8MHz 10MHz 16MHz 20MHz 25MHz 31.25MHz 62.5MHz 100MHz	1.8 2.0 4.1 5.8 6.5 8.2 9.3 10.4 11.7 17.0 22.0	87 85 85 85 85 85 85 85 85 85 85	117 115 115 115 115 115 115 115 115 115 115	67 65 56 51 50 47 45 44 43 38 35	64 62 53 48 47 44 42 41 40 35 32	— 20.0 23.0 24.5 25.0 25.0 25.0 24.3 23.6 21.5 20.1	63.0 60.8 48.7 42.7 40.8 36.7 34.7 32.8 30.9 24.8 20.8	— — — — — — — — — — —	— — — — — — — — — — —
Category 6	ANSI/TIA/EIA 568 B.2 ANSI/ICEA S-90-661 NEMA WC66 TIA/EIA 568 B.2-1 ISO 11801	16 Mbps TOKEN RING 155/622 Mbps ATM 1.2 Gbps ATM 100 Mbps TP PMD 100 BASE-T 1000 BASE-T (Gigabit Ethernet)	772kHz 1MHz 4MHz 10MHz 16MHz 20MHz 31.25MHz 62.5MHz 100MHz 200MHz 250MHz	1.8 2.0 3.8 6.0 7.6 8.5 10.7 15.4 19.8 29.0 32.8	87 85 85 85 85 85 85 85 85 85 85	117 115 115 115 115 115 115 115 115 115 115	76.0 74.3 65.3 59.3 56.2 54.8 51.9 47.4 44.3 39.8 38.3	74.0 72.3 63.3 57.3 54.2 52.8 49.9 45.4 42.3 37.8 36.3	— 20.0 23.0 25.0 25.0 25.0 23.6 21.5 20.1 18.0 17.3	67.0 64.8 52.8 44.8 40.7 38.7 36.8 34.9 24.8 18.8 16.8	— — — — — — — — — — —	— — — — — — — — — — —
Category 6a	ANSI/TIA 568 B.2-10 RoHS	IEEE 802.3 10G BASE-T 100 BASE-T 100 BASE-TX 10 BASE-T 1000 BASE-TX 155 Mb/s ATM ANSI X3.263 100Mb/s	1MHz 4MHz 8MHz 10MHz 16MHz 20MHz 25MHz 31.25MHz 62.50MHz 100MHz 200MHz 250MHz 300MHz 400MHz 500MHz	2.1 3.8 5.3 5.9 7.5 8.4 9.4 10.5 15.0 19.1 27.6 31.1 34.3 40.1 45.3	85 85 85 85 85 85 85 85 85 85 85 85 85 85 85	115 115 115 115 115 115 115 115 115 115 115 115 115 115 115	74.3 65.3 60.8 59.3 56.2 54.8 53.3 51.9 47.4 44.3 39.8 38.3 37.1 35.3 33.8	72.3 63.3 58.8 57.3 54.2 52.8 51.3 49.9 45.4 42.3 37.8 36.3 35.1 33.3 31.8	20.0 23.0 24.5 25.0 25.0 25.0 24.3 23.6 21.5 20.1 18.0 17.3 16.8 15.9 15.2	64.8 52.8 46.7 44.8 40.7 38.8 36.8 34.9 28.9 24.8 18.8 16.8 15.3 12.8 10.8	78.2 66.2 60.1 58.2 54.1 52.2 50.2 48.3 42.3 38.2 32.2 30.2 28.7 26.2 24.2	92.5 83.5 79.0 77.5 74.4 73.0 71.5 70.1 65.6 62.5 58.0 56.5 55.3 53.5 52.0

Data subject to change without notice. Contact your Customer Service Representative for latest information.

— No requirement

Note: Higher category may be substituted for lower category.

Glossary

Alien Crosstalk (AXT): Unwanted signal coupling from one component, channel, or permanent link to another is defined as alien crosstalk. Alien crosstalk is only specified by the Standards as a power sum parameter for components and cabling to approximate the energy present when all pairs are energized. Power sum alien measured at the near-end is called Power Sum Alien Near-End Crosstalk loss (PSANEXT) and power sum alien crosstalk at the far-end is called Power Sum Alien Attenuation to Crosstalk Ratio, far-end (PSAACRF). High power sum alien crosstalk levels can compromise the operation of 10G Base-T applications.

American Wire Gauge (AWG): A system used to specify wire size. The greater the wire diameter, the smaller the value (e.g., 24 AWG [0.51 mm {0.020 in}]).

Asynchronous Transfer Mode (ATM): A high-speed switching transmission protocol that utilizes payload packages organized into 53-byte cells to carry data.

Attenuation: The decrease in magnitude of transmission signal strength between points, expressed as the ratio of output to input. Measured in dB, usually at a specific frequency for copper or wavelength for optical fiber, the signal strength may be power or voltage.

Attenuation-to-Crosstalk Ratio (ACR): The difference between attenuation and crosstalk, measured in dB at a given frequency. This difference is critical to ensure that the signal sent down the twisted-pair cable is stronger at the receiving end of the cable than any interference signals (crosstalk) from other cable pairs.

Bandwidth: A range of frequencies, usually the difference between the upper and lower limits of the range, expressed in Hz. It is used to denote the potential capacity of the medium, device or system. In copper and optical fiber cabling, the bandwidth decreases with increasing length.

Baseband transmission: A transmission technique in which all of the available bandwidth is dedicated to a single communications channel. Only a single message transfer can occur at a given time.

Bit Error Rate (BER): The ratio of incorrectly transmitted bits to total transmitted bits. A primary specification for all transmission systems, it is usually expressed as a power of 10. The number of errors made in a digital transmission as compared to complete accuracy.

Broadband transmission: The transmission of multiple signals on a medium at the same time, sharing the entire bandwidth of the medium. The signals are multiplexed into channels with a bandwidth of 6 kHz each and occupy a different frequency on the cable. The signals are divided, usually by frequency divisions, to allow more than one channel on the cable at any time.

Broadcast: A technique for sending data simultaneously to all devices attached to a network with a single transmission. See multicast and unicast.

Capacitance: The tendency of an electronic component to store electrical energy. Pairs of wire in a cable tend to act as a capacitor. The charge on one of two conductors of a capacitor divided by the potential difference between them (measured in farads).

Common-mode noise (and longitudinal): The noise voltage that appears between each signal conductor to ground, caused by electrostatic induction and/or electromagnetic induction.

Cross-connect: A facility enabling the termination of cable elements and their interconnection or cross-connection.

Crosstalk: The unwanted reception of electromagnetic signals on a communications circuit from another circuit.

Decibel (dB): A logarithmic unit used for expressing the loss or gain of signal strength. One dB is the amount by which the pressure of a pure sine wave of sound must be varied in order for the change to be detected by the average human ear.

Delay skew: The difference in the propagation delay between any two pairs within the same cable sheath.

Dielectric constant: The ratio of capacitance of an insulated wire measured against the same wire uninsulated, but using air as the dielectric, which is equal to one.

Elongation: The fraction increase in the length of a material stressed in tension.

Equal Level Far-End Crosstalk (ELFEXT): A measure of the unwanted signal coupling from a transmitter at the near end into another pair measured at the far end, relative to the received signal level.

Ethernet: A LAN protocol using a logical bus structure and carrier sense multiple access with collision detection.

Far-end crosstalk loss: A measure of the unwanted signal coupling from a transmitter at the near end into another pair measured at the far end, relative to the transmitted signal level.

FEP: Fluorinated Ethylene Propylene

Frequency: The measure of the number of cycles (waves) per second, expressed in Hz.

Full Duplex: Simultaneous two-way transmission utilizing all 4 pairs.

Gigabits per second (Gb/s): A transmission rate denoting one billion bits per second.

Gigabit Ethernet: A carrier sense multiple access with collision detection LAN standard developed by the IEEE 802 group operating at one Gb/s.

Hertz (Hz): A unit of frequency equal to one cycle per second.

Insertion loss: The signal loss resulting from the insertion of a component, link or channel between a transmitter and receiver (often referred to as attenuation).

Insulation: The dielectric material that physically separates wires and prevents conduction between them.

Megabits per second (Mb/s): A unit of measure used to express the data transfer rate of a system, device or communications channel.

Megahertz (MHz): A unit of frequency equal to one million cycles per second (hertz).

Near-end crosstalk (NEXT): The unwanted signal coupling between pairs. It is measured at the end of a cable nearest the point of transmission. Contrast with far-end crosstalk.

Nominal velocity of propagation (NVP): The speed of transmission along a cable relative to the speed of light in a vacuum.

Glossary

Ohm: The standard unit of electrical resistance that measures the opposition to the flow of direct current, called resistance, or opposition to the flow of alternating current, called impedance. One volt will cause one ampere of current to flow through one ohm of resistance. The symbol is W.

Plenum: A designated area used for transport of environmental air as part of the air distribution system. Because it is part of the air distribution system, cables installed in this space require a higher fire rating.

Plenum cable: A cable with flammability and smoke characteristics that meet the safety requirements of the National Electrical Code® (NEC®) that allow it to be routed in a plenum area without being enclosed in a conduit.

Polyolefin: A thermoplastic insulation material having excellent properties and moisture resistance, used in the construction of some communications cable.

Polyvinyl Chloride (PVC): A tough, flame-retardant, thermoplastic, water-resistant insulator. Its dielectric losses are higher than polyethylene.

Polyvinylidine DiFluoride (PVDF): A highly non-reactive and pure thermoplastic fluoropolymer. It is tough and has low friction.

Power Sum Attenuation-to-Crosstalk Ratio (PSACR): The difference between attenuation and power sum crosstalk measured in dB at a given frequency. This difference is critical to ensure that the signal sent down the twisted-pair cable is stronger at the receiving end of the cable than any interference signals (crosstalk) from other cable pairs.

Power Sum Equal Level Far-End Crosstalk (PSELFEXT) Loss: A computation of the unwanted signal coupling from multiple transmitters at the near end into a pair measured at the far end and normalized to the received signal level.

Power Sum Near-End Crosstalk (PSNEXT) Loss: A computation of the unwanted signal coupling from multiple transmitters at the near end into a pair measured at the near end.

Propagation delay: The time interval required for a signal to be transmitted from one end of the circuit to the other.

Restriction on Hazardous Substances (RoHS): The European Commission's Directive 2002/95/EC adopted January 27, 2003, also known as "RoHS," which restricts the use of certain hazardous substances in electrical and electronic equipment.

Return loss: A ratio of the power of the outgoing signal to the power of the reflected signal, expressed in dB.

Rip cord: A small filament cord used to rip through the outer cable sheath.

Riser: Term applied to vertical sections of cable, such as changing from underground or direct-buried plant to aerial plant. Term also applies to the space used for cable access between floors.

Separator: A layer of insulating material, which is placed between pairs inside a cable to enhance crosstalk. This could be in a form of tape, cross-web or just single filler.

Signal-to-Noise Ratio (SNR): The ratio between the detected signal power and noise in a receiver, expressed in dB. The prime determining factor in bit error rate. See Bit Error Rate.

Star Topology: A Local Area Network (LAN) topology in which end points of the network are connected to a common central switch by point-to-point links.

Structural Return loss: A measure of reflected energy of a transmitted signal due to impedance variations along the length of the cable, expressed in dB.

T-1: A digital transmission link with a bandwidth capacity of 1.544 Mb/s. Typical medium is 2-pair telephone wire; however, T-1 is not indicative of transmission medium.

Token ring: Allows attached devices to share a common cabling system for communications purposes without the possibility of a collision between transmissions. A device is only able to send a message when it is in possession of a special electronic sequence of bits called a token.

Velocity of propagation: The speed of transmission along a cable relative to the speed of light in a vacuum.

VoIP: A term used in IP telephony for voice delivered using the Internet Protocol.

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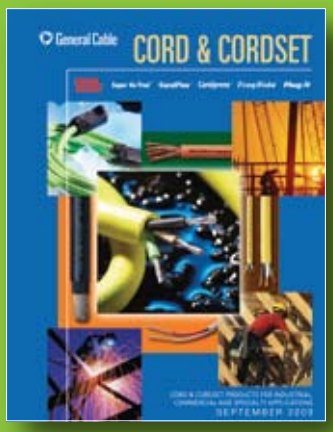

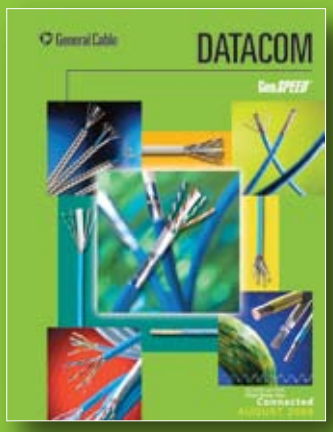

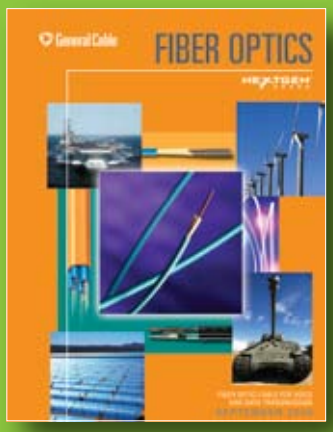

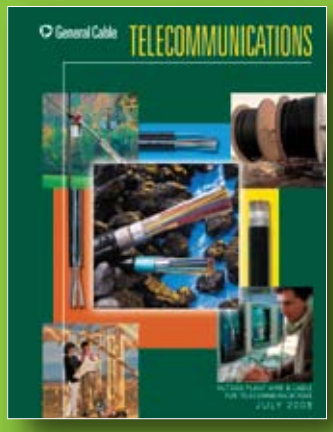

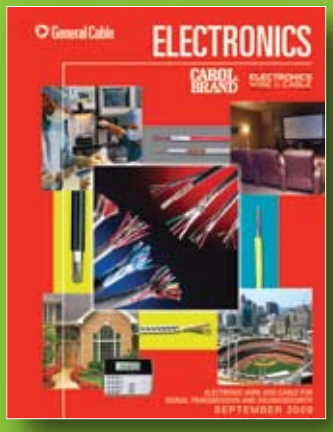

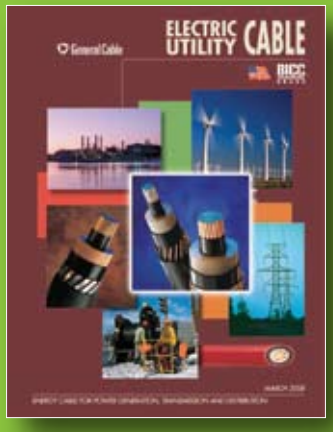

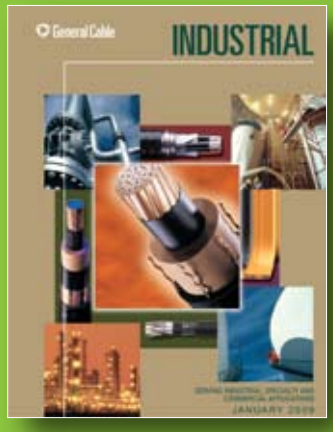

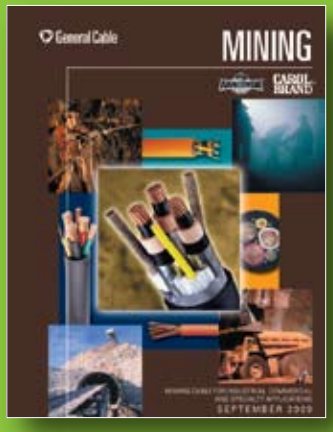

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