GenSPEED® BRAND

# Datacom Cable

## FOR VOICE AND DATA COMMUNICATIONS

NOVEMBER 2020

General Cable

# 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*® Cables.

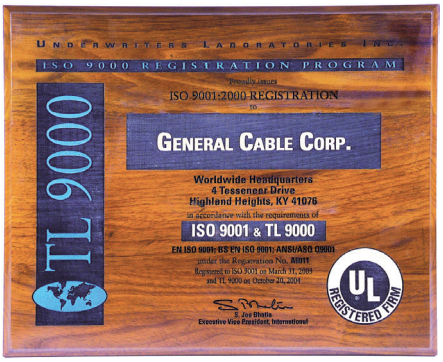
Our products are readily available through our network of authorized stocking distributors and distribution centers.

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 and UL 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


GenSPEED® BRAND

## High-Powered PoE Applications Call for

# LP Cables That Keep Their Cool

Future-proof your installations now with General Cable's UL Listed Limited Power (LP) cabling solutions ... **the first in the industry to be certified.**

Independently validated by Underwriters Laboratories (UL), Gen*SPEED*® Brand's LP Listed cables provide a simple way to ensure installations are future-proofed against the continually evolving Power over Ethernet (PoE) standards. As PoE applications draw more power in the coming years, make sure the cables you install today won't be susceptible to performance issues caused by heat generation down the road. Ensure a hassle-free installation without constraints to bundle size by choosing one of General Cable's Gen*SPEED* Brand solutions that feature the LP rating.

Learn more about the new rating and our LP Listed Gen*SPEED* Brand solutions by calling us at 800-424-5666 or visit **gcna.us/LP.**

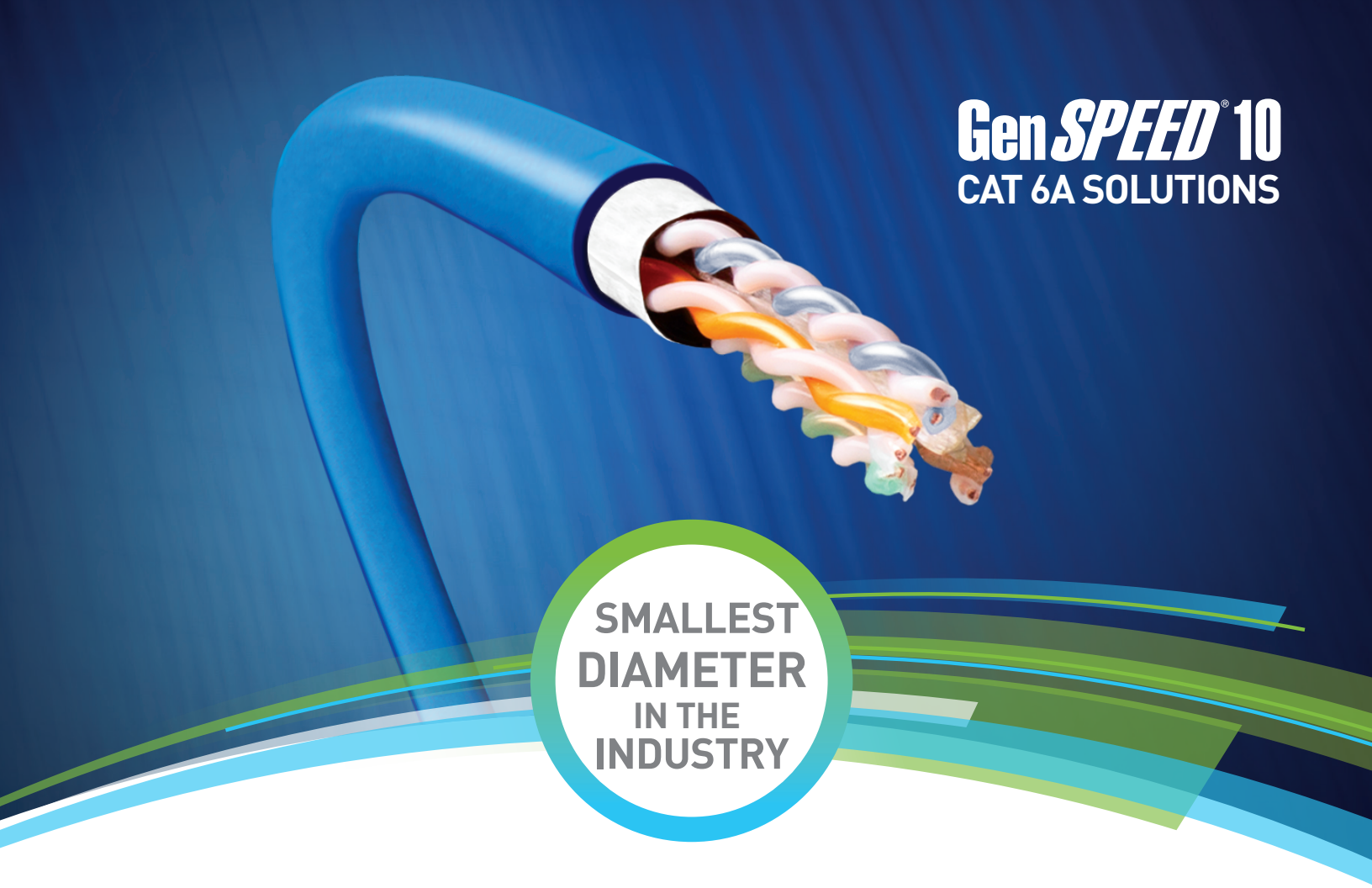
*Cable Choice Matters...Choose General Cable*

MADE IN USA

UL® LISTED

General Cable

1.800.424.5666
www.generalcable.com
info@generalcable.com




# Introducing the New Generation of Small Diameter Category 6A Cables

General Cable's industry-trusted 10 Gig Solutions goes BIG by introducing the new generation of small diameter **Gen*SPEED*® 10 Category 6A Solutions**. With a revolutionary design developed to find the perfect blend of product performance and product size, the new Gen*SPEED* 10 products offer the smallest Cat 6A cables in the industry with enhanced performance and maneuverability.

## Smaller, Lighter & More Flexible

Gen*SPEED* 10 features our smallest diameter ever. Its improved design, lighter weight and increased flexibility translates to simplified cable handling.

## Small Cable, Big Savings

The new Gen*SPEED* 10 standard packaging can fit 36 reels or 20 boxes per pallet, allowing for improved shipping and warehouse efficiency, lowering overall project costs.

## Improved Conduit Fill and Easier Installation

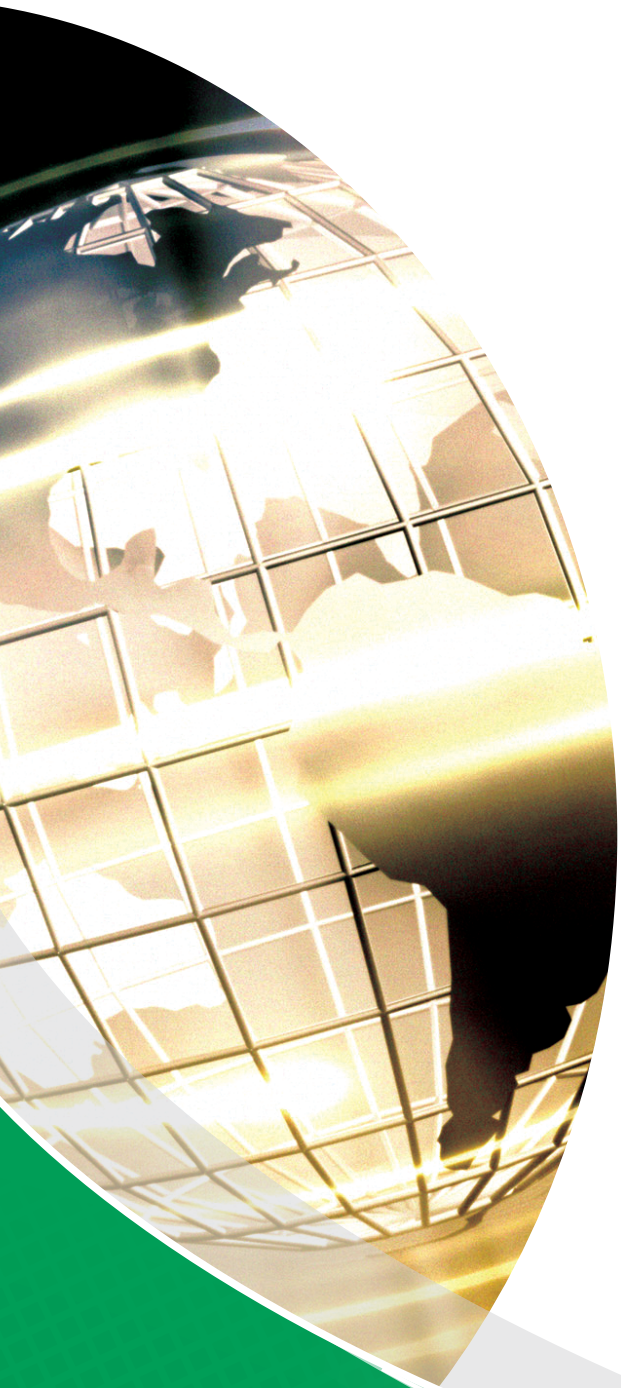
Reduced diameter means optimized cable management: less conduit, less cable tray and more cable in existing conduit and trays, which also lower overall costs.

**Learn more about the new Gen*SPEED* 10 Solutions by calling us at 800-424-5666 or visit gcna.us/genspeed10**

General Cable

www.generalcable.com 1.800.243.8020

# One Company
# Connecting The World



## POWERFUL PRESENCE · PRODUCTS PERFORMANCE · PEOPLE

General Cable has been a wire and cable innovator for over 170 years, always dedicated to connecting and powering people's lives. We are one of the largest wire and cable manufacturers in the world.

Our company serves customers through a network of manufacturing facilities in our core markets and has worldwide sales representation and distribution. We are dedicated to the production of high-quality aluminum, copper and fiber optic wire and cable and systems solutions for the energy, construction, industrial, specialty and communications sectors. With a vast portfolio of products to meet thousands of diverse application requirements, we continue to invest in research and development in order to maintain and extend our technology leadership by developing new materials, designing new products, and creating new solutions to meet tomorrow's market challenges.

In addition to our strong brand recognition and strengths in technology and manufacturing, General Cable is also competitive in such areas as distribution and logistics, marketing, sales and customer service. This combination enables us to better serve our customers globally and as they expand into new geographic markets.

**General Cable offers our customers all the strengths and value of a large company, but our people give us the agility and responsiveness of a small one. We service you globally and locally.**

General Cable | ONE COMPANY
CONNECTING THE WORLD

Visit our Website at
www.generalcable.com

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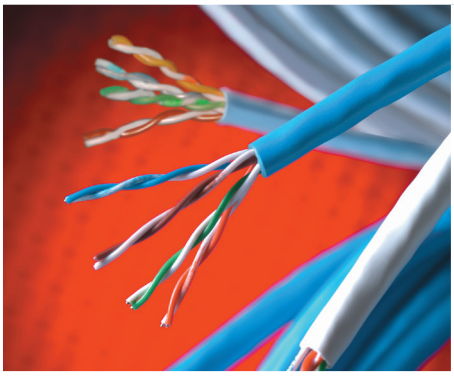
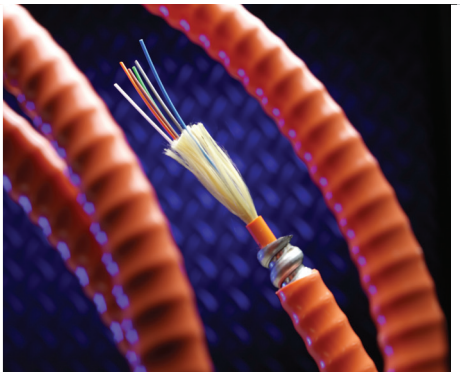
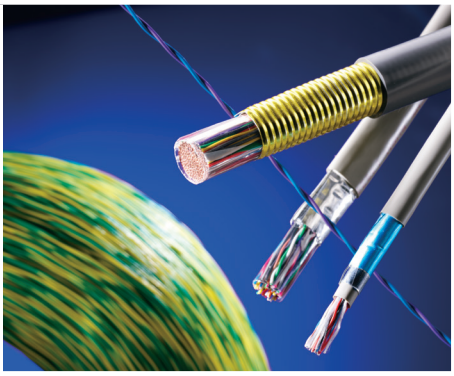
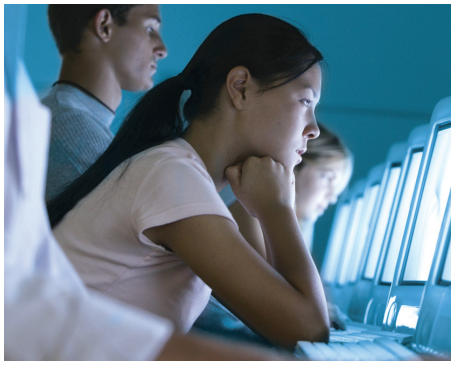
# GenAssurance℠ Product Warranty

## 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 products carry a standard one-year limited warranty. Additionally, a 25-year extended warranty protection plan is available for registered products.



### Standard Warranty

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, Electronics and Telecommunications (e.g., OSP and OVD) products.

### 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'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.**

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

## Extended Warranty

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

In addition to offering an extended 25-year limited warranty on Datacom and Electronics products, General Cable now offers the same extended limited warranty on OVD and OSP Telecom products. In order to become eligible for the Telecom extended GenAssurance warranty, the network project must use only General Cable Datacom copper and fiber for the structured cable portion (horizontal cable and inside backbone). Upon meeting this criteria, submit the completed registration documents to General Cable, and the extended GenAssurance warranty will be provided for the Telecom cable products.

## Datacom System Warranties

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

- Panduit — Premier Connectivity Partner

PanGen®
STRUCTURED CABLING SOLUTIONS

Registered PanGen and NetGen 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. Program information can be found at www.pangensolutions.com.

Additional connectivity partners are available.
Please reach out to your sales representative for more information.

General Cable

# Gen*SPEED*® Category 6A Cables



## Introducing the New Generation of Small Diameter Category 6A Cables

For more than a century and a half, General Cable has stayed ahead of the industry's changing needs with products that anticipate future performance requirements and provide best value in cabling solutions, which is why we are pleased to introduce the new generation of small diameter Gen*SPEED*® 10 Category 6A Solutions.

With a revolutionary design developed to find the perfect blend of product performance and product size, the new Gen*SPEED*® 10 Category 6A Cables offer the smallest diameter in the industry with enhanced performance and maneuverability. Its innovative technology and reduced size is perfect for migrating to a Cat 6A infrastructure, allowing for improved cable management, installation and handling when preparing your system for 10 Gigabit applications.

General Cable recognizes that application and performance needs may vary, which is why we offer you several copper 10 Gigabit solutions: Gen*SPEED*® 10 MTP™ Cat 6A 10 Gig Cable; Gen*SPEED*® 10 UTP Cat 6A 10 Gig Cable; Gen*SPEED*® 10,000 Shielded Cat 6A 10 Gig Cable; and Gen*SPEED*® Cat 6A OSP Cable.

General Cable's industry-leading 10 Gig solution, Gen*SPEED*® 10 MTP Category 6A Cable, provides superior alien crosstalk protection and EMI Immunity in the industry's smallest Cat 6A Cables. Without needing to be grounded, Gen*SPEED*® 10 MTP's Mosaic Variable Laser Cut Tape shields the cable from noise coming from external cable sources, which is referred to as alien crosstalk (PSANEXT and PSAACRF). Its improved design, lighter weight and increased flexibility translates to simplified cable handling and optimized cable management: less conduit, less cable tray and more cable in existing conduit and trays which lowers overall project costs.

Our second offering, Gen*SPEED*® 10 UTP Category 6A Cable, is a cost-effective, standard-compliant 10 Gig UTP featuring the smallest diameter in the industry with guaranteed performance that meets or exceeds all TIA Standards. Perfect for component upgrades, this cable is fully backwards-compatible to legacy infrastructures and prepares your system for future 10 Gigabit applications. Gen*SPEED*® 10 solves the one Gigabit limitation of Category 5e and Category 6 and is an ideal solution for bandwidth-intensive applications. Its smaller diameter allows for greater cable density, reducing cable management costs.

General Cable also offers two shielded options in Category 6A. Gen*SPEED*® 10,000 U/FTP is designed with individually shielded pairs for optimized isolation and immunity from external noise characterized by power sum alien crosstalk (PSANEXT) in cable bundles. Gen*SPEED*® 10 F/UTP is an overall shield design. 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, U/FTP and F/UTP cables are only effective if they are properly grounded. Gen*SPEED*® 10,000 Shielded cables offer you the ultimate PSANEXT protection.

Future-proof your cabling system today with Gen*SPEED*® Brand 10 Gig solutions from General Cable.

**Index** **Page**

# GenSPEED® Category 6A Quick Reference Guide

| JACKET COLOR | PACKAGE | GenSPEED® 10 MTP (p.3) | | GenSPEED® 10 UTP (p.9) | | GenSPEED® 10,000 U/FTP (p.11) | |
|---|---|---|---|---|---|---|---|
| | | CMR | CMP | CMR | CMP | CMR | CMP |
| **Blue** | | | | | | | |
| | Pull-Pac | 7143839 | 7141839 | 7143800 | 7141800 | | |
| | Spool-Pac® | | 7141879 | | 7141869 | | |
| | Spool | 7143849 | 7141849 | 7143819 | 7141819 | 7133786 | 7131786 |
| **White** | | | | | | | |
| | Pull-Pac | 7143840 | 7141840 | 7143801 | 7141801 | | |
| | Spool-Pac® | | 7141880 | | 7141870 | | |
| | Spool | 7143850 | 7141850 | 7143820 | 7141820 | 7133787 | 7131787 |
| **Yellow** | | | | | | | |
| | Pull-Pac | 7143842 | 7141842 | 7143802 | 7141802 | | |
| | Spool-Pac® | | 7141882 | | 7141871 | | |
| | Spool | 7143852 | 7141852 | 7143822 | 7141822 | 7133788 | 7131788 |
| **Gray** | | | | | | | |
| | Pull-Pac | 7143841 | 7141841 | 7143803 | 7141803 | | |
| | Spool-Pac® | | 7141881 | | 7141872 | | |
| | Spool | 7143851 | 7141851 | 7143821 | 7141821 | 7133789 | 7131789 |
| **Red** | | | | | | | |
| | Pull-Pac | 7143844 | 7141844 | 7143804 | 7141804 | | |
| | Spool-Pac® | | 7141884 | | 7141873 | | |
| | Spool | 7143854 | 7141854 | 7143824 | 7141824 | 7133790 | 7131790 |
| **Orange** | | | | | | | |
| | Pull-Pac | 7143846 | 7141846 | 7143805 | 7141805 | | |
| | Spool-Pac® | | 7141886 | | 7141874 | | |
| | Spool | 7143856 | 7141856 | 7143826 | 7141826 | 7133791 | 7131791 |
| **Green** | | | | | | | |
| | Pull-Pac | 7143843 | 7141843 | 7143806 | 7141806 | | |
| | Spool-Pac® | | 7141883 | | 7141875 | | |
| | Spool | 7143853 | 7141853 | 7143823 | 7141823 | 7133792 | 7131792 |
| **Black** | | | | | | | |
| | Pull-Pac | 7143848 | 7141848 | 7143807 | 7141807 | | |
| | Spool-Pac® | | 7141888 | | 7141876 | | |
| | Spool | 7143858 | 7141858 | 7143828 | 7141828 | 7133795 | 7131795 |
| **Pink** | | | | | | | |
| | Pull-Pac | 7143847 | 7141847 | 7143808 | 7141808 | | |
| | Spool-Pac® | | 7141887 | | 7141878 | | |
| | Spool | 7143857 | 7141857 | 7143827 | 7141827 | 7133793 | 7131793 |
| **Purple** | | | | | | | |
| | Pull-Pac | 7143845 | 7141845 | 7143809 | 7141809 | | |
| | Spool-Pac® | | 7141885 | | 7141877 | | |
| | Spool | 7143855 | 7141855 | 7143825 | 7141825 | 7133797 | 7131797 |

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

# GenSPEED® 10 MTP™ Gen5 Category 6A Cable

## Superior Alien Crosstalk Protection and EMI Immunity in the Industry's Smallest Full Channel, Component Compliant 6A Cable

### Features and Benefits

- Utilizes innovative Mosaic™ Variable Laser Cut Tape to provide superior protection against alien crosstalk. Guaranteed +8 dB over TIA 568.2-D Standard for both PSANEXT & PSAACRF.
- Variable laser cut pattern delivers maximum protection against EMI noise.
- Smaller cable diameter allows for greater cable density, reducing cable management costs.
- Simplified design and improved bend radius make it easer to strip, terminate and route, reducing installation time and expense.
- UL Listed CMP-LP 0.7A with certified performance for high-power PoE applications.
- CMP - UL verified with certified performance for 100W power over HDBaseT.
- CMP 105°C jacket rating provides greater protection against increased operating temperatures and for high-wattage applications.
- TRU-Mark® print legend contains footage markings from 1000' to 0'
- All GenSPEED products are made in the U.S.A.

### Applications

- IEEE 802.3: 10G BASE-T, 1000 BASE-T, 100 BASE-TX, 10 BASE-T, PoE, PoE+ and PoE++
- ANSI/TIA 854: 1000 BASE-TX
- Digital Video
- Broadband and Baseband Analog Video
- CDDI, Token Ring, ATM

### Standard Compliances

- ANSI/TIA 568.2-D
- NEC/CEC Type CMP (NFPA 262) for Plenum
- UL Listed CMP-LP 0.7A*
- UL 444
- UL 4299
- RoHS Compliant Directive 2011/65/EU
- ANSI/TIA 862 (Building Automation)
- ICEA S-116-732
- ISO/IEC 11801 Ed. 2.0 (Class $E_A$)

*0.7A is the ampacity rating of the cable, which equals to 140 watts using 50 volts over four pairs.

PoH™ Power over HDBaseT™ HDBT™

FEATURING MOSAIC™ VARIABLE LASER CUT TAPE


### CONSTRUCTION

**Conductors**
- 23 AWG solid bare annealed copper

**Insulation**
- Plenum: Fluoropolymer

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

**ANEXT Protection:**
- Mosaic™ Variable Laser Cut Tape

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

### PHYSICAL DATA

| | CMP (Plenum) |
|---|---|
| Nominal Cable Diameter (in) | 0.230 |
| Nominal Cable Weight (lbs/1000 ft) | 30 |
| Minimum Bend Radius (in) | 1 |
| Maximum Pulling Force (lbs) | 40 |
| Temperature Rating (°C) | |
| Installation: | 0 to +60 |
| Operation: | -20 to +105 |

### PART NUMBERS

| | CMP (Plenum) | |
|---|---|---|
| Jacket Color | Spool | Pull-Pac® |
| Blue | 7151849 | 7151839 |
| White | 7151850 | 7151840 |
| Gray | 7151851 | 7151841 |
| Yellow | 7151852 | 7151842 |
| Green | 7151853 | 7151843 |
| Red | 7151854 | 7151844 |
| Purple | 7151855 | 7151845 |
| Orange | 7151856 | 7151846 |
| Pink | 7151857 | 7151847 |
| Black | 7151858 | 7151848 |

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

General Cable

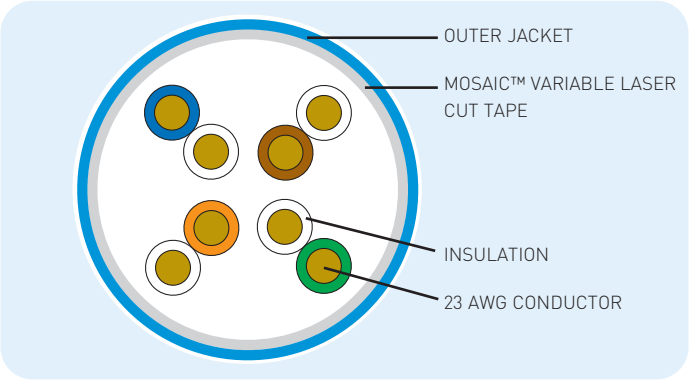
LISTED VERIFIED Made in U.S.A. RoHS Compliant Directive 2011/65/EU

## ELECTRICAL PERFORMANCE

| Frequency MHz | PSACR* (min) | ACR* (min) | Insertion Loss (min) | PSNEXT (min) | NEXT (min) | PSACRF (min) | ACRF (min) | Return Loss (min) | TCL (min) | PSANEXT (min) | | | PSAACRF (min) | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | General Cable Guaranteed | General Cable Guaranteed | TIA Guaranteed | TIA Guaranteed | TIA Guaranteed | TIA Guaranteed | TIA Guaranteed | TIA Guaranteed | TIA Guaranteed | TIA Guaranteed | General Cable Guaranteed | General Cable Typical | TIA Guaranteed | General Cable Guaranteed | General Cable Typical |
| **1** | 70.2 | 72.2 | 2.1 | 72.3 | 74.3 | 64.8 | 67.8 | 20.0 | 40.0 | 67.0 | 75.0 | 79.0 | 67.0 | 75.0 | 79.0 |
| **4** | 59.5 | 61.5 | 3.8 | 63.3 | 65.3 | 52.8 | 55.8 | 23.0 | 40.0 | 67.0 | 75.0 | 79.0 | 66.2 | 74.4 | 78.2 |
| **10** | 51.4 | 53.4 | 5.9 | 57.3 | 59.3 | 44.8 | 47.8 | 25.0 | 40.0 | 67.0 | 75.0 | 79.0 | 58.2 | 66.2 | 70.2 |
| **16** | 46.8 | 48.8 | 7.5 | 54.2 | 56.2 | 40.7 | 43.7 | 25.0 | 38.0 | 67.0 | 75.0 | 79.0 | 54.1 | 62.1 | 66.1 |
| **20** | 44.4 | 46.4 | 8.4 | 52.8 | 54.8 | 38.8 | 41.8 | 25.0 | 37.0 | 67.0 | 75.0 | 79.0 | 52.2 | 60.2 | 64.2 |
| **31.25** | 39.4 | 41.4 | 10.5 | 49.9 | 51.9 | 34.9 | 37.9 | 23.6 | 35.1 | 67.0 | 75.0 | 79.0 | 48.3 | 56.3 | 60.3 |
| **62.5** | 30.4 | 32.4 | 15.0 | 45.4 | 47.4 | 28.9 | 31.9 | 21.5 | 32.0 | 65.6 | 73.6 | 77.6 | 42.3 | 50.3 | 54.3 |
| **100** | 23.2 | 25.2 | 19.1 | 42.3 | 44.3 | 24.8 | 27.8 | 20.1 | 30.0 | 62.5 | 70.5 | 74.5 | 38.2 | 46.2 | 50.2 |
| **150** | 16.0 | 18.0 | 23.7 | 39.7 | 41.7 | 21.3 | 24.3 | 18.9 | 28.2 | 59.9 | 67.9 | 71.9 | 34.7 | 42.7 | 46.7 |
| **200** | 10.2 | 12.2 | 27.6 | 37.8 | 39.8 | 18.8 | 21.8 | 18.0 | 27.0 | 58.0 | 66.0 | 70.0 | 32.2 | 40.2 | 44.2 |
| **250** | 5.2 | 7.2 | 31.1 | 36.3 | 38.3 | 16.8 | 19.8 | 17.3 | 26.0 | 56.5 | 64.5 | 68.5 | 30.2 | 38.2 | 42.2 |
| **300** | 0.9 | 2.9 | 34.3 | 35.1 | 37.1 | 15.3 | 18.3 | 16.8 | 25.2 | 55.3 | 63.3 | 67.3 | 28.7 | 36.7 | 40.7 |
| **400** | — | — | 40.1 | 33.3 | 35.3 | 12.8 | 15.8 | 15.9 | 24.0 | 53.5 | 61.5 | 65.5 | 26.2 | 34.2 | 38.2 |
| **500** | — | — | 45.3 | 31.8 | 33.8 | 10.8 | 13.8 | 15.2 | 23.0 | 52.0 | 60.0 | 64.0 | 24.2 | 32.2 | 36.2 |

Note: Values are expressed in dB per 100 m (328 ft.) length @ 20°C.
*PSACR & ACR not specified in ANSI/TIA 568.2-D

## CROSS-SECTION



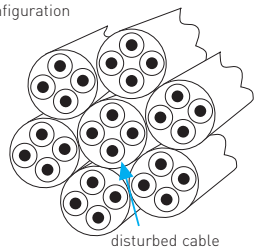

## ELECTRICAL CHARACTERISTICS

| | Max. | Nom. |
|---|---|---|
| **DC Resistance** Ohms/100 m (328 ft) @ 20°C | 9.38 | 7.00 |
| **DC Resistance Unbalanced** Individual Pair % | 4.00 | < 1 |
| **Delay Skew (Max)** ns/100 m | 45 | |
| **Nom. Velocity of Propagation** % Speed of Light | 70 | |
| **Characteristic Impedance** Frequency (f): 1-500 MHz | Ohms 100 ± 15 | |

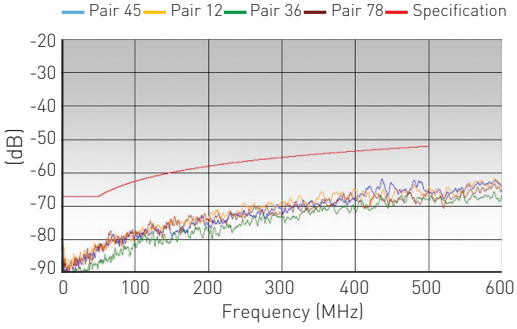
## 4 PAIR CABLES:

Bundles of 7 Test Results

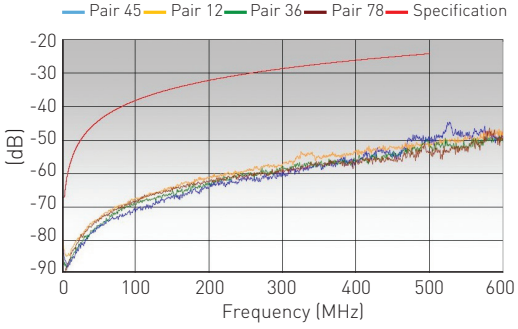
Six-around-one configuration




### PSANEXT




### PSAACRF




Data subject to change without notice.

# GenSPEED® 10 MTP™ Category 6A Cable

## Superior Alien Crosstalk Protection and EMI Immunity

### Features and Benefits

- Utilizes innovative Mosaic™ Variable Laser Cut Tape to provide superior protection against alien crosstalk. Guaranteed +8 dB over TIA 568.2-D Standard for both PSANEXT & PSAACRF.
- Variable laser cut pattern delivers maximum protection against EMI noise.
- Smaller cable diameter allows for greater cable density, reducing cable management costs.
- Simplified design and improved bend radius make it easer to strip, terminate and route, reducing installation time and expense.
- UL Listed CMP-LP 0.7A with certified performance for high-power PoE applications.
- UL Listed CMR-LP 0.5A with certified performance for high power PoE applications.
- CMP - UL verified with certified performance for 100W power over HDBaseT.
- CMP 105°C jacket rating provides greater protection against increased operating temperatures and for high-wattage applications.
- The internal separator optimizes internal pair geometry to yield superior electrical performance and maintain flexibility.
- TRU-Mark® print legend contains footage markings from 1000' to 0'
- All GenSPEED products are made in the U.S.A.

### Applications

- IEEE 802.3: 10G BASE-T, 1000 BASE-T, 100 BASE-TX, 10 BASE-T, PoE, PoE+ and PoE++
- ANSI/TIA 854: 1000 BASE-TX
- Digital Video
- Broadband and Baseband Analog Video
- CDDI, Token Ring, ATM

### Standard Compliances

- ANSI/TIA 568.2-D
- NEC/CEC Type CMP (NFPA 262) for Plenum
- NEC/CEC Type CMR (UL 1666) for Riser
- UL Listed CMP-LP 0.7A*
- UL Listed CMR-LP 0.5A
- UL 444
- UL 4299
- RoHS Compliant Directive 2011/65/EU
- ANSI/TIA 862 (Building Automation)
- ICEA S-116-732
- ISO/IEC 11801 Ed. 2.0 (Class $E_x$)

*0.7A is the ampacity rating of the cable, which equals to 140 watts using 50 volts over four pairs.

PoH™ Power over HDBaseT HDBT™

FEATURING MOSAIC™ VARIABLE LASER CUT TAPE

### CONSTRUCTION

**Conductors**
- 23 AWG solid bare annealed copper

**Insulation**
- Plenum: Fluoropolymer
- Non-Plenum: Thermoplastic

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

**Separator**
- Cross-Web

**ANEXT Protection:**
- Mosaic™ Variable Laser Cut Tape

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

### PHYSICAL DATA

| | CMP (Plenum) | CMR (Non-Plenum) |
|---|---|---|
| Nominal Cable Diameter (in) | 0.250 | 0.255 |
| Nominal Cable Weight (lbs/1000 ft) | 32 | 32 |
| Minimum Bend Radius (in) | 1 | 1.06 |
| Maximum Pulling Force (lbs) | 40 | 40 |
| Temperature Rating (°C) | | |
| Installation: | 0 to +60 | 0 to +60 |
| Operation: | -20 to +105 | -20 to +75 |

### PART NUMBERS

Standard packaging: 1000' Pull-Pac or spool. Spool-Pac by special order.

| | CMP (Plenum) | | CMR (Non-Plenum) | |
|---|---|---|---|---|
| Jacket Color | Spool | Pull-Pac® | Spool | Pull-Pac® |
| Blue | 7141849 | 7141839 | 7143849 | 7143839 |
| White | 7141850 | 7141840 | 7143850 | 7143840 |
| Gray | 7141851 | 7141841 | 7143851 | 7143841 |
| Yellow | 7141852 | 7141842 | 7143852 | 7143842 |
| Green | 7141853 | 7141843 | 7143853 | 7143843 |
| Red | 7141854 | 7141844 | 7143854 | 7143844 |
| Purple | 7141855 | 7141845 | 7143855 | 7143845 |
| Orange | 7141856 | 7141846 | 7143856 | 7143846 |
| Pink | 7141857 | 7141847 | 7143857 | 7143847 |
| Black | 7141858 | 7141848 | 7143858 | 7143848 |

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

General Cable

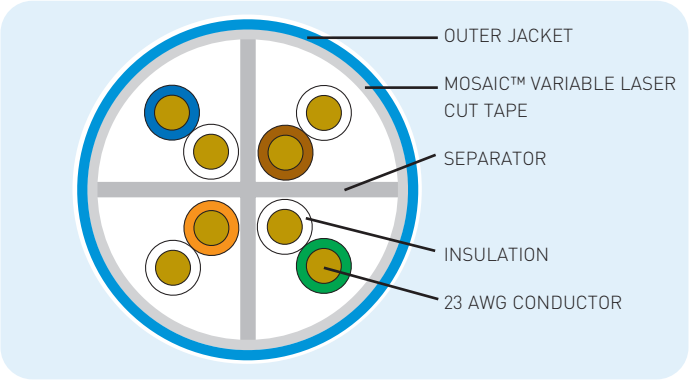
LISTED VERIFIED TIA 568-C.2 Made in U.S.A. RoHS Compliant Directive 2011/65/EU

## ELECTRICAL PERFORMANCE

| Frequency MHz | PSACR* (min) | ACR* (min) | Insertion Loss (min) | PSNEXT (min) | NEXT (min) | PSACRF (min) | ACRF (min) | Return Loss (min) | TCL (min) | PSANEXT (min) | | | PSAACRF (min) | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | General Cable Guaranteed | General Cable Guaranteed | TIA Guaranteed | TIA Guaranteed | TIA Guaranteed | TIA Guaranteed | TIA Guaranteed | TIA Guaranteed | TIA Guaranteed | TIA Guaranteed | General Cable Guaranteed | General Cable Typical | TIA Guaranteed | General Cable Guaranteed | General Cable Typical |
| **1** | 70.2 | 72.2 | 2.1 | 72.3 | 74.3 | 64.8 | 67.8 | 20.0 | 40.0 | 67.0 | 75.0 | 79.0 | 67.0 | 75.0 | 79.0 |
| **4** | 59.5 | 61.5 | 3.8 | 63.3 | 65.3 | 52.8 | 55.8 | 23.0 | 40.0 | 67.0 | 75.0 | 79.0 | 66.2 | 74.4 | 78.2 |
| **10** | 51.4 | 53.4 | 5.9 | 57.3 | 59.3 | 44.8 | 47.8 | 25.0 | 40.0 | 67.0 | 75.0 | 79.0 | 58.2 | 66.2 | 70.2 |
| **16** | 46.8 | 48.8 | 7.5 | 54.2 | 56.2 | 40.7 | 43.7 | 25.0 | 38.0 | 67.0 | 75.0 | 79.0 | 54.1 | 62.1 | 66.1 |
| **20** | 44.4 | 46.4 | 8.4 | 52.8 | 54.8 | 38.8 | 41.8 | 25.0 | 37.0 | 67.0 | 75.0 | 79.0 | 52.2 | 60.2 | 64.2 |
| **31.25** | 39.4 | 41.4 | 10.5 | 49.9 | 51.9 | 34.9 | 37.9 | 23.6 | 35.1 | 67.0 | 75.0 | 79.0 | 48.3 | 56.3 | 60.3 |
| **62.5** | 30.4 | 32.4 | 15.0 | 45.4 | 47.4 | 28.9 | 31.9 | 21.5 | 32.0 | 65.6 | 73.6 | 77.6 | 42.3 | 50.3 | 54.3 |
| **100** | 23.2 | 25.2 | 19.1 | 42.3 | 44.3 | 24.8 | 27.8 | 20.1 | 30.0 | 62.5 | 70.5 | 74.5 | 38.2 | 46.2 | 50.2 |
| **150** | 16.0 | 18.0 | 23.7 | 39.7 | 41.7 | 21.3 | 24.3 | 18.9 | 28.2 | 59.9 | 67.9 | 71.9 | 34.7 | 42.7 | 46.7 |
| **200** | 10.2 | 12.2 | 27.6 | 37.8 | 39.8 | 18.8 | 21.8 | 18.0 | 27.0 | 58.0 | 66.0 | 70.0 | 32.2 | 40.2 | 44.2 |
| **250** | 5.2 | 7.2 | 31.1 | 36.3 | 38.3 | 16.8 | 19.8 | 17.3 | 26.0 | 56.5 | 64.5 | 68.5 | 30.2 | 38.2 | 42.2 |
| **300** | 0.9 | 2.9 | 34.3 | 35.1 | 37.1 | 15.3 | 18.3 | 16.8 | 25.2 | 55.3 | 63.3 | 67.3 | 28.7 | 36.7 | 40.7 |
| **400** | — | — | 40.1 | 33.3 | 35.3 | 12.8 | 15.8 | 15.9 | 24.0 | 53.5 | 61.5 | 65.5 | 26.2 | 34.2 | 38.2 |
| **500** | — | — | 45.3 | 31.8 | 33.8 | 10.8 | 13.8 | 15.2 | 23.0 | 52.0 | 60.0 | 64.0 | 24.2 | 32.2 | 36.2 |

Note: Values are expressed in dB per 100 m (328 ft.) length @ 20°C.
*PSACR & ACR not specified in ANSI/TIA 568.2-D

## CROSS-SECTION



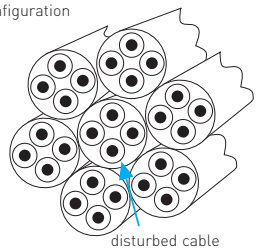

## ELECTRICAL CHARACTERISTICS

| | Max. | Nom. |
|---|---|---|
| **DC Resistance** Ohms/100 m (328 ft) @ 20°C | 9.38 | 7.00 |
| **DC Resistance Unbalanced** Individual Pair % | 4.00 | < 1 |
| **Delay Skew (Max)** ns/100 m | 45 | |
| **Nom. Velocity of Propagation** % Speed of Light | 70 | |
| **Characteristic Impedance** Frequency (f): 1-500 MHz | Ohms 100 ± 15 | |

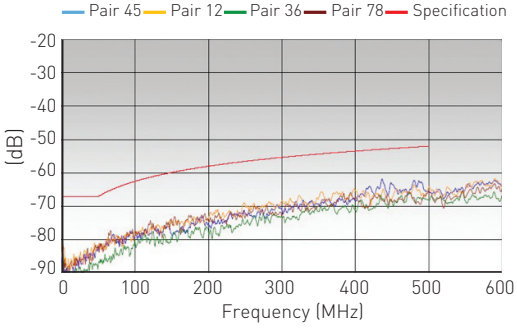
## 4 PAIR CABLES:

Bundles of 7 Test Results

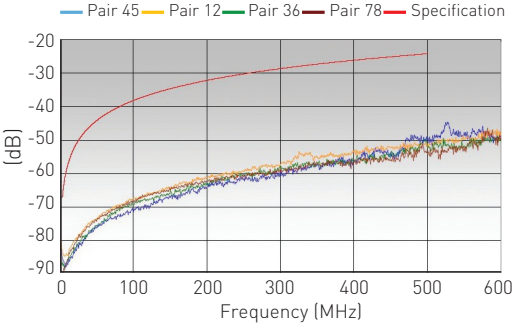
Six-around-one configuration




### PSANEXT




### PSAACRF




Data subject to change without notice.

# GenSPEED® 10 MTP™ with 17 FREE® Category 6A Cable

## An Unshielded 6A Cable with Superior Protection Against Alien Crosstalk

### Features and Benefits

- Lower smoke, less toxic, and halogen free
- More environmentally friendly
- Increased flexibility for easy installation
- 10 MTP™ unshielded-twisted pair (UTP) design provides industry-leading protection from external cable noise sources, also known as alien crosstalk. Guaranteed +8 dB over TIA 568.2-D Standard for both PSANEXT & PSAACRF
- Mosaic Crossblock™ is a thin metallic tape of segmented sections 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 Internal 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, 1000 BASE-T, 100 BASE-TX, 10 BASE-T, PoE, PoE+
- ANSI/TIA 854: 1000 BASE-TX
- Digital Video
- Broadband and Baseband Analog Video
- CDDI, Token Ring, ATM

### Standard Compliances

- ANSI/TIA 568.2-D
- NEC/CEC Type CMR (UL 1666)
- UL 444
- RoHS Compliant Directive 2011/65/EU
- ANSI/TIA 862 (Building Automation)
- ICEA S-116-732
- ISO/IEC 11801 Ed. 2.0 (Class EA)
- IEC 60754-1
- IEC 60754-2
- IEC 61034-1
- IEC 61034-2

Featuring mosaic CROSSBLOCK™

### CONSTRUCTION

**Conductors**
- 23 AWG solid bare annealed copper

**Insulation**
- Non-Plenum: Polyolefin

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

**Separator**
- Cross-web

**Jacket**
- Non-Plenum: Zero-Halogen Polyolefin

### PHYSICAL DATA

| | **CMR** (Non-Plenum) |
|---|---|
| Nominal Cable Diameter (in) | 0.318 |
| Nominal Cable Weight (lbs/1000 ft) | 47 |
| Minimum Bend Radius (in) | 1.25 |
| Maximum Pulling Force (lbs) | 40 |
| Temperature Rating (˚C) | |
| Installation: | 0 to +60 |
| Operation: | -20 to +75 |

### PART NUMBERS

Standard packaging: 1000' Spool

| | **Spool** |
|---|---|
| **Jacket Color** | **CMR** (Non-Plenum) |
| Blue | **7133849-17F** |
| White | **7133850-17F** |
| Yellow | **7133852-17F** |
| Gray | **7133851-17F** |
| Red | **7133854-17F** |
| Orange | **7133856-17F** |
| Green | **7133853-17F** |
| Black | **7133858-17F** |
| Pink | **7133857-17F** |
| Purple | **7133855-17F** |

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

Data subject to change without notice.



General Cable

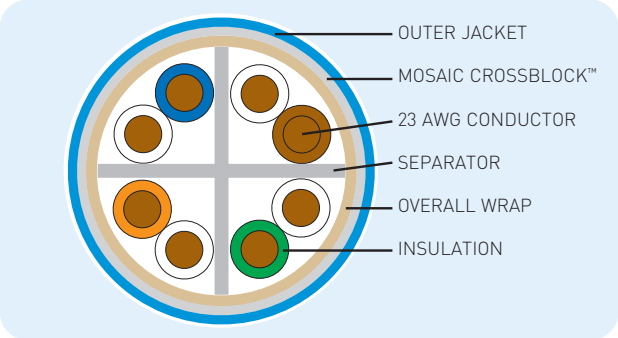
UL LISTED UL VERIFIED TIA 568-C.2 RoHS Compliant Directive 2011/65/EU Made in U.S.A.

## ELECTRICAL PERFORMANCE

| Frequency MHz | PSACR* (min) | ACR* (min) | Insertion Loss (min) | PSNEXT (min) | NEXT (min) | PSACRF (min) | ACRF (min) | Return Loss (min) | TCL (min) | PSANEXT (min) | | | PSAACRF (min) | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | General Cable Guaranteed | General Cable Guaranteed | TIA Guaranteed | TIA Guaranteed | TIA Guaranteed | TIA Guaranteed | TIA Guaranteed | TIA Guaranteed | TIA Guaranteed | TIA Guaranteed | General Cable Guaranteed | General Cable Typical | TIA Guaranteed | General Cable Guaranteed | General Cable Typical |
| **1** | 70.2 | 72.2 | 2.1 | 72.3 | 74.3 | 64.8 | 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 100 m (328 ft.) length @ 20°C.
*PSACR & ACR not specified in ANSI/TIA 568.2-D

## GenSPEED® 10 MTP™ with 17 FREE® CATEGORY 6A CROSS-SECTION

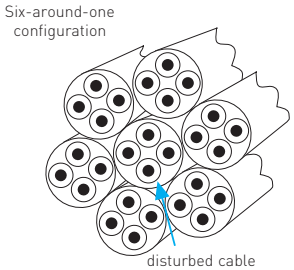



## ELECTRICAL CHARACTERISTICS

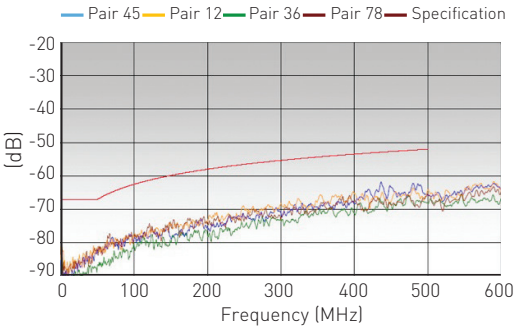
| | Max. | Nom. |
|---|---|---|
| **DC Resistance** Ohms/100 m (328 ft) @ 20°C | 9.38 | 7.00 |
| **DC Resistance Unbalanced** Individual Pair % | 4.00 | < 1 |
| **Delay Skew** ns/100 m | 45 | 35 |
| **Nom. Velocity of Propagation** % Speed of Light | 70 | |
| **Characteristic Impedance** Frequency (f): 1-500 MHz | Ohms 100 ± 15 | |

## 4 PAIR CABLES:

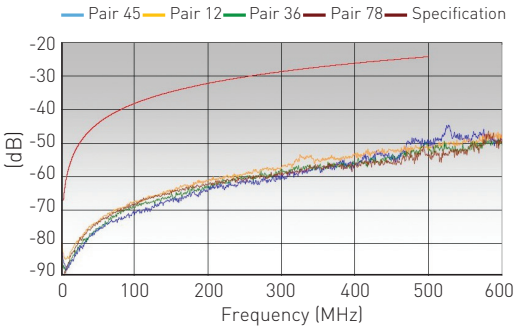
Bundles of 7 Test Results




### PSANEXT




### PSAACRF




GREEN INITIATIVE

**Going Green with General Cable**

General Cable has accelerated its environmental commitment, addressing its green alternative approach by identifying greener opportunities and promoting green cabling solutions wherever feasible. This includes promoting our existing green products, partnering with key customers in their green endeavors, identifying and providing resources for green product gaps, becoming a member of the U.S. Green Building Council (USGBC) and participating in collaborative ventures such as the Green Suppliers Network (GSN).

General Cable

# GenSPEED® 10 UTP Gen5 Category 6A Cable

## Industry's Smallest Full Channel, Component Compliant 6A Cable

### Features and Benefits

- Innovative 5th Generation design provides guaranteed performance using the industry's smallest 6A cable. Guaranteed +2 dB over TIA 568.2-D Standard for PSANEXT.
- Simplified design and improved bend radius make it easer to strip, terminate and route, reducing installation time and expense.
- UL Listed CMP-LP 0.7A with certified performance for high-power PoE applications.
- CMP - UL verified with certified performance for 100W power over HDBaseT.
- CMP 105°C jacket rating provides greater protection against increased operating temperatures and for high-wattage applications.
- TRU-Mark® print legend contains footage markings from 1000' to 0'
- All GenSPEED products are made in the U.S.A.

### Applications

- IEEE 802.3: 10G BASE-T, 1000 BASE-T, 100 BASE-TX, 10 BASE-T, PoE, PoE+ and PoE++
- ANSI/TIA 854: 1000 BASE-TX
- Digital Video
- Broadband and Baseband Analog Video
- CDDI, Token Ring, ATM

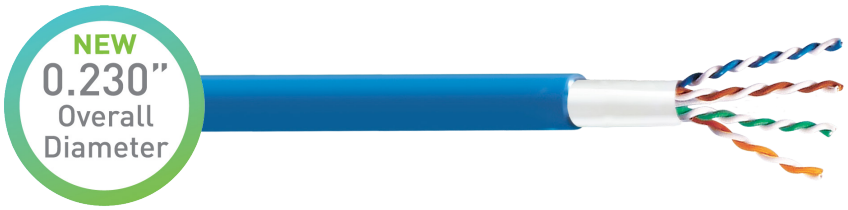
### Standard Compliances

- ANSI/TIA 568.2-D
- NEC/CEC Type CMP (NFPA 262) for Plenum
- UL Listed CMP-LP 0.7A*
- UL 444
- UL 4299
- RoHS Compliant Directive 2011/65/EU
- ANSI/TIA 862 (Building Automation)
- ICEA S-116-732
- ISO/IEC 11801 Ed. 2.0 (Class $E_x$)

*0.7A is the ampacity rating of the cable, which equals to 140 watts using 50 volts over four pairs.

PoH™ Power over HDBaseT

HDBT™




### CONSTRUCTION

**Conductors**
- 23 AWG solid bare annealed copper

**Insulation**
- Plenum: Fluoropolymer

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

**ANEXT Protection:**
- Encapsulated Isolated Wrap

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

### PHYSICAL DATA

| | CMP (Plenum) |
|---|---|
| Nominal Cable Diameter (in) | 0.230 |
| Nominal Cable Weight (lbs/1000 ft) | 30 |
| Minimum Bend Radius (in) | 1 |
| Maximum Pulling Force (lbs) | 40 |
| Temperature Rating (°C) | |
| Installation: | 0 to +60 |
| Operation: | -20 to +105 |

### PART NUMBERS

| | CMP (Plenum) | |
|---|---|---|
| Jacket Color | Spool | Pull-Pac® |
| Blue | 7151819 | 7151800 |
| White | 7151820 | 7151801 |
| Gray | 7151821 | 7151803 |
| Yellow | 7151822 | 7151802 |
| Green | 7151823 | 7151806 |
| Red | 7151824 | 7151804 |
| Purple | 7151825 | 7151809 |
| Orange | 7151826 | 7151805 |
| Pink | 7151827 | 7151808 |
| Black | 7151828 | 7151807 |

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

General Cable

LISTED VERIFIED

Made in U.S.A.

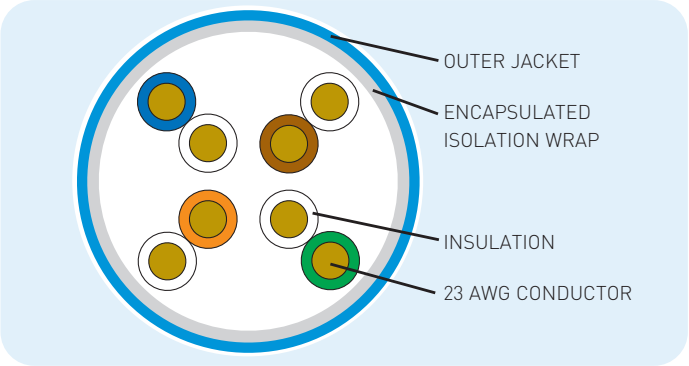
RoHS Compliant Directive 2011/65/EU

## ELECTRICAL PERFORMANCE

| Frequency MHz | PSACR** (min) | ACR** (min) | Insertion Loss (min) | PSNEXT (min) | NEXT (min) | PSACRF (min) | ACRF (min) | Return Loss (min) | TCL (min) | PSANEXT (min) | | PSAACRF (min) | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | TIA / GC Guaranteed | TIA / GC Guaranteed | TIA / GC Guaranteed | TIA / GC Guaranteed | TIA / GC Guaranteed | TIA / GC Guaranteed | TIA / GC Guaranteed | TIA / GC Guaranteed | TIA / GC Guaranteed | TIA | GC Guaranteed | TIA | GC Guaranteed |
| **1** | 70.2 | 72.2 | 2.1 | 72.3 | 74.3 | 64.8 | 67.8 | 20.0 | 40.0 | 67.0 | 69.0 | 67.0 | 69.0 |
| **4** | 59.5 | 61.5 | 3.8 | 63.3 | 65.3 | 52.8 | 55.8 | 23.0 | 40.0 | 67.0 | 69.0 | 66.2 | 68.2 |
| **10** | 51.4 | 53.4 | 5.9 | 57.3 | 59.3 | 44.8 | 47.8 | 25.0 | 40.0 | 67.0 | 69.0 | 58.2 | 60.2 |
| **16** | 46.8 | 48.8 | 7.5 | 54.2 | 56.2 | 40.7 | 43.7 | 25.0 | 38.0 | 67.0 | 69.0 | 54.1 | 56.1 |
| **20** | 44.4 | 46.4 | 8.4 | 52.8 | 54.8 | 38.8 | 41.8 | 25.0 | 37.0 | 67.0 | 69.0 | 52.2 | 54.2 |
| **31.25** | 39.4 | 41.4 | 10.5 | 49.9 | 51.9 | 34.9 | 37.9 | 23.6 | 35.1 | 67.0 | 69.0 | 48.3 | 50.3 |
| **62.5** | 30.4 | 32.4 | 15.0 | 45.4 | 47.4 | 28.9 | 31.9 | 21.5 | 32.0 | 65.6 | 67.6 | 42.3 | 44.3 |
| **100** | 23.2 | 25.2 | 19.1 | 42.3 | 44.3 | 24.8 | 27.8 | 20.1 | 30.0 | 62.5 | 64.5 | 38.2 | 40.2 |
| **150** | 16.0 | 18.0 | 23.7 | 39.7 | 41.7 | 21.3 | 24.3 | 18.9 | 28.2 | 59.9 | 61.9 | 34.7 | 36.7 |
| **200** | 10.2 | 12.2 | 27.6 | 37.8 | 39.8 | 18.8 | 21.8 | 18.0 | 27.0 | 58.0 | 60.0 | 32.2 | 34.2 |
| **250** | 5.2 | 7.2 | 31.1 | 36.3 | 38.3 | 16.8 | 19.8 | 17.3 | 26.0 | 56.5 | 58.5 | 30.2 | 32.2 |
| **300** | 0.9 | 2.9 | 34.3 | 35.1 | 37.1 | 15.3 | 18.3 | 16.8 | 25.2 | 55.3 | 57.3 | 28.7 | 30.7 |
| **400** | — | — | 40.1 | 33.3 | 35.3 | 12.8 | 15.8 | 15.9 | 24.0 | 53.5 | 55.5 | 26.2 | 28.2 |
| **500** | — | — | 45.3 | 31.8 | 33.8 | 10.8 | 13.8 | 15.2 | 23.0 | 52.0 | 54.0 | 24.2 | 26.2 |
| **600*** | — | — | 50.1* | 30.6* | 32.6* | 9.2* | 12.2* | 14.7* | 22.2* | — | 50.8* | — | 22.6* |
| **700*** | — | — | 54.5* | 29.6* | 31.6* | 7.9* | 10.9* | 14.2* | 21.5* | — | 49.8* | — | 21.3* |
| **750*** | — | — | 56.7* | 29.2* | 31.2* | 7.3* | 10.3* | 14.0* | 21.2* | — | 49.4* | — | 20.7* |

Note: Values are expressed in dB per 100 m (328 ft.) length @ 20˚C.
*Values are for reference only.
**PSACR & ACR not specified in ANSI/TIA 568.2-D

## CROSS-SECTION




## ELECTRICAL CHARACTERISTICS

| | Max. | Nom. |
|---|---|---|
| **DC Resistance** Ohms/100 m (328 ft) @ 20˚C | 9.38 | 7.50 |
| **DC Resistance Unbalanced** Individual Pair % | 4.00 | < 1 |
| **Delay Skew (Max)** ns/100 m | 45 | |
| **Nom. Velocity of Propagation** % Speed of Light | 70 | |
| **Characteristic Impedance** Frequency (f): 1-500 MHz | Ohms 100 ± 15 | |

# GenSPEED® 10,000 Category 6A U/FTP (STP) Cable

## An Individually Shielded 10 Gig Option for Peace of Mind

### Features and Benefits

- Individually pair shielded design allows for maximum pair separation, increasing key electrical performance parameters and providing EMI protection
- Typical positive PSACR beyond 500 MHz for increased available bandwidth
- Improved cable temperature rating (90°C Plenum, 75°C Riser) for greater protection against increased operating temperatures
- TRU-Mark® print legend contains footage markings from 1000' to 0'

### Applications

- IEEE 802.3: 10G BASE-T, 1000 BASE-T, 100 BASE-TX, 10 BASE-T, PoE, PoE+
- ANSI/TIA 854: 1000 BASE-TX
- Digital Video
- Broadband and Baseband Analog Video
- CDDI, Token Ring, ATM

### Standard Compliances

- ANSI/TIA 568.2-D
- NEC/CEC Type CMR (UL 1666) for Non-Plenum
- NEC/CEC Type CMP (NFPA 262) for Plenum
- UL 444
- RoHS Compliant Directive 2011/65/EU
- ANSI/TIA 862 (Building Automation)
- ICEA S-116-732
- ISO/IEC 11801 Ed. 2.0 (Class EA)

### CONSTRUCTION

**Conductors**
- 23 AWG solid bare annealed copper

**Insulation**
- Non-Plenum: Foamed 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

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

**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 | 0.295 |
| Nominal Cable Weight (lbs/1000 ft) | 43 | 47 |
| Minimum Bend Radius (in) | 2.44 | 2.36 |
| Maximum Pulling Force (lbs) | 32 | 32 |
| Temperature Rating (°C) | | |
| Installation: | 0 to +60 | 0 to +60 |
| Operation: | -20 to +75 | -20 to +90 |

### ELECTRICAL CHARACTERISTICS

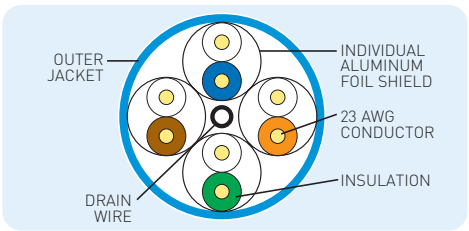
| | Max. | Nom. |
|---|---|---|
| **DC Resistance** Ohms/100 m (328 ft) @ 20°C | 9.38 | 7.00 |
| **DC Resistance Unbalance** Individual Pair % | 4.00 | < 1 |
| **Delay Skew** ns/100 m | 45 | 20 |
| **Nom. Velocity of Propagation** % Speed of Light | CMP: 78<br>CMR: 75 | |
| **Characteristic Impedance** Frequency (f): 1-600 MHz | Ohms<br>100 ± 15 | |

### ELECTRICAL PERFORMANCE

| Frequency MHz | Insertion Loss (max) | NEXT (min) | Return Loss (min) | PSANEXT (min) | PSAACRF (min) |
|---|---|---|---|---|---|
| **1** | 2.1 | 74.3 | 20.0 | 77.0 | 77.0 |
| **4** | 3.8 | 74.3 | 23.0 | 77.0 | 76.2 |
| **10** | 5.9 | 74.3 | 25.0 | 77.0 | 68.2 |
| **16** | 7.5 | 74.2 | 25.0 | 77.0 | 64.1 |
| **20** | 8.4 | 72.8 | 25.0 | 77.0 | 62.2 |
| **31.25** | 10.5 | 69.9 | 23.6 | 77.0 | 58.3 |
| **62.5** | 15.0 | 65.4 | 21.5 | 75.6 | 52.3 |
| **100** | 19.1 | 62.3 | 20.1 | 72.5 | 48.2 |
| **200** | 27.6 | 57.8 | 18.0 | 68.0 | 42.2 |
| **250** | 31.1 | 56.3 | 17.3 | 66.5 | 40.2 |
| **300** | 34.3 | 55.1 | 16.8 | 65.3 | 38.7 |
| **350** | 37.2 | 54.1 | 16.3 | 64.3 | 37.3 |
| **400** | 40.1 | 53.3 | 15.9 | 63.5 | 36.2 |
| **500** | 45.3 | 51.8 | 15.2 | 62.0 | 34.2 |
| **600** | 50.1 | 50.6 | 14.7 | 60.8 | 32.6 |

Note: Values are expressed in dB per 100 m (328 ft.) length @ 20°C.
*PSACR & ACR not specified in ANSI/TIA 568-C.2

### CROSS-SECTION




### PART NUMBERS

Standard packaging: 1000' Spool

| Jacket Color | Spool CMR (Non-Plenum) | Spool CMP (Plenum) |
|---|---|---|
| Blue | **7133786** | **7131786** |
| White | **7133787** | **7131787** |
| Yellow | **7133788** | **7131788** |
| Gray | **7133789** | **7131789** |

| Jacket Color | Spool CMR (Non-Plenum) | Spool CMP (Plenum) |
|---|---|---|
| Red | **7133790** | **7131790** |
| Orange | **7133791** | **7131791** |
| Green | **7133792** | **7131792** |
| Purple | **7133730** | **7133730** |

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

Data subject to change without notice.



General Cable

ETL VERIFIED · UL LISTED · ICEA · TIA 568-C.2 · Made in U.S.A. · RoHS Compliant Directive 2011/65/EU

# GenSPEED® 10 Category 6A F/UTP (ScTP) Cable

## An Enhanced Overall Shielded Cable

### CONSTRUCTION

**Conductors**
- 23 AWG solid bare annealed copper

**Insulation**
- Non-Plenum: Thermoplastic
- Plenum: Fluoropolymer

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

**Separator**
- Cross-Web

**Core Tape**
- Non-Plenum: Mylar
- Plenum: Mylar

**Drain Wire**
- 24 AWG solid tinned copper

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

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

### PHYSICAL DATA

| | **CMP** (Plenum) | **CMR** (Non-Plenum) |
|---|---|---|
| Nominal Cable Diameter (in) | 0.260 | 0.265 |
| Nominal Cable Weight (lbs/1000 ft) | 33 | 40 |
| Minimum Bend Radius (in) | 2.5 | 2.5 |
| Maximum Pulling Force (lbs) | 40 | 40 |
| Temperature Rating (°C) | | |
| Installation: | 0 to +60 | 0 to +60 |
| Operation: | -20 to +105 | -20 to +75 |

### ELECTRICAL PERFORMANCE

| Frequency MHz | Insertion Loss (min) | NEXT (min) | Return Loss (min) | PSANEXT (min) | | | PSAACRF (min) | | |
|---|---|---|---|---|---|---|---|---|---|
| | TIA Guaranteed | TIA Guaranteed | TIA Guaranteed | TIA Guaranteed | General Cable Guaranteed | General Cable Typical | TIA Guaranteed | General Cable Guaranteed | General Cable Typical |
| **1** | 2.1 | 74.3 | 20.0 | 67.0 | 73.0 | 85.0 | 67.0 | 73.0 | 85.0 |
| **4** | 3.8 | 65.3 | 23.0 | 67.0 | 73.0 | 85.0 | 66.2 | 72.2 | 84.2 |
| **10** | 5.9 | 59.3 | 25.0 | 67.0 | 73.0 | 85.0 | 58.2 | 64.2 | 76.2 |
| **16** | 7.5 | 56.2 | 25.0 | 67.0 | 73.0 | 85.0 | 54.1 | 60.1 | 72.1 |
| **20** | 8.4 | 54.8 | 25.0 | 67.0 | 73.0 | 85.0 | 52.2 | 58.2 | 70.2 |
| **31.25** | 10.5 | 51.9 | 23.6 | 67.0 | 73.0 | 85.0 | 48.3 | 54.3 | 66.3 |
| **62.5** | 15.0 | 47.4 | 21.5 | 65.6 | 71.6 | 83.6 | 42.3 | 48.3 | 60.3 |
| **100** | 19.1 | 44.3 | 20.1 | 62.5 | 68.5 | 80.5 | 38.2 | 44.2 | 56.2 |
| **150** | 23.7 | 41.7 | 18.9 | 59.9 | 65.9 | 77.9 | 34.7 | 40.7 | 52.7 |
| **200** | 27.6 | 39.8 | 18.0 | 58.0 | 64.0 | 76.0 | 32.2 | 38.2 | 50.2 |
| **250** | 31.1 | 38.3 | 17.3 | 56.5 | 62.5 | 74.5 | 30.2 | 36.2 | 48.2 |
| **300** | 34.3 | 37.1 | 16.8 | 55.3 | 61.3 | 73.3 | 28.7 | 34.7 | 46.7 |
| **400** | 40.1 | 35.3 | 15.9 | 53.5 | 59.5 | 71.5 | 26.2 | 32.2 | 44.2 |
| **500** | 45.3 | 33.8 | 15.2 | 52.0 | 58.0 | 70.0 | 24.2 | 30.2 | 42.2 |

Note: Values are expressed in dB per 100 m (328 ft.) length @ 20°C.
*PSACR & ACR not specified in ANSI/TIA 568.2-D

### PART NUMBERS

Standard packaging: 1000' Spool

| Jacket Color | Spool CMP (Plenum) | Spool CMR (Non-Plenum) |
|---|---|---|
| Blue | **7141586** | **7143586** |
| White | **7141587** | **7143587** |
| Yellow | **7141588** | **7143588** |
| Gray | **7141589** | **7143589** |

| Jacket Color | Spool CMP (Plenum) | Spool CMR (Non-Plenum) |
|---|---|---|
| Red | **7141590** | **7143590** |
| Orange | **7141591** | **7143591** |
| Green | **7141592** | **7143592** |
| Purple | **7141593** | **7143593** |

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

Data subject to change without notice.

### Features and Benefits

- An overall shielded or foiled-twisted pair (F/UTP) cable, requiring grounding and providing industry-leading protection from external cable noise sources, also known as alien crosstalk (PSANEXT and PSAACRF)
- CMP 105C jacket rating provides consistent performance in a wide range of operating environments.
- UL Listed CMP-LP 0.7A with certified performance for high power PoE applications
- The internal 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, 1000 BASE-T, 100 BASE-TX, 10 BASE-T, PoE, PoE++
- ANSI/ TIA 854: 1000 BASE-TX
- Digital Video
- Broadband and Baseband Analog Video
- CDDI, Token Ring, ATM

### Standard Compliances

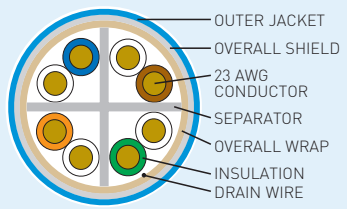
- ANSI/TIA 568.2-D
- NEC/CEC Type CMR (UL 1666) for Non-Plenum
- NEC/CEC Type CMP (NFPA 262) for Plenum
- UL Listed CMR-LP (0.5A) for Non-Plenum*
- UL Listed CMP-LP (0.7A) for Plenum**
- UL 444
- RoHS Compliant Directive 2011/65/EU
- ANSI/TIA 862 (Building Automation)
- ICEA S-116-732
- ISO/IEC 11801 Ed. 2.0 (Class $E_A$)

*0.5A is the ampacity rating of the cable, which equates to 100 watts using 50 volts over four pairs.
**0.7A is the ampacity rating of the cable, which equates to 140 watts using 50 volts over four pairs.

### ELECTRICAL CHARACTERISTICS

| | Max. | Nom. |
|---|---|---|
| **DC Resistance** Ohms/100 m (328 ft) @ 20°C | 9.38 | 7.00 |
| **DC Resistance Unbalance** Individual Pair % | 4.00 | < 1 |
| **Nom. Velocity of Propagation** % Speed of Light | 70 | |
| **Characteristic Impedance** Frequency (f): 1-500 MHz | Ohms 100 ± 15 | |

### CROSS-SECTION




Made in U.S.A. LISTED VERIFIED RoHS Compliant Directive 2011/65/EU

General Cable

# GenSPEED® 10 Category 6A Interlock Armored Cable

## Standards-Compliant

### 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
- Made in U.S.A.

### Applications

- IEEE 802.3: 10G BASE-T, 100 BASE-TX, 10 BASE-T, PoE, PoE++
- ANSI/TIA 854: 1000 BASE-TX
- CDDI, Token Ring, ATM
- Digital Video
- Broadband and Baseband Analog Video
- Indoor applications only

### Standard Compliances

- ANSI/TIA 568.2-D
- NEC/CEC Type CMP (NFPA 262) for Plenum
- UL 444
- RoHS Compliant Directive 2011/65/EU
- ANSI/TIA 862 (Building Automation)
- ICEA S-116-732
- ISO/IEC 11801 Ed. 2.0 (Class $E_A$)

### CONSTRUCTION

**Conductors**
- 23 AWG solid bare annealed copper

**Insulation**
- 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

**Separator**
- Cross-web

**Jacket**
- Flame-Retardant PVC

### PHYSICAL DATA

| | CMP (Plenum) |
|---|---|
| | 1 Cable |
| Nominal Cable Diameter (in) | 0.450 |
| Nominal Cable Weight (lbs/1000 ft) | 86.4 |
| Minimum Bend Radius (in) | 5.40 |
| Maximum Pulling Force (lbs) | 32 |
| Temperature Rating (°C) | |
| Installation: | 0 to +60 |
| Operation: | -20 to +90 |

### ELECTRICAL CHARACTERISTICS

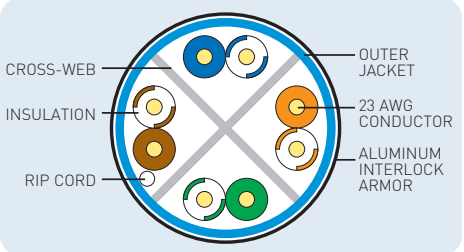
| | Max. | Nom. |
|---|---|---|
| **DC Resistance** Ohms/100 m (328 ft) @ 20°C | 9.38 | 7.20 |
| **DC Resistance Unbalance** Individual Pair % | 4.00 | < 1 |
| **Delay Skew (Max)** ns/100 m | 45 | |
| **Nom. Velocity of Propagation** % Speed of Light | 70 | |
| **Characteristic Impedance** Frequency (f): 1-250 MHz | Ohms 100 ± 15 | |

### ELECTRICAL PERFORMANCE

| Frequency MHz | Insertion Loss (max) | NEXT (min) | Return Loss (min) | PSANEXT (min) | PSAACRF (min) |
|---|---|---|---|---|---|
| **1** | 2.1 | 74.3 | 20.0 | 67.0 | 67.0 |
| **4** | 3.8 | 65.3 | 23.0 | 67.0 | 66.2 |
| **10** | 5.9 | 59.3 | 25.0 | 67.0 | 58.2 |
| **16** | 7.5 | 56.2 | 25.0 | 67.0 | 54.1 |
| **20** | 8.4 | 54.8 | 25.0 | 67.0 | 52.2 |
| **31.25** | 10.5 | 51.9 | 23.6 | 67.0 | 48.3 |
| **62.5** | 15.0 | 47.4 | 21.5 | 65.6 | 42.3 |
| **100** | 19.1 | 44.3 | 20.1 | 62.5 | 38.2 |
| **150** | 23.7 | 41.7 | 18.9 | 59.9 | 34.7 |
| **200** | 27.6 | 39.8 | 18.0 | 58.0 | 32.2 |
| **250** | 31.1 | 38.3 | 17.3 | 56.5 | 30.2 |
| **350** | 37.2 | 36.1 | 16.3 | 55.3 | 28.7 |
| **400** | 40.1 | 35.3 | 15.9 | 53.5 | 26.2 |
| **500** | 45.3 | 33.8 | 15.2 | 52.0 | 24.2 |

Note: Values are expressed in dB per 100 m (328 ft.) length @ 20°C. Results beyond 350 MHz for reference only.
*PSACR & ACR not specified in ANSI/TIA 568.2-D

### CROSS-SECTION




### PART NUMBERS

| Color | Part Number | Reel |
|---|---|---|
| Blue | **9141300** | 1000' reel |

Data subject to change without notice.

# GenSPEED® Category 6A Outside Plant Cable

## Standards-Compliant

### CONSTRUCTION

**Conductors**
- 23 AWG solid bare annealed copper

**Insulation**
- High Density Polyethylene

**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

**Jacket**
- UV- and Abrasion-Resistant Polyethylene

### PHYSICAL DATA

| | |
|---|---|
| Nominal Cable Diameter (in) | 0.365 |
| Nominal Cable Weight (lbs/1000 ft) | 47.3 |
| Minimum Bend Radius (in) | 1.5 |
| Maximum Pulling Force (lbs) | 40 |
| Temperature Rating (°C) | |
| Installation: | -30 to +60 |
| Operation: | -45 to +80 |

### ELECTRICAL PERFORMANCE

| Frequency MHz | Insertion Loss (min) | NEXT (min) | Return Loss (min) | PSANEXT (min) | PSAACRF (min) |
|---|---|---|---|---|---|
| | TIA Guaranteed | TIA Guaranteed | TIA Guaranteed | TIA Guaranteed | TIA Guaranteed |
| **1** | 2.1 | 74.3 | 20.0 | 67.0 | 67.0 |
| **4** | 3.8 | 65.3 | 23.0 | 67.0 | 66.2 |
| **10** | 5.9 | 59.3 | 25.0 | 67.0 | 58.2 |
| **16** | 7.5 | 56.2 | 25.0 | 67.0 | 54.1 |
| **20** | 8.4 | 54.8 | 25.0 | 67.0 | 52.2 |
| **31.25** | 10.5 | 51.9 | 23.6 | 67.0 | 48.3 |
| **62.5** | 15.0 | 47.4 | 21.5 | 65.6 | 42.3 |
| **100** | 19.1 | 44.3 | 20.1 | 62.5 | 38.2 |
| **150** | 23.7 | 41.7 | 18.9 | 59.9 | 34.7 |
| **200** | 27.6 | 39.8 | 18.0 | 58.0 | 32.2 |
| **250** | 31.1 | 38.3 | 17.3 | 56.5 | 30.2 |
| **300** | 34.3 | 37.1 | 16.8 | 55.3 | 28.7 |
| **400** | 40.1 | 35.3 | 15.9 | 53.5 | 26.2 |
| **500** | 45.3 | 33.8 | 15.2 | 52.0 | 24.2 |

Note: Values are expressed in dB per 100 m (328 ft.) length @ 20°C.
*PSACR & ACR not specified in ANSI/TIA 568.2-D

### PART NUMBER

Standard packaging: 1000' Reel

| Jacket Color | Reel |
|---|---|
| Black | **8136100** |

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

### 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'

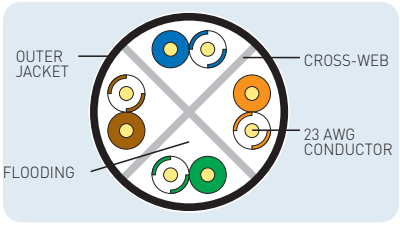
### Applications

- IEEE 802.3: 10G BASE-T, 1000 BASE-T, 100 BASE-TX, 10 BASE-T, PoE, PoE+
- ANSI/TIA 854: 1000 BASE-TX
- CDDI, Token Ring, ATM
- Digital Video
- Broadband and Baseband Analog Video
- Duct and conduit installations

### Standard Compliances

- ANSI/TIA 568.2-D
- UL 444
- RoHS Compliant Directive 2011/65/EU
- ANSI/TIA 862 (Building Automation)
- ICEA S-116-732
- ICEA S-102-700
- ANSI/NEMA WC 66
- ISO/IEC 11801 Ed. 2.0 (Class E)
- Telcordia (Bellcore) Specification GR-421-CORE Water Penetration Requirement

### CROSS-SECTION




### ELECTRICAL CHARACTERISTICS

| | |
|---|---|
| **DC Resistance** (max) Ohms/100 m (328 ft) @ 20°C | 9.38 |
| **DC Resistance Unbalance** (max) Individual Pair % | 4.00 |
| **Delay Skew** (max) ns/100 m | 45 |
| **Nom. Velocity of Propagation** % Speed of Light | 70 |
| **Characteristic Impedance** Frequency (f): 1-500 MHz | Ohms 100 ± 15 |

Data subject to change without notice.

Made in U.S.A.

TIA 568-C.2

RoHS Compliant Directive 2011/65/EU

General Cable

# GenSPEED® 10 UTP Indoor/Outdoor Plenum Category 6A Cable

## Features
- TRU-Mark® print legend contains footage markings from 1000' to 0'
- Made in U.S.A.

## Electrical Characteristics
- Outer jacket ensures electrical performance during long term water submersion
- Dry core construction for cleaner termination
- UL Listed CMP-LP 0.8A with certified performance for high-power PoE applications

## Applications
- Intended for installation in below-grade conduit, duct, and other wet environments
- Cable jacket must remain unabraded to avoid water ingress. Water must not be allowed to ingress into the cable ends
- IEEE 802.3: 10G BASE-T, 1000 BASE-T
- 100 BASE-TX, 10 BASE-T, PoE, PoE+
- ANSI/TIA 854: 1000 BASE-TX
- Digital Video
- Broadband and Baseband Analog Video
- CDDI, Token Ring, ATM

## Standard Compliances
- NEC/CEC Type CMP (NFPA 262) for plenum
- UL Listed SUN RES (720 hour) Rated to be installed permanently outdoor in direct sunlight
- ANSI/TIA 568.2-D
- RoHS Compliant Directive 2011/65/EU
- UL 444
- ANSI/TIA 862 (Building Automation)
- ICEA S-116-732
- ISO/IEC 11801 Ed. 2.0 (Class EA)
- Wet Location rated per UL 83
- UL Listed CMP-LP 0.8A - equivalent to 160 watts using 50 volts over four pairs
- Red List Free

## CONSTRUCTION

**Conductors**
- 23 AWG solid bare annealed copper

**Insulation**
- Fluoropolymer

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

**Separator**
- Cross-web

**Core Wrap**
- Polyester encapsulated isolation core wrap

**Jacket**
- Fluoropolymer

## PHYSICAL DATA

| | |
|---|---|
| Nominal Cable Diameter (in) | 0.260 |
| Nominal Cable Weight (lbs/1000 ft) | 33 |
| Minimum Bend Radius (in) | 2.1 |
| Maximum Pulling Force (lbs) | 40 |
| Temperature Rating (°C) | |
| Installation: | 0 to +60 |
| Operation: | -20 to +125 |

## PART NUMBERS

Standard packaging: 1000' Spool

| Jacket Color | CMP (Plenum) |
|---|---|
| Black | **7141007** |
| White | **7141001** |

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

DATA SHEET 7522d, 02/9/21



General Cable

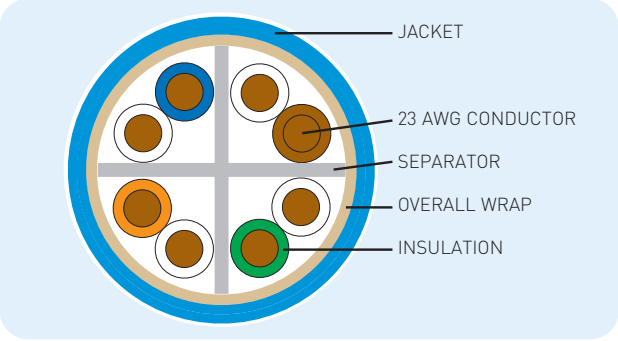
LISTED VERIFIED RoHS Compliant Directive 2011/65/EU Made in U.S.A.

## ELECTRICAL PERFORMANCE

| Frequency MHz | PSACR** (min) | ACR** (min) | Insertion Loss (min) | PSNEXT (min) | NEXT (min) | PSACRF (min) | ACRF (min) | Return Loss (min) | TCL (min) | PSANEXT (min) | | PSAACRF (min) | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | TIA / GC Guaranteed | TIA / GC Guaranteed | TIA / GC Guaranteed | TIA / GC Guaranteed | TIA / GC Guaranteed | TIA / GC Guaranteed | TIA / GC Guaranteed | TIA / GC Guaranteed | TIA / GC Guaranteed | TIA Guaranteed | GC Guaranteed | TIA Guaranteed | GC Guaranteed |
| **1** | 70.2 | 72.2 | 2.1 | 72.3 | 74.3 | 64.8 | 67.8 | 20.0 | 40.0 | 67.0 | 69.0 | 67.0 | 69.0 |
| **4** | 59.5 | 61.5 | 3.8 | 63.3 | 65.3 | 52.8 | 55.8 | 23.0 | 40.0 | 67.0 | 69.0 | 66.2 | 68.2 |
| **10** | 51.4 | 53.4 | 5.9 | 57.3 | 59.3 | 44.8 | 47.8 | 25.0 | 40.0 | 67.0 | 69.0 | 58.2 | 60.2 |
| **16** | 46.8 | 48.8 | 7.5 | 54.2 | 56.2 | 40.7 | 43.7 | 25.0 | 38.0 | 67.0 | 69.0 | 54.1 | 56.1 |
| **20** | 44.4 | 46.4 | 8.4 | 52.8 | 54.8 | 38.8 | 41.8 | 25.0 | 37.0 | 67.0 | 69.0 | 52.2 | 54.2 |
| **31.25** | 39.4 | 41.4 | 10.5 | 49.9 | 51.9 | 34.9 | 37.9 | 23.6 | 35.1 | 67.0 | 69.0 | 48.3 | 50.3 |
| **62.5** | 30.4 | 32.4 | 15.0 | 45.4 | 47.4 | 28.9 | 31.9 | 21.5 | 32.0 | 65.6 | 67.6 | 42.3 | 44.3 |
| **100** | 23.2 | 25.2 | 19.1 | 42.3 | 44.3 | 24.8 | 27.8 | 20.1 | 30.0 | 62.5 | 64.5 | 38.2 | 40.2 |
| **150** | 16.0 | 18.0 | 23.7 | 39.7 | 41.7 | 21.3 | 24.3 | 18.9 | 28.2 | 59.9 | 61.9 | 34.7 | 36.7 |
| **200** | 10.2 | 12.2 | 27.6 | 37.8 | 39.8 | 18.8 | 21.8 | 18.0 | 27.0 | 58.0 | 60.0 | 32.2 | 34.2 |
| **250** | 5.2 | 7.2 | 31.1 | 36.3 | 38.3 | 16.8 | 19.8 | 17.3 | 26.0 | 56.5 | 58.5 | 30.2 | 32.2 |
| **300** | 0.9 | 2.9 | 34.3 | 35.1 | 37.1 | 15.3 | 18.3 | 16.8 | 25.2 | 55.3 | 57.3 | 28.7 | 30.7 |
| **400** | — | — | 40.1 | 33.3 | 35.3 | 12.8 | 15.8 | 15.9 | 24.0 | 53.5 | 55.5 | 26.2 | 28.2 |
| **500** | — | — | 45.3 | 31.8 | 33.8 | 10.8 | 13.8 | 15.2 | 23.0 | 52.0 | 54.0 | 24.2 | 26.2 |
| **600*** | — | — | 50.1* | 30.6* | 32.6* | 9.2* | 12.2* | 14.7* | 22.2* | — | 50.8* | — | 22.6* |
| **700*** | — | — | 54.5* | 29.6* | 31.6* | 7.9* | 10.9* | 14.2* | 21.5* | — | 49.8* | — | 21.3* |
| **750*** | — | — | 56.7* | 29.2* | 31.2* | 7.3* | 10.3* | 14.0* | 21.2* | — | 49.4* | — | 20.7* |

Note: Values are expressed in dB per 100 m (328 ft.) length @ 20˚C.
*Values are for reference only.
**PSACR & ACR not specified in ANSI/TIA 568.2-D

## TYPICAL GenSPEED® 10 CATEGORY 6A INDOOR/OUTDOOR CROSS-SECTION




## ELECTRICAL CHARACTERISTICS

| | Max. | Nom. |
|---|---|---|
| **DC Resistance** Ohms/100 m (328 ft) @ 20˚C | 9.38 | 7.00 |
| **DC Resistance Unbalanced** Individual Pair % | 4.00 | < 1 |
| **Delay Skew** ns/100 m | 45 | |
| **Nom. Velocity of Propagation** % Speed of Light | 70 | |
| **Characteristic Impedance** Frequency (f): 1-500 MHz | Ohms 100 ± 15 | |

# Gen*SPEED*® Category 6 Cables



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. Also ask your General Cable representative about our 17 FREE™ line of riser-rated Gen*SPEED* 6 cables, which may qualify for LEED credit from the U.S. Green Building Council.

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 568.2-D 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 | PREMIUM Category 6 GenSPEED® 6500 Premium (p. 19) CMR | PREMIUM Category 6 GenSPEED® 6500 Premium (p. 19) CMP | ENHANCED Category 6 GenSPEED® 6000 Enhanced (p. 21) CMR | ENHANCED Category 6 GenSPEED® 6000 Enhanced (p. 21) CMP | STANDARD Category 6 GenSPEED® 6 (p. 23) CMR | STANDARD Category 6 GenSPEED® 6 (p. 23) CMP |
|---|---|---|---|---|---|---|---|
| **Blue** | | | | | | | |
| | Pull-Pac® | | | 7133900 | 7131900 | 7133800 | 7131800 |
| | Spool-Pac® | 7133930 | 7131930 | 7133940 | 7131940 | 7133840 | 7131840 |
| | Spool | 7133970 | 7131970 | 7133960 | 7131960 | 7133860 | 7131860 |
| **White** | | | | | | | |
| | Pull-Pac® | | | 7133901 | 7131901 | 7133801 | 7131801 |
| | Spool-Pac® | 7133931 | 7131931 | 7133941 | 7131941 | 7133841 | 7131841 |
| | Spool | 7133971 | 7131971 | 7133961 | 7131961 | 7133861 | 7131861 |
| **Yellow** | | | | | | | |
| | Pull-Pac® | | | 7133902 | 7131902 | 7133802 | 7131802 |
| | Spool-Pac® | 7133932 | 7131932 | 7133942 | 7131942 | 7133842 | 7131842 |
| | Spool | 7133972 | 7131972 | 7133962 | 7131962 | 7133862 | 7131862 |
| **Gray** | | | | | | | |
| | Pull-Pac® | | | 7133903 | 7131903 | 7133803 | 7131803 |
| | Spool-Pac® | 7133933 | 7131933 | 7133943 | 7131943 | 7133843 | 7131843 |
| | Spool | 7133973 | 7131973 | 7133963 | 7131963 | 7133863 | 7131863 |
| **Red** | | | | | | | |
| | Pull-Pac® | | | 7133904 | 7131904 | 7133804 | 7131804 |
| | Spool-Pac® | 7133934 | 7131934 | 7133944 | 7131944 | 7133844 | 7131844 |
| | Spool | 7133974 | 7131974 | 7133964 | 7131964 | 7133864 | 7131864 |
| **Orange** | | | | | | | |
| | Pull-Pac® | | | 7133905 | 7131905 | 7133805 | 7131805 |
| | Spool-Pac® | 7133935 | 7131935 | 7133945 | 7131945 | 7133845 | 7131845 |
| | Spool | 7133975 | 7131975 | 7133965 | 7131965 | 7133865 | 7131865 |
| **Green** | | | | | | | |
| | Pull-Pac® | | | 7133906 | 7131906 | 7133806 | 7131806 |
| | Spool-Pac® | 7133936 | 7131936 | 7133946 | 7131946 | 7133846 | 7131846 |
| | Spool | 7133976 | 7131976 | 7133966 | 7131966 | 7133866 | 7131866 |
| **Black** | | | | | | | |
| | Pull-Pac® | | | 7133907 | 7131907 | 7133807 | 7131807 |
| | Spool-Pac® | 7133937 | 7131937 | 7133947 | 7131947 | 7133847 | 7131847 |
| | Spool | 7133977 | 7131977 | 7133967 | 7131967 | 7133867 | 7131867 |
| **Pink** | | | | | | | |
| | Pull-Pac® | | | 7133908 | 7131908 | 7133808 | 7131808 |
| | Spool-Pac® | 7133938 | 7131938 | 7133948 | 7131948 | 7133848 | 7131848 |
| | Spool | 7133978 | 7131978 | 7133968 | 7131968 | 7133868 | 7131868 |
| **Purple** | | | | | | | |
| | Pull-Pac® | | | 7133909 | 7131909 | 7133809 | 7131809 |
| | Spool-Pac® | 7133939 | 7131939 | 7133959 | 7131959 | 7133859 | 7131859 |
| | Spool | 7133979 | 7131979 | 7133969 | 7131969 | 7133869 | 7131869 |

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.

# GenSPEED® 6500 Premium Category 6 Cable

## Signal Strength and Power

### 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
- Improved cable temperature rating (90°C Plenum, 75°C Riser) for greater protection against increased operating temperatures and for high-wattage applications
- TRU-Mark® print legend contains footage markings from 1000' to 0'
- Third-party verified for guaranteed performance

### Applications

- IEEE 802.3: 1000 BASE-T, 100 BASE-TX, 10 BASE-T, PoE, PoE+
- ANSI/TIA 854: 1000 BASE-TX
- CDDI, Token Ring, ATM
- Digital Video
- Broadband and Baseband Analog Video

### Standard Compliances

- ANSI/TIA 568.2-D
- NEC/CEC Type CMR (UL 1666) for Non-Plenum
- NEC/CEC Type CMP (NFPA 262) for Plenum
- UL Listed CMR-LP (0.5A) for Non-Plenum*
- UL Listed CMP-LP (0.6A) for Plenum**
- UL 444
- RoHS Compliant Directive 2011/65/EU
- ANSI/TIA 862 (Building Automation)
- ICEA S-116-732
- ICEA S-102-700
- ISO/IEC 11801 Ed. 2.0 (Class E)

*0.5A is the ampacity rating of the cable, which equates to 100 watts using 50 volts over four pairs.
**0.6A is the ampacity rating of the cable, which equates to 120 watts using 50 volts over four pairs.

### 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 | 0.255 |
| Nominal Cable Weight (lbs/1000 ft) | 32 | 31 |
| 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 +90 |

### 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.



General Cable

LISTED VERIFIED RoHS Compliant Directive 2011/65/EU Made in U.S.A.

## ELECTRICAL PERFORMANCE

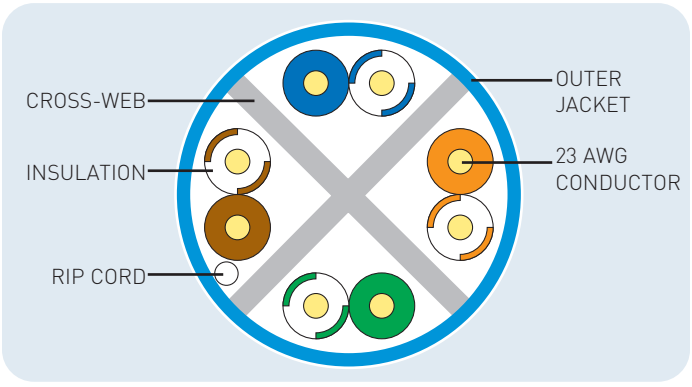
| Frequency MHz | PSACR* (min) | ACR* (min) | Insertion Loss (max) | | PSNEXT (min) | | NEXT (min) | |
|---|---|---|---|---|---|---|---|---|
| | Guaranteed | Guaranteed | TIA 568.2-D | Guaranteed | TIA 568.2-D | Guaranteed | TIA 568.2-D | Guaranteed |
| **1** | 77.4 | 79.4 | 2.0 | 1.9 | 72.3 | 79.3 | 74.3 | 81.3 |
| **4** | 66.8 | 68.8 | 3.8 | 3.5 | 63.3 | 70.3 | 65.3 | 72.3 |
| **10** | 58.8 | 60.8 | 6.0 | 5.5 | 57.3 | 64.3 | 59.3 | 66.3 |
| **16** | 54.2 | 56.2 | 7.6 | 7.0 | 54.2 | 61.2 | 56.2 | 63.2 |
| **20** | 51.9 | 53.9 | 8.5 | 7.8 | 52.8 | 59.8 | 54.8 | 61.8 |
| **31.25** | 47.0 | 49.0 | 10.7 | 9.9 | 49.9 | 56.9 | 51.9 | 58.9 |
| **62.5** | 38.0 | 40.0 | 15.4 | 14.3 | 45.4 | 52.4 | 47.4 | 54.4 |
| **100** | 30.8 | 32.8 | 19.8 | 18.5 | 42.3 | 49.3 | 44.3 | 51.3 |
| **200** | 17.5 | 19.5 | 29.0 | 27.2 | 37.8 | 44.8 | 39.8 | 46.8 |
| **250** | 12.4 | 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 100 m (328 ft.) length @ 20°C. Results beyond 350 MHz for reference only.
*PSACR & ACR not specified in ANSI/TIA 568.2-D

| Frequency MHz | PSACRF (min) | | ACRF (min) | | Return Loss (min) | | TCL (min) | | ELTCTL (min) | |
|---|---|---|---|---|---|---|---|---|---|---|
| | TIA 568.2-D | Guaranteed | TIA 568.2-D | Guaranteed | TIA 568.2-D | Guaranteed | TIA 568.2-D | Guaranteed | TIA 568.2-D | 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 | 55.8 | 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 | 41.8 | 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 |
| **62.5** | 28.9 | 34.9 | 31.9 | 37.9 | 21.5 | 23.5 | 32.0 | 32.0 | — | 5.0 |
| **100** | 24.8 | 30.8 | 27.8 | 33.8 | 20.1 | 22.1 | 30.0 | 30.0 | — | 5.0 |
| **200** | 18.8 | 24.8 | 21.8 | 27.8 | 18.0 | 20.0 | 27.0 | 27.0 | — | 5.0 |
| **250** | 16.8 | 23.8 | 19.8 | 26.8 | 17.3 | 19.3 | 26.0 | 26.0 | — | 5.0 |
| **350** | — | 19.9 | — | 22.9 | — | 18.3 | — | — | — | — |
| **500** | — | 16.8 | — | 19.8 | — | 17.2 | — | — | — | — |

Note: Values are expressed in dB per 100 m (328 ft.) length @ 20°C. Results beyond 350 MHz for reference only.

## GenSPEED® 6500 PREMIUM CATEGORY 6 CROSS-SECTION




## ELECTRICAL CHARACTERISTICS

| | Max. | Nom. |
|---|---|---|
| **DC Resistance** Ohms/100 m (328 ft) @ 20°C | 9.38 | 6.50 |
| **DC Resistance Unbalance** Individual Pair % | 4.00 | < 1 |
| **Delay Skew** ns/100 m | 45 | 35 |
| **Nom. Velocity of Propagation** % Speed of Light | CMP: 72<br>CMR: 70 | |
| **Characteristic Impedance** Frequency (f): 1-500 MHz | Ohms<br>100 ± 15 | |

Data subject to change without notice.

# GenSPEED® 6000 Enhanced Category 6 Cable

## Optimally Balanced Enhanced Performance

### Features and Benefits

- Innovative cross-web design allowing for maximum pair separation, increasing key electrical performance parameters
- Performance guaranteed to 350 MHz
- Improved cable temperature rating (90°C Plenum, 75°C Riser) for greater protection against increased operating temperatures
- TRU-Mark® print legend contains footage markings from 1000' to 0'
- Third-party verified for guaranteed performance

### Applications

- IEEE 802.3: 1000 BASE-T, 100 BASE-TX, 10 BASE-T, PoE, PoE+
- ANSI/TIA 854: 1000 BASE-TX
- CDDI, Token Ring, ATM
- Digital Video
- Broadband and Baseband Analog Video

### Standard Compliances

- ANSI/TIA 568.2-D
- NEC/CEC Type CMR (UL 1666) for Non-Plenum
- NEC/CEC Type CMP (NFPA 262) for Plenum
- UL Listed CMP-LP (0.5A) for Plenum*
- UL 444
- RoHS Compliant Directive 2011/65/EU
- ANSI/TIA 862 (Building Automation)
- ICEA S-116-732
- ICEA S-102-700
- ISO/IEC 11801 Ed. 2.0 (Class E)

*0.5A is the ampacity rating of the cable, which equates to 100 watts using 50 volts over four pairs.

### 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) | 0.240 | 0.230 |
| Nominal Cable Weight (lbs/1000 ft) | 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 +90 |

### 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.

## ELECTRICAL PERFORMANCE

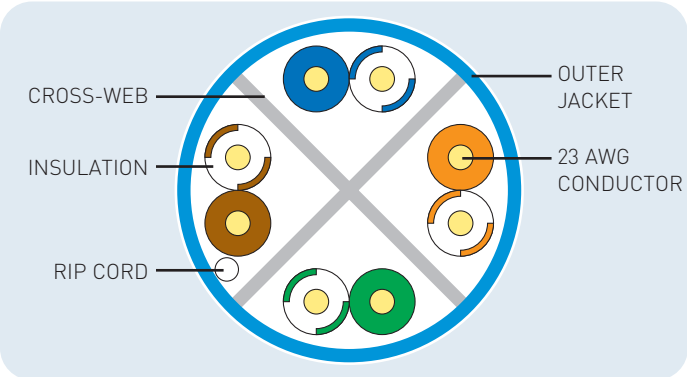
| Frequency MHz | PSACR* (min) | ACR* (min) | Insertion Loss (max) | | PSNEXT (min) | | NEXT (min) | |
|---|---|---|---|---|---|---|---|---|
| | Guaranteed | Guaranteed | TIA 568.2-D | Guaranteed | TIA 568.2-D | Guaranteed | TIA 568.2-D | Guaranteed |
| **1** | 75.3 | 77.3 | 2.0 | 2.0 | 72.3 | 77.3 | 74.3 | 79.3 |
| **4** | 64.5 | 66.5 | 3.8 | 3.8 | 63.3 | 68.3 | 65.3 | 70.3 |
| **10** | 56.4 | 58.4 | 6.0 | 5.9 | 57.3 | 62.3 | 59.3 | 64.3 |
| **16** | 51.7 | 53.8 | 7.6 | 7.5 | 54.2 | 59.3 | 56.2 | 61.3 |
| **20** | 49.4 | 51.4 | 8.5 | 8.4 | 52.8 | 57.8 | 54.8 | 59.8 |
| **31.25** | 44.3 | 46.3 | 10.7 | 10.6 | 49.9 | 54.9 | 51.9 | 56.9 |
| **62.5** | 35.1 | 37.1 | 15.4 | 15.3 | 45.4 | 50.4 | 47.4 | 52.4 |
| **100** | 27.6 | 29.6 | 19.8 | 19.7 | 42.3 | 47.3 | 44.3 | 49.3 |
| **150** | 20.0 | 22.0 | 24.7 | 24.7 | 39.7 | 44.7 | 41.7 | 46.7 |
| **200** | 13.8 | 15.8 | 29.0 | 29.0 | 37.8 | 42.8 | 39.8 | 44.8 |
| **250** | 8.7 | 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 100 m (328 ft.) length @ 20˚C. Results beyond 350 MHz for reference only.
*PSACR & ACR not specified in ANSI/TIA 568.2-D

| Frequency MHz | PSACRF (min) | | ACRF (min) | | Return Loss (min) | | TCL (min) | | ELTCTL (min) | |
|---|---|---|---|---|---|---|---|---|---|---|
| | TIA 568.2-D | Guaranteed | TIA 568.2-D | Guaranteed | TIA 568.2-D | Guaranteed | TIA 568.2-D | Guaranteed | TIA 568.2-D | 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 |
| **62.5** | 28.9 | 33.8 | 31.8 | 36.8 | 21.5 | 23.5 | 32.0 | 32.0 | — | 5.0 |
| **100** | 24.8 | 29.8 | 27.8 | 32.8 | 20.1 | 22.5 | 30.0 | 30.0 | — | 5.0 |
| **150** | 21.3 | 26.3 | 24.3 | 29.3 | 18.9 | 21.6 | 28.2 | 28.2 | — | 5.0 |
| **200** | 18.8 | 23.8 | 21.8 | 26.8 | 18.0 | 21.0 | 27.0 | 27.0 | — | 5.0 |
| **250** | 16.8 | 21.8 | 19.8 | 24.8 | 17.3 | 20.5 | 26.0 | 26.0 | — | 5.0 |
| **350** | — | 18.9 | — | 21.9 | — | 19.8 | — | — | — | — |
| **500** | — | 15.8 | — | 18.8 | — | 19.0 | — | — | — | — |

Note: Values are expressed in dB per 100 m (328 ft.) length @ 20˚C. Results beyond 350 MHz for reference only.

## GenSPEED® 6000 ENHANCED CATEGORY 6 CROSS-SECTION




## ELECTRICAL CHARACTERISTICS

| | Max. | Nom. |
|---|---|---|
| **DC Resistance** Ohms/100 m (328 ft) @ 20˚C | 9.38 | 7.20 |
| **DC Resistance Unbalance** Individual Pair % | 4.00 | < 1 |
| **Delay Skew** ns/100 m | 45 | CMP: 30<br>CMR: 40 |
| **Nom. Velocity of Propagation** % Speed of Light | CMP: 70<br>CMR: 68 | |
| **Characteristic Impedance** Frequency (f): 1-500 MHz | Ohms<br>100 ± 15 | |

Data subject to change without notice.

# GenSPEED® 6 Category 6 Cable (23 AWG)

## Standards-Compliant Extended Frequency

### Features and Benefits

- Unique separator design engineered for consistent electrical performance
- TRU-Mark® print legend contains footage markings from 1000' to 0'
- Third-party verified for guaranteed performance
- Made in U.S.A.

### Applications

- IEEE 802.3: 1000 BASE-T, 100 BASE-TX, 10 BASE-T, PoE, PoE+
- ANSI/TIA 854: 1000 BASE-TX
- CDDI, Token Ring, ATM
- Digital Video
- Broadband and Baseband Analog Video

### Standard Compliances

- ANSI/TIA 568.2-D
- NEC/CEC Type CMR (UL 1666) for Non-Plenum
- NEC/CEC Type CMP (NFPA 262) for Plenum
- UL 444
- RoHS Compliant Directive 2011/65/EU
- ANSI/TIA 862 (Building Automation)
- ICEA S-116-732
- ISO/IEC 11801 Ed. 2.0 (Class E)

Last Revision: December 2022

### CONSTRUCTION

**Conductors**
- 23 AWG solid bare annealed copper

**Insulation**
- Non-Plenum: Polyolefin
- Plenum: FEP, Polyolefin

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

**Separator**
- Divider

**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) | 0.220 | 0.205 |
| Nominal Cable Weight (lbs/1000 ft) | 24 | 25 |
| 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** | **7131100** | **7133840** | **7131140** | **7133860** | **7131160** |
| White | **7133801** | **7131101** | **7133841** | **7131141** | **7133861** | **7131161** |
| Yellow | **7133802** | **7131102** | **7133842** | **7131142** | **7133862** | **7131162** |
| Gray | **7133803** | **7131103** | **7133843** | **7131143** | **7133863** | **7131163** |
| Red | **7133804** | **7131104** | **7133844** | **7131144** | **7133864** | **7131164** |
| Orange | **7133805** | **7131105** | **7133845** | **7131145** | **7133865** | **7131165** |
| Green | **7133806** | **7131106** | **7133846** | **7131146** | **7133866** | **7131166** |
| Black | **7133807** | **7131107** | **7133847** | **7131147** | **7133867** | **7131167** |
| Pink | **7133808** | **7131108** | **7133848** | **7131148** | **7133868** | **7131168** |
| Purple | **7133809** | **7131109** | **7133859** | **7131159** | **7133869** | **7131169** |

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.

Prysmian Group

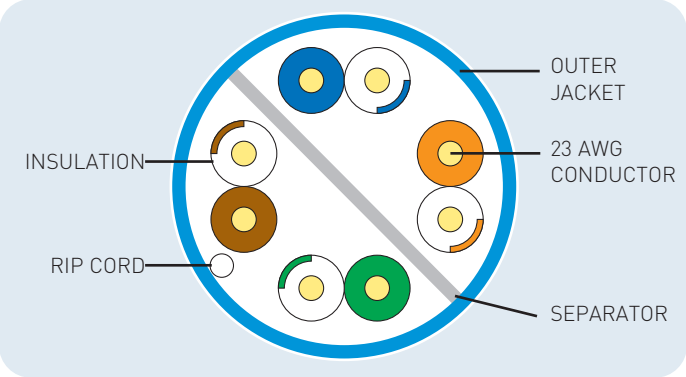
LISTED VERIFIED RoHS Compliant Directive 2011/65/EU Made in U.S.A.

## ELECTRICAL PERFORMANCE

| Frequency MHz | PSACR* (min) | ACR* (min) | Insertion Loss (max) | PSNEXT (min) | NEXT (min) | PSACRF (min) | ACRF (min) | Return Loss (min) | TCL (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 | – |
| **62.5** | 29.9 | 32.0 | 15.4 | 45.4 | 47.4 | 28.9 | 31.8 | 21.5 | 32.0 | – |
| **100** | 22.5 | 24.5 | 19.8 | 42.3 | 44.3 | 24.8 | 27.8 | 20.1 | 30.0 | – |
| **150** | 14.9 | 16.9 | 24.7 | 39.7 | 41.7 | 21.3 | 24.3 | 18.9 | 28.2 | – |
| **200** | 8.8 | 10.8 | 29.0 | 37.8 | 39.8 | 18.8 | 21.8 | 18.0 | 27.0 | – |
| **250** | 3.5 | 5.5 | 32.8 | 36.3 | 38.3 | 16.8 | 19.8 | 17.3 | 26.0 | – |
| **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 100 m (328 ft.) length @ 20°C. Results beyond 250 MHz are for reference only.
*PSACR & ACR not specified in ANSI/TIA 568.2-D

## GenSPEED® 6 CATEGORY 6 (23 AWG) CROSS-SECTION




Note: Plenum cable, Pair 2/Orange, is non-striped

## ELECTRICAL CHARACTERISTICS

| | Max. | Nom. |
|---|---|---|
| **DC Resistance** Ohms/100 m (328 ft) @ 20°C | 9.38 | 7.50 |
| **DC Resistance Unbalance** Individual Pair % | 4.00 | < 1 |
| **Nom. Velocity of Propagation** % Speed of Light | CMP: 70 CMR: 68 | |
| **Characteristic Impedance** Frequency (f): 1-250 MHz | Ohms 100 ± 15 | |



Prysmian Group

# GenSPEED® 6 EfficienCMAX® Category 6 Cable (22 AWG)

## Standards-Compliant with Enhanced PoE Performance

### Features and Benefits

- Large-gauge conductors for reduced heat generation, higher maximum current-carrying capabilities and improved attenuation performance
- Improved cable temperature rating (90°C) for greater protection against increased operating temperatures and for high-wattage applications
- Unique separator 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, 100 BASE-TX, 10 BASE-T, PoE, PoE+
- ANSI/TIA 854: 1000 BASE-TX
- CDDI, Token Ring, ATM
- Digital Video
- Broadband and Baseband Analog Video
- Supports the growth of higher-wattage devices (IT/IP, IoT, and IoE)
- Compatible with new higher-speed, higher-power USB 3.1 SuperSpeed

### Standard Compliances

- ANSI/TIA 568.2-D
- TIA TSB-184:2009
- NEC/CEC Type CMP (NFPA 262) for Plenum
- UL Listed CMP-LP (0.6A)*
- UL 444
- RoHS Compliant Directive 2011/65/EU
- ANSI/TIA 862 (Building Automation)
- ICEA S-116-732
- ICEA S-102-700
- ISO/IEC 11801 Ed. 2.0 (Class E)

*0.6A is the ampacity rating of the cable, which equates to 120 watts using 50 volts over four pairs.

FEATURING EFFICIENC MAX technology to support PoE applications

### CONSTRUCTION

**Conductors**
- 22 AWG solid bare annealed copper

**Insulation**
- Fluoropolymer

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

**Separator**
- Divider

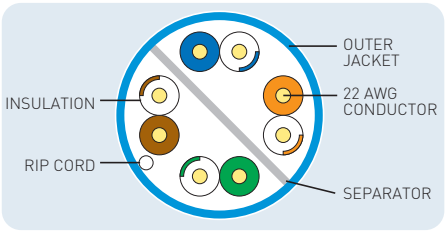
**Rip Cord**
- Applied longitudinally under jacket

**Jacket**
- Low-Smoke, Flame-Retardant PVC

| PHYSICAL DATA | CMP (Plenum) |
|---|---|
| Nominal Cable Diameter (in) | 0.240 |
| Nominal Cable Weight (lbs/1000 ft) | 29 |
| Minimum Bend Radius (in) | 1.0 |
| Maximum Pulling Force (lbs) | 32 |
| Temperature Rating (°C) | |
| Installation: | 0 to +60 |
| Operation: | -20 to +90 |

### ELECTRICAL CHARACTERISTICS

| | Max. | Nom. |
|---|---|---|
| **DC Resistance** Ohms/100 m (328 ft) @ 20°C | 9.38 | 6.50 |
| **DC Resistance Unbalance** Individual Pair % | 4.00 | < 1 |
| **Delay Skew** ns/100 m | 45 | 35 |
| **Nom. Velocity of Propagation** % Speed of Light | 74 | |
| **Characteristic Impedance** Frequency (f): 1-350 MHz | Ohms 100 ± 15 | |




### ELECTRICAL PERFORMANCE

| Frequency MHz | Insertion Loss (max) | NEXT (min) | Return Loss (min) |
|---|---|---|---|
| **1** | 1.9 | 74.3 | 20.0 |
| **4** | 3.5 | 65.3 | 23.0 |
| **10** | 5.5 | 59.3 | 25.0 |
| **16** | 7.0 | 56.2 | 25.0 |
| **20** | 7.9 | 54.8 | 25.0 |
| **31.25** | 9.9 | 51.9 | 23.6 |
| **62.5** | 14.3 | 47.4 | 21.5 |
| **100** | 18.4 | 44.3 | 20.1 |
| **150** | 23.0 | 41.7 | 18.9 |
| **200** | 27.0 | 39.8 | 18.0 |
| **250** | 30.6 | 38.3 | 17.3 |
| **350** | 37.0 | 36.1 | 16.3 |
| **400** | 40.0 | 35.3 | 15.9 |
| **500** | 45.5 | 33.8 | 15.2 |

Note: Values are expressed in dB per 100 m (328 ft.) length @ 20°C. Results beyond 350 MHz are for reference only.

### PART NUMBERS

Standard packaging: 1000' Pull-Pac® II

| Jacket Color | Pull-Pac® II CMP (Plenum) |
|---|---|
| Blue | **8131800** |
| White | **8131801** |
| Yellow | **8131802** |
| Gray | **8131803** |
| Red | **8131804** |
| Orange | **8131805** |
| Green | **8131806** |

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 minimumorder quantities. Other colors available.

Data subject to change without notice.



General Cable

UL LISTED UL VERIFIED ICEA TIA RoHS Compliant Directive 2011/65/EU Made in U.S.A.

# GenSPEED® 6 with 17 FREE® Category 6 Cable

## Standards-Compliant


### CONSTRUCTION

**Conductors**
- 23 AWG solid bare annealed copper

**Insulation**
- 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

**Separator**
- Divider

**Jacket**
- Non-Plenum: Zero-Halogen Polyolefin

### PHYSICAL DATA

| | **CMR** (Non-Plenum) |
|---|---|
| Nominal Cable Diameter (in) | 0.230 |
| Nominal Cable Weight (lbs/1000 ft) | 27 |
| Minimum Bend Radius (in) | 1.0 |
| Maximum Pulling Force (lbs) | 32 |
| Temperature Rating (°C) | |
| Installation: | -10 to +60 |
| Operation: | -20 to +75 |

### ELECTRICAL PERFORMANCE

| **Frequency** MHz | **Insertion Loss** (max) | **NEXT** (min) | **Return Loss** (min) |
|---|---|---|---|
| **1** | 2.0 | 74.3 | 20.0 |
| **4** | 3.8 | 65.3 | 23.0 |
| **10** | 6.0 | 59.3 | 25.0 |
| **16** | 7.6 | 56.2 | 25.0 |
| **20** | 8.5 | 54.8 | 25.0 |
| **31.25** | 10.7 | 51.9 | 23.6 |
| **62.5** | 15.4 | 47.4 | 21.5 |
| **100** | 19.8 | 44.3 | 20.1 |
| **150** | 24.7 | 41.7 | 18.9 |
| **200** | 29.0 | 39.8 | 18.0 |
| **250** | 32.8 | 38.3 | 17.3 |
| **350** | 39.8 | 36.1 | 16.3 |
| **400** | 43.0 | 35.3 | 15.9 |
| **500** | 48.9 | 33.8 | 15.2 |

Note: Values are expressed in dB per 100 m (328 ft.) length @ 20°C. Results beyond 350 MHz are for reference only.

### PART NUMBERS

Standard packaging: 1000' Pull-Pac® II with environmentally friendly packaging.
Spool-Pac® and Spool by special order.

| **Jacket Color** | **Pull-Pac® II** **CMR** (Non-Plenum) | **Spool-Pac®** **CMR** (Non-Plenum) | **Spool** **CMR** (Non-Plenum) |
|---|---|---|---|
| Blue | **7133800-17F** | **7133840-17F** | **7133860-17F** |
| White | **7133801-17F** | **7133841-17F** | **7133861-17F** |
| Yellow | **7133802-17F** | **7133842-17F** | **7133862-17F** |
| Gray | **7133803-17F** | **7133843-17F** | **7133863-17F** |
| Red | **7133804-17F** | **7133844-17F** | **7133864-17F** |
| Orange | **7133805-17F** | **7133845-17F** | **7133865-17F** |
| Green | **7133806-17F** | **7133846-17F** | **7133866-17F** |
| Black | **7133807-17F** | **7133847-17F** | **7133867-17F** |
| Purple | **7133809-17F** | **7133859-17F** | **7133869-17F** |

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.

### Features and Benefits

- No halogens
- Less toxic
- More environmentally friendly
- Increased flexibility for easy installation
- 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, 100 BASE-TX, 10 BASE-T, PoE, PoE+
- ANSI/TIA 854: 1000 BASE-TX
- CDDI, Token Ring, ATM
- Digital Video
- Broadband and Baseband Analog Video

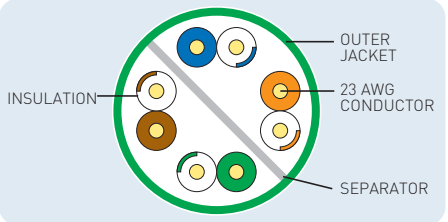
### Standard Compliances

- ANSI/TIA 568.2-D
- NEC/CEC Type CMR (UL 1666) for Non-Plenum
- UL 444
- RoHS Compliant Directive 2011/65/EU
- ANSI/TIA 862 (Building Automation)
- ICEA S-116-732
- ICEA S-102-700
- ISO/IEC 11801 Ed. 2.0 (Class E)
- IEC 60754-1
- IEC 60754-2
- IEC 61034-2

### ELECTRICAL CHARACTERISTICS

| | **Max.** | **Nom.** |
|---|---|---|
| **DC Resistance** Ohms/100 m (328 ft) @ 20°C | 9.38 | 7.50 |
| **DC Resistance Unbalance** Individual Pair % | 4.00 | < 1 |
| **Delay Skew** ns/100 m | 45 | 30 |
| **Nom. Velocity of Propagation** % Speed of Light | 68 | |
| **Characteristic Impedance** Frequency (f): 1-350 MHz | Ohms 100 ± 15 | |

### CROSS-SECTION




Data subject to change without notice.

VERIFIED

RoHS Compliant Directive 2011/65/EU

Made in U.S.A.

General Cable

# GenSPEED® 6 Category 6 F/UTP (ScTP) Cable

## Standards-Compliant

### Features and Benefits

- Foil shield reduces electromagnetic interference (EMI) for optimal performance
- Performance guaranteed to 250 MHz
- Improved cable temperature rating (105°C Plenum, 75°C Riser) for greater protection against increased operating temperatures and for high-wattage applications
- UL Listed CMP-LP 0.7A with certified performance for high power PoE applications
- TRU-Mark® print legend contains footage markings from 1000' to 0'

### Applications

- IEEE 802.3: 1000 BASE-T, 100 BASE-TX, 10 BASE-T, PoE, PoE+
- ANSI/TIA 854: 1000 BASE-TX
- CDDI, Token Ring, ATM
- Digital Video
- Broadband and Baseband Analog Video

### Standard Compliances

- ANSI/TIA 568.2-D
- NEC/CEC Type CMR (UL 1666) for Non-Plenum
- NEC/CEC Type CMP (NFPA 262) for Plenum
- UL Listed CMR-LP (0.5A) for Non-Plenum*
- UL Listed CMP-LP (0.7A) for Plenum**
- UL 444
- RoHS Compliant Directive 2011/65/EU
- ANSI/TIA 862 (Building Automation)
- ICEA S-116-732
- ICEA S-102-700
- ISO/IEC 11801 Ed. 2.0 (Class E)

*0.5A is the ampacity rating of the cable, which equates to 100 watts using 50 volts over four pairs.
**0.7A is the ampacity rating of the cable, which equates to 140 watts using 50 volts over four pairs.

### 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

**Core Wrap**
- Non-Plenum: Mylar
- Plenum: Mylar

**Drain Wire**
- 24 AWG solid tinned copper

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

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

### PHYSICAL DATA

| | **CMR** (Non-Plenum) | **CMP** (Plenum) |
|---|---|---|
| Nominal Cable Diameter (in) | 0.265 | 0.260 |
| Nominal Cable Weight (lbs/1000 ft) | 34 | 39 |
| Minimum Bend Radius (in) | 2.50 | 2.50 |
| Maximum Pulling Force (lbs) | 40 | 40 |
| Temperature Rating (°C) | | |
| Installation: | 0 to +60 | 0 to +60 |
| Operation: | -20 to +75 | -20 to +105 |

### ELECTRICAL CHARACTERISTICS

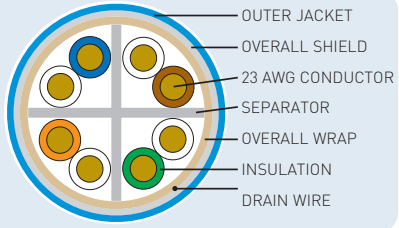
| | |
|---|---|
| **DC Resistance** (max) Ohms/100 m (328 ft) @ 20°C | 9.38 |
| **DC Resistance Unbalance** (max) Individual Pair % | 4.00 |
| **Nom. Velocity of Propagation** % Speed of Light | 70 |
| **Characteristic Impedance** Frequency (f): 1-250 MHz | Ohms 100 ± 15 |

### ELECTRICAL PERFORMANCE

| **Frequency** MHz | **Insertion Loss** (max) | **PSNEXT** (min) | **Return Loss** (min) |
|---|---|---|---|
| **1** | 2.0 | 72.3 | 20.0 |
| **4** | 3.8 | 63.3 | 23.0 |
| **10** | 6.0 | 57.3 | 25.0 |
| **16** | 7.6 | 54.2 | 25.0 |
| **20** | 8.5 | 52.8 | 25.0 |
| **31.25** | 10.7 | 49.9 | 23.6 |
| **62.5** | 15.4 | 45.4 | 21.5 |
| **100** | 19.8 | 42.3 | 20.1 |
| **150** | 24.7 | 39.7 | 18.9 |
| **200** | 29.0 | 37.8 | 18.0 |
| **250** | 32.8 | 36.3 | 17.3 |
| **350** | 39.8 | 34.1 | 16.3 |
| **400** | 43.0 | 33.3 | 15.9 |
| **500** | 48.9 | 31.8 | 15.2 |

Note: Values are expressed in dB per 100 m (328 ft.) length @ 20°C. Results beyond 250 MHz are for reference only.

### CROSS-SECTION




### PART NUMBERS

Standard packaging: 1000' Spool

| **Jacket Color** | **Spool** **CMR** (Non-Plenum) | **Spool** **CMP** (Plenum) |
|---|---|---|
| Blue | **6133785** | **6131785** |
| White | **6133787** | **6131787** |
| Yellow | **6133788** | **6131788** |
| Gray | **6133789** | **6131789** |
| Red | **6133790** | **6131790** |
| Orange | **6133791** | **6131791** |
| Green | **6133792** | **6131792** |
| Black | **6133793** | **6131793** |
| Pink | **6133795** | **6131795** |
| Purple | **6133794** | **6131794** |

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

Data subject to change without notice.



General Cable

VERIFIED LISTED Made in U.S.A. RoHS Compliant Directive 2011/65/EU

# GenSPEED® 6 Category 6 Interlock Armored Cable

## Standards-Compliant

### 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

**Separator**
- Cross-web

**Jacket**
- Flame-Retardant PVC

### PHYSICAL DATA

| | CMR (Non-Plenum) |
|---|---|
| Nominal Cable Diameter (in) | 0.450 |
| Nominal Cable Weight (lbs/1000 ft) | 82 |
| Minimum Bend Radius (in) | 5.40 |
| Maximum Pulling Force (lbs) | 32 |
| Temperature Rating (°C) | |
| Installation: | 0 to +60 |
| Operation: | -20 to +75 |

### ELECTRICAL PERFORMANCE

| Frequency MHz | Insertion Loss (max) | NEXT (min) | Return Loss (min) |
|---|---|---|---|
| **1** | 2.0 | 74.3 | 20.0 |
| **4** | 3.8 | 65.3 | 23.0 |
| **10** | 6.0 | 59.3 | 25.0 |
| **16** | 7.6 | 56.2 | 25.0 |
| **20** | 8.5 | 54.8 | 25.0 |
| **31.25** | 10.7 | 51.9 | 23.6 |
| **62.5** | 15.4 | 47.4 | 21.5 |
| **100** | 19.8 | 44.3 | 20.1 |
| **150** | 24.7 | 41.7 | 18.9 |
| **200** | 29.0 | 39.8 | 18.0 |
| **250** | 32.8 | 38.3 | 17.3 |
| **350** | 39.8 | 36.1 | 16.3 |
| **400** | 43.0 | 35.3 | 15.9 |
| **500** | 48.9 | 33.8 | 15.2 |

Note: Values are expressed in dB per 100 m (328 ft.) length @ 20°C. Results beyond 350 MHz for reference only.

### PART NUMBERS

| Color | Part Number | Reel |
|---|---|---|
| Blue | **9133300** | 1000' reel |
| Blue | **9133300.2R** | 2000' reel |
| White | **9133305** | 1000' reel |
| White | **9133305.2R** | 2000' reel |

### 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
- Made in U.S.A.

### Applications

- IEEE 802.3: 1000 BASE-T, 100 BASE-TX, 10 BASE-T, PoE, PoE+
- ANSI/TIA 854: 1000 BASE-TX
- CDDI, Token Ring, ATM
- Digital Video
- Broadband and Baseband Analog Video
- Indoor applications only

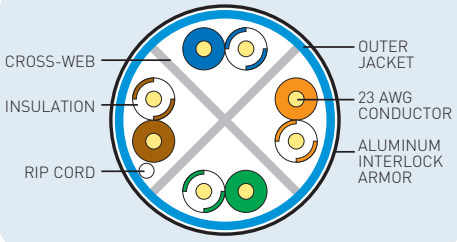
### Standard Compliances

- ANSI/TIA 568.2-D
- NEC/CEC Type CMR (UL 1666) for Non-Plenum
- UL 444
- RoHS Compliant Directive 2011/65/EU
- ANSI/TIA 862 (Building Automation)
- ICEA S-116-732
- ICEA S-102-700
- ISO/IEC 11801 Ed. 2.0 (Class E)

### ELECTRICAL CHARACTERISTICS

| | Max. | Nom. |
|---|---|---|
| **DC Resistance** Ohms/100 m (328 ft) @ 20°C | 9.38 | 7.20 |
| **DC Resistance Unbalance** Individual Pair % | 4.00 | < 1 |
| **Delay Skew** ns/100 m | 45 | 40 |
| **Nom. Velocity of Propagation** % Speed of Light | 70 | |
| **Characteristic Impedance** Frequency (f): 1-250 MHz | Ohms 100 ± 15 | |

### CROSS-SECTION




Data subject to change without notice.

RoHS Compliant Directive 2011/65/EU · ETL Listed · UL Verified · TIA · ICEA · Made in U.S.A.

General Cable

# GenSPEED® 6 Category 6 Outside Plant Cable
## Standards-Compliant

### 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
- IEEE 802.3: 1000 BASE-T, 100 BASE-TX, 10 BASE-T, PoE, PoE+
- ANSI/TIA 854: 1000 BASE-TX
- CDDI, Token Ring, ATM
- Digital Video
- Broadband and Baseband Analog Video
- Duct and conduit installations

### Standard Compliances
- ANSI/TIA 568.2-D
- UL 444
- RoHS Compliant Directive 2011/65/EU
- ANSI/TIA 862 (Building Automation)
- ICEA S-116-732
- ICEA S-102-700
- ISO/IEC 11801 Ed. 2.0 (Class E)
- Telcordia (Bellcore) Specification GR-421-CORE Water Penetration Requirement

### 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

**Jacket**
- UV- and Abrasion-Resistant Polyethylene

### PHYSICAL DATA

| | |
|---|---|
| Nominal Cable Diameter (in) | 0.250 |
| Nominal Cable Weight (lbs/1000 ft) | 32 |
| Minimum Bend Radius (in) | 1.0 |
| Maximum Pulling Force (lbs) | 32 |
| Temperature Rating (°C) | |
| Installation: | -30 to +60 |
| Operation: | -45 to +80 |

### ELECTRICAL CHARACTERISTICS

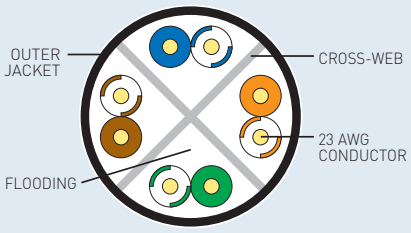
| | |
|---|---|
| **DC Resistance** (max) Ohms/100 m (328 ft) @ 20°C | 9.38 |
| **DC Resistance Unbalance** (max) Individual Pair % | 4.00 |
| **Delay Skew** (max) ns/100 m | 45 |
| **Nom. Velocity of Propagation** % Speed of Light | 69 |
| **Characteristic Impedance** Frequency (f): 1-250 MHz | Ohms 100 ± 15 |

### ELECTRICAL PERFORMANCE

| Frequency MHz | Insertion Loss (max) | NEXT (min) | Return Loss (min) |
|---|---|---|---|
| **1** | 2.0 | 74.3 | 20.0 |
| **4** | 3.8 | 65.3 | 23.0 |
| **10** | 6.0 | 59.3 | 25.0 |
| **16** | 7.6 | 56.2 | 25.0 |
| **20** | 8.5 | 54.8 | 25.0 |
| **31.25** | 10.7 | 51.9 | 23.6 |
| **62.5** | 15.4 | 47.4 | 21.5 |
| **100** | 19.8 | 44.3 | 20.1 |
| **200** | 29.0 | 39.8 | 18.0 |
| **250** | 32.8 | 38.3 | 17.3 |

Note: Values are expressed in dB per 100 m (328 ft.) length @ 20°C.

### CROSS-SECTION




### PART NUMBER
Standard packaging: 1000' Reel

| Jacket Color | Reel |
|---|---|
| Black | **7136100** |

Data subject to change without notice.



General Cable

RoHS Compliant Directive 2011/65/EU

Made in U.S.A.

# GenSPEED® 6 Category 6 Residential CMX Outdoor-CMR Cable

## Standards-Compliant

### 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**
- Divider

**Rip Cord**
- Applied longitudinally under jacket

**Jacket**
- Flame-Retardant PVC

### PHYSICAL DATA

| | |
|---|---|
| Nominal Cable Diameter (in) | 0.240 |
| Nominal Cable Weight (lbs/1000 ft) | 28 |
| Minimum Bend Radius (in) | 1.0 |
| Maximum Pulling Force (lbs) | 32 |
| Temperature Rating (°C) | |
| Installation: | -10 to +60 |
| Operation: | -40 to +75 |

### ELECTRICAL PERFORMANCE

| Frequency MHz | Insertion Loss (max) | NEXT (min) | Return Loss (min) |
|---|---|---|---|
| **1** | 2.0 | 74.3 | 20.0 |
| **4** | 3.8 | 65.3 | 23.0 |
| **10** | 6.0 | 59.3 | 25.0 |
| **16** | 7.6 | 56.2 | 25.0 |
| **20** | 8.5 | 54.8 | 25.0 |
| **31.25** | 10.7 | 51.9 | 23.6 |
| **62.5** | 15.4 | 47.4 | 21.5 |
| **100** | 19.8 | 44.3 | 20.1 |
| **150** | 24.7 | 41.7 | 18.9 |
| **200** | 29.0 | 39.8 | 18.0 |
| **250** | 32.8 | 38.3 | 17.3 |
| **350** | 39.8 | 36.1 | 16.3 |
| **400** | 43.0 | 35.3 | 15.9 |
| **500** | 48.9 | 33.8 | 15.2 |

Note: Values are expressed in dB per 100 m (328 ft.) length @ 20°C. Results beyond 350 MHz are for reference only.

### PART NUMBERS

Standard packaging: Pull-Pac® II

| Jacket Color | 1000' Pull-Pac® II |
|---|---|
| Blue | **6137160** |
| White | **6137147** |
| Gray | **6137146** |
| Ivory | **6137143** |
| Beige | **6137144** |
| Black | **6137145** |

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

### 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
- CMR rating also allows the cable to be used in traditional indoor CMR installations
- Sunlight-resistant
- Sequential footage markings
- Wax box for increased durability on job site.
- Third-party verified for guaranteed performance

### Applications

- IEEE 802.3: 1000 BASE-T, 100 BASE-TX, 10 BASE-T, PoE, PoE+
- ANSI/TIA 854: 1000 BASE-TX
- CDDI, Token Ring, ATM
- Digital Video
- Broadband and Baseband Analog Video

### Standard Compliances

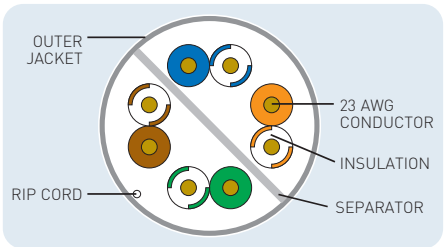
- ANSI/TIA 568.2-D
- NEC/CEC Type CMX Outdoor - CMR
- UL 444 Sunlight-Resistant
- UL 444
- RoHS Compliant Directive 2011/65/EU
- ANSI/TIA 862 (Building Automation)
- ICEA S-100-685
- ICEA S-102-700
- ISO/IEC 11801 Ed. 2.0 (Class E)
- Telcordia GR-3164
- Telcordia GR-3164 Severe Cold Impact

### ELECTRICAL CHARACTERISTICS

| | Max. | Nom. |
|---|---|---|
| **DC Resistance** Ohms/100 m (328 ft) @ 20°C | 9.38 | 7.50 |
| **DC Resistance Unbalance** Individual Pair % | 4.00 | < 1 |
| **Delay Skew** ns/100 m | 45 | 35 |
| **Nom. Velocity of Propagation** % Speed of Light | 68 | |
| **Characteristic Impedance** Frequency (f): 1-350 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.

### CROSS-SECTION

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LISTED VERIFIED RoHS Compliant Directive 2011/65/EU Made in U.S.A.

General Cable

# 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. General Cable also offers its 17 FREE™ line of riser-rated Gen*SPEED* 5000 cables, which may qualify for LEED credit from the U.S. Green Building Council.

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.

**Index** **Page**

# GenSPEED® Category 5e Quick Reference Guide

| JACKET COLOR | PACKAGE | STANDARD Category 5e GenSPEED® 5000 (p. 32) CMR | STANDARD Category 5e GenSPEED® 5000 (p. 32) CMP | ENHANCED Category 5e GenSPEED® 5350 Enhanced (p. 30) CMR | ENHANCED Category 5e GenSPEED® 5350 Enhanced (p. 30) CMP | PREMIUM Category 5e GenSPEED® 5500 Premium (p. 29) CMR | PREMIUM Category 5e GenSPEED® 5500 Premium (p. 29) 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 |
| **White** | | | | | | | |
| | Pull-Pac® | 5133255E | 5131361E | 6133713 | 6131691 | 6133255 | 6131361 |
| | Spool-Pac® | 5133342E | 5131450E | 6133708 | 6131689 | 6133339 | 6131449 |
| | Spool | 5133250E | 5131365E | 6133704 | 6131687 | 6133492 | 6131618 |
| **Yellow** | | | | | | | |
| | Pull-Pac® | 5133289E | 5131379E | 6133715 | 6131693 | 6133289 | 6131546 |
| | Spool-Pac® | 5133448E | 5131546E | 6133717 | 6131695 | 6133369 | 6131379 |
| | Spool | | 5131648E | 6133719 | 6131697 | 6133348 | 6131382 |
| **Gray** | | | | | | | |
| | Pull-Pac® | 5133200E | 5131418E | 6133714 | 6131692 | 6133200 | 6131418 |
| | Spool-Pac® | 5133329E | 5131456E | 6133716 | 6131694 | 6133331 | 6131619 |
| | Spool | 5133204E | 5131475E | 6133718 | 6131696 | 6133334 | |
| **Red** | | | | | | | |
| | Pull-Pac® | 5133274E | 5131477E | | | 6133274 | 6131477 |
| | Spool-Pac® | 5133427E | 5131553E | 6133732 | 6131732 | 6133635 | 6131635 |
| | Spool | | 5131383E | 6133782 | 6131782 | | |
| **Orange** | | | | | | | |
| | Pull-Pac® | 5133383E | 5131422E | 6133761 | 6131761 | 6133746 | 6131422 |
| | Spool-Pac® | | | 6133833 | 6131833 | 6133383 | 6131576 |
| | Spool | 5133667E | | 6133733 | 6131733 | | |
| **Green** | | | | | | | |
| | Pull-Pac® | 5133512E | 5131547E | 6133699 | 6131699 | 6133512 | 6131547 |
| | Spool-Pac® | 5133693E | 5131575E | 6133731 | 6131731 | 6133615 | 6131575 |
| | Spool | 5133649E | 5131649E | 6133700 | 6131700 | 6133616 | 6131757 |
| **Black** | | | | | | | |
| | Pull-Pac® | 5133696E | 5131683E | | 6131707 | 6133696 | 6131683 |
| | Spool-Pac® | 6133650E | | | | | 6131829 |
| | Spool | 6133726E | 5131689E | | | | |
| **Pink** | | | | | | | |
| | Pull-Pac® | 5133290E | 5131380E | | | 6133290 | 6131709 |
| | Spool-Pac® | 5133447E | 5131478E | | | 6133447 | 6131478 |
| | Spool | | | | | 6133341 | |
| **Purple** | | | | | | | |
| | Pull-Pac® | 5133445E | 5131730E | | 6131698 | 6133445 | 6131710 |
| | Spool-Pac® | | | | | 6133446 | |
| | Spool | | | | | | |

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

# GenSPEED® 5500 Premium Category 5e Cable

## Enhanced Transmission Throughput

### 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, 100 BASE-TX, 10 BASE-T, PoE, PoE+
- CDDI, Token Ring, ATM
- Broadband and Baseband Analog Video

### Standard Compliances

- ANSI/TIA 568.2-D
- NEC/CEC Type CMR (UL 1666) for Non-Plenum
- NEC/CEC Type CMP (NFPA 262) for Plenum
- UL 444
- RoHS Compliant Directive 2011/65/EU
- ANSI/TIA 862 (Building Automation)
- ICEA S-90-661
- ISO/IEC 11801 Ed. 2.0 (Class D)

### CONSTRUCTION

**Conductors**
- 23 AWG CMR solid bare annealed copper
- 24 AWG CMP 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) | 0.220 | 0.190 |
| Nominal Cable Weight (lbs/1000 ft) | 24 | 21 |
| 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 |

### ELECTRICAL CHARACTERISTICS

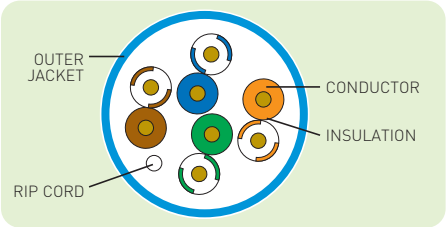
| | |
|---|---|
| **DC Resistance** (max) Ohms/100 m (328 ft) @ 20˚C | 8.9 |
| **DC Resistance Unbalance** (max) Individual Pair % | 3.0 |
| **Delay Skew** (max) ns/100 m | 45 |
| **Nom. Velocity of Propagation** % Speed of Light | CMP: 72<br>CMR: 70 |
| **Characteristic Impedance** Frequency (f): 1-350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

### ELECTRICAL PERFORMANCE

| Frequency MHz | Insertion Loss (max) | NEXT (min) | Return Loss (min) |
|---|---|---|---|
| **1** | 2.0 | 70.3 | 20.0 |
| **4** | 3.9 | 61.3 | 23.0 |
| **10** | 6.2 | 55.3 | 25.0 |
| **16** | 7.9 | 52.2 | 25.0 |
| **20** | 8.9 | 50.8 | 25.0 |
| **25** | 10.0 | 49.3 | 24.3 |
| **31.25** | 11.2 | 47.9 | 23.6 |
| **62.5** | 16.3 | 43.4 | 21.5 |
| **100** | 21.0 | 40.3 | 20.1 |
| **155** | 26.9 | 37.4 | 18.8 |
| **200** | 31.0 | 35.8 | 18.0 |
| **250** | 35.3 | 34.3 | 17.3 |
| **300** | 39.2 | 33.1 | 16.8 |
| **350** | 42.9 | 32.1 | 16.3 |

Note: Values are expressed in dB per 100 m (328 ft.) length @ 20˚C.
*PSACR & ACR not specified in ANSI/TIA 568.2-D

### CROSS-SECTION




### PART NUMBERS

Standard packaging: 1000' Pull-Pac® II

| Jacket Color | Pull-Pac® II CMR (Non-Plenum) | Pull-Pac® II CMP (Plenum) | Spool-Pac® CMR (Non-Plenum) | Spool-Pac® CMP (Plenum) | Spool CMR (Non-Plenum) | Spool 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 | 6133635 | 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.

Data subject to change without notice.

General Cable

LISTED VERIFIED TIA 568.2-D RoHS Compliant Directive 2011/65/EU Made in U.S.A.

# GenSPEED® 5350 Enhanced Category 5e Cable

## High Performance


### 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) | 0.200 | 0.190 |
| Nominal Cable Weight (lbs/1000 ft) | 20 | 22 |
| 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 |

### ELECTRICAL PERFORMANCE

| **Frequency** MHz | **Insertion Loss** (max) | **NEXT** (min) | **Return Loss** (min) |
|---|---|---|---|
| **1** | 2.0 | 66.3 | 20.0 |
| **4** | 4.0 | 57.3 | 23.0 |
| **10** | 6.4 | 51.3 | 25.0 |
| **16** | 8.1 | 48.2 | 25.0 |
| **20** | 9.2 | 46.8 | 25.0 |
| **25** | 10.3 | 45.3 | 24.3 |
| **31.25** | 11.6 | 43.9 | 23.6 |
| **62.5** | 16.8 | 39.4 | 21.5 |
| **100** | 21.7 | 36.3 | 20.1 |
| **155** | 27.7 | 33.4 | 18.8 |
| **200** | 32.0 | 31.8 | 18.0 |
| **250** | 36.4 | 30.3 | 17.3 |
| **300** | 40.5 | 29.1 | 16.8 |
| **350** | 44.3 | 28.1 | 16.3 |

Note: Values are expressed in dB per 100 m (328 ft.) length @ 20˚C.
*PSACR & ACR not specified in ANSI/TIA 568.2-D

### 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 | | | **6133732** | **6131732** | **6133782** | **6131782** |
| Orange | **6133761** | **6131761** | **6133833** | **6131833** | **6133733** | **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.

### 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, 100 BASE-TX, 10 BASE-T, PoE, PoE+
- CDDI, Token Ring, ATM
- Broadband and Baseband Analog Video

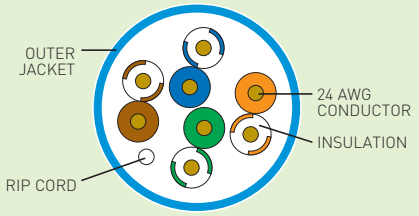
### Standard Compliances

- ANSI/TIA 568.2-D
- NEC/CEC Type CMR (UL 1666) for Non-Plenum
- NEC/CEC Type CMP (NFPA 262) for Plenum
- UL 444
- RoHS Compliant Directive 2011/65/EU
- ANSI/TIA 862 (Building Automation)
- ICEA S-90-661
- ISO/IEC 11801 Ed. 2.0 (Class D)

### ELECTRICAL CHARACTERISTICS

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

### CROSS-SECTION




Data subject to change without notice.

UL LISTED · UL VERIFIED · ETL LISTED · CSA · TIA 568.2-D · RoHS Compliant Directive 2011/65/EU · Made in U.S.A.

General Cable

# GenSPEED® 5350 with 17 FREE® Enhanced Category 5e Cable

## High Performance

### Features and Benefits

- No halogens
- Less toxic
- More environmentally friendly
- Increased flexibility for easy installation
- Engineered to provide stable and continuous 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, 100 BASE-TX, 10 BASE-T, PoE, PoE+
- CDDI, Token Ring, ATM
- Broadband and Baseband Analog Video

### Standard Compliances

- ANSI/TIA 568.2-D
- NEC/CEC Type CMR (UL 1666) for Non-Plenum
- UL 444
- RoHS Compliant Directive 2011/65/EU
- ANSI/TIA 862 (Building Automation)
- ICEA S-90-661
- ISO/IEC 11801 Ed. 2.0 (Class D)
- IEC 60754-1
- IEC 60754-2
- IEC 61034-2


### CONSTRUCTION

**Conductors**
- 24 AWG solid bare annealed copper

**Insulation**
- 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

**Jacket**
- Non-Plenum: Zero-Halogen Polyolefin

### PHYSICAL DATA

| | **CMR** (Non-Plenum) |
|---|---|
| Nominal Cable Diameter (in) | 0.200 |
| Nominal Cable Weight (lbs/1000 ft) | 22 |
| Minimum Bend Radius (in) | 1.0 |
| Maximum Pulling Force (lbs) | 25 |
| Temperature Rating (°C) | |
| Installation: | -10 to +60 |
| Operation: | -20 to +75 |

### ELECTRICAL CHARACTERISTICS

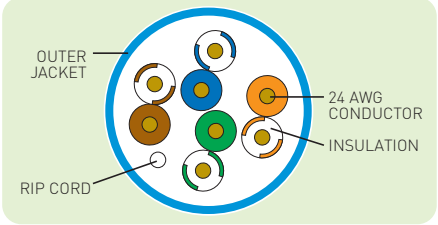
| | |
|---|---|
| **DC Resistance** (max) Ohms/100 m (328 ft) @ 20°C | 8.9 |
| **DC Resistance Unbalance** (max) Individual Pair % | 3.0 |
| **Delay Skew** (max) ns/100 m | 45 |
| **Nom. Velocity of Propagation** % Speed of Light | 70 |
| **Characteristic Impedance** Frequency (f): 1-350 MHz | Ohms 100 ± 15 |

### ELECTRICAL PERFORMANCE

| **Frequency** MHz | **Insertion Loss** (max) | **NEXT** (min) | **Return Loss** (min) |
|---|---|---|---|
| **1** | 2.0 | 66.3 | 20.0 |
| **4** | 4.0 | 57.3 | 23.0 |
| **10** | 6.4 | 51.3 | 25.0 |
| **16** | 8.1 | 48.2 | 25.0 |
| **20** | 9.2 | 46.8 | 25.0 |
| **25** | 10.3 | 45.3 | 24.3 |
| **31.25** | 11.6 | 43.9 | 23.6 |
| **62.5** | 16.8 | 39.4 | 21.5 |
| **100** | 21.7 | 36.3 | 20.1 |
| **155** | 27.7 | 33.4 | 18.8 |
| **200** | 32.0 | 31.8 | 18.0 |
| **250** | 36.4 | 30.3 | 17.3 |
| **300** | 40.5 | 29.1 | 16.8 |
| **350** | 44.3 | 28.1 | 16.3 |

Note: Values are expressed in dB per 100 m (328 ft.) length @ 20°C.
*PSACR & ACR not specified in ANSI/TIA 568.2-D

### CROSS-SECTION




### PART NUMBERS

Standard packaging: 1000' Pull-Pac® II with environmentally friendly packaging.

| **Jacket Color** | **Pull-Pac® II** **CMR** (Non-Plenum) |
|---|---|
| Blue | **6133712-17F** |
| White | **6133713-17F** |
| Gray | **6133714-17F** |

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.

Data subject to change without notice.

General Cable

VERIFIED

TIA 568.2-D

RoHS Compliant Directive 2011/65/EU

# GenSPEED® 5000 Category 5e Cable

## Standards-Compliant Extended Frequency


### 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, Flame-Retardant PVC

### PHYSICAL DATA

| PHYSICAL DATA | CMR (Non-Plenum) | CMP (Plenum) |
|---|---|---|
| Nominal Cable Diameter (in) | 0.195 | 0.180 |
| Nominal Cable Weight (lbs/1000 ft) | 19 | 21 |
| 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 |

### ELECTRICAL PERFORMANCE

| Frequency MHz | Insertion Loss (max) | NEXT (min) | Return Loss (min) |
|---|---|---|---|
| **1** | 2.0 | 65.3 | 20.0 |
| **4** | 4.1 | 56.3 | 23.0 |
| **10** | 6.5 | 50.3 | 25.0 |
| **16** | 8.2 | 47.2 | 25.0 |
| **20** | 9.3 | 45.8 | 25.0 |
| **25** | 10.4 | 44.3 | 24.3 |
| **31.25** | 11.7 | 42.9 | 23.6 |
| **62.5** | 17.0 | 38.4 | 21.5 |
| **100** | 22.0 | 35.3 | 20.1 |
| **155** | 28.1 | 32.4 | 18.8 |
| **200** | 32.4 | 30.8 | 18.0 |
| **250** | 36.9 | 29.3 | — |
| **300** | 41.0 | 28.1 | — |
| **350** | 44.9 | 27.1 | — |

Note: Values are expressed in dB per 100 m (328 ft.) length @ 20°C. Values above 200 MHz are for information only.
*PSACR & ACR not specified in ANSI/TIA 568.2-D

### PART NUMBERS

Standard packaging: 1000' Pull-Pac® II

| Jacket Color | Pull-Pac® II | | Spool-Pac® | | Spool | |
|---|---|---|---|---|---|---|
| | 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** | **5133650E** | | **5133726E** | **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.
Data subject to change without notice.

### 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, 100 BASE-TX, 10 BASE-T, PoE, PoE+
- CDDI, Token Ring, ATM
- Broadband and Baseband Analog Video

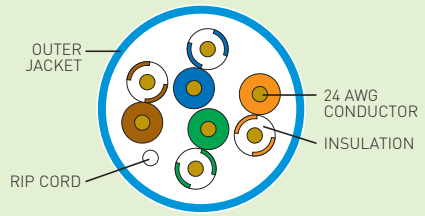
### Standard Compliances

- ANSI/TIA 568.2-D
- NEC/CEC Type CMR (UL 1666) for Non-Plenum
- NEC/CEC Type CMP (NFPA 262) for Plenum
- UL 444
- RoHS Compliant Directive 2011/65/EU
- ANSI/TIA 862 (Building Automation)
- ICEA S-90-661
- ISO/IEC 11801 Ed. 2.0 (Class D)

### ELECTRICAL CHARACTERISTICS

| | |
|---|---|
| **DC Resistance** (max) Ohms/100 m (328 ft) @ 20˚C | 9.38 |
| **DC Resistance Unbalance** (max) Individual Pair % | 4.00 |
| **Delay Skew** (max) ns/100 m | 45 |
| **Nom. Velocity of Propagation** % Speed of Light | CMP: 72<br>CMR: 70 |
| **Characteristic Impedance** Frequency (f): 1-200 MHz | Ohms<br>100 ± 15 |

### CROSS-SECTION




UL LISTED UL VERIFIED ETL LISTED CEC TIA TIA 568.2-D RoHS Compliant Directive 2011/65/EU Made in U.S.A.

General Cable

# GenSPEED® 5000 with 17 FREE® Category 5e Cable

## Standards-Compliant

### Features and Benefits

- No halogens
- Less toxic
- More environmentally friendly
- Increased flexibility for easy installation
- 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, 100 BASE-TX, 10 BASE-T, PoE, PoE+
- CDDI, Token Ring, ATM
- Broadband and Baseband Analog Video

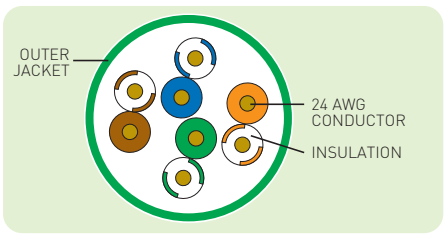
### Standard Compliances

- ANSI/TIA 568.2-D
- NEC/CEC Type CMR (UL 1666) for Non-Plenum
- UL 444
- RoHS Compliant Directive 2011/65/EU
- ANSI/TIA 862 (Building Automation)
- ICEA S-90-661
- ISO/IEC 11801 Ed. 2.0 (Class D)
- IEC 60754-1
- IEC 60754-2
- IEC 61034-2

### ELECTRICAL CHARACTERISTICS

| | |
|---|---|
| **DC Resistance** (max) Ohms/100 m (328 ft) @ 20°C | 9.38 |
| **DC Resistance Unbalance** (max) Individual Pair % | 4.00 |
| **Delay Skew** (max) ns/100 m | 45 |
| **Nom. Velocity of Propagation** % Speed of Light | 70 |
| **Characteristic Impedance** Frequency (f): 1-200 MHz | Ohms 100 ± 15 |

### CROSS-SECTION





### CONSTRUCTION

**Conductors**
- 24 AWG solid bare annealed copper

**Insulation**
- 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

**Jacket**
- Non-Plenum: Zero-Halogen Polyolefin

### PHYSICAL DATA

| | CMR (Non-Plenum) |
|---|---|
| Nominal Cable Diameter (in) | 0.200 |
| Nominal Cable Weight (lbs/1000 ft) | 22 |
| Minimum Bend Radius (in) | 1.0 |
| Maximum Pulling Force (lbs) | 25 |
| Temperature Rating (°C) | |
| Installation: | -10 to +60 |
| Operation: | -20 to +75 |

### ELECTRICAL PERFORMANCE

| Frequency MHz | Insertion Loss (max) | NEXT (min) | Return Loss (min) |
|---|---|---|---|
| **1** | 2.0 | 65.3 | 20.0 |
| **4** | 4.1 | 56.3 | 23.0 |
| **10** | 6.5 | 50.3 | 25.0 |
| **16** | 8.2 | 47.2 | 25.0 |
| **20** | 9.3 | 45.8 | 25.0 |
| **25** | 10.4 | 44.3 | 24.3 |
| **31.25** | 11.7 | 42.9 | 23.6 |
| **62.5** | 17.0 | 38.4 | 21.5 |
| **100** | 22.0 | 35.3 | 20.1 |
| **155** | 28.1 | 32.4 | 18.8 |
| **200** | 32.4 | 30.8 | 18.0 |
| **250** | 36.9 | 29.3 | — |
| **300** | 41.0 | 28.1 | — |
| **350** | 44.9 | 27.1 | — |

Note: Values are expressed in dB per 100 m (328 ft.) length @ 20°C. Values above 200 MHz are for information only. Spec meets ANSI/TIA 568.2-D standard for Cat 5e UTP cabling.
*PSACR & ACR not specified in ANSI/TIA 568.2-D

### PART NUMBERS

Standard packaging: 1000' Pull-Pac® II with environmentally friendly packaging. Spool-Pac® and Spool by special order.

| Jacket Color | Pull-Pac® II CMR (Non-Plenum) | Spool-Pac® CMR (Non-Plenum) | Spool CMR (Non-Plenum) |
|---|---|---|---|
| Blue | **5133299E-17F** | **5133374E-17F** | **5133300E-17F** |
| White | **5133255E-17F** | **5133342E-17F** | **5133250E-17F** |
| Yellow | **5133289E-17F** | **5133448E-17F** | |
| Gray | **5133200E-17F** | **5133329E-17F** | **5133204E-17F** |
| Red | **5133274E-17F** | **5133427E-17F** | |
| Orange | **5133383E-17F** | | **5133667E-17F** |
| Green | **5133512E-17F** | **5133693E-17F** | **5133649E-17F** |
| Black | **5133696E-17F** | | |
| Purple | **5133445E-17F** | | |

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.

Data subject to change without notice.



General Cable

VERIFIED

TIA 568.2-D

RoHS Compliant Directive 2011/65/EU

Made in U.S.A.

# GenSPEED® 5000 Category 5e F/UTP (ScTP) Cable

## Standards-Compliant

### 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

**Core Tape**
- Polyester

**Drain Wire**
- 26 AWG stranded (7/34) 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/1000 ft) | 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 |

### ELECTRICAL PERFORMANCE

| Frequency MHz | Insertion Loss (max) | NEXT (min) | Return Loss (min) |
|---|---|---|---|
| **1** | 2.0 | 65.3 | 20.0 |
| **4** | 4.1 | 56.3 | 23.0 |
| **10** | 6.5 | 50.3 | 25.0 |
| **16** | 8.2 | 47.2 | 25.0 |
| **20** | 9.3 | 45.8 | 25.0 |
| **25** | 10.4 | 44.3 | 24.3 |
| **31.25** | 11.7 | 42.9 | 23.6 |
| **62.5** | 17.0 | 38.4 | 21.5 |
| **100** | 22.0 | 35.3 | 20.1 |
| **155** | 28.1 | 32.4 | — |
| **200** | 32.4 | 30.8 | — |
| **250** | 36.9 | 29.3 | — |
| **300** | 41.0 | 28.1 | — |
| **350** | 44.9 | 27.1 | — |

Note: Values are expressed in dB per 100 m (328 ft.) length @ 20°C. Values above 100 MHz are for information only.
*PSACR & ACR not specified in ANSI/TIA 568.2-D

### PART NUMBERS

Standard packaging: 1000' Spool

| Jacket Color | Spool CMR (Non-Plenum) | Spool 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** |

### Features and Benefits

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

### Applications

- IEEE 802.3: 1000 BASE-T, 100 BASE-TX, 10 BASE-T, PoE, PoE+
- CDDI, Token Ring, ATM
- Broadband and Baseband Analog Video

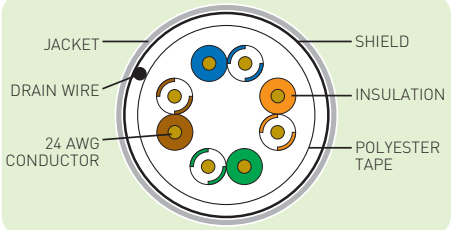
### Standard Compliances

- ANSI/TIA 568.2-D
- NEC/CEC Type CMR (UL 1666) for Non-Plenum
- NEC/CEC Type CMP (NFPA 262) for Plenum
- UL 444
- RoHS Compliant Directive 2011/65/EU
- ANSI/TIA 862 (Building Automation)
- ICEA S-90-661
- ISO/IEC 11801 Ed. 2.0 (Class D)

### ELECTRICAL CHARACTERISTICS

| | |
|---|---|
| **DC Resistance** (max) Ohms/100 m (328 ft) @ 20°C | 9.38 |
| **DC Resistance Unbalance** (max) Individual Pair % | 4.00 |
| **Delay Skew** (max) ns/100 m | 45 |
| **Nom. Velocity of Propagation** % Speed of Light | CMP: 72<br>CMR: 70 |
| **Characteristic Impedance** Frequency (f): 1-100 MHz | Ohms<br>100 ± 15 |

### CROSS-SECTION




Data subject to change without notice.

UL LISTED · TIA 568.2-D · RoHS Compliant Directive 2011/65/EU · Made in U.S.A.

General Cable

# GenSPEED® 5000 Category 5e Interlock Armored Cable

## Standards-Compliant

### 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, 100 BASE-TX, 10 BASE-T, PoE, PoE+
- CDDI, Token Ring, ATM
- Broadband and Baseband Analog Video
- Indoor applications only

### Standard Compliances

- ANSI/TIA 568.2-D
- NEC/CEC Type CMR (UL 1666) for Non-Plenum
- UL 444
- RoHS Compliant Directive 2011/65/EU
- ANSI/TIA 862 (Building Automation)
- ICEA S-90-661
- ISO/IEC 11801 Ed. 2.0 (Class D)

### 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

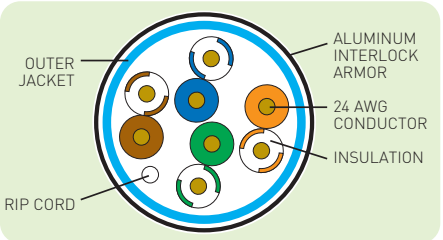
**Jacket**
- Flame-Retardant PVC

**Armor**
- Aluminum interlock armor

### ELECTRICAL CHARACTERISTICS

| | |
|---|---|
| **DC Resistance** (max) Ohms/100 m (328 ft) @ 20°C | 9.38 |
| **DC Resistance Unbalance** (max) Individual Pair % | 4.00 |
| **Delay Skew** (max) ns/100 m | 45 |
| **Nom. Velocity of Propagation** % Speed of Light | 70 |
| **Characteristic Impedance** Frequency (f): 1-100 MHz | Ohms 100 ± 15 |

### CROSS-SECTION




### PHYSICAL DATA

| | CMR (Non-Plenum) | |
|---|---|---|
| | 1 Cable | 2 Cables |
| Nominal Cable Diameter (in) | 0.450 | 0.620 |
| Nominal Cable Weight (lbs/1000 ft) | 58.5 | 96.0 |
| Minimum Bend Radius (in) | 5.40 | 7.44 |
| Maximum Pulling Force (lbs) | 25 | 25 |
| Temperature Rating (°C) | | |
| Installation: | 0 to +60 | |
| Operation: | -20 to +75 | |

### ELECTRICAL PERFORMANCE

| Frequency MHz | Insertion Loss (max) | NEXT (min) | Return Loss (min) |
|---|---|---|---|
| **1** | 2.0 | 65.3 | 20.0 |
| **4** | 4.1 | 56.3 | 23.0 |
| **10** | 6.5 | 50.3 | 25.0 |
| **16** | 8.2 | 47.2 | 25.0 |
| **20** | 9.3 | 45.8 | 25.0 |
| **25** | 10.4 | 44.3 | 24.3 |
| **31.25** | 11.7 | 42.9 | 23.6 |
| **62.5** | 17.0 | 38.4 | 21.5 |
| **100** | 22.0 | 35.3 | 20.1 |

Note: Values are expressed in dB per 100 m (328 ft.) length @ 20°C.
*PSACR & ACR not specified in ANSI/TIA 568.2-D

### 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.



General Cable

TIA 568.2-D

RoHS Compliant Directive 2011/65/EU

Made in U.S.A.

# GenSPEED® 5000 Category 5e Outside Plant Cable

## Standards-Compliant

### 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

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

**Flooding Compound**
- Waterproof gel

**Jacket**
- UV- and Abrasion-Resistant Polyethylene

### PHYSICAL DATA

| | No Armor | Aluminum Armor |
|---|---|---|
| Nominal Cable Diameter (in) | 0.230 | 0.340 |
| Nominal Cable Weight (lbs/1000 ft) | 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 |

### ELECTRICAL PERFORMANCE

| Frequency MHz | Insertion Loss (max) | NEXT (min) | Return Loss (min) |
|---|---|---|---|
| **1** | 2.0 | 65.3 | 20.0 |
| **4** | 4.1 | 56.3 | 23.0 |
| **10** | 6.5 | 50.3 | 25.0 |
| **16** | 8.2 | 47.2 | 25.0 |
| **20** | 9.3 | 45.8 | 25.0 |
| **25** | 10.4 | 44.3 | 24.3 |
| **31.25** | 11.7 | 42.9 | 23.6 |
| **62.5** | 17.0 | 38.4 | 21.5 |
| **100** | 22.0 | 35.3 | 20.1 |
| **155** | 28.1 | 32.4 | — |
| **200** | 32.4 | 30.8 | — |
| **250** | 36.9 | 29.3 | — |
| **300** | 41.0 | 28.1 | — |
| **350** | 44.9 | 27.1 | — |

Note: Values are expressed in dB per 100 m (328 ft.) length @ 20°C. Values above 100 MHz are for information only.
*PSACR & ACR not specified in ANSI/TIA 568.2-D

### PART NUMBERS

Standard packaging: 1000' Reel

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

### Features and Benefits

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

### Applications

- IEEE 802.3: 1000 BASE-T, 100 BASE-TX, 10 BASE-T, PoE, PoE+
- CDDI, Token Ring, ATM
- Broadband and Baseband Analog Video
- Armored: aerial, duct and buried installations
- Non-armored design is recommended for duct installation

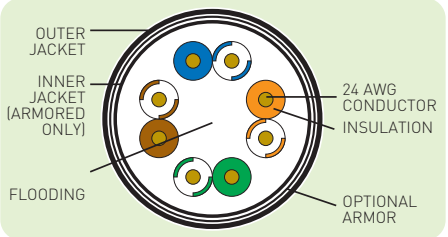
### Standard Compliances

- ANSI/TIA 568.2-D
- UL 444
- RoHS Compliant Directive 2011/65/EU
- ANSI/TIA 862 (Building Automation)
- ICEA S-90-661
- ISO/IEC 11801 Ed. 2.0 (Class D)
- Telcordia (Bellcore) Specification GR-421-CORE Water Penetration Requirements

### ELECTRICAL CHARACTERISTICS

| | |
|---|---|
| **DC Resistance** (max) Ohms/100 m (328 ft) @ 20˚C | 9.38 |
| **DC Resistance Unbalance** (max) Individual Pair % | 4.00 |
| **Delay Skew** (max) ns/100 m | 45 |
| **Nom. Velocity of Propagation** % Speed of Light | 69 |
| **Characteristic Impedance** Frequency (f): 1-100 MHz | Ohms 100 ± 15 |

### CROSS-SECTION




Data subject to change without notice.

TIA 568.2-D

RoHS Compliant Directive 2011/65/EU

Made in U.S.A.

General Cable

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

## Standards-Compliant

### 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
- CMR rating also allows the cable to be used in traditional indoor CMR installations
- Sunlight-resistant
- Sequential footage markings
- Wax box on 1000' PPCs for increased durability on the job site
- Third-party verified for guaranteed performance

### Applications

- IEEE 802.3: 1000 BASE-T, 100 BASE-TX, 10 BASE-T, PoE, PoE+
- CDDI, Token Ring, ATM
- Broadband and Baseband Analog Video

### Standard Compliances

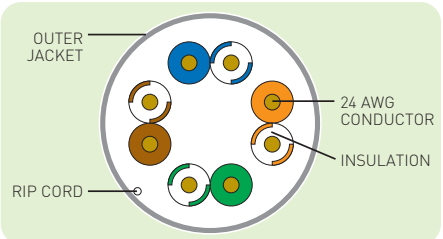
- ANSI/TIA 568.2-D
- NEC/CEC Type CMX OUTDOOR-CMR
- UL 444 Sunlight-Resistant
- UL 444
- RoHS Compliant Directive 2011/65/EU
- ANSI/TIA 862 (Building Automation)
- ICEA S-100-685
- ICEA S-90-661
- ISO/IEC 11801 Ed. 2.0 (Class D)
- Telcordia GR-3164
- Telcordia GR-3164 Severe Cold Impact

### ELECTRICAL CHARACTERISTICS

| | |
|---|---|
| **DC Resistance** (max) Ohms/100 m (328 ft) @ 20°C | 9.38 |
| **DC Resistance Unbalance** (max) Individual Pair % | 4.00 |
| **Delay Skew** (max) ns/100 m | 45 |
| **Nom. Velocity of Propagation** % Speed of Light | 70 |
| **Characteristic 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.

### CROSS-SECTION




### 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/1000 ft) | 26 |
| Minimum Bend Radius (in) | 1.0 |
| Maximum Pulling Force (lbs) | 25 |
| Temperature Rating (°C) | |
| Installation: | -10 to +60 |
| Operation: | -40 to +75 |

### ELECTRICAL PERFORMANCE

| **Frequency** MHz | **Insertion Loss** (max) | **NEXT** (min) | **Return Loss** (min) |
|---|---|---|---|
| **1** | 2.0 | 65.3 | 20.0 |
| **4** | 4.1 | 56.3 | 23.0 |
| **10** | 6.5 | 50.3 | 25.0 |
| **16** | 8.2 | 47.2 | 25.0 |
| **20** | 9.3 | 45.8 | 25.0 |
| **25** | 10.4 | 44.3 | 24.3 |
| **31.25** | 11.7 | 42.9 | 23.6 |
| **62.5** | 17.0 | 38.4 | 21.5 |
| **100** | 22.0 | 35.3 | 20.1 |
| **155** | 28.1 | 32.4 | — |
| **200** | 32.4 | 30.8 | — |
| **250** | 36.9 | 29.3 | — |
| **300** | 41.0 | 28.1 | — |
| **350** | 44.9 | 27.1 | — |

Note: Values are expressed in dB per 100 m (328 ft.) length @ 20°C. Values above 100 MHz are for information only.
*PSACR & ACR not specified in ANSI/TIA 568.2-D

### PART NUMBERS

Standard packaging: Pull-Pac® II

| **Jacket Color** | **600' Pull-Pac® II** **CMR** (Non-Plenum) | **1000' Pull-Pac® II** **CMR** (Non-Plenum) |
|---|---|---|
| Blue | | **2137160E** |
| White | | **2137147E** |
| Gray | **2137114E** | **2137146E** |
| Ivory | **2137113E** | **2137143E** |
| Beige | | **2137144E** |

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

Data subject to change without notice.

General Cable

VERIFIED TIA 568.2-D RoHS Compliant Directive 2011/65/EU Made in U.S.A.

# GenSPEED® 5000 Category 5e Backbone 25 Pair Cable

## Standards-Compliant

### CONSTRUCTION

**Conductors**
- 25 pairs of 24 AWG solid bare annealed copper

**Insulation**
- Non-Plenum: Polyolefin
- Plenum: Fluoropolymer

**Color Code**
- See Color Code Chart on page 95, except no bandmarking; only solid colors

**Rip Cord**
- Applied longitudinally under jacket

**Jacket**
- Non-Plenum: Flame-retardant PVC
- Plenum: Low-smoke, flame-retardant PVC

**Separator**
- Non-Plenum: N/A
- Plenum: Core filler

### PHYSICAL DATA

| | CMR (Non-Plenum) | CMP (Plenum) |
|---|---|---|
| Nominal Cable Diameter (in) | 0.500 | 0.500 |
| Nominal Cable Weight (lbs/1000 ft) | 125 | 160 |
| Minimum Bend Radius (in) | 4.0 | 4.0 |
| Maximum Pulling Force (lbs) | 50 | 50 |
| Temperature Rating (°C) | | |
| Installation: | 0 to +60 | 0 to +60 |
| Operation: | -20 to +75 | -20 to +75 |

### ELECTRICAL PERFORMANCE

| Frequency MHz | Insertion Loss (max) | NEXT (min) | Return Loss (min) |
|---|---|---|---|
| **0.772** | 1.8 | 67.0 | — |
| **1** | 2.0 | 65.3 | 20.0 |
| **4** | 4.1 | 56.3 | 23.0 |
| **8** | 5.8 | 51.8 | 24.5 |
| **10** | 6.5 | 50.3 | 25.0 |
| **16** | 8.2 | 47.2 | 25.0 |
| **20** | 9.3 | 45.8 | 25.0 |
| **25** | 10.4 | 44.3 | 24.3 |
| **31.25** | 11.7 | 42.9 | 23.6 |
| **62.5** | 17.0 | 38.4 | 21.5 |
| **100** | 22.0 | 35.3 | 20.1 |

Note: Values are expressed in dB per 100 m (328 ft.) length @ 20°C.

### PART NUMBERS

Standard packaging: 1000' Reel

| Jacket Color | Reel CMR (Non-Plenum) | Reel CMP (Plenum) |
|---|---|---|
| Blue | **2133694E** | |
| White | **2133781E** | **2131550E** |
| Gray | **2133269E** | **2131752E** |

### Features and Benefits

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

### Applications

- IEEE 802.3: 1000 BASE-T, 100 BASE-TX, 10 BASE-T, PoE, PoE+
- CDDI, Token Ring, ATM
- Broadband and Baseband Analog Video

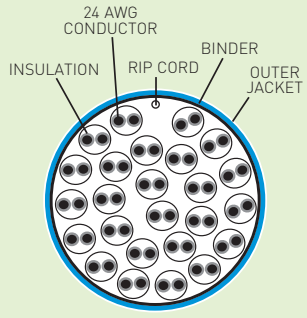
### Standard Compliances

- ANSI/TIA 568.2-D
- NEC/CEC Type CMR (UL 1666) for Non-Plenum
- NEC/CEC Type CMP (NFPA 262) for Plenum
- UL 444
- RoHS Compliant Directive 2011/65/EU
- ANSI/TIA 862 (Building Automation)
- ICEA S-90-661
- ISO/IEC 11801 Ed. 2.0 (Class D)

### ELECTRICAL CHARACTERISTICS

| | |
|---|---|
| **DC Resistance** (max) Ohms/100 m (328 ft) @ 20°C | 9.38 |
| **DC Resistance Unbalance** (max) Individual Pair % | 5.00 |
| **Delay Skew** (max) ns/100 m | 45 |
| **Propagation Delay** (max) ns @ 100 MHz | CMP: 518<br>CMR: 538 |
| **Nom. Velocity of Propagation** % Speed of Light | CMP: 72<br>CMR: 68 |
| **Characteristic Impedance** Frequency (f): 1-100 MHz | Ohms<br>100 ± 15 |

### CROSS-SECTION




Data subject to change without notice.

# 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 2 to 300 pair counts, Category 3 Plenum and Riser Cables meet all your Power Sum NEXT backbone voice transmission requirements.

All General Cable's Category Cables meet applicable TIA/EIA 568 C.2 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.

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 |
| **2131245** | 4 | White | PP | 0.17 | 17 |
| **2131313** | 4 | Gray | PP | 0.17 | 17 |
| **2131453** | 4 | Blue | 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 |

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 97

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

### Jacket:
- Flexguard® flame-retardant PVC
- Sequential footage markings

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

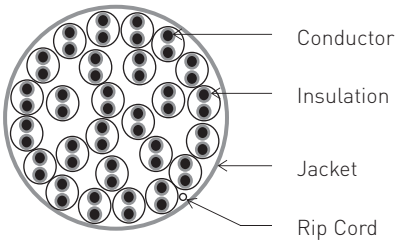
### Applications
- IEEE 802.3: 10 BASE-T
- IEEE 802.12: 100 BaseVG
- Token Ring, ATM
- T1
- Voice

### Compliances
- ANSI/TIA 568.2-D
- NEC/CEC Type CMP (NFPA 262) for Plenum
- UL 444
- RoHS Compliant Directive 2011/65/EU
- ICEA S-90-661

## Electrical Characteristics

| | 24 AWG |
|---|---|
| **DC Resistance** (max) Ohms/100 m (328 ft) @ 20°C | 9.38 |
| **Mutual Capacitance** (max) 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<br>10.0-16.0 MHz | dB (min)<br>12<br>12-10 log (f/10) |

| Frequency | Insertion Loss dB/100 m (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 +60 |
| Operation: | -20 to +75 |

UL LISTED UL VERIFIED 4 Pair 25 Pair TIA 568.2-D RoHS Compliant Directive 2011/65/EU Made in U.S.A.

General Cable

# Category 3 Non-Plenum

## Product Construction

### Conductors:
- 24 AWG solid bare annealed copper

### Insulation:
- Flame-retardant semi-rigid PVC (6-25 pr)
- Polyolefin (2-4 pr)

### Color Code:
- See Color Code Chart on page 97

### 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)

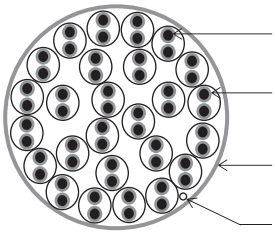
## Applications
- IEEE 802.3: 10 BASE-T
- IEEE 802.12: 100 BaseVG
- Token Ring, ATM
- T1
- Voice

## Compliances
- ANSI/TIA 568.2-D
- NEC/CEC Type CMR (UL 1666) for Non-Plenum
- UL 444
- RoHS Compliant Directive 2011/65/EU
- ICEA S-100-661

| 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 |
| **2133033** | 25 | Gray | RL | 0.42 | 105 |
| **2133033.99** | 25 | Gray | POL | 0.42 | 105 |

Data subject to change without notice.

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




## Physical Data

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

## Electrical Characteristics

| | **24 AWG** |
|---|---|
| **DC Resistance** (max) Ohms/100 m (328 ft) @ 20°C | 9.38 |
| **Mutual Capacitance** (max) 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 | dB (min) 12 |
| 10.0-16.0 MHz | 12-10 log (f/10) |

| Frequency | Insertion Loss dB/100 m (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

Made in U.S.A.

RoHS Compliant Directive 2011/65/EU

TIA 568.2-D

4 Pair 25 Pair VERIFIED

# Central Office Cables 5

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. 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.

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.

# Distributing Frame Wire Tight Twist

## 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"

### 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

### 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

- NEC/CEC Type CM (UL 1685-2000)
- Category 5 compatible, 1 inch and below
- RoHS Compliant Directive 2011/65/EU
- Telcordia (Bellcore) GR-136-CORE

| PRODUCT NUMBER | PAIR LAY | TYPE | CDRS | COLOR CODE | O.D. (INCHES) | WEIGHT (LBS/KFT) | SHIP LENGTH |
|---|---|---|---|---|---|---|---|
| 1" AND BELOW | | | | | | | |
| **2113187** | 5/8" | DT22P | 2 | R/V | 0.084 | 4.7 | 3000' CL |
| **2113188** | 5/8" | DT24P | 2 | R/V | 0.074 | 3.1 | 5000' CL |
| **2113099** | 0.75" | DT22P | 2 | R/V | 0.084 | 4.7 | 3500' BSP |
| **2113098** | 0.75" | DT24P | 2 | R/V | 0.074 | 3.1 | 5000' BSP |
| **2113181** | 1.00" | DT22P | 2 | V/BL | 0.084 | 4.7 | 600' SP |
| **2113185** | 1.00" | DT22P | 2 | V/BL | 0.084 | 4.7 | 3000' CL |
| **2113150** | 1.00" | DT22P | 2 | V/BL | 0.084 | 4.7 | 1000' SP |
| **2113111** | 1.00" | DT22P | 2 | V/BL | 0.084 | 4.7 | 3500' BSP |
| **2113182** | 1.00" | DT24P | 2 | V/BL | 0.074 | 3.1 | 600' SP |
| **2113186** | 1.00" | DT24P | 2 | V/BL | 0.074 | 3.1 | 5000' CL |
| **2113112** | 1.00" | DT24P | 2 | V/BL | 0.074 | 3.1 | 5000' BSP |
| 1.75" AND ABOVE | | | | | | | |
| **2113163** | 1.75" | DT22P | 2 | W/BL | 0.084 | 4.7 | 3000' CL |
| **2113169** | 1.75" | DT22P | 2 | W/O | 0.084 | 4.7 | 3000' CL |
| **2113168** | 1.75" | DT22P | 2 | W/G | 0.084 | 4.7 | 3000' CL |
| **2113166** | 1.75" | DT22P | 2 | R/G | 0.084 | 4.7 | 3000' CL |
| **2113192** | 1.75" | DT22P | 2 | BK/BL | 0.084 | 4.7 | 2600' HT |
| **2113191** | 1.75" | DT22P | 2 | BK/BL | 0.084 | 4.7 | 3000' CL |
| **2113178** | 1.75" | DT22P | 2 | BK/O | 0.084 | 4.7 | 3000' CL |
| **2113200** | 1.75" | DT22P | 2 | Y/G | 0.084 | 4.7 | 3000' CL |
| **2113202** | 1.75" | DT22P | 2 | W/R | 0.084 | 4.7 | 2600' HT |
| **2113170** | 1.75" | DT22P | 2 | W/R | 0.084 | 4.7 | 3000' CL |
| **2113177** | 1.75" | DT22P | 2 | W/BK | 0.084 | 4.7 | 3000' CL |
| **2113204** | 1.75" | DT22P | 2 | R/Y | 0.084 | 4.7 | 3000' CL |

Data subject to change without notice.

### Electrical Characteristics

| | 22 AWG | 24 AWG |
|---|---|---|
| **DC Resistance** (max) Ohms/1000 ft | 17.8 | 28.6 |
| **Coaxial Capacitance** (nom) microfarads/kft @ kHz | 0.150 | 0.125 |
| **Characteristic Impedance** Ohms @ 1 MHz (nom) | 100 | 100 |



General Cable

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RoHS Compliant Directive 2011/65/EU

Made in U.S.A.

# Distributing Frame Wire

## Type "DT" • Spec. 5009

| PRODUCT NUMBER | PAIRS | AWG | COLOR CODE | PKG. | PKG./ CAR-TON | O.D. (INCHES) | WEIGHT (LBS/KFT) |
|---|---|---|---|---|---|---|---|
| **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 |
| **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 |
| **2113046** | 1 | 24 | W/BL | 1000' SP | | 0.074 | 3.1 |
| **7022601** | 2 | 24 | Y/BL-R/G | 3000' BSP | 2 | 0.098 | 6.2 |
| **2113100** | 1 | 22 | W/O | 1000' SP | 4 | 0.084 | 5.0 |
| **7051618** | 1 | 22 | BK/W | 1000' SP | 4 | 0.084 | 5.0 |
| **7051626** | 1 | 22 | R/W | 1000' SP | 4 | 0.084 | 5.0 |
| **7051634** | 1 | 22 | BL/W | 1000' SP | 4 | 0.084 | 5.0 |
| **2113196** | 1 | 22 | BL/W | 4200' SP | 2 | 0.084 | 5.0 |
| **2113203** | 1 | 22 | R/W | 4200' SP | 2 | 0.084 | 5.0 |
| **2113087** | 1 | 22 | V/W | 4500' BSP | 2 | 0.084 | 5.0 |
| **7022460** | 1 | 22 | W/BL | 4500' BSP | 2 | 0.084 | 5.0 |
| **7022478** | 1 | 22 | W/O | 4500' BSP | 2 | 0.084 | 5.0 |
| **7022486** | 1 | 22 | W/G | 4500' BSP | 2 | 0.084 | 5.0 |
| **7022494** | 1 | 22 | W/R | 4500' BSP | 2 | 0.084 | 5.0 |
| **7022502** | 1 | 22 | R/G | 4500' BSP | 2 | 0.084 | 5.0 |
| **2113040** | 1 | 22 | W/BK | 3000' BSP | | 0.084 | 5.0 |
| **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/1000 ft | 17.8 | 28.6 |
| **Coaxial Capacitance** (nom) microfarads/kft @ kHz | 0.150 | 0.125 |
| **Characteristic Impedance** Ohms @ 1 MHz (nom) | 100 | 100 |

### 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

### 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

- NEC/CEC Type CM (UL 1685-2000)
- Category 3 compatible
- RoHS Compliant Directive 2011/65/EU
- Telcordia (Bellcore) GR-136-CORE

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RoHS Compliant Directive 2011/65/EU

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# DSX Distribution Frame Wire

## Type "Y2" • Spec. 5506

### 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/1000 ft): 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
- NEC/CEC Type CM (UL 1685-2000)
- Category 3 compatible
- RoHS Compliant Directive 2011/65/EU

| PRODUCT NUMBER | PAIRS | PKG. | PKG./ CARTON |
|---|---|---|---|
| **2114395** | 2.5 | 660' SP | 4 |
| **2114396** | 2.5 | 1350' CL | 2 |
| **7026156** | 2.5 | 1000' SP | 4 |

Data subject to change without notice.

### Electrical Characteristics

| | 24 AWG |
|---|---|
| **DC Resistance** (max) Ohms/1000 ft @ 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 kHz | 70 |



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# Customer Premise Cross-Connect Wire Spec. 5006

| PRODUCT NUMBER | PAIRS | AWG | COLOR CODE | | | | PKG./ CARTON | O.D. (INCHES) | WEIGHT (LBS/ KFT) |
|---|---|---|---|---|---|---|---|---|---|
| | | | PAIR 1 | PAIR 2 | PAIR 3 | PAIR 4 | | | |
| **2114369** | 1 | 24 | R/BL-BL/R | | | | 8 | 0.06 | 3 |
| **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 |
| **7023716** | 2 | 24 | BL/W-W/BL | O/W-W/O | | | 3 | 0.09 | 6 |
| **2114211** | 4 | 24 | BL/W-W/BL | O/W-W/O | G/W-W/G | BR/W-W/BR | 4 | 0.12 | 13 |
| **2114363** | 1 | 22 | W/O-O/W | | | | 4 | 0.08 | 5 |
| **7041973** | 1 | 22 | BL/W-W/BL | | | | 4 | 0.08 | 5 |
| **7042047** | 1 | 22 | R/W-W/R | | | | 4 | 0.08 | 5 |

Data subject to change without notice.

### Electrical Characteristics

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

### 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**
- NEC/CEC Type CM (UL 1685-2000)
- Category 2 compatible
- RoHS Compliant Directive 2011/65/EU

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

| 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 |
| **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 |
| **2114355** | 1 | R/W-W/R | | | 600' SP | 8 | 0.07 | 3 |
| **2114408** | 2 | BL/W-W/BL | O/W-W/O | | 500' SP | 8 | 0.09 | 7 |
| **7042518** | 2 | BL/R-R/BL | O/R-R/O | | 1150' SP | 4 | 0.09 | 7 |
| **2114307** | 2 | BL/W-W/BL | O/W-W/O | | 1000' SP | 4 | 0.09 | 7 |
| **7042526** | 3 | BL/W-W/BL | O/W-W/O | G/W-W/G | 600' SP | 4 | 0.12 | 11 |

Data subject to change without notice.

### Electrical Characteristics

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

### 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**
- NEC/CEC Type CM (UL 1685-2000)
- Category 3 compatible
- RoHS Compliant Directive 2011/65/EU
- Telcordia (Bellcore) GR-1253 (Bellcore Specification TA-TSY-000130)

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RoHS Compliant Directive 2011/65/EU

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# Customer Premise Cross-Connect Wire Tight Twist

## Type "F" • Spec. 5008

### Product Construction

**Conductors:**
- 24 AWG solid bare annealed copper

**Insulation:**
- Flame-retardant semi-rigid PVC

**Pairing:**
- Twelve twists per foot

### 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
- Telcordia (Bellcore) GR-1253 (Bellcore Specification TA-TSY-000130)
- Category 5 compatible

| PRODUCT NUMBER | PAIRS | COLOR CODE PAIR 1 | PKG. | PKG./ CARTON | O.D. (INCHES) | WEIGHT (LBS/KFT) |
|---|---|---|---|---|---|---|
| **2113189** | 1 | BL/V-V/BL | 500' SP | 8 | 0.67 | 3.25 |
| **2114410** | 1 | BL/V-V/BL | 300' SP | 8 | 0.67 | 3.25 |

Data subject to change without notice.

### Electrical Characteristics

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

# Network Outdoor Cross-Connect Wire

## Type "G" • Spec. 5010

### 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
- Category 3 compatible
- RoHS Compliant Directive 2011/65/EU
- Telcordia (Bellcore) GR-126-CORE (Bellcore Specification TA-NWT-000126)

| 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/1000 ft @ 20°C | 17.8 |
| **Coaxial Capacitance** (max) microfarads/kft @ 23°C | 0.09 |
| **Insulation Resistance** (min) Megohm - kft @ 23°C | 2000 |

# Universal Cross-Connect Wire

## Type "N" • Spec. 5013

| PRODUCT NUMBER | PAIRS | COLOR CODE | | PKG. | PKG./ CARTON | WEIGHT (LBS/KFT) |
|---|---|---|---|---|---|---|
| | | PAIR 1 | PAIR 2 | | | |
| **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 | 10.6 |

Data subject to change without notice.

### Electrical Characteristics

| | 22 AWG |
|---|---|
| **DC Resistance** (max) Ohms/1000 ft @ 20˚C | 17.8 |
| **Coaxial Capacitance** (max) microfarads/kft @ 23˚C | 0.15 |
| **Insulation Resistance** (min) Megohm - kft @ 23˚C | 600 |
| **Near-End Cross Talk** (min) dB @ 772 kHz | 44 |

### 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

- NEC/CEC Type CM (UL 1685-2000)
- Category 3 compatible
- RoHS Compliant Directive 2011/65/EU
- Telcordia (Bellcore) GR-126-CORE (Bellcore Specification TA-NWT-000126)

Made in U.S.A.

RoHS Compliant Directive 2011/65/EU

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# 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

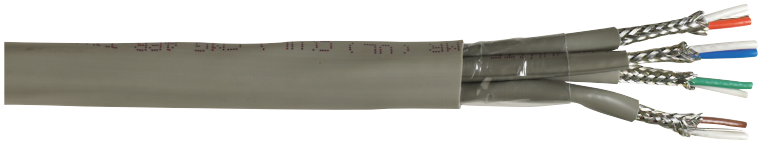
**Color Code:**
- Pair jackets are color-coded by use of jacket printing
- Marking or printing will correspond with the colors of the insulated pairs (e.g., white/blue printed on the pair jacket indicates the insulation colors of the pairs enclosed)

**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: NEC/CEC Type CM (UL 1685-2000)
- 2 pair through 12 pair: NEC/CEC Type CMR (UL 1666)
- UL 444
- RoHS Compliant Directive 2011/65/EU



| PRODUCT NUMBER | PAIRS | COLOR CODE | JACKET COLOR | O.D. (INCHES) | WEIGHT (LBS/KFT) |
|---|---|---|---|---|---|
| **2117037** | 1 | W/BL | Orange | 0.18 | 26 |
| **7056898** | 1 | W/BL | Gray | 0.18 | 26 |

Data subject to change without notice.

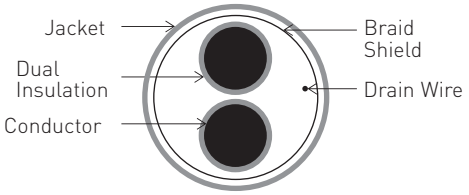
### Electrical Characteristics

| | 22 AWG |
|---|---|
| **DC Resistance** (max) Ohms/1000 ft @ 20°C | 18 |
| **Resistance Unbalanced** (max) Individual Pair % @ 20°C | 5 |
| **Shield Resistance** (nom) Ohms @ 1000 ft | 3.3 |
| **Mutual Capacitance** (max) pF/ft @ 1 kHz | 19 |
| **Impedance** Ohms/772 kHz | 100 ± 5 |

| Frequency | Attenuation dB/1000 ft | NEXT dB/1000 ft | FEXT dB/1000 ft |
|---|---|---|---|
| **.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**



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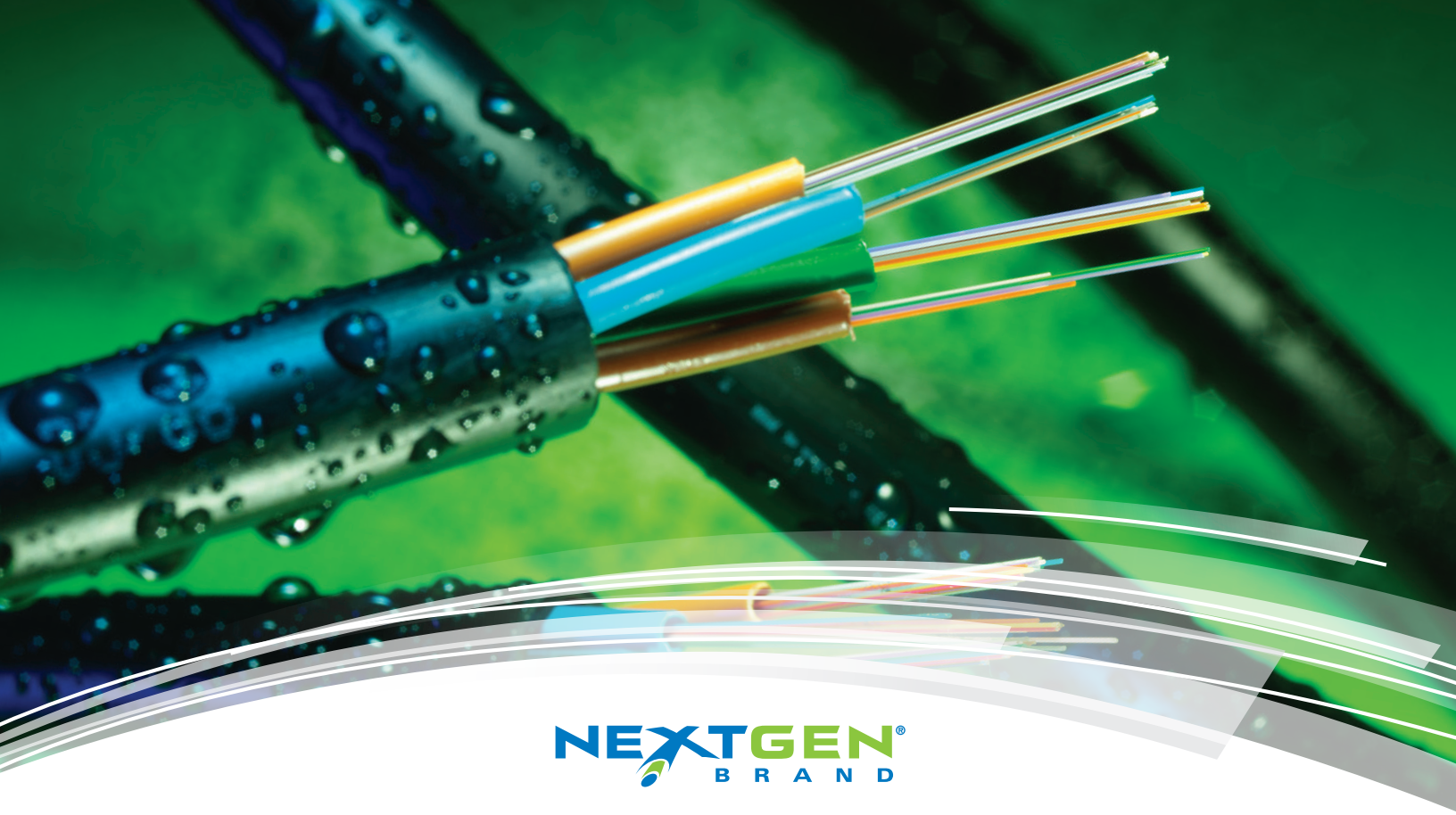

NEXTGEN® BRAND

# Fiber Optic Cable

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**NextGen Brand delivers the cable construction and performance that best fit — whatever the demand.**

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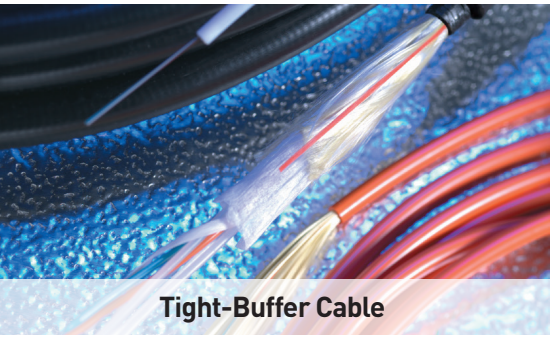
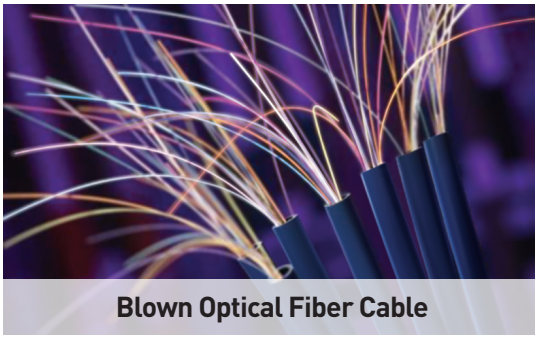
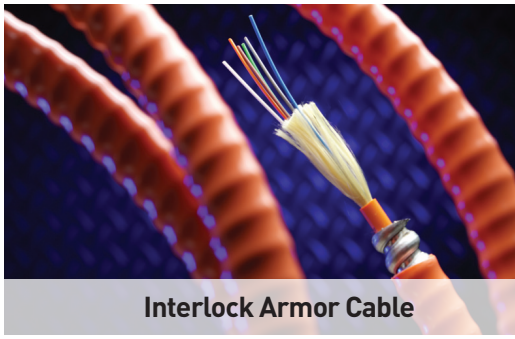


Tight-Buffer Cable



Blown Optical Fiber Cable



Interlock Armor Cable

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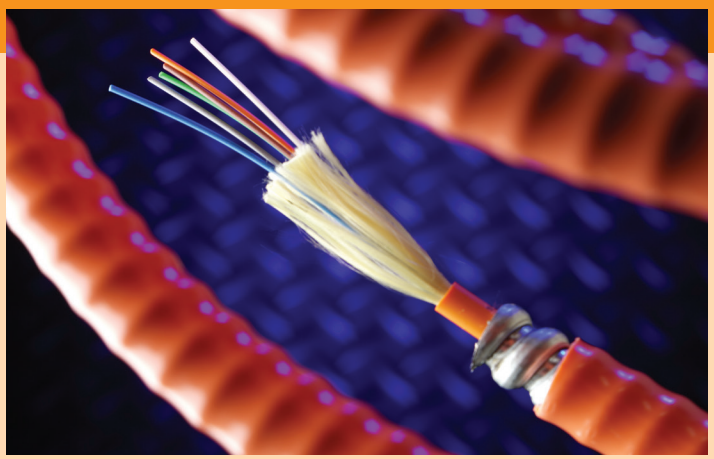
**General Cable, Corning® Optical Fiber. Names that are synonymous with cable and fiber combine to create the ultimate in fiber optics. General Cable partners with Corning Optical Fiber to deliver the world's most reliable and technologically advanced optical fiber cables.**



## 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 (l0) 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
- ISO 11801 052
- 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.

### ClearCurve® ZBL

General Cable, utilizing Corning® ClearCurve® ZBL Optical Fiber, delivers the best macrobending performance in the industry while maintaining compatibility with current optical fibers, equipment, practices and procedures. This full-spectrum singlemode optical fiber, when subjected to smaller radii bends, experiences virtually no signal loss. ClearCurve fiber exceeds the most stringent bend performance requirements of ITU-T Recommendations G.657.B3 while remaining fully compliant with ITU-T Recommendation G.652.D and the installed base of Corning SMF-28e® and SMF-28e+® fiber.

## 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.

These fibers have superior measurement technology and manufacturing control, and industry-leading CPC® coatings for superior microbend and environmental performance. ClearCurve fiber performance is ensured by minEMBc, the industry's leading standards-approved bandwidth measurement for OM3 fibers. ClearCurve fibers are the only ones to use this measurement to ensure 10 Gb/s performance.

### 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

### 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

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, ISO 11801 052, OS2* |
| 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, ISO 11801 052, OS2* |
| Tight Buffer SM | AP | SMF-28e+™ Fiber | Full spectrum, low water peak singlemode with 900 µm PVC buffer, ITU-T G.652.D, ISO 11801 052, OS2* |
| Long-Haul SM | AL | LEAF® Fiber | Large $A_{eff}$, low water peak, NZ-DSF singlemode, ITU-T G.655 |
| Ultra-Bendable SM | AZ | ClearCurve® ZBL | Full spectrum with best 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*<br>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*<br>1 Gb/s ≤ 1000 m at 1300 nm |
| Ultra-bendable 50 µm MM | BI | ClearCurve® OM2 Fiber | 10 Gb/s ≤ 150 m at 850 nm, OM2*<br>1 Gb/s ≤ 750 m at 850 nm |
| Ultra-bendable 50 µm MM | BE | ClearCurve® OM3 Fiber | 10 Gb/s ≤ 300 m at 850 nm, OM3*<br>1 Gb/s ≤ 1000 m at 850 nm |
| Ultra-bendable 50 µm MM | BL | ClearCurve® OM4 Fiber | 10 Gb/s ≤ 550 m at 850 nm, OM4*<br>1 Gb/s ≤ 1100 m at 850 nm |
| Ultra-bendable 50 µm MM | BM | ClearCurve® OM4 Fiber | 10 Gb/s ≤ 600 m at 850 nm, OM4+*<br>1 Gb/s ≤ 1100 m at 850 nm |

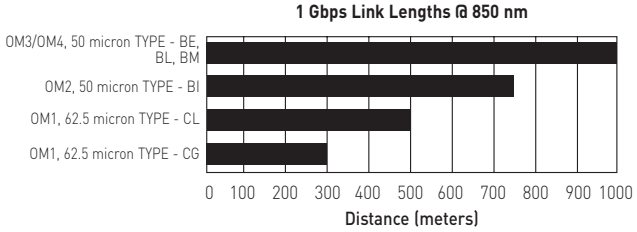
* Designation per ISO 11801 Fiber Standards

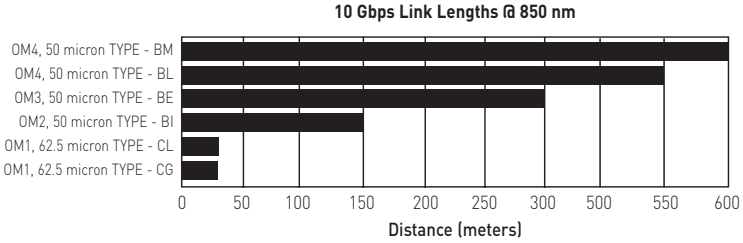
# Fiber Specification and Selection

## 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 | OM1 Type-CG | OM1 Type-CL | |
| Maximum Finished Cable Attenuation Coefficient | @850 nm | 3.0 | 3.0 | 3.0 | 3.0 | 3.5 | 3.5 | dB/km |
| | @1300 nm | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | dB/km |
| Overfill Launch Bandwidth | @850 nm | 700 | 1500 | 1500 | 1500 | 200 | 200 | MHz.km |
| | @1300 nm | 500 | 500 | 500 | 500 | 500 | 500 | MHz.km |
| Laser Bandwidth | @850 nm | 850 | 2000 | 4700 | 5350* | 220 | 385 | MHz.km |
| Gigabit Ethernet Link Length (1 Gbps) | 1000 BASE-SX (850 nm) | 750 | 1000 | 1100 | 1100 | 300 | 500 | meters |
| | 1000 BASE-LX (1300 nm) | 550 | 550 | 550 | 550 | 550 | 1000 | meters |
| 10 Gigabit Ethernet Length (10 Gbps) | 10G BASE-SR (850 nm) | 150 | 300 | 550 | 600 | 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) | |
|---|---|---|---|---|---|---|---|---|
| | | 1310 nm | 1383 nm | 1550 nm | 1625 nm | 1310 nm | 1310 nm | 1550 nm |
| **OS2 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 |
| **OS2 Singlemode - Tight Buffer** | | | | | | | | |
| Distribution | AP | 0.65 | – | 0.65 | – | 10,000 | 5,000 | 30,000 |
| Breakout | AP | 1.00 | – | 1.00 | – | 10,000 | 5,000 | 30,000 |

## SPECIALTY FIBERS — SINGLEMODE

| FIBER DESCRIPTION | FIBER TYPE | TYPICAL ATTENUATION (dB/km) | | | | TYPICAL APPLICATION |
|---|---|---|---|---|---|---|
| | | 1310 nm | 1383 nm | 1550 nm | 1625 nm | |
| **Singlemode (NZDS)** | | | | | | |
| Large Effective Area | AL | – | – | 0.30 | 0.30 | DWDM |
| **Singlemode** | | | | | | |
| Bend-Insensitive | AZ | 0.40 | 0.40 | 0.30 | 0.30 | SMALL BEND RADIUS |

Use the code in the "Fiber Type" column to replace the XX notation in the catalog number shown on the catalog page. This identifies the fiber that will be provided with the cable choice.

The fibers in all completed cables are tested 100% at the factory for attenuation, and each fiber must meet the minimum requirements specified by the customer.

# Tight Buffer Distribution Riser Cable

## Type OFNR, CSA FT4, 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 | — | 0.20 | 5 | 18 | 27 | 225 | 1000 | 65 | 290 |
| **XX0121PNR** | 12 | — | 0.25 | 6 | 24 | 36 | 320 | 1425 | 112 | 500 |
| **XX0241P1R** | 24 | 4 | 0.34 | 9 | 47 | 70 | 330 | 1425 | 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.

# Tight Buffer Distribution Plenum Cable

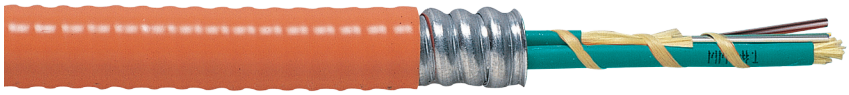
## Type OFNP, CSA FT6, Indoor*

| 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 | — | 0.17 | 4 | 12 | 17 | 225 | 1000 | 65 | 290 |
| **XX0061PNU** | 6 | — | 0.18 | 5 | 16 | 24 | 225 | 1000 | 65 | 290 |
| **XX0121PNU** | 12 | — | 0.22 | 6 | 23 | 34 | 320 | 1423 | 112 | 500 |
| **XX0241PNU** | 24 | — | 0.32 | 8 | 45 | 67 | 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.

# Tight Buffer Distribution Interlock Armored Riser Cable

## Type OFCR, CSA FT4, 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 | — | 0.52 | 13 | 85 | 126 | 550 | 2447 | 165 | 734 |
| **XX0041PNR-ILRA** | 4 | — | 0.57 | 14 | 95 | 141 | 550 | 2447 | 165 | 734 |
| **XX0061PNR-ILRA** | 6 | — | 0.57 | 14 | 98 | 146 | 550 | 2447 | 165 | 734 |
| **XX0121PNR-ILRA** | 12 | — | 0.57 | 14 | 104 | 155 | 550 | 2447 | 165 | 734 |
| **XX0241PNR-ILRA** | 24 | — | 0.67 | 17 | 144 | 214 | 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.

# Tight Buffer Distribution Interlock Armored Plenum Cable

## Type OFCP, CSA FT6, 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 | — | 0.49 | 12 | 80 | 119 | 550 | 2447 | 165 | 734 |
| **XX0041PNU-ILPA** | 4 | — | 0.49 | 12 | 82 | 122 | 550 | 2447 | 165 | 734 |
| **XX0061PNU-ILPA** | 6 | — | 0.49 | 12 | 84 | 125 | 550 | 2447 | 165 | 734 |
| **XX0121PNU-ILPA** | 12 | — | 0.49 | 12 | 100 | 149 | 550 | 2447 | 165 | 734 |
| **XX0241PNU-ILPA** | 24 | — | 0.59 | 15 | 138 | 205 | 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.

# Tight Buffer Distribution Riser Cable

## Type OFNR, CSA FT4, 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 | — | 0.20 | 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.
NOTE: More fiber counts are available upon request. See Fiber Optic Catalog for complete product information.
*Not for aerial or direct burial applications.

# Tight Buffer Distribution Plenum Cable

## Indoor/Outdoor Dry Water Block, Type OFNP, CSA FT6, 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 | — | 0.17 | 4 | 11.7 | 17.4 | 300 | 1334 | 90 | 400 |
| XX0061ANU.BK | 6 | — | 0.20 | 5 | 16.0 | 23.8 | 320 | 1423 | 96 | 427 |
| XX0121ANU.BK | 12 | — | 0.23 | 6 | 22.7 | 33.8 | 400 | 1780 | 120 | 534 |
| XX0241ANU.BK | 24 | — | 0.32 | 8 | 45.0 | 67 | 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.

# Tight Buffer Distribution Interlock Armored Riser Cable

## Type OFCR, CSA FT4, 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 |
| **XX0121ANR-ILRA** | 12 | — | 0.57 | 14 | 104 | 155 | 550 | 2447 | 165 | 734 |
| **XX0241ANR-ILRA** | 24 | — | 0.67 | 17 | 144 | 214 | 550 | 2447 | 165 | 734 |
| **XX0481A1R-ILRA** | 48 | 4 | 0.99 | 25 | 330 | 491 | 1000 | 4448 | 300 | 1334 |
| **XX0721A1R-ILRA** | 72 | 6 | 1.09 | 28 | 422 | 628 | 1000 | 4448 | 300 | 1334 |

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.

# Tight Buffer Distribution Interlock Armored Plenum Cable

## Type OFCP, CSA FT6, 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 |
| **XX0121ANU-ILPA** | 12 | — | 0.49 | 12 | 100 | 149 | 550 | 2447 | 165 | 734 |
| **XX0241ANU-ILPA** | 24 | — | 0.59 | 15 | 138 | 205 | 550 | 2447 | 165 | 734 |
| **XX0481ANU-ILPAS** | 48 | 4 | 0.80 | 20 | 209 | 311 | 1000 | 4448 | 300 | 1334 |
| **XX0721ANU-ILPAS** | 72 | 6 | 0.95 | 24 | 273 | 406 | 1000 | 4448 | 300 | 1334 |

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.

# Loose Tube Single Jacket Riser Cable

## Type OFNR, CSA, 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 | 0.36 | 9 | 53 | 80 | 600 | 2670 | 200 | 890 |
| XX0124M1M-DT | 12 | 2 | 0.36 | 9 | 52 | 78 | 600 | 2670 | 200 | 890 |
| XX0244M1M-DT | 24 | 4 | 0.36 | 9 | 51 | 76 | 600 | 2670 | 200 | 890 |

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.

# Loose Tube Single Jacket Plenum Cable

## Type OFNP, CSA FT6, 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.
NOTE: More fiber counts are available upon request. See Fiber Optic Catalog for complete product information.
* Not for aerial or direct burial applications.

# Loose Tube Single Jacket Low-Smoke, Zero-Halogen (LSZH) Cable Type OFN/LS, 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 |
| **XX0064M1Z** | 6 | 1 | 0.36 | 9 | 59 | 89 | 600 | 2670 | 200 | 890 |
| **XX0124M1Z** | 12 | 2 | 0.36 | 9 | 60 | 89 | 600 | 2670 | 200 | 890 |
| **XX0244M1Z** | 24 | 4 | 0.36 | 9 | 61 | 90 | 600 | 2670 | 200 | 890 |

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.

# Tight Buffer Distribution Low-Smoke, Zero-Halogen (LSZH) Cable Type OFNR, CSA FT4, 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 |
| **XX0061PNZ** | 6 | — | 0.20 | 5 | 15 | 22 | 225 | 1000 | 65 | 290 |
| **XX0121PNZ** | 12 | — | 0.23 | 6 | 21 | 31 | 320 | 1425 | 112 | 500 |
| **XX0241P1Z** | 24 | 4 | 0.53 | 13 | 92 | 137 | 800 | 3560 | 270 | 1201 |

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.

# 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 | 0.44 | 11.1 | 55 | 82 | 600 | 2700 | 180 | 800 |
| **XX0244M1A-DWB** | 24 | 2 | 3 | 0.44 | 11.1 | 55 | 82 | 600 | 2700 | 180 | 800 |
| **XX0484M1A-DWB** | 48 | 4 | 1 | 0.44 | 11.1 | 55 | 82 | 600 | 2700 | 180 | 800 |
| **XX0724M1A-DWB** | 72 | 6 | 0 | 0.47 | 12.0 | 66 | 98 | 600 | 2700 | 180 | 800 |

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.

# 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 | 0.51 | 13.0 | 78 | 116 | 600 | 2700 | 180 | 800 |
| **XX0244H1A-DWB** | 24 | 2 | 3 | 0.51 | 13.0 | 78 | 116 | 600 | 2700 | 180 | 800 |
| **XX0484H1A-DWB** | 48 | 4 | 1 | 0.51 | 13.0 | 78 | 116 | 600 | 2700 | 180 | 800 |
| **XX0724H1A-DWB** | 72 | 6 | 0 | 0.54 | 13.7 | 90 | 134 | 600 | 2700 | 180 | 800 |

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

# 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 | 0.48 | 12.1 | 91 | 135 | 600 | 2670 | 180 | 800 |
| **XX0244M1F-DWB** | 24 | 2 | 3 | 0.48 | 12.1 | 91 | 135 | 600 | 2670 | 180 | 800 |
| **XX0484M1F-DWB** | 48 | 4 | 1 | 0.48 | 12.1 | 91 | 135 | 600 | 2670 | 180 | 800 |
| **XX0724M1F-DWB** | 72 | 6 | 0 | 0.54 | 13.6 | 109 | 162 | 600 | 2670 | 180 | 800 |

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

# 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 | 213 | 600 | 2670 | 180 | 800 |

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

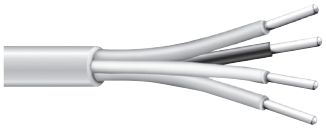
CAROL® BRAND

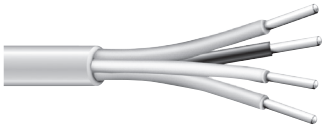
# Quick Reference Applications Guide

General Cable manufactures the most comprehensive line of Carol® Brand Electronic Cables available today for signal & data transmission, security, fire alarm & life safety, sound and audio/video & home entertainment. Our products are readily available for immediate shipment through a network of authorized stocking distributors and distribution centers.

## Alarm and Security:

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

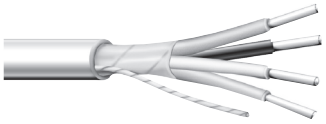


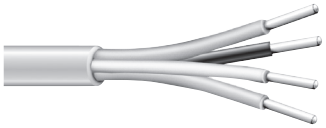


| PART NUMBER | PRODUCT DESCRIPTION | APPLICATIONS |
|---|---|---|
| **PLENUM UNSHIELDED ALARM AND SECURITY** | | |
| E3004S | 22/4 Multi-Cond. 7/30TC SHLD CM | • Power-Limited Control Circuits<br>• Wiring of Intercom, Security, Audio, Background Music<br>• Suggested Voltage Rating: 300 V |
| E3032S | 18/2 Multi-Cond. 7/30TC SHLD CM | |
| E3034S | 18/4 Multi-Cond. 16/30TC SHLD CM | |
| E3033S | 18/3 Multi-Cond. 16/30TC SHLD CM | |
| E3042S | 16/2 Multi-Cond. 19/30TC SHLD CM | |
| **PLENUM SHIELDED ALARM AND SECURITY** | | |
| E2104S | 22/4 Multi-Cond. 7/30BC OA SH CMP/CL3P | • Power-Limited Control Circuits<br>• Wiring of Intercom, Security, Audio, Background Music<br>• Suggested Voltage Rating: 300 V |
| E2106S | 22/6 Multi-Cond. 7/30BC OA SH CMP/CL3P | |
| E2202S | 18/2 Multi-Cond. 7/26BC OA SH CMP/CL3P | |
| E2204S | 18/4 Multi-Cond. 7/26BC OA SH CMP/CL3P | |
| E2206S | 18/6 Multi-Cond. 7/26BC OA SH CMP/CL3P | |
| **RISER (NON-PLENUM) UNSHIELDED ALARM AND SECURITY** | | |
| E1002S | 22/2 Multi-Cond. 7/30BC UNSH CMR/CL3R | • Power-Limited Control Circuits<br>• Wiring of Intercom, Security, Audio, Background Music<br>• Suggested Voltage Rating: 300 V |
| E1004S | 22/4 Multi-Cond. 7/30BC UNSH CMR/CL3R | |
| E1032S | 18/2 Multi-Cond. 7/26BC UNSH CMR/CL3R | |
| E1034S | 18/4 Multi-Cond. 7/26BC UNSH CMR/CL3R | |
| E1042S | 16/2 Multi-Cond. 19/.0117BC UNSH CMR | |
| **RISER (NON-PLENUM) SHIELDED ALARM AND SECURITY** | | |
| E2002S | 22/2 Multi-Cond. 7/30BC OA SH CMR/CL3R | • Power-Limited Control Circuits<br>• Wiring of Intercom, Security, Audio, Background Music<br>• Suggested Voltage Rating: 300 V |
| E2032S | 18/2 Multi-Cond. 7/26BC OA SH CMR/CL3R | |
| E2033S | 18/3 Multi-Cond. 7/26BC OA SH CMR/CL3R | |
| E2034S | 18/4 Multi-Cond. 7/26BC OA SH CMR/CL3R | |
| E2042S | 16/2 Multi-Cond. 19/.0117BC OA SH CMR | |

## Fire Alarm:

General Cable's offering has expanded from a rather simple and unsophisticated business configured upon large, electromechanical devices to one relying upon the most modern technologies of microprocessor and chip technology. Our Carol® Brand designs have proven themselves in the area of fire system security over time; all are fabricated with solid, bare copper conductors and insulations and jackets of premium-grade PVC. Offered both with and without shields, the formerto protect these critical circuits from noise, these cables will provide the latest in available technology for the system installer and contractor.





| PART NUMBER | PRODUCT DESCRIPTION | APPLICATIONS |
|---|---|---|
| **PLENUM UNSHIELDED FIRE ALARM** | | |
| E3502S | 1/28 Multi-Cond. SBC PVC/NS/FLEX FPLP | • Residential Housing<br>• Business and Office Campus Environments<br>• Public Stadiums and Arenas<br>• Airport, Train, Bus and Other Transportation Hubs<br>• Schools, Colleges and Universities<br>• Commercial Buildings |
| E3504S | 18/4 Multi-Cond. SBC PVC/NS/FLEX FPLP | |
| E3512S | 16/2 Multi-Cond. SBC PVC/NS/FLEX FPLP | |
| E3522S | 14/2 Multi-Cond. SBC PVC/NS/FLEX FPLP | |
| E3532S | 12/2 Multi-Cond. SBC PVC/NS/FLEX FPLP | |
| **PLENUM SHIELDED FIRE ALARM** | | |
| E3602S | 18/2 Multi-Cond. SBC PVC/OA/FLEX FPLP | • Residential Housing<br>• Business and Office Campus Environments<br>• Public Stadiums and Arenas<br>• Airport, Train, Bus and Other Transportation Hubs<br>• Schools, Colleges and Universities<br>• Commercial Buildings |
| E3604S | 18/4 Multi-Cond. SBC PVC/OA/FLEX FPLP/CMP | |
| E3612S | 16/2 Multi-Cond. SBC PVC/OA/FLEX FPLP | |
| E3622S | 14/2 Multi-Cond. SBC PVC/OA/FLEX FPLP | |
| E3632S | 12/2 Multi-Cond. SBC PVC/OA/FLEX FPLP/CMP | |
| **RISER (NON-PLENUM) UNSHIELDED FIRE ALARM** | | |
| E1502S | 18/2 Multi-Cond. SBC UNSH TYPE FPLR | • Residential Housing<br>• Business and Office Campus Environments<br>• Public Stadiums and Arenas<br>• Airport, Train, Bus and Other Transportation Hubs<br>• Schools, Colleges and Universities<br>• Commercial Buildings |
| E1504S | 18/4 Multi-Cond. SBC UNSH TYPE FPLR | |
| E1512S | 16/2 Multi-Cond. SBC UNSH TYPE FPLR | |
| E1522S | 14/2 Multi-Cond. SBC UNSH TYPE FPLR | |
| E1532S | 12/2 Multi-Cond. SBC UNSH TYPE FPLR | |
| **RISER (NON-PLENUM) SHIELDED FIRE ALARM** | | |
| E2502S | 18/2 Multi-Cond. SBC OA SH TYPE FPLR | • Residential Housing<br>• Business and Office Campus Environments<br>• Public Stadiums and Arenas<br>• Airport, Train, Bus and Other Transportation Hubs<br>• Schools, Colleges and Universities<br>• Commercial Buildings |
| E2504S | 18/4 Multi-Cond. SBC OA SH TYPE FPLR | |
| E2522S | 16/2 Multi-Cond. SBC OA SH TYPE FPLR | |
| E2524S | 16/4 Multi-Cond. SBC OA SH TYPE FPLR | |
| E2532S | 14/2 Multi-Cond. SBC OA SH TYPE FPLR | |

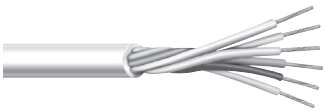
NOTE: Other gauges, colors and packaging are available; contact your General Cable Representative for additional ordering options.

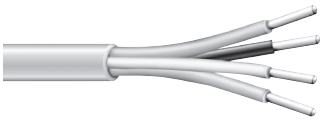
General Cable

# Classics – Comm & Control:

Paired cable designs find frequent application in circuits requiring circuit-to-circuit isolation from noise, minimization of capacitance imbalances and a reduction of EMI interference currents. Circuit separation is further enhanced in those designs employing individual circuit shields in concert with an overall shield. These Carol® Brand shielding systems are available from General Cable in myriad combinations to suit the unique needs of the circuit designer.

*** Paired constructions are also available**

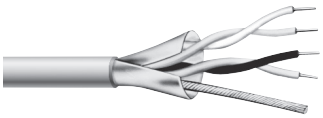


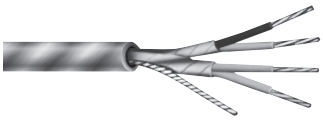


| PART NUMBER | PRODUCT DESCRIPTION | APPLICATIONS |
|---|---|---|
| | **RISER SHIELDED CLASSICS** | |
| C2514A | 22/2 Multi-Cond. 7/30TC SHLD CM | • Remote & Process Control<br>• Public Address Systems<br>• Building Automation for EIA 232 Serial Applications<br>• HVAC/Lighting |
| C0763A | 22/6 Multi-Cond. 7/30TC SHLD CM | |
| C2534A | 18/2 Multi-Cond. 16/30TC SHLD CM | |
| C2535A | 18/3 Multi-Cond. 16/30TC SHLD CM | |
| C2543A | 18/4 Multi Cond. 19/30TC SHLD CM | |
| | **RISER UNSHIELDED CLASSICS** | |
| C6348A | 22/2 Multi-Cond. 7/30TC UNSH CM | • Remote & Process Control<br>• Public Address Systems<br>• Building Automation for EIA 232 Serial Applications<br>• HVAC/Lighting |
| C4062A | 22/3 Multi-Cond. 7/30TC UNSH CM | |
| C4063A | 22/4 Multi-Cond. 7/30TC UNSH CM | |
| C6351A | 20/2 Multi-Cond. 7/28TC UNSH CM | |
| C2831A | 18/3 Multi-Cond. 16/30TC UNSH CM | |
| | **PLENUM SHIELDED CLASSICS** | |
| C3158 | 22/2 Multi-Cond. 7/30TC PVC/SHLD/FLEX CMP | • Remote & Process Control<br>• Public Address Systems<br>• Building Automation for EIA 232 Serial Applications<br>• HVAC/Lighting |
| C3062 | 18/2 Multi-Cond. 7/26BC PVC/SHLD/FLEX CMP | |
| C3063 | 18/4 Multi Cond. 7/26BC PVC/SHLD/FLEX CMP | |
| C3065 | 18/6 Multi-Cond. 7/26BC PVC/SHLD/FLEX CMP | |
| C3068 | 16/2 Multi-Cond. 19/.0117BC SHLD/FLEX CMP | |
| | **PLENUM UNSHIELDED CLASSICS** | |
| C3115 | 22/2 Multi-Cond. 7/30TC PVC/UNSH/FLEX CMP | • Remote & Process Control<br>• Public Address Systems<br>• Building Automation for EIA 232 Serial Applications<br>• HVAC/Lighting |
| C3112 | 18/2 Multi-Cond. 7/26BC PVC/UNSH/FLEX CMP | |
| C3113 | 18/4 Multi-Cond. 7/26BC PVC/UNSH/FLEX CMP | |
| C3122 | 18/8 Multi-Cond. 7/26BC PVC/UNSH/FLEX CMP | |
| C3128 | 14/2 Multi-Cond. 19/.0147BC UNSH/FLEX CL3P | |

# Classics – Hi-Temp:

As with the multi-conductor designs, a wide array of insulating and jacketing materials are available to meet specific electronic applications. General Cable's Carol® Brand communication cable products are manufactured to meet the latest UL, CSA and NEC requirements and approvals.





| PART NUMBER | PRODUCT DESCRIPTION | APPLICATIONS |
|---|---|---|
| | **MULTI-PAIRED UNSHIELDED HI-TEMP CLASSICS** | |
| C8122 | 18/1 Multi-Pr. 19/30TC UNSH FLP/PVC CMP | • Remote Control Circuits<br>• Process Control and Instrumentation<br>• Suggested Voltage Rating: 300 V |
| | **MULTI-PAIRED SHIELDED HI-TEMP CLASSICS** | |
| C8118 | 24/2 Multi-Pr. 7/32TC SHLD FFEP/PVDF CMP | • Remote Control Circuits<br>• Process Control and Instrumentation<br>• Suggested Voltage Rating: 300 V |
| C8109 | 22/1 Multi-Pr. 7/30TC SHLD FEP/FEP CMP | |
| C8103 | 22/1 Multi-Pr. 7/30TC SHLD FEP/PVDF CMP | |
| C8101 | 18/1 Multi-Pr. 19/30TC SHLD FEP/FEP CMP | |
| C8104 | 18/1 Multi-Pr. 19/30TC SHLD FEP/PVDF CMP | |
| C8127 | 24/1 Multi-Pr. 7/32TC SHLD FEP/PVC CMP | |
| C8113 | 24/3 Multi-Pr. 7/32TC SHLD FEP/LSPVC CMP | |
| C8126 | 22/1 Multi-Pr. 7/30TC SHLD FEP/PVC CMP | |
| C8124 | 22/1 Multi-Pr. 7/30TC SHLD FEP/PVC CMP | |
| C8123 | 18/1 Multi-Pr. 19/30TC SHLD FEP/PVC CMP | |
| | **MULTI-PAIRED DUAL SHIELDED HI-TEMP CLASSICS** | |
| C8117 | 24/1 Multi-Pr. 7/32TC FOIL/BRD SHLD FEP/FEP CMP | • Remote Control Circuits |
| C8129 | 24/2 Multi-Pr. 7/32TC FOIL/BRD SHLD FFEP/PVDF CMP | |
| | **MULTI-PAIRED INDIVIDUALLY SHIELDED HI-TEMP CLASSICS** | |
| C8134 | 24/2 Multi-Pr. 7/32TC ISHLD FFEP/PVC CMP | • Remote Control Circuits<br>• Process Control and Instrumentation<br>• Suggested Voltage Rating: 300 V |
| C8105 | 22/2 Multi-Pr. 7/30TC ISHLD FEP/PVC CMP | |
| C8131 | 22/3 Multi-Pr. 7/30TC ISHLD FEP/PVC CMP | |
| C8133 | 22/6 Multi-Pr. 7/30TC ISHLD FEP/PVC CMP | |
| C8112 | 22/2 Multi-Pr. 7/30TC ISHLD FEP/FEP CMP | |
| C8132 | 22/6 Multi-Pr. 7/30TC ISHLD FEP/FEP CMP | |
| C8128 | 24/2 Multi-Pr. 7/32TC ISHLD FFEP/PVDF CMP | |
| | **MULTI-CONDUCTOR UNSHIELDED HI-TEMP CLASSICS** | |
| C8102 | 18/4 Multi-Cond. 19/30TC UNSH FEP/FEP CMP | • Process Control and Instrumentation |
| | MULTI-CONDUCTOR SHIELDED HI-TEMP CLASSICS | |
| C8106 | 18/3 Multi-Cond. 19/30TC SHLD FEP/FEP CMP | • Process Control and Instrumentation |
| C8114 | 18/4 Multi-Cond. 19/30TC SHLD FEP/FEP CMP | |
| | **MULTI-CONDUCTOR DUAL SHIELDED HI-TEMP CLASSICS** | |
| C8107 | 18/3 Multi-Cond. 19/30TC FOIL/BRD SHLD FEP/FEP CMP | • Remote Control Circuits<br>• Process Control and Instrumentation<br>• Suggested Voltage Rating: 300 V |
| C8110 | 18/4 Multi-Cond. 19/30TC FOIL/BRD SHLD FEP/FEP CMP | |
| C8120 | 18/6 Multi-Cond. 19/30TC FOIL/BRD SHLD FEP/FEP CMP | |
| C8111 | 16/2 Multi-Cond. 19/29TC FOIL/BRD SHLD FEP/FEP CMP | |
| C8119 | 16/3 Multi-Cond. 19/29TC FOIL/BRD SHLD FEP/FEP CMP | |
| C8108 | 16/6 Multi-Cond. 19/29TC FOIL/BRD SHLD FEP/FEP CMP | |

NOTE: Other gauges, colors and packaging are available; contact your General Cable Representative for additional ordering options.

# EXZEL®:

EXZEL® High-Endurance Electronic Cables are manufactured with the selection, quality and dependability our customers have come to expect from Carol® Brand. From special jacket colors, print legends and TRU-Mark® sequential footage markings to unique constructions, innovative materials and quality manufacturing, General Cable's expert engineers offer superior service and design assistance.

***Paired constructions are available**

***LSZH constructions are available**

| PART NUMBER | PRODUCT DESCRIPTION | APPLICATIONS |
|---|---|---|
| **MULTI-CONDUCTOR UNSHIELDED COMMUNICATION AND CONTROL** | | |
| C9009A | 22/2 Multi-Cond. 7/30TC UNSH CM | • Advanced Signal Transmission in Controlled Environments<br>• Medical Instrumentation & Equipment<br>• Consumer Electronic Peripherals<br>• Industrial Process Control Systems<br>• Suitable for EIA-RS-232 Applications |
| C9010A | 22/3 Multi-Cond. 7/30TC UNSH CM | |
| C9011A | 22/4 Multi-Cond. 7/30TC UNSH CM | |
| C9012A | 22/6 Multi-Cond. 7/30TC UNSH CM | |
| C9013A | 22/8 Multi Cond. 7/30TC UNSH CM | |
| C9014A | 22/10 Multi-Cond. 7/30TC UNSH CM | |
| C9015A | 22/15 Multi-Cond. 7/30TC UNSH CM | |
| C9018A | 20/2 Multi-Cond. 7/28TC UNSH CM | |
| C9019A | 20/3 Multi-Cond. 7/28TC UNSH CM | |
| C9020A | 20/4 Multi-Cond. 7/28TC UNSH CM | |
| C9021A | 20/6 Multi-Cond. 7/28TC UNSH CM | |
| C9022A | 20/8 Multi-Cond. 7/28TC UNSH CM | |
| C9023A | 20/10 Multi-Cond. 7/28TC UNSH CM | |
| C9024A | 20/15 Multi-Cond. 7/28TC UNSH CM | |
| C9028A | 2/18 Multi-Cond. 16/30TC UNSH CM | |
| C9030A | 3/18 Multi-Cond. 16/30TC UNSH CM | |
| C9031A | 4/18 Multi-Cond. 16/30TC UNSH CM | |
| C9032A | 6/18 Multi-Cond. 16/30TC UNSH CM | |
| C9033A | 8/18 Multi-Cond. 16/30TC UNSH CM | |
| C9034A | 10/18 Multi-Cond. 16/30TC UNSH CM | |
| C9035A | 15/18 Multi-Cond. 16/30TC UNSH CM | |
| C9039A | 2/16 Multi-Cond. 19/.0117TC UNSH CM | |
| C9041A | 3/16 Multi-Cond. 19/.0117TC UNSH CM | |
| C9042A | 4/16 Multi-Cond. 19/.0117TC UNSH CM | |
| C9043A | 6/16 Multi-Cond. 19/.0117TC UNSH CM | |
| C9044A | 8/16 Multi-Cond. 19/.0117TC UNSH CM | |
| C9045A | 10/16 Multi-Cond. 19/.0117TC UNSH CM | |

| | | |
|---|---|---|
| **MULTI-CONDUCTOR SHIELDED COMMUNICATION AND CONTROL** | | |
| C9109A | 22/2 Multi-Cond. 7/30TC SHLD CM | • Advanced Signal Transmission in Controlled Environments<br>• Medical Instrumentation & Equipment<br>• Consumer Electronic Peripherals<br>• Industrial Process Control Systems<br>• Suitable for EIA-RS-232 Applications |
| C9110A | 22/3 Multi-Cond. 7/30TC SHLD CM | |
| C9111A | 22/4 Multi-Cond. 7/30TC SHLD CM | |
| C9112A | 22/6 Multi-Cond. 7/30TC SHLD CM | |
| C9113A | 22/8 Multi-Cond. 7/30TC SHLD CM | |
| C9114A | 22/10 Multi-Cond. 7/30TC SHLD CM | |
| C9115A | 22/15 Multi-Cond. 7/30TC SHLD CM | |
| C9118A | 20/2 Multi-Cond. 7/28TC SHLD CM | |
| C9119A | 20/3 Multi-Cond. 7/28TC SHLD CM | |
| C9120A | 20/4 Multi-Cond. 7/28TC SHLD CM | |
| C9121A | 20/6 Multi-Cond. 7/28TC SHLD CM | |
| C9122A | 20/8 Multi-Cond. 7/28TC SHLD CM | |
| C9123A | 20/10 Multi-Cond. 7/28TC SHLD CM | |
| C9124A | 20/15 Multi-Cond. 7/28TC SHLD CM | |
| C9127A | 18/2 Multi-Cond. 16/30TC SHLD CM | |
| C9129A | 18/3 Multi-Cond. 16/30TC SHLD CM | |
| C9131A | 18/4 Multi-Cond. 16/30TC SHLD CM | |
| C9132A | 18/6 Multi-Cond. 16/30TC SHLD CM | |
| C9133A | 18/8 Multi-Cond. 16/30TC SHLD CM | |
| C9134A | 18/10 Multi-Cond. 16/30TC SHLD CM | |
| C9135A | 18/15 Multi-Cond. 16/30TC SHLD CM | |
| C9138A | 16/2 Multi-Cond. 19/.0117TC SHLD CM | |
| C9140A | 16/3 Multi-Cond. 19/.0117TC SHLD CM | |
| C9142A | 16/4 Multi-Cond. 19/.0117TC SHLD CM | |
| C9143A | 16/6 Multi-Cond. 19/.0117TC SHLD CM | |
| C9144A | 16/8 Multi-Cond. 19/.0117TC SHLD CM | |
| C9145A | 16/10 Multi-Cond. 19/.0117TC SHLD CM | |

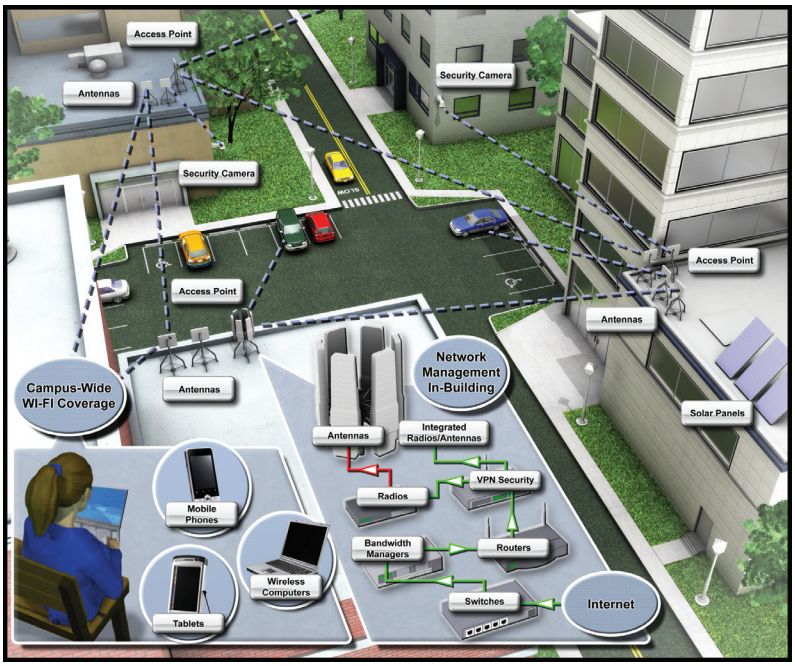
| | | |
|---|---|---|
| **MULTI-CONDUCTOR DUAL SHIELDED COMMUNICATION AND CONTROL** | | |
| C9209A | 22/2 Multi-Cond. 7/30TC FOIL/BRD SHLD CM | • Advanced Signal Transmission in Controlled Environments<br>• Medical Instrumentation & Equipment<br>• Consumer Electronic Peripherals<br>• Industrial Process Control Systems<br>• Suitable for EIA-RS-232 Applications |
| C9210A | 22/3 Multi-Cond. 7/30TC FOIL/BRD SHLD CM | |
| C9211A | 22/4 Multi-Cond. 7/30TC FOIL/BRD SHLD CM | |
| C9212A | 22/6 Multi-Cond. 7/30TC FOIL/BRD SHLD CM | |
| C9213A | 22/8 Multi-Cond. 7/30TC FOIL/BRD SHLD CM | |
| C9214A | 22/10 Multi-Cond. 7/30TC FOIL/BRD SHLD CM | |
| C9215A | 22/15 Multi-Cond. 7/30TC FOIL/BRD SHLD CM | |
| C9218A | 20/2 Multi-Cond. 7/28TC FOIL/BRD SHLD CM | |
| C9219A | 20/3 Multi-Cond. 7/28TC FOIL/BRD SHLD CM | |
| C9220A | 20/4 Multi-Cond. 7/28TC FOIL/BRD SHLD CM | |
| C9221A | 20/6 Multi-Cond. 7/28TC FOIL/BRD SHLD CM | |
| C9222A | 20/8 Multi-Cond. 7/28TC FOIL/BRD SHLD CM | |
| C9223A | 20/10 Multi-Cond. 7/28TC FOIL/BRD SHLD CM | |
| C9224A | 20/15 Multi-Cond. 7/28TC FOIL/BRD SHLD CM | |
| C9228A | 18/2 Multi-Cond. 16/30TC FOIL/BRD SHLD CM | |
| C9230A | 18/3 Multi-Cond. 16/30TC FOIL/BRD SHLD CM | |
| C9231A | 18/4 Multi-Cond. 16/30TC FOIL/BRD SHLD CM | |
| C9232A | 18/6 Multi-Cond. 16/30TC FOIL/BRD SHLD CM | |
| C9233A | 18/8 Multi-Cond. 16/30TC FOIL/BRD SHLD CM | |

NOTE: Other gauges, colors and packaging are available; contact your General Cable Representative for additional ordering options.

# DBRF Coax for Distributed Antenna Systems (DAS):

The ability to communicate anywhere with wireless devices or cell phones, both indoors and out, continues to be a growing demand that requires Distributed Antenna Systems (DAS). A DAS is a network of spatially separated antennas connected to a transport medium, typically coax or fiber optic cable, that provides wireless service within a building or structure.

| PART NUMBER | PRODUCT DESCRIPTION | APPLICATIONS |
|---|---|---|
| | **DBRF COAX** | |
| DBRF100 | PVC Jacket - Indoor/Outdoor | • 2-way Land Mobile Radios<br>• Wireless Local Area Networks IEEE802.11<br>• Wireless Local Loop<br>• Wireless Internet (WISP)<br>• Wireless Cable (MMDS)<br>• Wireless Broadband Data<br>• Telemetry<br>• Commercial Buildings<br>• Residential Housing<br>• Business and Office Campus Environments<br>• Public Stadiums and Arenas<br>• Transportation Hubs like Airports, Train Stations and Bus Stations<br>• Primary and Secondary Schools, Universities and Colleges<br>• Governments and Municipalities |
| DBRF100HF | FR-LSZH Jacket - Indoor/CMR Riser | |
| DBRF100R | FR-PVC Jacket - Indoor/CMR Riser | |
| DBRF100P | LS-PVC Jacket - Indoor/CMP Plenum | |
| DBRF195 | Polyethylene Jacket - Indoor/Outdoor | |
| DBRF195FL | Polyethylene Jacket - Outdoor/Flooded Water-Resistant | |
| DBRF195HF | FR-LSZH Jacket - Indoor/CMR Riser | |
| DBRF195R | FR-PVC Jacket - Indoor/CMR Riser | |
| DBRF195P | LS-PVC Jacket - Indoor/CMP Plenum | |
| DBRF200 | Polyethylene Jacket - Indoor/Outdoor | |
| DBRF200FL | Polyethylene Jacket - Outdoor/Flooded Water-Resistant | |
| DBRF200HF | FR-LSZH Jacket - Indoor/CMR Riser | |
| DBRF200R | FR-PVC Jacket - Indoor/CMR Riser | |
| DBRF200P | LS-PVC Jacket - Indoor/CMP Plenum | |
| DBRF240 | Polyethylene Jacket - Indoor/Outdoor | |
| DBRF240FL | Polyethylene Jacket - Outdoor/Flooded Water-Resistant | |
| DBRF240HF | FR-LSZH Jacket - Indoor/CMR Riser | |
| DBRF240R | FR-PVC Jacket - Indoor/CMR Riser | |
| DBRF240P | LS-PVC Jacket - Indoor/CMP Plenum | |
| DBRF300 | Polyethylene Jacket - Indoor/Outdoor | |
| DBRF300FL | Polyethylene Jacket - Flooded Water-Resistant Outdoor | |
| DBRF300HF | FR-LSZH Jacket - Indoor/CMR Riser | |
| DBRF300R | FR-PVC Jacket - Indoor/CMR Riser | |
| DBRF300P | LS-PVC Jacket - Indoor/CMP Plenum | |
| DBRF400 | Polyethylene Jacket - Outdoor | |
| DBRF400FL | Polyethylene Jacket - Outdoor/Flooded Water-Resistant | |
| DBRF400HF | FR-LSZH Jacket - Indoor/CMR Riser | |
| DBRF400R | FR-PVC Jacket - Indoor/CMR Riser | |
| DBRF400P | PVDF Jacket - Indoor/CMP Plenum - 150C | |




NOTE: Fiber/Power Composite Cables, as well as other gauges, colors and packaging, are available. Contact your General Cable representative for additional options.

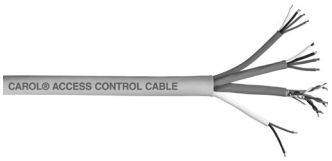
# Coax:

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.

| PART NUMBER | PRODUCT DESCRIPTION | APPLICATIONS |
|---|---|---|
| C5775 | 18/1 RG6/U FL+60%AL/BRD SHLD CL2/CM | • CATV<br>• MATV |
| C5886 | 18/1 RG6/U FL+60%AL/BRD SHLD CMR | |
| C5785 | 18/1 RG6/U QUAD SHLD CL2/CM | |
| C5889 | 18/1 RG6/U QUAD SHLD RISER | |
| C1156 | 26/1 RG174U 88%TC/BRD SHLD | |
| C3524 | 18/1 RG6/U FL+80%AL/BRD SHLD CL2P/CMP | |
| C3525 | 18/1 RG6/U QUAD SHLD CL2P/CMP | |
| C3521 | 18/1 RG6/U FL+95%TC/BRD SHLD HD/ETL/CMP | |
| C3528 | 14/1 RG11/U FL+60%AL/BRD SHLD CL2P | |
| C3529 | 14/1 RG11/U QUAD SHLD CL2P | |
| C8029 | 18+1PR18 RG6/U CCTV/CM/CL2 | • CCTV<br>• RF/Broadcast<br>• HDTV |
| C8028 | 20+1PR18 RG59/U CCTV/CM/CL2 | |
| C1142 | 20/1 RG59/U 95%BC/BRD SHLD CL2/CM | |
| C1166 | 20/1 RG58/U 95%TC/BRD SHLD JAN-C-17A | |
| C8030 | 20+1PR18 RG59/U CCTV PLENUM | • CCTV<br>• HDTV |
| 495025 | 18/1 RG6/U FL+95%TC/BRD SHLD HD/SDI/CMP | |
| 495028 | 20/1 RG59/U 95%BC/BRD SHLD CMP | |
| 495027 | 14/1 RG11/U FL+95%TC/BRD SHLD PVDF CMP | |
| 495015 | 14/1 RG11/U 95%BC/BRD SHLD PVDF CMP | |

# Access Control:

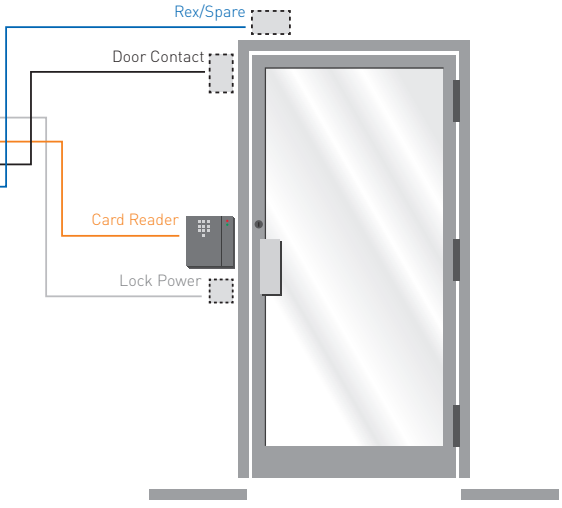
When your job requires Access Control cable, think of Carol® Brand cables first. We manufacture over 1,000 standard electronic cables that we can ship direct from stock, and we have the technical staff and design expertise to meet any customer cable requirement. The cables are installer friendly, as they save time and money on installation With multiple cables under one jacket, time is saved in preparation and setup, pulling and termination.




| PART NUMBER | PRODUCT DESCRIPTION | APPLICATIONS |
|---|---|---|
| 4EPL1S | 4 Elements 1 Shielded Overall Jacket Access Control Plenum | • Card Readers<br>• Door Contacts<br>• Lock Power<br>• Retinal Scanner in Commercial Buildings |
| 4EPL4S | 4 Shielded Elements Overall Jacket Access Control Plenum | |
| 4ERS1S | 4 Elements 1 Shielded Overall Jacket Access Control Riser | |
| 4ERS4S | 4 Shielded Elements Overall Jacket Access Control Riser | |

**JACKET COLOR CODING & COMPONENT APPLICATION**

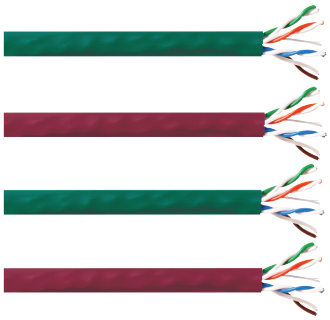
| JACKET COLOR | COMPONENT | CABLE TYPE | APPLICATION |
|---|---|---|---|
| Gray | 1 | 4 Conductor, 18 AWG | Lock Power |
| Orange | 2 | 3 Pair, 22 AWG | Card Reader |
| White | 3 | 2 Conductor, 22 AWG | Door Contact |
| Blue | 4 | 4 Conductor, 22 AWG | Rex/Spare |




NOTE: Other gauges, colors and packaging are available; contact your General Cable Representative for additional ordering options.

# Low Skew 4 Pair® UTP Cables:

General Cable's Carol® Brand Low Skew UTP Cables are manufactured for your RGB video and Digital CCTV camera needs. While the basic elements of the Low Skew Cables 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.



| PART NUMBER | PRODUCT DESCRIPTION | APPLICATIONS |
|---|---|---|
| E3842S CMP | 24 AWG 4 Pair UTP, Plenum | • Suitable for RGB Video Applications<br>• Digital CCTV Cameras |
| E1842S CMR | 24 AWG 4 Pair UTP, Riser | |
| E3843S CMP | 23 AWG 4 Pair UTP, Plenum | |
| E1843S CMR | 23 AWG 4 Pair UTP, Riser | |

# Commodore® (Armored):

For cable upgrades or installations, the offshore industry is focusing on network performance and increased bandwidth potential that will last for years. Commodore Coaxial communication and video monitoring LSZH constructions are used in control and coaxial communication applications where performance is critical.

| PART NUMBER | PRODUCT DESCRIPTION | APPLICATIONS |
|---|---|---|
| EO24P0022188 | 24/2P RS485 COMMODORE ABS SHPBRD | • Oil, Gas and Petrochemical Applications<br>• Deeper Drilling for Natural Gas and Resources in Extremes<br>• Offshore Rigs<br>• Production Platforms<br>• FPSOs and Ships<br>• Stabilization and Directional Drilling<br>• Shipboard Applications Only |
| EO24P0022186 | 24/2P RS422 COMMODORE ABS SHPBRD | |
| EO24P0042186 | 24/4P RS422 COMMODORE ABS SHPBRD | |
| EO24P0082186 | 24/8P RS422 COMMODORE ABS SHPBRD | |
| ZO16P0022189 | 16/2P COMMODORE DEVICENET ABS SHPBRD | |
| CO18C0012170 | 18/1P RG6/U COMMODORE ABS SHPBRD | |
| CO14C0012170 | 14/1P RG11/U COMMODORE ABS SHPBRD | |
| CO21C0012170 | 21/1P RG58/U COMMODORE ABS SHPBRD | |
| CO20C0012170 | 20/1P RG59/U COMMODORE ABS SHPBRD | |
| CO13C0012170 | 13/1P RG213/U COMMODORE ABS SHPBRD | |
| EO18P0015337 | 18/1P COMMODORE FIELDBUS ABS SHPBRD | |
| EO18P0025337 | 18/2P COMMODORE FIELDBUS ABS SHPBRD | |
| EO18P0055337 | 18/5P COMMODORE FIELDBUS ABS SHPBRD | |
| EO22P0011203 | 22/1P COMMODORE PROFIBUS ABS SHPBRD | |

# Technical Information

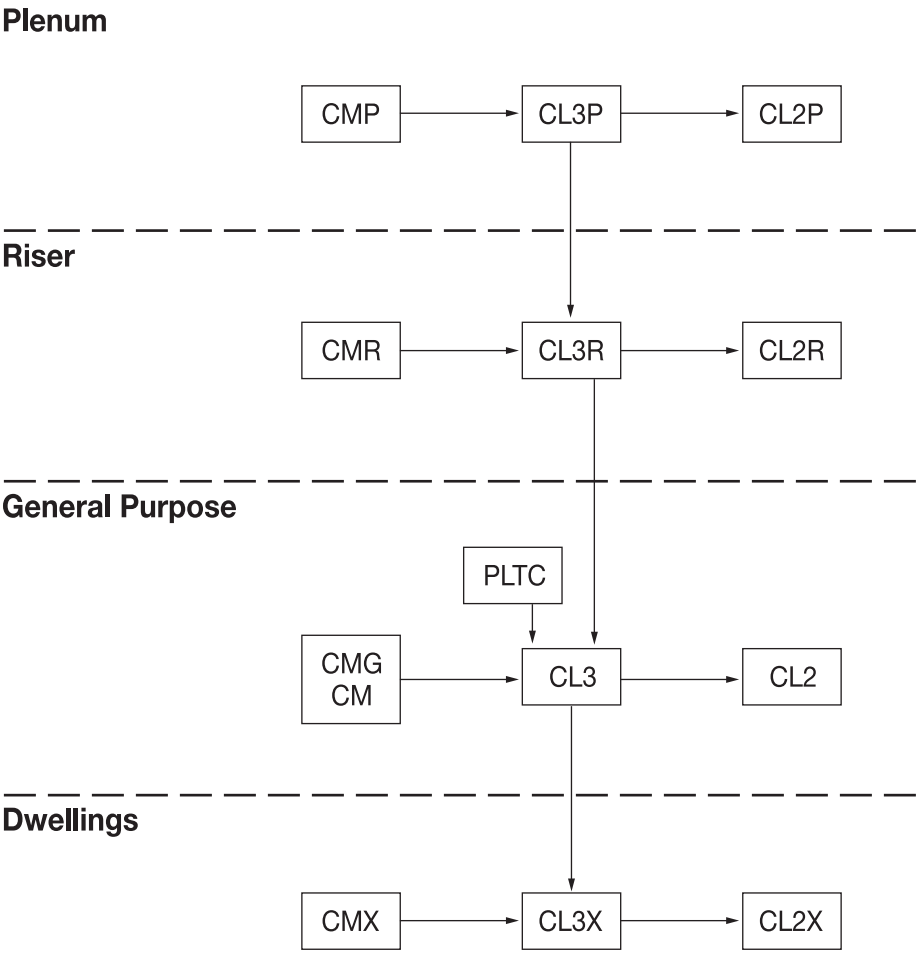
# 8

# NEC and CSA Fire Resistance Levels

| FIRE RESISTANCE LEVEL | TEST REQUIREMENT | NEC ARTICLE | | |
|---|---|---|---|---|
| | | 800 | 725 | 760 |
| **(Highest) Plenum Cables** | NFPA 262 (Steiner tunnel)<br>CSA-FT6 (Steiner tunnel) | CMP | CL3P<br>CL2P | FPLP |
| **Riser Cables Multiple Floors** | UL-1666 (Vertical Shaft)<br>CSA-FT4 (Vertical Tray) | CMR | CL3R<br>CL2R | FPLR |
| **General Purpose Cables** | UL-1581 (Vertical Tray)<br>CSA-FT4 (Vertical Tray) | CMG | CL3<br>CL2 | FPL |
| **(Lowest) Residential Cables Restricted Use** | UL-1581 VW-1<br>CSA-FT | CMX | CL3X<br>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 800-154).

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 2011 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.

# Industry Standards, Typical Uses and Electrical Requirements For Twisted Pair Horizontal Wiring Cable

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

# Packaging Information

GenSPEED® 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 GenSPEED 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.


**▲ GenSPEED® Pull-Pac®**

| | |
|---|---|
| 5000 | CMR/CMP/CMX |
| 5350 | CMR/CMP |
| 5500 | CMR/CMP |
| 6 | CMR/CMP |
| 6000E | CMR/CMP |
| 10 UTP | CMR/CMP |


**▲ GenSPEED® D2000 Pull-Pac®**

| | |
|---|---|
| 5000 | CMR/CMP/CMX |
| 5350 | CMR/CMP |
| 5500 | CMR/CMP |
| 6 | CMR/CMP |
| 6000E | CMR/CMP |
| 10 MTP | CMR/CMP |


**▲ GenSPEED® Basic Spool-Pac®**

| | |
|---|---|
| 5000 | CMR/CMP |
| 5350 | CMR/CMP |
| 5500 | CMR/CMP |
| 6 | CMR/CMP |
| 10 | CMP |
| 10 MTP | CMP |

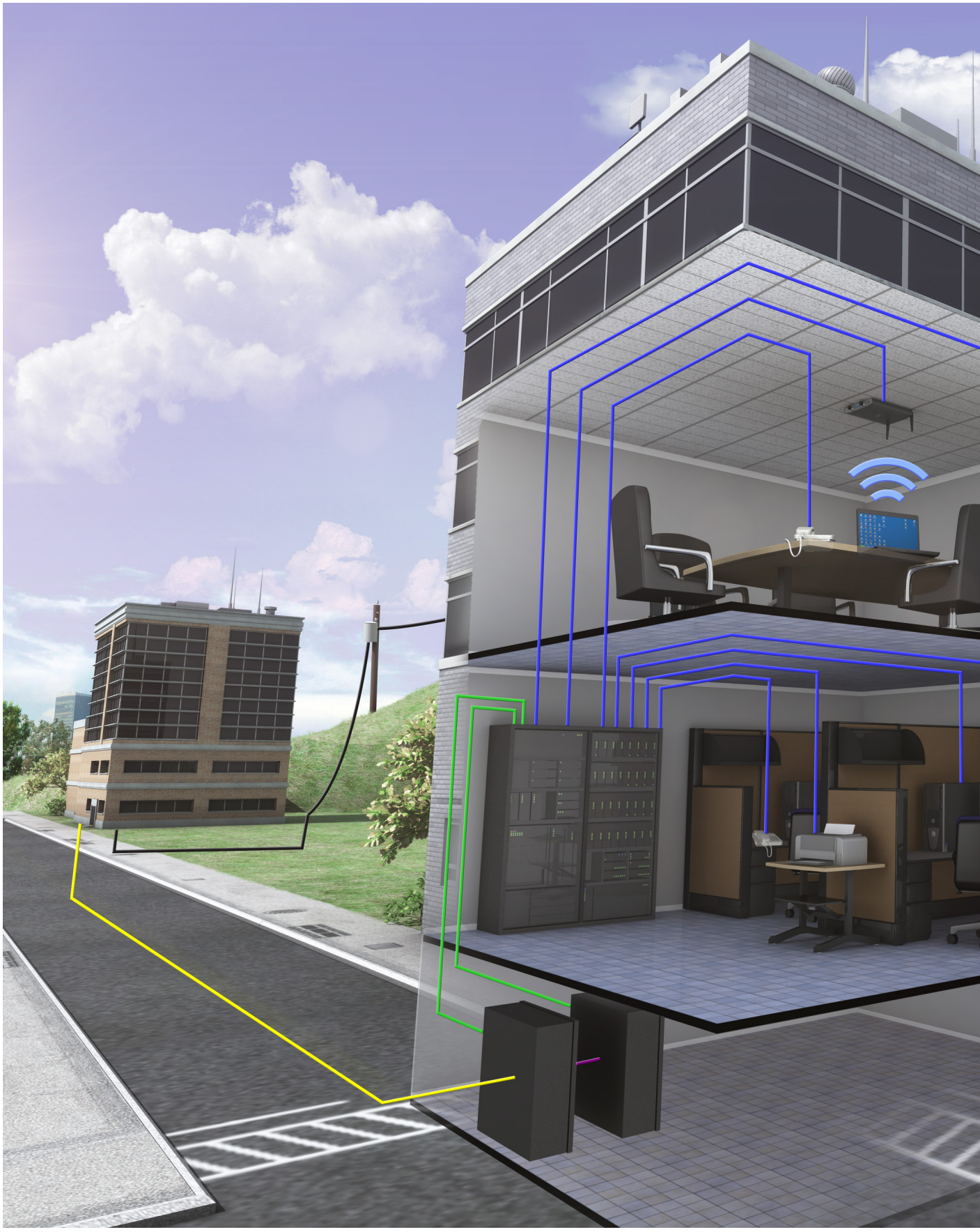

**▲ GenSPEED® EZ-Brake™ Spool-Pac®**

| | |
|---|---|
| 6000E | CMR/CMP |
| 6500P | CMR/CMP |


**▲ Spool-Pac® Cat 3**

▲ Spool
Available for all Datacom products

# Commercial Building Datacom/Topology




GenSPEED® CABLES
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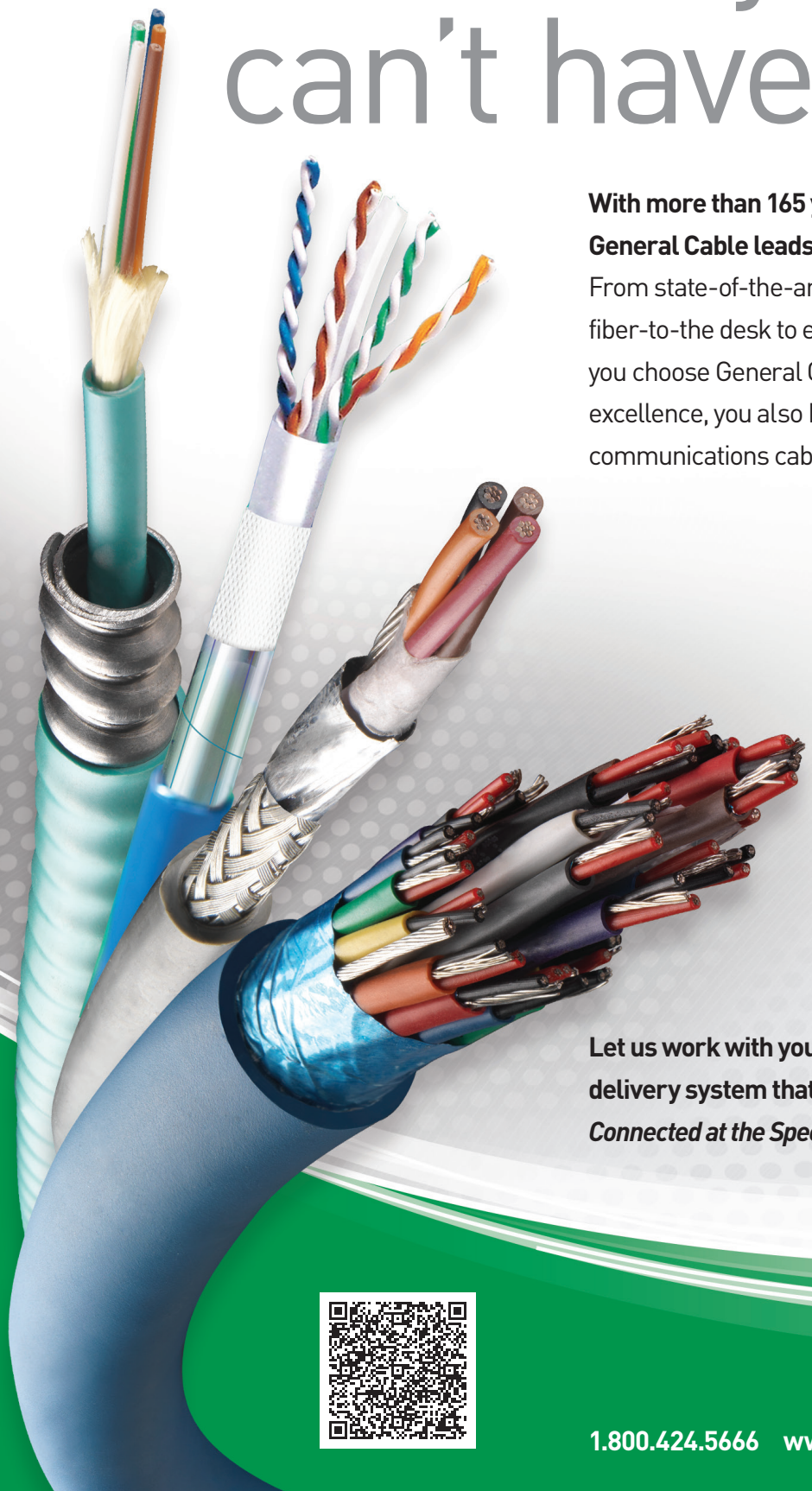
(Copper or Fiber)
In-Building Backbone
(Fiber)
Campus Backbone
(Copper or Fiber)
Datacenter
(Fiber Ribbon)
Aerial/Buried OSP
(Copper or Fiber)

General Cable

# Who says you can't have it all?



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# 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.

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

**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.

**Equal Level Transverse Conversion Transfer Loss (ELTCTL):** A calculation, expressed in dB, of the difference between measured TCTL and the differential mode insertion loss of the disturbed pair.

**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.

**Longitudinal Conversion Loss (LCL):** A measure of how well a pair is balanced and a useful metric of a cable's ability to reject noise from external sources and to limit electromagnetic radiation from the cable to the environment. Examples of external noise sources include noisy power lines, electrical equipment, walkie-talkies, radio and radar stations, and alien crosstalk from other telecommunications cables. As structured cabling is applied to industrial environments and network speeds increase, balance becomes increasingly important.

# Glossary

**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.

**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 over Ethernet (PoE):** An application defined in IEEE 802.3af and IEEE 802.3at which allows the use of direct current power sources to deliver low voltage power to remote devices over telecommunications cabling.

**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 Attenuation-to-Alien Crosstalk Ratio, Far-End (PSAACRF):** A computation of the unwanted signal coupling from multiple transmitters at the near-end of surrounding cables into a pair measured at the far-end of the center cable under test, and normalized to the received signal level. See Alien Crosstalk (AXT).

**Power Sum Attenuation-to-Crosstalk Ratio, Far-End (PSACRF), formerly PS ELFEXT:** 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 Alien Near-End Crosstalk (PSANEXT):** A computation of the unwanted signal coupling from multiple transmitters at the near-end of pairs in the surrounding cables into a pair measured at the near-end of the center cable under test. See Alien Crosstalk (AXT).

**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 (BER).

**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.

**Transverse Conversion Loss (TCL):** A ratio, expressed in dB, of the measured common mode voltage on a pair relative to the differential mode voltage on the same pair applied at the same end.

**Transverse Conversion Transfer Loss (TCTL):** A ratio, expressed in dB, of the measured common mode voltage on a pair relative to the differential mode voltage applied at the opposite end of the same pair, or on either end of another pair.

**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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