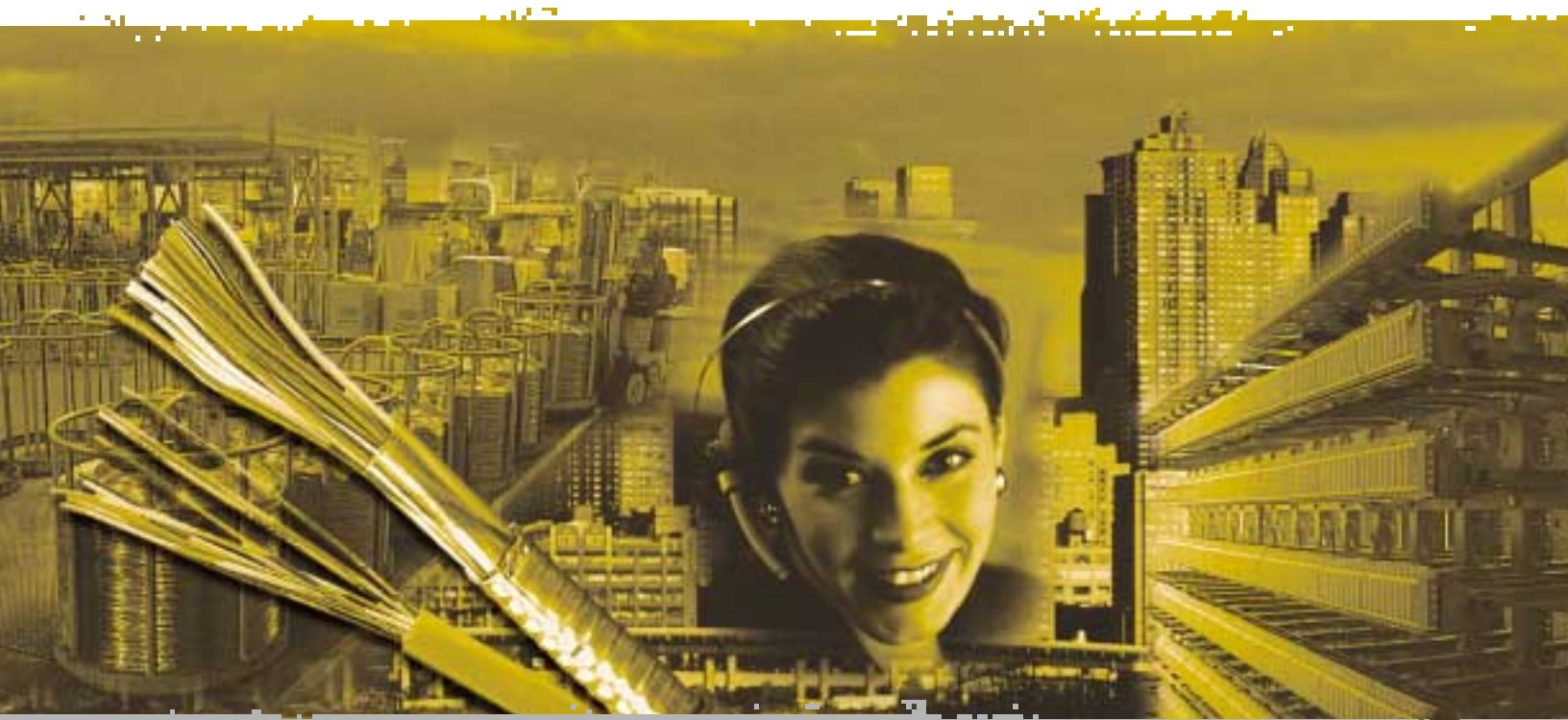


**AVAYA**



## **Cable and Wire Product Guide**

ExchangeMAX<sup>®</sup>  
Cable Management Systems



Communication without boundaries

**A** Avaya is the world's market leader for the provisioning of cable and wire products for both the incumbent Service Provider as well as new carriers such as CLECs now entering the telecommunications arena. In this role, Avaya sets the standard for innovation by introducing new products for network infrastructure that provide the highest levels of performance and reliability for voice and digital network operations. Additionally, Avaya specializes in the development of advanced solutions that help these providers deploy voice, data, video and converged services.



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# Introduction

## ExchangeMAX® Cable and Wire Product Guide

ExchangeMAX cable and wire products are designed for flexibility whether used in a Central Office or for a remote application. Today's high-density environments, where space is often limited, demand flexible, lightweight products. These products also need to be easy to install and handle. Lightweight, high quality insulation and convenient color-coding are important features of ExchangeMAX cable and wire products.

Cabling designs for switching and transport equipment applications continue to evolve from large and bulky products to small and more flexible cable solutions. This change is taking place along with the overall reduction in size of the central office. As electronics become smaller and more efficient, equipment sizes shrink and distances between pieces of equipment are reduced. As a result, smaller cables may be used to connect equipment. Smaller cables help relieve cable congestion on equipment and allow more efficient utilization of cable rack space. Avaya's twisted pair and coaxial cables are some of the smallest in the industry.

Cable miniaturization is accompanied by a greater emphasis on UL® Listing. Even though communications equipment, under the exclusive use of a communications utility, is still exempt from coverage by the National Electrical Code\*, many customers prefer UL Listed cables. Avaya is proud to be the first cable manufacturer to receive UL Listings for its cable, and through Avaya Labs continues to seek appropriate safety approvals and certifications on its innovative designs.

ExchangeMAX cable and wire products have the optimum combination of electrical, physical, and mechanical properties providing excellent transmission performance for many applications. With Avaya's wide variety of cable, it is easy and cost effective to develop a copper-based solution for a multitude of cabling needs, even at higher frequencies. ExchangeMAX shielded and unshielded twisted pair cables, coaxial cables and hookup wires represent an extensive product line unmatched in the industry.



Avaya's Smart Main Distribution Frame features 800 Series twisted pair cable for flawless operation.

# Introduction

## How to Use This Product Guide

This Product Guide is divided into the following sections:

- Voice Frequency Systems for the DS-0 transmission format
  - Unshielded Hookup Wire
  - Shielded Hookup Wire
  - Unshielded Twisted Pair Cable
- Digital Distribution System Applications including DS-1, DS-3, E-1/STS/M-1
  - Shielded Twisted Pair Cable
  - Coaxial Cable

These products have been specially designed to have the optimum combination of electrical, physical and mechanical properties. Consult the Selection Guide at the beginning of each section for a quick listing of each product's attributes.

Note: All physical dimension and weights listed in this product guide are nominal values, provided for planning purposes only.

## Ordering Information

It is easier than ever to order ExchangeMAX products. Consult our Web site [avaya.com/connectivity](http://avaya.com/connectivity) for the latest product information and periodic updates.

Use this catalog to help select the ExchangeMAX cable and wire product best suited for your applications. Each page contains information such as cable size, conductor material, insulation and jacket types, color codes, number of pairs and specifications for each product. Appropriate UL designations are included as well as a photo of the product in most cases. When you are ready, order your ExchangeMAX product using its Material ID. What could be easier?

### INTERPRETING AVAYA PRODUCT IDENTIFICATION CODES

1100 TIW	012 2/26	C	GY	R W	1000 1000
Family Code	Configuration Gauge	Generation	Jacket Color	Package	Length
	2 = pair 2c = 2 conductor		BL - Blue IV - Ivory RD - Red WH - White GY - Grey-(Light Olive) SL - Slate BE - Beige OR - Orange YL - Yellow BK - Black RE - Berry Red LL - Lilac GN - Spring Green DG - Dark Grey SA - Sable GR - Green PR - Purple	<b>W</b> = WE-TOTE® tangleproof box <b>R</b> = Reel (disposable) <b>C</b> = Coil <b>S</b> = Spool <b>K</b> = Knockout box <b>T</b> = REEL TOTE® (Reel in a box) <b>RVAR</b> = Variable Length Packaging <b>CUSTL</b> = Custom Fixed Length	

## Selecting Cable Lengths

ExchangeMAX cable and wire products are available in various package configurations.

Check the product code for packing options. The listings below summarize the packaging options that are available.

### Unit Package

**The product code indicates one continuous length of cable.**

#### Example:

Order	Receive
TIW 2/24 W1000	1000 feet (305m) in a WE TOTE® box
1249C 004 R1000	1000 feet (305m) on a reel
DT 2C/22 C3000	3000 feet (915m) in a coil

### Standard Package

**The product code indicates the minimum length of continuous cable on the reel; length may vary +10%.**

#### Example:

Order	Receive
1107 008A R6500	between 6500 (1982.5m) and 7150 feet (2180.8m) on the reel
810A 128/26 R1000	between 1000 (305m) and 1100 feet (335.5m) on the reel
613C 30/22 R500	between 500 (152.5m) and 550 feet (167.7m) on the reel

### Variable Length Package

For bulk orders, a Variable Length Package is often selected. Known as a Variable Length Reel (RVAR), it contains the longest possible lengths available, up to the capacity of the reel. The actual length is marked clearly on the reel. In a limited number of instances, there may be up to three lengths on a reel. These reels will be clearly marked with the number and lengths of the product. The minimum length for a RVAR is 400 feet unless otherwise noted. Billing will be for the exact length of product provided. Shipments will have a tolerance of  $-0 + 10\%$ .

If you need an exact length and the product is available in a stocked variable length package, arrangements may be made to cut to exact length requirements.

### Custom Length Package

Customized packages and lengths may be available to fit particular needs. Please contact your Avaya representative for additional information.

#### Note:

**All products in this product guide are ordered by length in feet.**

**Example:            Order Quantity 1000 feet (304.5m)**  
**Product Code:    1249 028C R1000**



The many colors of communication cables



# Introduction

## Technical Innovations

In an increasingly competitive marketplace, quality and reliability of our products are two of our most important achievements. Avaya maintains a position of leadership through diligent pursuit of quality in every phase of the manufacturing process. Customer satisfaction is the ultimate measure of that success, and every employee is dedicated to its achievement.

An integrated quality assurance program tracks our cable products from design to delivery. Our select quality control organization consists of operators, inspectors and auditors, each of whom is responsible for quality evaluations at some point in the production process. Avaya's commitment to quality includes testing samples of all incoming raw materials.

But quality controls are not just limited to in-process tests and final inspections. A number of in-house laboratories in each manufacturing plant provide the controlled environment and special equipment needed for more detailed analysis. We have raw material, chemical, physical/electrical and special plastics laboratories located within each plant. All to insure that every reel of finished cable is thoroughly tested before it leaves the plant.

Quality begins with strict adherence to a set of industry standards. Avaya constantly strives to maximize the number of its products that meet or exceed established industry benchmarks. The Underwriters Laboratories Listings, Classifications, Recognitions and other industry-approved notations found in this catalog are testimony to this concern for the highest quality and safety of products.



One of the best reasons to specify Avaya cable and wire is quality. Our manufacturing sites are ISO 9001 and 9002 registered by accredited third-party registrars like Lloyd's Register Quality Assurance, Ltd., to assure you of quality processes of the highest standards.

## Testing

Avaya has in-house testing and research facilities unequaled in the industry. ExchangeMAX wires and cables are subjected to a continuous testing process from design inception to the final quality audits made just prior to shipment. Routine tests highlight mechanical, physical, electrical and transmission parameters.

Avaya's Plastic Research group determines the capabilities of vast numbers of candidate materials. Typically, tests during the material identification and catalog operations include stress/strain, Young's Modulus, creep, thermal stability, oxygen index, low temperature embrittlement, environmental stress cracking, ultraviolet stability, viscosity, dielectric constant, dielectric strength and volume resistivity. From the information derived during these tests, special materials formulations are derived to meet specific needs. To insure quality, Avaya issues raw material specifications to which suppliers must stringently adhere.



Ensuring electrical performance quality (Electrical Transmission Test)

Avaya's Product Development group draws from a vast reservoir of candidate materials, using them to configure products for specific applications. During this physical design process, consideration is given to critical parameters such as breaking strength, elongation, compression, cut-through and abrasion resistance, fatigue, friction, adhesion, low temperature flexibility and impact resistance, heat distortion, dielectric strength, insulation resistance and compliance with appropriate UL flame and smoke emissions requirements.

### **Electrical Transmission Performance**

With today's new materials, processing improvements, and design technology advancements, meeting demands for increased speed and distance allows us to achieve cable performance once thought unattainable. To verify performance and benchmark new technology, we utilize our extensive measurement facilities to perform high frequency electrical characterizations extending well above 500 MHz. A battery of tests including: attenuation, crosstalk, structural return loss (SRL), and characteristic impedance ( $Z_0$ ) are routinely performed both in the laboratory and on the production floor.



Chemist conducting insulating materials test to assure product quality

## **Assuring Product Reliability**

Once material selection and product design is complete, Avaya's tests for quality assurance continue.

A series of tests are conducted on samples taken from each incoming shipment of raw materials. All tests are performed per ASTM specifications and all tests must fall within established acceptance levels or the materials are rejected and returned to their source.

Efficient manufacture of cable products depends upon the proper selection of processing equipment and tooling. High-quality products result from the precise monitoring and control of critical process variables such as temperature, pressure, line speed, insulation symmetry and insulation and jacket integrity. Avaya uses state-of-the-art manufacturing equipment throughout the production process to achieve the highest efficiency.

The method and procedures used to establish product conformance to specified requirements include a variety of in-process and final inspections. In addition, the Quality team performs a final audit inspection of selected products presented for shipment. This detailed inspection procedure insures that the product you receive will perform to your requirements every time.

Quality goods and services are cornerstones of Avaya's philosophy. Testing, whether standard or special, is an integral part of quality control and one of the key reasons Avaya is a leader in manufacturing of telecommunications cables and wires.

# Introduction

## NEC (National Electrical Code)

The National Electrical Code (NEC) is the most widely accepted set of electrical and safety requirements used in the United States. Included in the code are listing requirements for various levels of fire resistance for cables. Two of the most important hazards addressed by the Code are initiation of a fire by electrical circuits and the carrying of fire by cables.

Underwriters Laboratories (UL) is one of the recognized listing agencies used to determine compliance with the NEC.

## Code Organization

There are three articles in the NEC that deal with limited energy wiring that apply to products in this product guide.

- Article 725 Class 1, Class 2, Class 3, Remote-Control, Signaling and Power-Limited circuits
- Article 760 Fire Protective Signaling Systems
- Article 800 Communication Circuits

## Listing of Communications and Signaling Cables

The 1993 NEC required that communication and signaling wires and cables in a building be listed as being suitable for the purpose.

## Article 725

This article covers Class 1, Class 2, and Class 3 remote control, signaling and power limited circuits. Listed Communications, Multipurpose, and Power Limited Fire Protective Signaling Circuit cables are used for Class 2 and Class 3 applications. When a Class 2 circuit, such as Data Communications circuit, is run in the same cable with a Communications circuit, the cable is categorized as a Communications cable and has to meet the requirements of Article 800.

Some of the listing categories described in Article 725 are listed below:

- CL2P – Class 2 Plenum Cable
- CL2R – Class 2 Riser Cable
- CL2 – Class 2 cables for general use (except Plenums and Risers)
- CL2X – Class 2 cables for limited use in dwellings and commercial buildings.

## Article 760

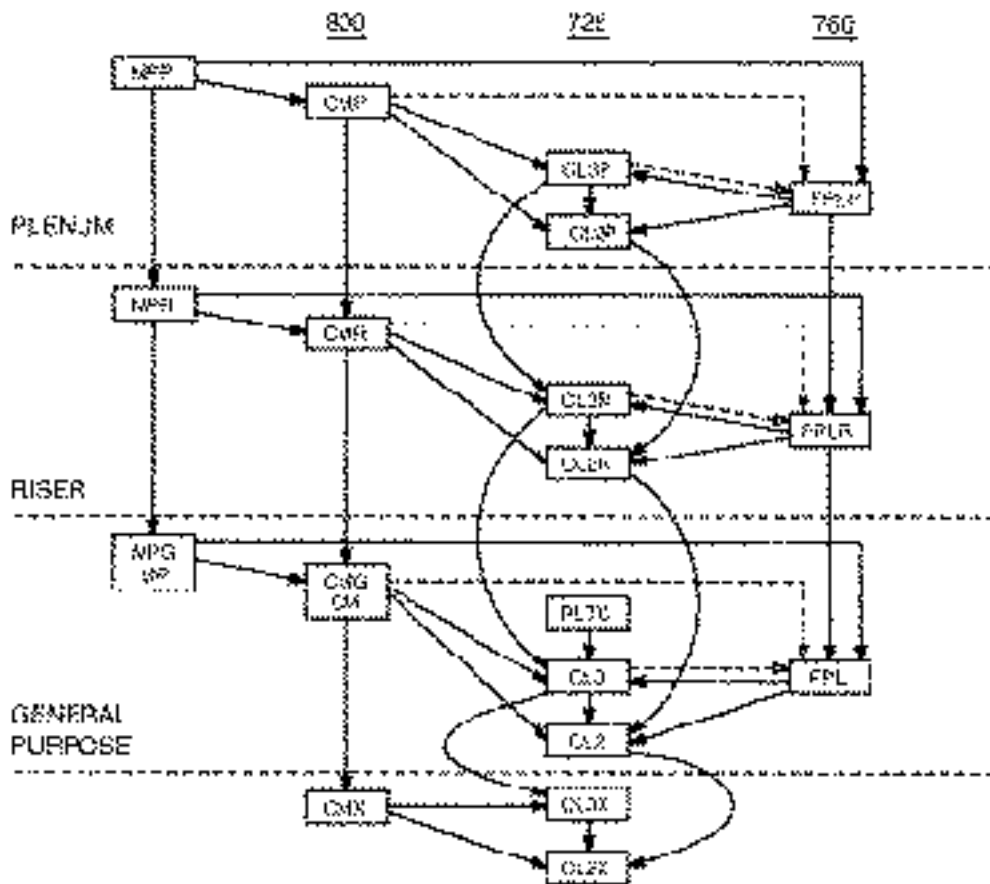
This article covers Power-Limited Fire Protective Signaling Circuit (FPL) cables. Listed solid conductor communications and Class 3 cables may be used for Power-Limited Fire Protective Signaling Circuits provided the gauge and pair size restrictions shown below are met. Listed multipurpose cables can be substituted for listed FPL cables provided they meet the following requirements specified in Table 760-51 of the National Electrical Code.

Minimum Conductors In Cable	Gauge Size
1 conductor	16 AWG minimum
2 conductors	19 AWG minimum
4 conductors	22 AWG minimum
6 conductors	24 AWG minimum
10 conductors	26 AWG minimum

Additional limitations, such as using stranded conductors, should be noted in the NEC.

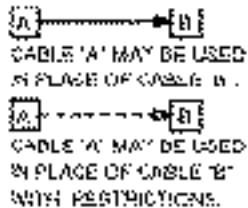
The figure on the next page is an illustration of the hierarchy and permitted interchanges of Communication cables, Power-Limited Fire Alarm cables, Class 2 and 3 circuit cables, and Multipurpose cables.

NEC Articles



Dwellings

- Types CM and CMG - Communications Wires and Cables
- Types CL2 and CL3 - Class 2 and Class 3 Remote-Control, Signaling and Power-Limited Cables
- Type FPL - Power-Limited Fire Protective Signaling Cables
- Type MP and MPG - Multipurpose Cables
- Type PLTC - Power-Limited Tray Cable
- P = PLENUM
- R = RISER
- X = LIMITED USE



# Introduction

Products covered by this product guide are intended to conform to all applicable requirements of Part 68 of the FCC rules and regulations, or to all applicable requirements of the 1993 NEC.

## Article 800

The listing categories as described in Article 800 are:

MPP – Multipurpose Plenum Cable

CMP – Communications Plenum Cable

MPR – Multipurpose Riser Cable

CMR – Communications Riser Cable

MP & MPG – Multipurpose cable for general use  
(except Plenums and Risers)

CM & CMG – Communications cable for general-  
purpose use (except Plenums and  
Risers)

CMX – Communications cable for limited use in  
dwellings and commercial buildings.

Cables used for telephone (voice) communications must be tested and listed as satisfying the fire resistance, mechanical, and electrical standards of the independent testing laboratory. Communications wires, such as distributing frame wire and cross-connect wire, must be listed as being resistant to the spread of fire.

## Canadian Electrical Code (CEC)

The CEC establishes the electrical and safety requirements for the country of Canada. Two agencies that perform evaluation of products for Canada are the Canadian Standards Association (CSA) and Underwriters Laboratories (UL).

Products bearing the CSA mark or the c(UL) mark indicate the products meet electrical and safety requirements, and are accepted by the Canadian building industry.

## Approval

With the exception of large scale fire testing, Avaya conducts (in-house) all necessary tests required to qualify for UL and c(UL) Listings. Personnel, calibration and measurement procedures are reviewed annually by UL engineering staff to insure compliance. Avaya is proud to have been the first wire and cable manufacturer to be approved by UL for this type of program (UL Client Data Program).

Avaya products are independently verified to comply with the NEC by Underwriters Laboratories (UL). Products that successfully complete a series of mechanical, electrical and thermal characteristics tests which simulate all reasonable, foreseeable hazards are authorized to show the UL mark. Products are marked (UL) and C(UL) for recognition in the United States and Canada respectively.

### Listing Type

MPP or CMP  
c(UL) CMP

MPR or CMR  
c(UL) CMG

MP or CM, & Comm. Wires  
CMX

CMH

### Required Fire Test


Test for Fire and Smoke  
Characteristics of Wires and Cables, NFPA 262 or UL-910.

Test for Flame Propagation  
Height of Electrical and Optical-Fiber Cable Installed Vertically in Shafts, UL 1666. Complies with FT4 test.

Vertical – Tray Flame Test, UL 1581 – Section 1160.  
VW-1 Flame Test, UL 1581 – Section 1080.

Communications House (FT1 Test)

The UL and Canadian Standards Association (CSA) are harmonized in UL 444/CSA C222 No. 214-94. This standard now specifies requirements for communications cables. In addition to the physical requirements specified in these standards, the following fire tests are also required for each of the given applications.

UL Recognized 

Products bearing UL Recognized labels have been tested for use as a component in a UL Listed package. These component products are tested for electrical, mechanical, and thermal characteristics.

UL Recognized is a more restrictive approval than UL Listing in that it allows a product to be certified only for use within a listed piece of equipment.

It should be noted that the cables with only a UL Recognized approval do not have to pass fire tests of the general purpose Listed cables; i.e., vertical flame test. Only the lower level VW-1 test is required for Recognition; this would be equivalent to the lowest CL2X rating for power limited circuit cables.

# Notes

# Unshielded Hookup Wire

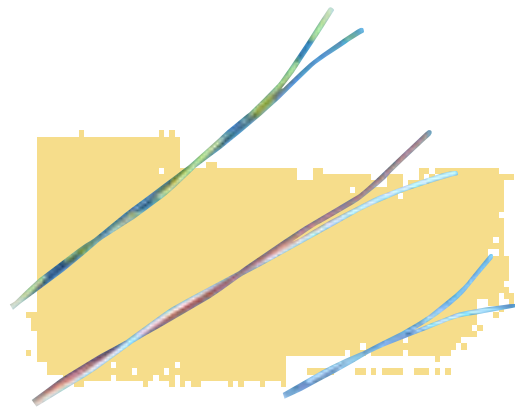
Avaya offers a wide variety of unshielded hookup wire for internal telecom apparatus wiring and Central Office cross-connect and point-to-point wiring.

Applications or special wire requirements include:

- DSX frame cross-connections
- General utility wiring
- Extra-strength general utility wiring
- Solder heat-resistant wiring
- Surface (high abrasion-resistant) wiring
- Local cable forming
- Insulation displacement wiring
- Distributing frame cross-connecting
- Outdoor cabinet cross-connect wiring
- Cable manufacturing

Avaya manufactured hookup wire conductors provide good ductility, high corrosion resistance, continuous shape, mechanical strength, and standard electrical conductivity. Hookup wire is available in 20 to 26 AWG tinned copper.

Hookup wire insulation is formulated not only to comply with mechanical and electrical specifications, but also to insure that the material has long-term stability and integrity at varied temperatures. Special attention is directed to heat, moisture, abrasion, fire, and chemical resistance and tensile strength. For ease of identification, a rainbow of different color options is available.



*Unshielded Hookup Wire*

UNSHIELDED  
HOOKUP WIRE



# Selection Guide

## Unshielded Hookup Wire

UNSHIELDED  
HOOKUP WIRE

Product Code	AWG	Page	Good Cut-Thru Resist.	Solderless Wrap Conn.	Solder Heat-Resist.	Abrasion Resist.	Gen. Utl.	Dist. Frame Cross-Conn.	DSX Cross-Conn.	Outside Terminal Cross-Conn.	Sta. Equip. Incoming Cross-Conn.	UL Listed
<b>BH2</b>												
Solid Conductor	24	3	X			X	X					X
	22	4	X			X	X					X
	20	5	X			X	X					X
<b>BU</b>												
Solid Conductor	24	6		X			X					X
	22	7		X			X					X
<b>CCW-F</b>												
Solid Conductor Cross-Connect	24	8								X	X	X
	22	9								X	X	X
<b>CCW-H</b>												
Solid Tinned Conductor Cross-Connect	24	10		X					X	X	X	X
<b>DP3</b>												
Solid Conductor	26	11	X	X	X	X						X
	24	12	X	X	X	X						X
	22	13	X	X	X	X						X
	20	14	X	X	X	X						X
Solid Conductor, Tight Twist	24	15	X	X	X	X						X
<b>DT</b>												
Solid Conductor	24	16	X	X	X	X		X				X
	22	17	X	X	X	X		X				X
<b>Y1</b>												
Solid Conductor	24	18		X					X			X
<b>Y2</b>												
Solid Conductor	24	19	X	X	X	X			X			X

# 24 AWG BH2 Unshielded Hookup Wire

UNSHIELDED  
HOOKUP WIRE

## SPECIFICATIONS

<b>Conductors</b>	Tinned copper	<b>Insulation</b>	APVC
<b>UL Recognized</b>	AWM Style #1936 90°C	<b>Insulation Thickness</b>	0.017 in (0.43 mm)
<b>UL Listed</b>	Cross-Connect wire		

## ORDERING INFORMATION

Product Code	Pair Count	Weight	Insulation Colors	Material ID
BH2 2C/24 S850	1 Pair	4.85 lbs/K ft (7.22 kg/km)	Y/Y-G	843 745 340
BH2 2C/24 S850	1 Pair	4.85 lbs/K ft (7.22 kg/km)	G/G-W	843 745 365
BH2 2C/24 S850	1 Pair	4.85 lbs/K ft (7.22 kg/km)	BK/R-BK	843 745 373
BH2 2C/24 S850	1 Pair	4.85 lbs/K ft (7.22 kg/km)	R/R-BK	843 742 883
BH2 4C/24 S370	2 Pairs	9.71 lbs/K ft (14.47 kg/km)	Y/Y-G, R/R-G	843 745 399
BH2 1C/24 S2400	1 Conductor	2.43 lbs/K ft (3.62 kg/km)	G	842 697 161
BH2 1C/24 S2400	1 Conductor	2.43 lbs/K ft (3.62 kg/km)	R	842 697 203
BH2 1C/24 S2400	1 Conductor	2.43 lbs/K ft (3.62 kg/km)	BK	842 697 211
BH2 1C/24 S2400	1 Conductor	2.43 lbs/K ft (3.62 kg/km)	R-BK	843 744 863
BH2 3C/24 S495	3 Conductors	7.28 lbs/K ft (10.85 kg/km)	Y/Y-G/R-G	843 742 701

# 22 AWG

## BH2 Unshielded Hookup Wire

UNSHIELDED  
HOOKUP WIRE

### SPECIFICATIONS

<b>Conductors</b>	Tinned copper	<b>Insulation</b>	APVC
<b>UL Recognized</b>	AWM Style #1936 90°C	<b>Insulation Thickness</b>	0.017 in (0.43 mm)
<b>UL Listed</b>	Cross-Connect wire		

### ORDERING INFORMATION

Product Code	Pair Count	Weight	Insulation Colors	Material ID
BH2 2C/22 S710	1 Pair	6.57 lbs/K ft (9.79 kg/km)	R/R-BK	843 742 917
BH2 2C/22 S710	1 Pair	6.57 lbs/K ft (9.79 kg/km)	BL/BL-W	843 742 370
BH2 2C/22 S710	1 Pair	6.57 lbs/K ft (9.79 kg/km)	R/BK	843 742 461
BH2 2C/22 S710	1 Pair	6.57 lbs/K ft (9.79 kg/km)	Y/Y-G	843 742 503
BH2 2C/22 S710	1 Pair	6.57 lbs/K ft (9.79 kg/km)	BK/R-BK	843 742 529
BH2 4C/22 S350	2 Pairs	13.14 lbs/K ft (19.58 kg/km)	Y/Y-G, R/R-G	843 745 407
BH2 1C/22 S1860	1 Conductor	3.29 lbs/K ft (4.90 kg/km)	BK	843 744 970
BH2 1C/22 S1860	1 Conductor	3.29 lbs/K ft (4.90 kg/km)	R-BK	843 745 142
BH2 3C/22 S460	3 Conductors	9.86 lbs/K ft (14.69 kg/km)	Y/Y-G/R-G	843 742 776

# 20 AWG BH2 Unshielded Hookup Wire

## SPECIFICATIONS

<b>Conductors</b>	Tinned copper	<b>Insulation</b>	APVC
<b>UL Recognized</b>	AWM Style #1936 90°C	<b>Insulation Thickness</b>	0.017 in (0.43 mm)
<b>UL Listed</b>	Cross-Connect wire		

## ORDERING INFORMATION

Product Code	Pair Count	Weight	Insulation Colors	Material ID
BH2 2C/20 S570	1 Pair	9.46 lbs/K ft (14.10 kg/km)	R/BK	843 742 636
BH2 2C/20 S570	1 Pair	9.46 lbs/K ft (14.10 kg/km)	Y/Y-G	843 742 677
BH2 2C/20 S570	1 Pair	9.46 lbs/K ft (14.10 kg/km)	BK/R-BK	843 742 693
BH2 2C/20 RVAR	1 Pair	9.46 lbs/K ft (14.10 kg/km)	BK/R-BK	108 872 029
BH2 4C/20 S220	2 Pairs	18.92 lbs/K ft (28.20 kg/km)	Y/Y-G, R/R-G	843 745 431
BH2 1C/20 S1250	1 Conductor	4.73 lbs/K ft (7.05 kg/km)	BK	842 697 849
BH2 1C/20 S1250	1 Conductor	4.73 lbs/K ft (7.05 kg/km)	R-BK	843 745 290
BH2 3C/20 S360	3 Conductors	14.19 lbs/K ft (21.15 kg/km)	S/R/BK	843 742 800
BH2 3C/20 S360	3 Conductors	14.19 lbs/K ft (21.15 kg/km)	Y/Y-G/R-G	843 742 842

# 24 AWG

## BU Unshielded Hookup Wire

### SPECIFICATIONS

<b>Conductors</b>	Tinned copper	<b>Insulation</b>	Semi-rigid PVC
<b>UL Listed</b>	Cross-Connect wire 90°C	<b>Insulation Thickness</b>	0.008 in (0.20 mm)

### ORDERING INFORMATION

Product Code	Pair Count	Weight	Insulation Colors	Material ID
BU 2C/24 S1890	1 Pair	3.38 lbs/K ft (5.04 kg/km)	W-BL/BL-W	814 615 837
BU 2C/24 S1890	1 Pair	3.38 lbs/K ft (5.04 kg/km)	W-O/O-W	814 615 845
BU 2C/24 S1890	1 Pair	3.38 lbs/K ft (5.04 kg/km)	W-G/G-W	814 615 852
BU 2C/24 S1890	1 Pair	3.38 lbs/K ft (5.04 kg/km)	BK-G/G-BK	814 615 951
BU 2C/24 S1890	1 Pair	3.38 lbs/K ft (5.04 kg/km)	BL/W	814 231 759
BU 2C/24 S1890	1 Pair	3.38 lbs/K ft (5.04 kg/km)	R/BL	814 935 714
BU 2C/24 S1890	1 Pair	3.38 lbs/K ft (5.04 kg/km)	R/W	814 935 763
BU 2C/24 S1890	1 Pair	3.38 lbs/K ft (5.04 kg/km)	BL/BL-W	814 658 738
BU 2C/24 S1890	1 Pair	3.38 lbs/K ft (5.04 kg/km)	O/O-W	814 658 746
BU 2C/24 S1890	1 Pair	3.38 lbs/K ft (5.04 kg/km)	G/G-W	814 658 753
BU 2C/24 S1890	1 Pair	3.38 lbs/K ft (5.04 kg/km)	BR/BR-W	814 658 761
BU 2C/24 S1890	1 Pair	3.38 lbs/K ft (5.04 kg/km)	R/R-W	814 658 787
BU 2C/24 S1890	1 Pair	3.38 lbs/K ft (5.04 kg/km)	BK/W-BK	814 658 803
BU 2C/24 S790	2 Pairs	3.38 lbs/K ft (5.04 kg/km)	BL/O/G/BR	814 936 027
BU 1C/24 R14000 -0+10%	1 Conductor	1.69 lbs/K ft (2.52 kg/km)	BL	106 282 791
BU 1C/24 S4750	1 Conductor	1.69 lbs/K ft (2.52 kg/km)	O	814 615 613
BU 1C/24 S4750	1 Conductor	1.69 lbs/K ft (2.52 kg/km)	G	814 615 621
BU 1C/24 S4750	1 Conductor	1.69 lbs/K ft (2.52 kg/km)	BR	814 615 639
BU 1C/24 S4750	1 Conductor	1.69 lbs/K ft (2.52 kg/km)	S	814 615 647
BU 1C/24 R14000 -0+10%	1 Conductor	1.69 lbs/K ft (2.52 kg/km)	W	106 282 809
BU 1C/24 S4750	1 Conductor	1.69 lbs/K ft (2.52 kg/km)	R	814 615 662
BU 1C/24 S4750	1 Conductor	1.69 lbs/K ft (2.52 kg/km)	BK	814 615 670
BU 1C/24 S4750	1 Conductor	1.69 lbs/K ft (2.52 kg/km)	V	700 023 047
BU 1C/24 S4750	1 Conductor	1.69 lbs/K ft (2.52 kg/km)	Y	814 624 649

# 22 AWG

## BU Unshielded Hookup Wire

### SPECIFICATIONS

<b>Conductors</b>	Tinned copper	<b>Insulation</b>	Semi-rigid PVC
<b>UL Listed</b>	Cross-Connect wire 90°C	<b>Insulation Thickness</b>	0.008 in (0.20 mm)

UNSHIELDED  
HOOKUP WIRE

### ORDERING INFORMATION

Product Code	Pair Count	Weight	Insulation Colors	Material ID
BU 1C/22 S1350	1 Pair	4.93 lbs/K ft (7.35 kg/km)	W-BL/BL-W	814 231 502
BU 2C/22 S500	1 Pair	4.93 lbs/K ft (7.35 kg/km)	R/W	106 503 873
BU 2C/22 S1000	1 Pair	4.93 lbs/K ft (7.35 kg/km)	R/W	106 503 881
BU 1C/22 S3800	1 Conductor	2.47 lbs/K ft (3.68 kg/km)	BL	814 616 504

# 24 AWG CCW-F Unshielded Hookup Wire

UNSHIELDED  
HOOKUP WIRE

## SPECIFICATIONS

<b>Conductors</b>	Tinned copper	<b>Insulation</b>	Semi-rigid PVC
<b>UL Listed</b>	Cross-Connect wire 75°C	<b>Insulation Thickness</b>	0.008 in. (0.20 mm)
		<b>Outside Diameter</b>	0.038 in. (0.097 cm) maximum

## ORDERING INFORMATION

Product Code	Pair Count	Weight	Insulation Colors	Material ID
CCW-F 1/24 S1000	1 Pair	3.10 lbs/K ft (4.62 kg/km)	Y-BL/BL-Y	105 597 199
CCW-F 1/24 S1000	1 Pair	3.10 lbs/K ft (4.62 kg/km)	W-R/R-W	105 597 231
CCW-F 1/24 S1000	1 Pair	3.10 lbs/K ft (4.62 kg/km)	W-BL/BL-W	105 597 264
CCW-F 1/24 S600	1 Pair	3.10 lbs/K ft (4.62 kg/km)	W-R/R-W	107 279 937
CCW-F 1/24 S1000	1 Pair	3.10 lbs/K ft (4.62 kg/km)	W/BK	107 035 008
CCW-F 2/24 S1000	2 Pairs	6.21 lbs/K ft (9.25 kg/km)	W-BL/BL-W, W-O/O-W	105 617 955
CCW-F 2/24 S1150	2 Pairs	6.21 lbs/K ft (9.25 kg/km)	R-BL/BL-R, R-O/O-R	105 597 413
CCW-F 2/24 S1000	2 Pairs	6.21 lbs/K ft (9.25 kg/km)	R-BL/BL-R, R-O/O-R	106 483 878
CCW-F 3/24 S660	3 Pairs	9.31 lbs/K ft (13.87 kg/km)	W-BL/BL-W, W-O/O-W, W-G/G-W	105 597 462
CCW-F 3/24 S1000	3 Pairs	9.31 lbs/K ft (13.87 kg/km)	W-BL/BL-W, W-O/O-W, W-G/G-W	105 597 447
CCW-F 4/24 S1000	4 Pairs	12.42 lbs/K ft (18.50 kg/km)	W-BL/BL-W, W-O/O-W, W-G/G-W, W-BR/BR-W	105 597 512

# 22 AWG CCW-F Unshielded Hookup Wire

## SPECIFICATIONS

<b>Conductors</b>	Bare copper	<b>Insulation</b>	Weatherized semi-rigid PVC
<b>UL Listed</b>	Cross-Connect wire 75°C	<b>Insulation Thickness</b>	0.008 in (0.20 mm)

## ORDERING INFORMATION

Product Code	Pair Count	Weight	Insulation Colors	Material ID
CCW-F 1/22 S400	1 Pair	4.6 lbs/K ft (6.9 kg/km)	V/W-V	106 751 373

UNSHIELDED  
HOOKUP WIRE



# 24 AWG CCW-H Unshielded Hookup Wire

## SPECIFICATIONS

<b>Conductors</b>	Tinned copper	<b>Insulation</b>	Semi-rigid PVC
<b>UL Listed</b>	Cross-Connect wire 75°C	<b>Insulation Thickness</b>	0.008 in. (0.20 mm)
		<b>Outside Diameter</b>	0.038 in. (0.097 cm) maximum

## ORDERING INFORMATION

Product Code	Pair Count	Weight	Insulation Colors	Material ID
CCW-H 1/24 S800	1 Pair	3.10 lbs/K ft (4.62 kg/km)	W/O	106 500 770
CCW-H 1/24 S400	1 Pair	3.10 lbs/K ft (4.62 kg/km)	W/O	106 433 584

# 26 AWG

## DP3 Unshielded Hookup Wire

### SPECIFICATIONS

<b>Conductors</b>	Tinned copper	<b>Insulation</b>	APVC
<b>UL Listed</b>	Cross-Connect wire 90°C	<b>Insulation Thickness</b>	0.008 in (0.22 mm)

UNSHIELDED  
HOOKUP WIRE

### ORDERING INFORMATION

Product code	Pair Count	Weight	Insulation Colors	Material ID
DP3 2C/26 S2220	1 Pair	2.46 lbs/K ft (3.67 kg/km)	BL/W-BL	843 747 833
DP3 2C/26 S2220	1 Pair	2.46 lbs/K ft (3.67 kg/km)	O/W-O	843 747 841
DP3 2C/26 S2220	1 Pair	2.46 lbs/K ft (3.67 kg/km)	G/W-G	843 747 858
DP3 2C/26 S2220	1 Pair	2.46 lbs/K ft (3.67 kg/km)	BR/W-BR	843 747 866
DP3 2C/26 S2220	1 Pair	2.46 lbs/K ft (3.67 kg/km)	S/W-S	843 747 874
DP3 2C/26 S2220	1 Pair	2.46 lbs/K ft (3.67 kg/km)	R/W	843 747 981
DP3 2C/26 S2220	1 Pair	2.46 lbs/K ft (3.67 kg/km)	R/BK	843 747 999
DP3 1C/26 R31300	1 Conductor	1.23 lbs/K ft (1.83 kg/km)	BL	108 654 237
DP3 1C/26 R31300	1 Conductor	1.23 lbs/K ft (1.83 kg/km)	O	108 654 641
DP3 1C/26 S5200	1 Conductor	1.23 lbs/K ft (1.83 kg/km)	G	843 743 121
DP3 1C/26 R31300	1 Conductor	1.23 lbs/K ft (1.83 kg/km)	G	108 654 245
DP3 1C/26 R31300	1 Conductor	1.23 lbs/K ft (1.83 kg/km)	BR	108 654 252
DP3 1C/26 S5200	1 Conductor	1.23 lbs/K ft (1.83 kg/km)	S	843 743 147
DP3 1C/26 R31300	1 Conductor	1.23 lbs/K ft (1.83 kg/km)	S	108 654 286
DP3 1C/26 S5200	1 Conductor	1.23 lbs/K ft (1.83 kg/km)	W	843 743 154
DP3 1C/26 R31300	1 Conductor	1.23 lbs/K ft (1.83 kg/km)	W	108 654 294
DP3 1C/26 S5200	1 Conductor	1.23 lbs/K ft (1.83 kg/km)	R	843 743 162
DP3 1C/26 R31300	1 Conductor	1.23 lbs/K ft (1.83 kg/km)	R	108 654 302
DP3 1C/26 S5200	1 Conductor	1.23 lbs/K ft (1.83 kg/km)	BK	843 743 170
DP3 1C/26 R31300	1 Conductor	1.23 lbs/K ft (1.83 kg/km)	BK	108 654 310
DP3 1C/26 R31300	1 Conductor	1.23 lbs/K ft (1.83 kg/km)	Y	108 654 328
DP3 1C/26 R31300	1 Conductor	1.23 lbs/K ft (1.83 kg/km)	V	108 654 658
DP3 1C/26 S5200	1 Conductor	1.23 lbs/K ft (1.83 kg/km)	R-BL	843 743 329

# 24 AWG

## DP3 Unshielded Hookup Wire

### SPECIFICATIONS

<b>Conductors</b>	Tinned copper	<b>Insulation</b>	APVC
<b>UL Listed</b>	Cross-Connect wire 90°C	<b>Insulation Thickness</b>	0.008 in (0.22 mm)

### ORDERING INFORMATION

Product Code	Pair Count	Weight	Insulation Colors	Material ID
DP3 2C/24 S1530	1 Pair	3.49 lbs/K ft (5.19 kg/km)	R/BK	844 510 255
DP3 4C/24 S760	2 Pairs	6.96 lbs/K ft (10.37 kg/km)	BL/O, G/BR	843 745 506
DP3 1C/24 S4100	1 Conductor	1.74 lbs/K ft (2.59 kg/km)	G	843 743 436
DP3 1C/24 S4100	1 Conductor	1.74 lbs/K ft (2.59 kg/km)	BK	843 743 485

UNSHIELDED  
HOOKUP WIRE

# 22 AWG

## DP3 Unshielded Hookup Wire

UNSHIELDED  
HOOKUP WIRE

### SPECIFICATIONS

<b>Conductors</b>	Tinned copper	<b>Insulation</b>	APVC
<b>UL Listed</b>	Cross-Connect wire 90°C	<b>Insulation Thickness</b>	0.008 in (0.22 mm)

### ORDERING INFORMATION

Product Code	Pair Count	Weight	Insulation Colors	Material ID
DP3 2C/22 S1640	1 Pair	4.92 lbs/K ft (7.33 kg/km)	R/BK	844 510 438
DP3 1C/22 R16600	1 Conductor	2.46 lbs/K ft (3.67 kg/km)	BL	108 654 336
DP3 1C/22 R16600	1 Conductor	2.46 lbs/K ft (3.67 kg/km)	O	108 654 757
DP3 1C/22 R16600	1 Conductor	2.46 lbs/K ft (3.67 kg/km)	G	108 654 344
DP3 1C/22 S3300	1 Conductor	2.46 lbs/K ft (3.67 kg/km)	BR	843 743 758
DP3 1C/22 R16600	1 Conductor	2.46 lbs/K ft (3.67 kg/km)	BR	108 654 351
DP3 1C/22 R16600	1 Conductor	2.46 lbs/K ft (3.67 kg/km)	W	108 654 377
DP3 1C/22 R16600	1 Conductor	2.46 lbs/K ft (3.67 kg/km)	R	108 654 385
DP3 1C/22 R16600	1 Conductor	2.46 lbs/K ft (3.67 kg/km)	S	108 654 369
DP3 1C/22 S3300	1 Conductor	2.46 lbs/K ft (3.67 kg/km)	BK	843 743 790
DP3 1C/22 R16600	1 Conductor	2.46 lbs/K ft (3.67 kg/km)	BK	108 653 635
DP3 1C/22 R16600	1 Conductor	2.46 lbs/K ft (3.67 kg/km)	Y	108 654 393
DP3 1C/22 R16600	1 Conductor	2.46 lbs/K ft (3.67 kg/km)	V	108 654 765

# 20 AWG

## DP3 Unshielded Hookup Wire

### SPECIFICATIONS

<b>Conductors</b>	Tinned copper	<b>Insulation</b>	APVC
<b>UL Listed</b>	Cross-Connect wire 90°C	<b>Insulation Thickness</b>	0.008 in (0.22 mm)

### ORDERING INFORMATION

Product Code	Pair Count	Weight	Insulation Colors	Material ID
DP3 2C/20 S1300	1 Pair	7.51 lbs/K ft (11.19 kg/km)	R/BK	844 512 566
DP3 1C/20 S2100	1 Conductor	3.76 lbs/K ft (5.60 kg/km)	R	843 746 363

# 24 AWG

## DP3 Unshielded Hookup Wire, Tight Twist

### SPECIFICATIONS

<b>Conductors</b>	Tinned copper	<b>Insulation</b>	APVC
<b>UL Listed</b>	Cross-Connect wire 90°C	<b>Insulation Thickness</b>	0.008 in (0.22 mm)

UNSHIELDED  
HOOKUP WIRE

### ORDERING INFORMATION

Product Code	Pair Count	Weight	Insulation Colors	Material ID
DP3 2C/24 S1215	1 Pair	3.48 lbs/K ft (5.19 kg/km)	S/S-W	844 514 158

# 24 AWG DT Unshielded Hookup Wire

UNSHIELDED  
HOOKUP WIRE

## SPECIFICATIONS

<b>Conductors</b>	Tinned copper	<b>Insulation</b>	APVC
<b>UL Listed</b>	Cross-Connect wire 90°C	<b>Insulation Thickness</b>	0.008 in (0.20 mm)

## ORDERING INFORMATION

Product Code	Pair Count	Weight	Insulation Colors	Material ID
DT 2C/24 C5000	1 Pair	3.12 lbs/K ft (4.65 kg/km)	Y/BL	102 379 195
DT 2C/24 C5000	1 Pair	3.12 lbs/K ft (4.65 kg/km)	Y/G	103 252 565
DT 2C/24 C5000	1 Pair	3.12 lbs/K ft (4.65 kg/km)	Y/O	103 252 573
DT 2C/24 C5000	1 Pair	3.12 lbs/K ft (4.65 kg/km)	Y/R	103 252 581
DT 2C/24 K3000	1 Pair	3.12 lbs/K ft (4.65 kg/km)	U/R	106 941 487
DT 2C/24 C5000	1 Pair	3.12 lbs/K ft (4.65 kg/km)	W/BL	108 477 944
DT 2C/24 S3000	1 Pair	3.12 lbs/K ft (4.65 kg/km)	W/BL	108 737 669
DT 2/24 C2500	1 Pair	3.12 lbs/K ft (4.65 kg/km)	Y/BL, R/G	103 252 557
DT 2C/24 C3000	1 Pair	3.12 lbs/K ft (4.65 kg/km)	W/R	106 676 240
DT 2C/24 S3000	1 Pair	3.12 lbs/K ft (4.65 kg/km)	W/R	106 894 082
DT 2C/24 C3000	1 Pair	3.12 lbs/K ft (4.65 kg/km)	BL/O	106 675 887
DT 2C/24 S6000	1 Pair	3.12 lbs/K ft (4.65 kg/km)	W/R	106 513 773
DT 2C/24 C3000	1 Pair	3.12 lbs/K ft (4.65 kg/km)	W/BK	106 513 807
DT 2C/24 C3000	1 Pair	3.12 lbs/K ft (4.65 kg/km)	R/Y	106 514 342
*DT 2C/24 C5000	1 Pair	3.12 lbs/K ft (4.65 kg/km)	BL/V	108 778 499
DT 2.5/24 C1000	2.5 Pairs	7.81 lbs/K ft (11.64 kg/km)	BL/O, BR/S,G	106 514 094

\*Features 1-inch twist length

# 22 AWG

## DT Unshielded Hookup Wire

### SPECIFICATIONS

<b>Conductors</b>	Tinned copper	<b>Insulation</b>	APVC
<b>UL Listed</b>	Cross-Connect wire 90°C	<b>Insulation Thickness</b>	0.008 in (0.20 mm)

UNSHIELDED  
HOOKUP WIRE

### ORDERING INFORMATION

Product Code	Pair Count	Weight	Insulation Colors	Material ID
DT 2C/22 S500	1 Pair	4.7 lbs/K ft (7 kg/km)	W/BL	102 627 288
DT 2C/22 C3000	1 Pair	4.7 lbs/K ft (7 kg/km)	W/BL	102 337 870
DT 2C/22 C3000	1 Pair	4.7 lbs/K ft (7 kg/km)	W/G	102 421 922
DT 2C/22 S3000	1 Pair	4.7 lbs/K ft (7 kg/km)	W/BL	106 894 249
DT 2C/22 C3000	1 Pair	4.7 lbs/K ft (7 kg/km)	W/BK	106 513 831
DT 2C/22 S3000	1 Pair	4.7 lbs/K ft (7 kg/km)	W/R	106 894 066
DT 2C/22 C3000	1 Pair	4.7 lbs/K ft (7 kg/km)	R/Y	106 676 257
DT 2C/22 C3000	1 Pair	4.7 lbs/K ft (7 kg/km)	G/Y	106 676 265
DT 2C/22 K2600	1 Pair	4.7 lbs/K ft (7 kg/km)	G/BR	106 941 594
DT 2C/22 C3000	1 Pair	4.7 lbs/K ft (7 kg/km)	W/O	102 421 930
DT 2C/22 S4200	1 Pair	4.7 lbs/K ft (7 kg/km)	W/O	107 266 215
DT 2C/22 C3000	1 Pair	4.7 lbs/K ft (7 kg/km)	W/R	102 421 948
DT 2C/22 C3000	1 Pair	4.7 lbs/K ft (7 kg/km)	R/G	103 169 124
DT 2C/22 C3000	1 Pair	4.7 lbs/K ft (7 kg/km)	BL/O	106 513 880
DT 2C/22 C1000	1 Pair	4.7 lbs/K ft (7 kg/km)	BL/BK	106 513 872
*DT 2C/22 C3000	1 Pair	4.7 lbs/K ft (7 kg/km)	BL/V	108 778 507
DT 2C/22 C3000	1 Pair	4.7 lbs/K ft (7 kg/km)	BK/V	107 053 290
DT 2C/22 S3000	1 Pair	4.7 lbs/K ft (7 kg/km)	BK/W	106 955 099
DT 2C/22 C3000	1 Pair	4.7 lbs/K ft (7 kg/km)	BK/Y	104 293 451
DT 2C/22 S3000	1 Pair	4.7 lbs/K ft (7 kg/km)	W/R	106 894 066
DT 2C/22 K2600	1 Pair	4.7 lbs/K ft (7 kg/km)	W/R	106 941 628
DT 2C/22 C1000	1 Pair	4.7 lbs/K ft (7 kg/km)	G/BR	106 513 914
DT 2C/22 K2600	1 Pair	4.7 lbs/K ft (7 kg/km)	G/BR	106 941 594
DT 2C/22 K2600	1 Pair	4.7 lbs/K ft (7 kg/km)	BL/BK	106 941 537
DT 2/22 K1150	2 Pairs	9.40 lbs/K ft (14.01 kg/km)	W/BK, R/G	106 941 883
DT 2/22 K1150	2 Pairs	9.40 lbs/K ft (14.01 kg/km)	W/R, BL/BK	106 941 875
DT 2/22 C1500	2 Pairs	9.40 lbs/K ft (14.01 kg/km)	W/BL, R/G	102 448 982
DT 2/22 C500	2 Pairs	9.40 lbs/K ft (14.01 kg/km)	W/BK, R/G	106 513 930
DT 3C/22 C2100	3 Conductors	7.05 lbs/K ft (10.51 kg/km)	W/BL/R	102 448 990

\* Features 1-inch twist length



# 24 AWG

## Y1 Unshielded Hookup Wire

### SPECIFICATIONS

<b>Conductors</b>	Tinned copper	<b>Insulation</b>	Semi-rigid PVC
<b>UL Listed</b>	Cross-Connect wire 90°C	<b>Insulation Thickness</b>	0.006 in (0.15 mm)

### ORDERING INFORMATION

Product Code	Pair Count	Weight	Insulation Colors	Material ID
Y1 5C/24 C1000	2.5 Pairs	7.12 lbs/K ft (10.60 kg/km)	BL-W/W-BL, O-W/W-O,G	105 271 191
Y1 3/24 S660	3 Pairs	8.54 lbs/K ft (12.73 kg/km)	BL-W/W-BL, O-W/W-O, G-W/W-G	102 540 929

UNSHIELDED  
HOOKUP WIRE

# 24 AWG

## Y2 Unshielded Hookup Wire

### SPECIFICATIONS

<b>Conductors</b>	Tinned copper	<b>Insulation</b>	Semi-rigid PVC
<b>UL Listed</b>	Cross-Connect wire 90°C	<b>Insulation Thickness</b>	0.008 in (0.22 mm)

### ORDERING INFORMATION

Product Code	Pair Count	Weight	Insulation Colors	Material ID
Y2 5C/24 S1000	2.5 Pairs	8.69 lbs/K ft (12.95 kg/km)	BL-W/W-BL, O-W/W-O, G	105 065 569
Y2 5C/24 C1350	2.5 Pairs	8.69 lbs/K ft (12.95 kg/km)	BL-W/W-BL, O-W/W-O, G	103 361 200
Y2 5C/24 C2000	2.5 Pairs	8.69 lbs/K ft (12.95 kg/km)	BL-W/W-BL, O-W/W-O, G	105 065 585
Y2 5C/24 S660	2.5 Pairs	8.69 lbs/K ft (12.95 kg/km)	BL-W/W-BL, O-W/W-O, G	105 271 209
Y2 5C/24 S200	2.5 Pairs	8.69 lbs/K ft (12.95 kg/km)	BL-W/W-BL, O-W/W-O, G	106 276 447

UNSHIELDED  
HOOKUP WIRE

# Notes

UNSHIELDED  
HOOKUP WIRE

# Shielded Hookup Wire

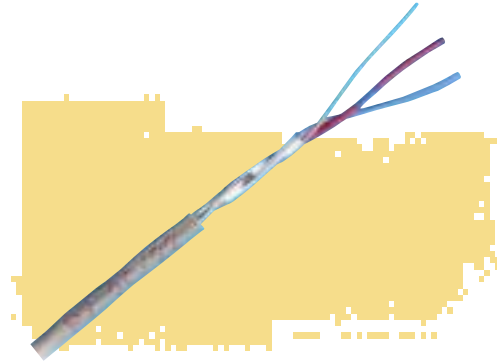
Avaya offers a wide variety of shielded hookup wire for internal telecom apparatus wiring and Central Office cross-connect and point-to-point wiring where shielding benefits are required.

Applications or special shielded wire requirements include:

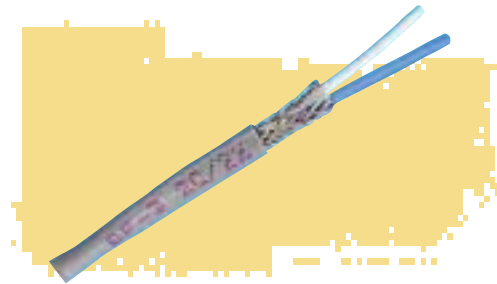
- DSX frame cross-connect wiring
- T Carrier equipment wiring
- D1 through D4 channel bank wiring
- Toll transmission wiring with stable impedance and low loss
- Electromagnetic Interference (EMI) protection
- High frequency cross-connection wiring
- Isolation of timing signal from carrier signals
- Distribution of central clock reference to distributed points throughout facilities

Shielding is provided in the form of braided wire or longitudinally-applied metal foils. Braided wire shields offer superior structural integrity, are very flexible, and have a long flex life. Avaya's shielded wire meets application demands of 60 to 95 percent of the total surface area covered.

As an alternative to braided shielded wire, Avaya also offers aluminum foil shielded paired wire. Shielding is provided by a longitudinally applied polyester-backed aluminum foil and drain wire for easy termination. Shielded hookup wire is available in 20 – 24 AWG.



*P7 Shielded Hookup Wire*



*BF-3 Shielded Hookup Wire*

SHIELDED  
HOOKUP WIRE

# Selection Guide

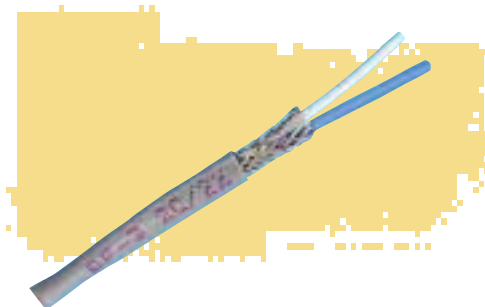
## Shielded Hookup Wire

Product Code	AWG	Page	T-Carrier Equip.	D-4 Channel	Toll Trans.	DSX Cross-Conn.	Timing Signal	Single Braid Shield	Aluminum Foil Shield
<b>BF3</b>									
Solid Conductors	24	23			X	X		X	
	22	24			X	X			
<b>P7</b>									
Solid Conductors, Cabled	24	25	X	X		X	X		X
	22	26	X	X		X	X		X
	20	27							
<b>761A</b>									
Solid Conductors, Cabled	24	28	X	X			X	X	
<b>1175A</b>									
Shielded Twisted Pair	22	29	X	X			X		

SHIELDED HOOKUP WIRE

# 24 AWG

## BF-3 Shielded Hookup Wire



### SPECIFICATIONS

#### Attenuation

6.2 dB/1000 ft, 2.0 dB/100m @ 0.772 MHz  
 7.4 dB/1000 ft, 2.4 dB/100m @ 1.024 MHz  
 9.7 dB/1000 ft, 3.2 dB/100m @ 1.576 MHz  
 14 dB/1000 ft, 4.6 dB/100m @ 3.156 MHz  
 16 dB/1000 ft, 5.2 dB/100m @ 4.224 MHz

**Characteristic Impedance** 100 ± 15 Ohms

**Conductors** Tinned copper

**UL Listed** (UL) CMR c(UL)

**Insulation** FRPE

**Insulation Thickness** 0.018 in (0.46 mm)

**Jacket** PVC

**Jacket Thickness** 0.020 in (0.51 mm)

**Mutual Capacitance** 16 pF/ft, 52 pF/m

**Outside Diameter** 0.17 in (4.32 mm)

**Shield** Tinned copper braid (90% coverage)

**Weight** 24 lbs/K ft (35.8 kg/km)

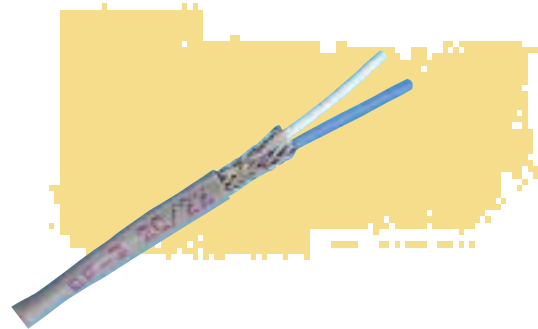
SHIELDED  
HOOKUP WIRE

### ORDERING INFORMATION

Product Code	Pair Count	Insulation Colors	Material ID
BF-3 2C/24 RVAR	1 Pair	BL/WH	106 977 663

# 22 AWG

## BF-3 Shielded Hookup Wire



### SPECIFICATIONS

#### Attenuation

6.0 dB/1000 ft, 2.0 dB/100m @ 0.772 MHz  
 7.1 dB/1000 ft, 2.3 dB/100m @ 1.024 MHz  
 9.3 dB/1000 ft, 3.1 dB/100m @ 1.576 MHz  
 13 dB/1000 ft, 4.3 dB/100m @ 3.156 MHz  
 15 dB/1000 ft, 4.9 dB/100m @ 4.224 MHz

**Characteristic Impedance** 85 ± 15 Ohms

**Conductors** Tinned copper

**UL Listed** (UL) CMR c(UL)

**Insulation** FRPE

**Insulation Thickness** 0.016 in (0.41 mm)

**Jacket** PVC

**Jacket Thickness** 0.022 in (0.56 mm)

**Mutual Capacitance** 20 pF/ft, 66 pF/m

**Outside Diameter** 0.18 in (4.57 mm)

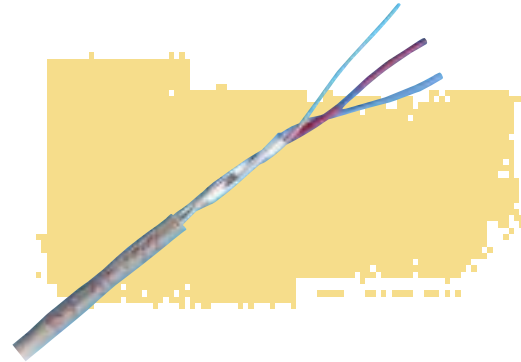
**Shield** Tinned copper braid (90% coverage)

**Weight** 25 lbs/K ft (37.3 kg/km)

### ORDERING INFORMATION

Product Code	Pair Count	Insulation Colors	Material ID
BF-3 2C/22 RVAR	1 Pair	BL/WH	106 977 432
BF-3 2C/22 RVAR	1 Pair	OR/WH	106 977 721
BF-3 2C/22 RVAR	1 Pair	OR/BK	106 977 572
BF-3 2C/22 RVAR	1 Pair	GR/RD	106 977 606

# 24 AWG P7 Shielded Hookup Wire



## SPECIFICATIONS

### Attenuation

0.15 dB/1000 ft, 4.9 dB/100m at 772 KHz

**Characteristic Impedance** 72 Ohms at 1 MHz

**Conductors** Tinned copper

**Insulation** APVC

**Insulation Thickness** 0.008 in (0.22 mm)

### Jacket

PVC

### Jacket Thickness

0.022 in (0.56 mm)

### Mutual Capacitance

30.0 pF/ft, 118 pF/m

### Outside Diameter

0.14 in (3.56 mm)

### Shield

Longitudinal polyester-aluminum foil overshield

### Weight

9.9 lbs/K ft (14.8 kg/km)

### Drain Wire

24 AWG solid tinned copper

SHIELDED  
HOOKUP WIRE

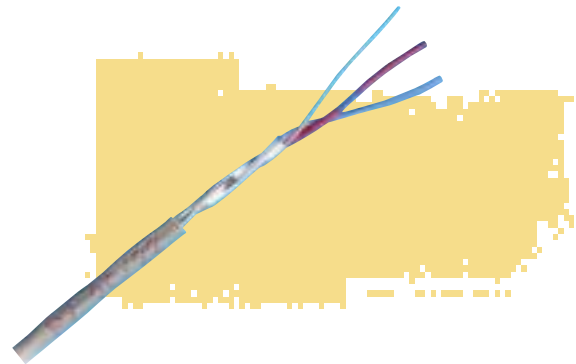
## ORDERING INFORMATION

Product Code	Pair Count	Insulation Colors	Material ID
P7 2C/24 R1000	1 Pair	BL/W-BL	105 046 783
P7 2C/24 R1000	1 Pair	R/R-G	105 046 791



# 22 AWG

## P7 Shielded Hookup Wire



### SPECIFICATIONS

#### Attenuation

0.17 dB/1000 ft, 5.6 dB/100 m at 772 KHz

**Characteristic Impedance** 60 Ohms at 1 MHz

**Conductors** Tinned copper

**Insulation** APVC

**Insulation Thickness** 0.008 in (0.22 mm)

#### Jacket

PVC

#### Jacket Thickness

0.022 in (0.56 mm)

#### Mutual Capacitance

30.0 pF/ft, 118 pF/m

#### Outside Diameter

0.15 in (3.81 mm)

#### Shield

Longitudinal polyester-aluminum foil overshield

#### Weight

12.4 lbs/K ft (18.5 kg/km)

#### Drain Wire

22 AWG solid tinned copper

SHIELDED  
HOOKUP WIRE

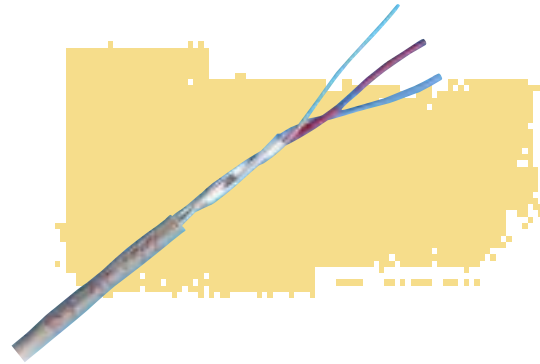
### ORDERING INFORMATION

Product Code	Pair Count	Insulation Colors	Material ID
P7 2C/22 R1000	1 Pair	BL/R-BL	105 046 775
P7 2C/22 R250	1 Pair	BL/R-BL	106 380 926
*P7 2C/22 R1000	1 Pair	BL/R-BL	106 378 144

\*Red Jacket

# 20 AWG

## P7 Shielded Hookup Wire



### SPECIFICATIONS

#### Attenuation

0.19 dB/1000 ft, 6.2 dB/100 m at 772 KHz

**Characteristic Impedance** 50 Ohms at 1 MHz

**Conductors** Tinned copper

**Insulation** APVC

**Insulation Thickness** 0.008 in (0.22 mm)

#### Jacket

PVC

#### Jacket Thickness

0.022 in (0.56 mm)

#### Mutual Capacitance

50.0 pF/ft, 148 pF/m

#### Outside Diameter

0.16 in (4.06 mm)

#### Shield

Longitudinal polyester-aluminum foil overshield

#### Weight

15.5 lbs/K ft (23.1 kg/km)

#### Drain Wire

20 AWG solid tinned copper

SHIELDED  
HOOKUP WIRE

### ORDERING INFORMATION

Product Code	Pair Count	Insulation Colors	Material ID
P7 2C/20 R1000	1 Pair	R/BK	105 046 759

# 24 AWG

## 761A Shielded Hookup Wire

### SPECIFICATIONS

#### Attenuation

6.2 dB/1000 ft, 2.0 dB/100m @ 0.772 MHz  
 7.4 dB/1000 ft, 2.4 dB/100m @ 1.024 MHz  
 9.7 dB/1000 ft, 3.2 dB/100m @ 1.576 MHz  
 14 dB/1000 ft, 4.6 dB/100m @ 3.156 MHz  
 16 dB/1000 ft, 5.2 dB/100m @ 4.224 MHz

**Characteristic Impedance** 100 ± 15 Ohms

**Conductors** Tinned copper

**UL Listed** (UL) Type CM c(UL)

**Insulation** PE

**Insulation Thickness** 0.018 in (0.46 mm)

**Jacket** PVC

**Jacket Thickness** 0.020 in (0.51 mm)

**Mutual Capacitance** 16 pF/ft, 52 pF/m

**Outside Diameter** 0.21 in (5.33 mm)

**Shield** Two layers of tinned copper braid  
(90% coverage)

**Weight** 33.0 lbs/K ft (49.2 kg/km)

SHIELDED  
HOOKUP WIRE

### ORDERING INFORMATION

Product Code	Pair Count	Insulation Colors	Material ID
761A1 1/24 R600	1 Pair	BL/W	106 894 124
761A1 1/24 R1000	1 Pair	BL/W	105 414 031
761A1 1/24 R3000	1 Pair	BL/W	105 401 442
761A1 1/24 RVAR	1 Pair	BL/W	105 393 888
761A2 1/24 RVAR	1 Pair	O/W	105 428 924
761A3 1/24 RVAR	1 Pair	G/W	105 428 932
761A4 1/24 RVAR	1 Pair	BL/R	105 428 940
761A5 1/24 RVAR	1 Pair	S/W	105 428 957

# 22 AWG

## 1175A Shielded Hookup Wire

### SPECIFICATIONS

#### Attenuation

4.5 dB/1000 ft @ 0.77 MHz  
 5.0 dB/1000 ft @ 1.00 MHz  
 8.8 dB/1000 ft @ 4.00 MHz  
 14.0 dB/1000 ft @ 10.00 MHz  
 18.5 dB/1000 ft @ 16.00 MHz  
 21.0 dB/1000 ft @ 20.00 MHz

**Characteristic Impedance** 100 ± 15 Ohms

**Conductors** Solid, tinned

**UL Listed** (UL) CMR c(UL)

**Insulation** Polyethylene

**Insulation Thickness** 0.01 in (0.0254 mm)

**Jacket** PVC

**Jacket Thickness** 0.018 in (0.046 mm)

**Mutual Capacitance** 18 pF/ft, 59 pF/m

**Outside Diameter** 0.22 in (5.58 mm)

**Shield** Aluminum foil laminate

**Weight** 18.56 lbs/K ft (27.6 kg/km)

SHIELDED  
HOOKUP WIRE

### ORDERING INFORMATION

Product Code	Pair Count	Insulation Color	Jacket Color	Material ID
1175 001A RVAR	1 Pair	BL/W	GY	108 672 890
1175 001A RVAR	1 Pair	BL/W	RD	108 672 874
1175 001A R1000	1 Pair	BL/W	RD	108 891 300

# Notes

SHIELDED  
HOOKUP WIRE

# Unshielded Twisted Pair Cable

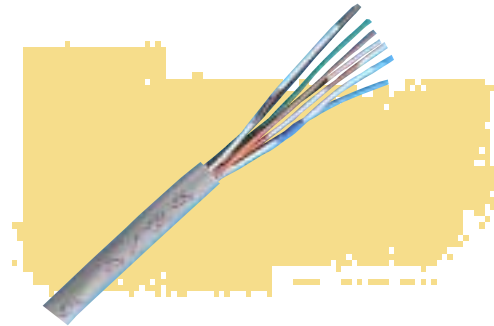
Avaya has designed a variety of unshielded twisted pair cables primarily for connecting modules of switching equipment and for connecting the equipment to a distributing frame in a Central Office or on a customer's premises. They may be used within equipment cabinets, from one cabinet to another, or in a cable rack. Frequency ranges can cover from voice frequencies (64 kb/s) to DS1, DSC1, DS2, E-1, and E-2 (8.44Mb/s) or higher for certain distances.

Tinned conductors, wire-wrapped into tinned binding posts, provide gas-tight connections, which are electrically equivalent to soldered connections.

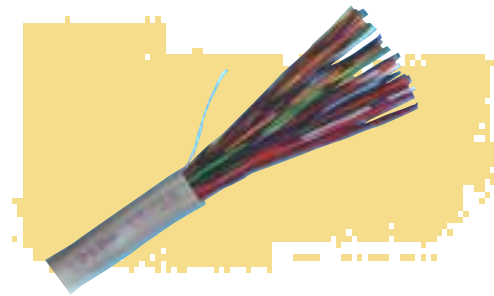
Twisted pair construction provides excellent crosstalk separation between adjacent pairs and decreases the capacitance unbalance to ground both of which result in less signal distortion. Protection against electromagnetic interference (EMI), for a balanced signal, is provided by a twisted pair design, and it is achieved without the corresponding loss induced by the addition of a shield.

All of the cables in the section are suitable for use inside a building or in a controlled environment vault (CEV) where temperature and humidity are maintained within a relatively narrow range. Some of the newest cables are also designed to operate in outside plant cabinets where extreme conditions may be encountered.

All cables have been tested and evaluated by Underwriters Laboratories (UL). Compliance with the NEC is identified on each product page.



*800 Series Twisted Pair Cable*



*TIW Twisted Pair Cable*

# Selection Guide

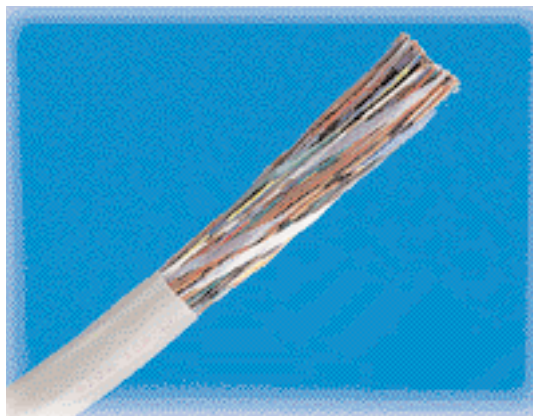
## Unshielded Twisted Pair Cable

Product Code	AWG	Page	Controlled Temperature Environment	Uncontrolled Temperature Environment	UL Listed
<b>800 Series A Cable</b>					
Solid Conductors, Twisted Pairs	26	33	X		CMR
<b>1006A</b>					
Solid Conductors, Twisted Pairs	24	34	X	X	CMR
<b>1051</b>					
Solid Conductors, Tight Twisted Pairs	26	35	X	X	CMR
<b>A Cable</b>					
Solid Conductors, Twisted Pairs	24	36	X	X	CMR
	22	37	X		CMR
<b>B Cable</b>					
Solid Conductors, Twisted Pairs	26	38	X		CMR
<b>R Cable</b>					
Solid Conductors, Twisted Pairs	26	39	X		CMR
<b>TIW</b>					
Solid Conductors, Twisted Pairs	26	40	X		CMR
	24	41	X		CMR

UNSHIELDED  
TWISTED PAIR CABLE

# 26 AWG

## 800 Series A Unshielded Twisted Pair Cable



### SPECIFICATIONS

#### Attenuation

4, 6 Pairs: 2.6 dB/1000 ft, 0.9 dB/100m @ 32 kHz  
 4, 6 Pairs: 6.1 dB/1000 ft, 2.0 dB/100m @ 0.772 MHz  
 4, 6 Pairs: 16 dB/1000 ft, 5.2 dB/100m @ 4.224 MHz  
 8 - 144 Pairs: 2.8 dB/1000 ft, 0.9 dB/100m @ 32 kHz  
 8 - 144 Pairs: 7.4 dB/1000 ft, 2.4 dB/100m @ 0.772 MHz  
 8 - 144 Pairs: 19 dB/1000 ft, 6.2 dB/100m @ 4.224 MHz

**Characteristic Impedance** 4, 6 Pairs: 110 ± 15 Ohms  
 8 - 144 Pairs: 100 ± 20 Ohms

**Color Code** #4

**UL Listed** (UL) CMR c(UL)

**Conductors** Tinned copper

**Insulation** Semi-rigid PVC

**Insulation Thickness** 0.007 in (0.17 mm)

**Jacket** Gray PVC

**Nominal Jacket Thickness** 0.020 in (0.51 mm)

**Mutual Capacitance** 4, 6 Pairs: 18 pF/ft, 58.5 pF/m  
 8 - 144 Pairs: 20 pF/ft, 65 pF/m

Note: Some cables are designed with fewer than 25 pairs per binder group

### ORDERING INFORMATION

Product Code	Pair Count	Outside Diameter	Weight	Material ID
812A 4/26 RVAR	4	0.17 in (4.3 mm)	13.8 lbs/K ft (20.6 kg/km)	105 412 530
816A 6/26 RVAR	6	0.20 in (5.1 mm)	19.1 lbs/K ft (28.5 kg/km)	105 412 563
811A 8/26 RVAR	8	0.20 in (5.1 mm)	23.9 lbs/K ft (35.6 kg/km)	105 412 522
820A 10/26 RVAR	10	0.23 in (5.8 mm)	28.4 lbs/K ft (42.3 kg/km)	105 412 589
807A 16/26 RVAR	16	0.25 in (6.4 mm)	41.6 lbs/K ft (61.9 kg/km)	105 412 480
800A 20/26 RVAR	20	0.28 in (7.2 mm)	51 lbs/K ft (76.0 kg/km)	105 412 415
824A 25/26 RVAR	25	0.30 in (7.7 mm)	62 lbs/K ft (92.4 kg/km)	103 934 667
808A 32/26 RVAR	32	0.34 in (8.6 mm)	77.2 lbs/K ft (115.0 kg/km)	105 412 498
803A 40/26 RVAR	40	0.36 in (9.2 mm)	95.3 lbs/K ft (142.0 kg/km)	105 412 449
822A 48/26 RVAR	48	0.39 in (10.0 mm)	113 lbs/K ft (168.4 kg/km)	105 412 605
813A 50/26 RVAR	50	0.41 in (10.5 mm)	117.9 lbs/K ft (175.7 kg/km)	105 412 548
809A 64/26 RVAR	64	0.44 in (11.2 mm)	148.1 lbs/K ft (220.7 kg/km)	105 412 506
805A 80/26 RVAR	80	0.49 in (12.5 mm)	183.2 lbs/K ft (273.0 kg/km)	105 412 464
823A 96/26 RVAR	96	0.53 in (13.5 mm)	217.9 lbs/K ft (324.3 kg/km)	105 412 613
806A 100/26 RVAR	100	0.54 in (13.8 mm)	226.7 lbs/K ft (337.8 kg/km)	105 412 472
810A 128/26 RVAR;	128	0.63 in (16.1 mm)	288.6 lbs/K ft (430.0 kg/km)	105 412 514
814A 144/26 RVAR	144	0.67 in (17.0 mm)	323.8 lbs/K ft (481.9 kg/km)	105 412 555

UNSHIELDED  
TWISTED PAIR CABLE



# 24 AWG

## 1006A Unshielded Twisted Pair Cable

### SPECIFICATIONS

#### Attenuation

2.3 dB/1000 ft, 0.8 dB/100 m @ 32 kHz  
 6.6 dB/1000 ft, 2.2 dB/100m @ 0.772 MHz  
 17 dB/1000 ft, 5.6 dB/100m @ 4.224 MHz

**Characteristic Impedance** 100 ± 15 Ohms

**Color Code** #4

**UL Listed** (UL) CMR c(UL) CMG 90°C 300 volts

#### Conductors

Tinned copper

#### Insulation

Semi-rigid PVC

#### Insulation Thickness

0.008 in (0.22 mm)

#### Jacket

Gray PVC

#### Nominal Jacket Thickness

0.020 in (0.05 mm)

#### Mutual Capacitance

20 pF/ft, 66 pF/m

### ORDERING INFORMATION

Product Code	Pair Count	Outside Diameter	Weight	Material ID
1006 012 A RVAR	12	0.27 in (6.8 mm)	49.5 lbs/K ft (73.7 kg/km)	106 378 409
1006 025 A RVAR	25	0.40 in (10.2 mm)	97.9 lbs/K ft (145.9 kg/km)	106 737 448

UNSHIELDED  
TWISTED PAIR CABLE

# 26 AWG

## 1051 Unshielded Tight Twisted Pair Cable

### SPECIFICATIONS

#### Near End Crosstalk Typical

56 dB/1000 ft @ 1 MHz  
 41 dB/1000 ft @ 10 MHz  
 36 dB/1000 ft @ 50 MHz

#### Attenuation

7.5 dB/1000 ft, 2.9 dB/100 m @ 1 MHz  
 25 dB/1000 ft, 7.6 dB/100m @ 10 MHz  
 57 dB/1000 ft, 17 dB/100 m @ 50 MHz

**Characteristic Impedance** 100 ± 15 Ohms

**Color Code** #2

**UL Listed** (UL) CMR c(UL)

**Conductors** Solid tinned copper  
**Insulation** HDPE  
**Insulation Thickness** 0.0065 in (0.16 mm)  
**Jacket** LSPVC  
**Nominal Jacket Thickness** 0.018 in (0.05 mm)  
**Mutual Capacitance** 15 pF/ft, 49 pF/m

### ORDERING INFORMATION

Product Code	Pair Count	Outside Diameter	Weight	Material ID
1051 004B RVAR	4	0.180 in (4.6 mm)	13.7 lbs/K ft (19.7 kg/km)	107 717 449
1051 005B RVAR	5	0.180 in (4.6 mm)	16.1 lbs/K ft (24.1 kg/km)	107 717 456
1051 006B RVAR	6	0.200 in (5.1 mm)	18.5 lbs/K ft (28.2 kg/km)	107 717 464

UNSHIELDED  
TWISTED PAIR CABLE

# 24 AWG

## A Cable Unshielded Twisted Pair Cable

### SPECIFICATIONS

#### Attenuation

4 - 6 Pairs: 2.0 dB/1000 ft, 0.7 dB/100 m @ 32 kHz  
 4 - 6 Pairs: 5.5 dB/1000 ft, 1.8 dB/100m @ 0.772 MHz  
 4 - 6 Pairs: 14 dB/1000 ft, 4.6 dB/100 m @ 4.224 MHz  
 8 - 144 Pairs: 2.3 dB/1000 ft, 0.8 dB/100 m @ 32 kHz  
 8 - 144 Pairs: 6.6 dB/1000 ft, 2.2 dB/100m @ 0.772 MHz  
 8 - 144 Pairs: 17 dB/1000 ft, 5.6 dB/100 m @ 4.224 MHz

**Characteristic Impedance** 100 ± 15 Ohms

**Color Code** #4

**UL Listed** (UL) CMR c(UL) CMG

**Conductors** Tinned copper

**Insulation** Semi-rigid PVC

**Insulation Thickness** 0.008 in (0.20 mm)

**Jacket** Gray PVC

**Nominal Jacket Thickness** 0.020 in (0.05 mm)

**Mutual Capacitance** 4 - 6 Pairs: 18 pF/ft, 59 pF/m  
 8 - 144 Pairs: 20 pF/ft, 66 pF/m

Note: Some cables are designed with fewer than 25 pairs per binder group

### ORDERING INFORMATION

Product Code	Pair Count	Outside Diameter	Weight	Material ID
286A 4/24 RVAR	4	0.20 in (5.1 mm)	20.3 lbs/K ft (30.2 kg/km)	105 412 928
252A 6/24 RVAR	6	0.24 in (6.1 mm)	28.8 lbs/K ft (42.9 kg/km)	105 412 696
294A 8/24 RVAR	8	0.27 in (6.9 mm)	35.8 lbs/K ft (53.3 kg/km)	105 412 951
253A 10/24 RVAR	10	0.27 in (6.9 mm)	42.5 lbs/K ft (63.3 kg/km)	105 412 704
265A 12/24 RVAR	12	0.30 in (7.6 mm)	50.3 lbs/K ft (74.9 kg/km)	105 412 829
255A 20/24 RVAR	20	0.36 in (9.1 mm)	79.1 lbs/K ft (117.9 kg/km)	105 412 720
266A 24/24 RVAR	24	0.37 in (9.4 mm)	93.6 lbs/K ft (139.5 kg/km)	105 412 837
269A 36/24 RVAR	36	0.47 in (11.9 mm)	137.5 lbs/K ft (204.8 kg/km)	105 412 852
257A 40/24 RVAR	40	0.49 in (12.4 mm)	151.7 lbs/K ft (226.0 kg/km)	105 412 746
270A 50/24 RVAR	50	0.54 in (13.9 mm)	186.1 lbs/K ft (277.3 kg/km)	105 412 860
295A 60/24 RVAR	60	0.65 in (16.5 mm)	230.7 lbs/K ft (344 kg/km)	105 412 969
267A 72/24 RVAR	72	0.67 in (17.0 mm)	266.8 lbs/K ft (397.5 kg/km)	105 412 845
261A 80/24 RVAR	80	0.68 in (17.2 mm)	294.9 lbs/K ft (439.4 kg/km)	105 363 097
261A 100/24 RVAR	100	0.75 in (19.0 mm)	363.8 lbs/K ft (542.1 kg/km)	105 363 105
287A 120/24 RVAR	120	0.93 in (23.6 mm)	465 lbs/K ft (693 kg/km)	105 363 147
288A 144/24 RVAR	144	1.01 in (25.7 mm)	553 lbs/K ft (825 kg/km)	105 363 154

# 22 AWG

## A Cable Unshielded Twisted Pair Cable

### SPECIFICATIONS

#### Attenuation

1.7 dB/1000 ft, 0.6 dB/100 m @ 32 kHz  
 5.7 dB/1000 ft, 1.9 dB/100m @ 0.772 MHz  
 14 dB/1000 ft, 4.6 dB/100m @ 4.224 MHz

**Characteristic Impedance** 100 ± 15 Ohms

**Color Code** #4

**UL Listed** (UL) CMR c(UL) CMG

#### Conductors

Tinned copper

#### Insulation

Semi-rigid PVC

#### Insulation Thickness

0.009 in (0.22 mm)

#### Jacket

Gray PVC

#### Mutual Capacitance

20 pF/ft, 66 pF/m

### ORDERING INFORMATION

Product Code	Pair Count	Outside Diameter	Weight	Material ID
285A 4/22 RVAR	4	0.24 in (6.1 mm)	29.1 lbs/K ft (43.4 kg/km)	105 412 910
182A 6/22 RVAR	6	0.27 in (6.9 mm)	40.5 lbs/K ft (60.4 kg/km)	105 412 662
74A 10/22 RVAR	10	0.34 in (8.6 mm)	63.8 lbs/K ft (95.0 kg/km)	105 412 654
276A 12/22 RVAR	12	0.37 in (9.4 mm)	75.2 lbs/K ft (112.0 kg/km)	105 412 886
24A 20/22 RVAR	20	0.45 in (11.4 mm)	119.4 lbs/K ft (178.0 kg/km)	105 412 621
62A 30/22 RVAR	30	0.53 in (13.5 mm)	174.1 lbs/K ft (259.0 kg/km)	105 412 639
70A 40/22 RVAR	40	0.60 in (15.2 mm)	228.4 lbs/K ft (340.0 kg/km)	105 412 647
66A 50/22 RVAR	50	0.66 in (16.8 mm)	282.4 lbs/K ft (421.0 kg/km)	105 413 041
97A 64/22 RVAR	64	0.77 in (19.6 mm)	371.4 lbs/K ft (553.0 kg/km)	105 363 063
69A 100/22 RVAR	100	0.95 in (24.1 mm)	570 lbs/K ft (849.0 kg/km)	105 363 048

UNSHIELDED  
TWISTED PAIR CABLE

# 26AWG

## B Cable 0.4 mm Unshielded Twisted Pair

### Globally Enhanced Switchboard Cable

#### SPECIFICATIONS

##### Attenuation

4, 6 Pairs:	4.3 dB/500 m @ 32 kHz
4, 6 Pairs:	10 dB/500 m @ 772 kHz
4, 6 Pairs:	11.5 dB/500 m @ 1.024 MHz (CEPT-1)
4, 6 Pairs:	26.2 dB/500 m @ 4.224 MHz (CEPT-2)
8 - 128 Pairs:	4.6 dB/500 m @ 32 kHz
8 - 128 Pairs:	12.1 dB/500 m @ 772 kHz
8 - 128 Pairs:	13.8 dB/500 m @ 1.024 MHz (CEPT-1)
8 - 128 Pairs:	31.2 dB/500 m @ 4.224 MHz (CEPT-2)

<b>Characteristic Impedance</b>	4, 6 Pairs: 100 ± 15 Ohms
	8 - 128 Pairs: 100 ± 20 Ohms

**Color Code** #2

Complete with IEC 332-1, IEC 332-3

Note: Some cables are designed with fewer than 25 pairs per binder group.

##### Conductors

Copper

##### Insulation

Semi-rigid PVC

##### Insulation Thickness

0.006 in (0.15 mm)

##### Jacket

Gray PVC

##### Nominal Jacket Thickness

4 - 32 Pairs: 0.015 in (0.38 mm)  
48 - 128 Pairs: 0.020 in (0.51 mm)

##### Mutual Capacitance

4, 6 Pairs: 52 pF/m  
8 - 128 Pairs: 59 pF/m

#### ORDERING INFORMATION

Product Code	Pair Count	Outside Diameter	Weight	Material ID
812B RVAR	4	0.18 in (4.6 mm)	13.5 lbs/K ft (20.1 kg/km)	107 709 453
816B RVAR	6	0.19 in (4.8 mm)	18.4 lbs/K ft (27.4 kg/km)	107 709 479
811B RVAR	8	0.22 in (5.9 mm)	23.2 lbs/K ft (34.6 kg/km)	107 709 446
807B RVAR	10	0.27 in (6.9 mm)	41.6 lbs/K ft (61.9 kg/km)	107 709 404
800B RVAR	20	0.29 in (7.4 mm)	51.0 lbs/K ft (76.0 kg/km)	107 709 388
808B RVAR	32	0.34 in (8.6 mm)	77.2 lbs/K ft (115.0 kg/km)	107 709 412
822B RVAR	48	0.39 in (10.0 mm)	113.0 lbs/K ft (168.4 kg/km)	107 709 487
813B RVAR	50	0.43 in (10.9 mm)	117.9 lbs/K ft (175.7 kg/km)	107 709 461
809B RVAR	64	0.45 in (11.4 mm)	148.1 lbs/K ft (220.7 kg/km)	107 709 420
810B RVAR	128	0.64 in (16.3 mm)	288.6 lbs/K ft (430.0 kg/km)	107 709 438

# 26 AWG

## R Cable Unshielded Twisted Pair Cable

### SPECIFICATIONS

#### Attenuation

3, 6 Pairs:	1.0 dB/1000 ft @ 32 kHz
3, 6 Pairs:	4.3 dB/1000 ft @ 772 kHz
3, 6 Pairs:	11 dB/1000 ft @ 4.224 MHz
8 Pairs:	1.2 dB/1000 ft @ 32 kHz
8 Pairs:	4.9 dB/1000 ft @ 772 kHz
8 Pairs:	13 dB/1000 ft @ 4.224 MHz

<b>Characteristic Impedance</b>	3, 6 Pairs: 100 ± 15 Ohms
	8 Pairs: 100 ± 20 Ohms

**Color Code** #4

**UL Listed** (UL) CMR c(UL)

#### Conductors

Tinned copper

#### Insulation

APVC

#### Insulation Thickness

0.008 in (0.22 mm)

#### Jacket

Light olive gray PVC

#### Nominal Jacket Thickness

0.020 in (0.51 mm)

#### Mutual Capacitance

3, 6 Pairs: 18 pF/ft  
8 Pairs: 20 pF/ft

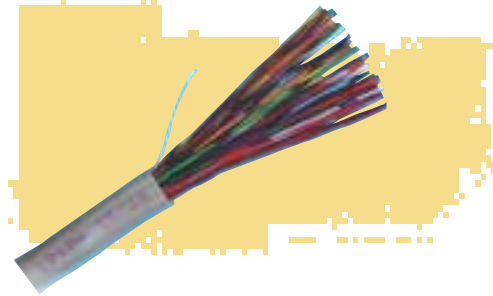
### ORDERING INFORMATION

Product Code	Pair Count	Outside Diameter	Weight	Material ID
450R3 3/20 RVAR	3	0.21 in (5.3 mm)	28.5 lbs/K ft (42.5 kg/km)	103 728 606
451R3 6/20 RVAR	6	0.28 in (7.1 mm)	52.4 lbs/K ft (78.0 kg/km)	103 728 598
452R3 8/20 RVAR	8	0.32 in (8.1 mm)	67.9 lbs/K ft (101.2 kg/km)	103 729 224

UNSHIELDED  
TWISTED PAIR CABLE

# 26 AWG

## TIW Unshielded Twisted Pair Cable



### SPECIFICATIONS

#### Attenuation

2 - 3 Pairs:	6.8 dB/1000 ft, 2.2 dB/100m @ 0.772 MHz
2 - 3 Pairs:	2.7 dB/1000 ft, 0.9 dB/100m @ 32 kHz
2 - 3 Pairs:	17 dB/1000 ft, 5.6 dB/100m @ 4.224 MHz
25 - 150 Pairs:	3.0 dB/1000 ft, 1.0 dB/100m @ 32 kHz
25 - 150 Pairs:	7.7 dB/1000 ft, 2.5 dB/100m @ 0.772 MHz
25 - 150 Pairs:	20 dB/1000 ft, 6.6 dB/100m @ 4.224 MHz

**Characteristic Impedance** 100 ± 200 Ohms

**Color Code** #4

**UL Listed** (UL) CMR c(UL)

#### Conductors

Tinned copper

#### Insulation

Semi-rigid PVC

#### Insulation Thickness

0.006 in (0.15 mm)

#### Jacket

Gray PVC

#### Nominal Jacket Thickness

2 - 25 Pairs: 0.15 in (0.38 mm)  
50 - 150 Pairs: 0.020 in (0.51 mm)

#### Mutual Capacitance

2 - 3 Pairs: 17 pF/ft, 55 pF/m  
25 - 150 Pairs: 20 pF/ft, 66 pF/m

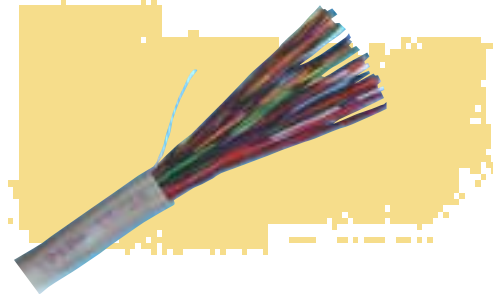
Note: The 100 pair cables are composed of four binder groups of 25 pairs each.

### ORDERING INFORMATION

Product Code	Pair Count	Outside Diameter	Weight	Material ID
TIW 2/26 W1000	2	0.11 in (2.8 mm)	6.9 lbs/K ft (10.3 kg/km)	104 309 091
TIW 3/26 W1000	3	0.12 in (3.1 mm)	9.2 lbs/K ft (13.7 kg/km)	104 309 109
TIW 25/26 RVAR	25	0.29 in (7.4 mm)	59.3 lbs/K ft (88.4 kg/km)	102 313 442
TIW 50/26 R1000	50	0.41 in (10.4 mm)	117.7 lbs/K ft (175.4 kg/km)	104 309 141
TIW 100/26 R1000	100	0.53 in (13.5 mm)	226.1 lbs/K ft (337.2 kg/km)	104 309 372
TIW 100/26 RVAR	100	0.53 in (13.5 mm)	226.1 lbs/K ft (337.2 kg/km)	103 096 517
TIW 150/26 R1000	150	0.68 in (17.4 mm)	335.8 lbs/K ft (500.3 kg/km)	105 058 028

# 24 AWG

## TIW Unshielded Twisted Pair Cable



### SPECIFICATIONS

<b>Attenuation</b>		<b>Conductors</b>	Tinned copper
2 - 4 Pairs	2.3 dB/1,000ft @ 32 KHz 7.1 dB/1,000 ft @ 0.77 MHz 18 dB/1,000 ft @ 4.224 MHz	<b>Insulation</b>	Semi-rigid PVC
8 - 150 Pairs	2.0 dB/1,000ft @ 32 KHz 6.2 dB/1,000 ft @ 0.77 MHz 16 dB/1,000 ft @ 4.224 MHz	<b>Insulation Thickness</b>	0.006 in (0.15 mm)
<b>Characteristic Impedance</b>	100 ± 20 Ohms	<b>Jacket</b>	Gray PVC
<b>Color Code</b>	#4	<b>Jacket Thickness</b>	2 - 16 Pairs: 0.015 in (0.38 mm) 25 - 100 Pairs: 0.020 in (0.51 mm) 150 Pairs: 0.032 in (0.81 mm)
<b>UL Listed</b>	(UL) CMR c(UL)	<b>Mutual Capacitance</b>	2 - 4 Pairs 19 pF/ft, 62.3 pF/m 8 - 150 Pairs 22 pF/ft, 72.2 pF/m

Note: Cables with more than 25 pairs are composed of 25 pair binder groups.

### ORDERING INFORMATION

Product Code	Pair Count	Outside Diameter	Weight	Material ID
TIW 2/24 W1000	2	0.14 in (3.56 mm)	9.3 lbs/kft (13.86 kg/km)	104 309 208
TIW 3/24 S1000	3	0.15 in (3.81 mm)	12.4 lbs/kft (18.48 kg/km)	105 367 544
TIW 4/24 W1000	4	0.16 in (4.06 mm)	15.6 lbs/kft (23.24 kg/km)	104 309 224
TIW 8/24 RVAR	8	0.22 in (5.59 mm)	28.9 lbs/kft (43.06 kg/km)	102 553 898
TIW 10/24 RVAR	10	0.22 in (5.59 mm)	34.4 lbs/kft (51.26 kg/km)	105 438 543
TIW 12/24 RVAR	12	0.24 in (6.10 mm)	40.6 lbs/kft (60.49 kg/km)	105 438 550
TIW 16/24 RVAR	16	0.26 in (6.60 mm)	52.6 lbs/kft (78.37 kg/km)	101 799 674
TIW 25/24 R1000	25	0.33 in (8.38 mm)	83.0 lbs/kft (123.67 kg/km)	105 367 627
TIW 25/24 RVAR	25	0.33 in (8.38 mm)	83.0 lbs/kft (123.67 kg/km)	105 438 584
TIW 50/24 RVAR	50	0.45 in (11.43 mm)	159.1 lbs/kft (237.06 kg/km)	105 438 592
TIW 75/24 RVAR	75	0.55 in (13.97 mm)	234.8 lbs/kft (349.85 kg/km)	105 438 600
TIW 100/24 RVAR	100	0.63 in (16.00 mm)	309.9 lbs/kft (461.75 kg/km)	105 438 626
TIW 150/24 RVAR	150	0.78 in (19.81 mm)	478.2 lbs/kft (712.52 kg/km)	105 057 988

UNSHIELDED  
TWISTED PAIR CABLE



# Notes

UNSHIELDED  
TWISTED PAIR CABLE

# Shielded Twisted Pair Cable

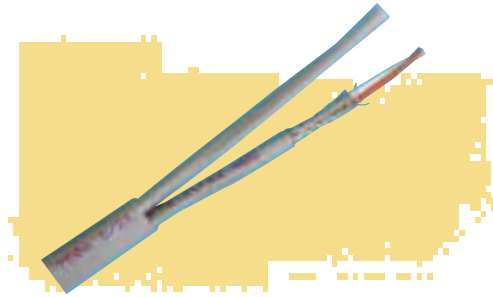
Avaya's shielded twisted pair cables are designed primarily for switching and transport for digital loop carrier systems, channel banks, digital cross-connect systems and multiplexers. Additionally, many of these cables have been designed for specific high-performance digital signaling applications where the physical characteristics and economies surpass other cable alternatives. Cable shields minimize the effects of electromagnetic interference (EMI) by containing radiation and by blocking external interference. Frequency ranges can cover from voice frequencies (64 kb/s) to DS1, DSC1, DS2, E-1, and E-2 (8.448 Mb/s) or higher for certain distances.

Avaya has several types of shielding available:

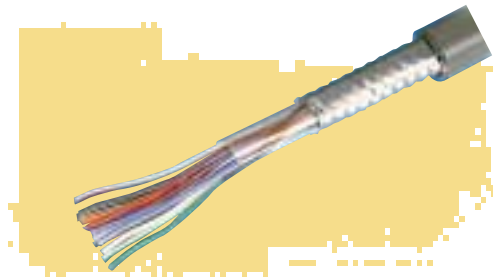
- Corrugated aluminum shields provide the greatest mechanical strength. It may be bonded to the cable jacket to form an integral sheath or left unbonded with a separate shield and jacket.
- Foil shields provide superior shield effectiveness and permit greater flexibility. This results in a lighter-weight cable which terminates easily with the drain wire.
- Braid overshields and individually shielded pairs allow great cable flexibility and are well suited to high-frequency applications which require a circumferential termination method.

All of the cables in this section are suitable for use inside a building or controlled environment vault (CEV) where temperature and humidity are maintained within a relatively narrow range. Some of the newest cables are also designed to operate in outside plant cabinets where extreme conditions may be encountered.

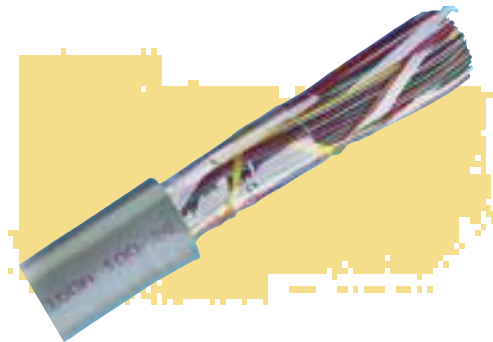
The *Selection Guide* will provide details on those products which have been tested for low flame spread and low smoke characteristics and are UL Listed CMP. The UL LISTED CMP products are suitable for application in air handling spaces. Compliance with the NEC is identified on each product page.



*750A Shielded Twisted Pair Cable*



*600B Shielded Twisted Pair Cable*



*1107B Shielded Twisted Pair Cable*

# Selection Guide

## Shielded Twisted Pair Cable

Product Code	AWG	Page	Corrugated Aluminum Shield	Aluminum Foil Shield	Overall Braided Shield	Indiv. Pr. Braided Shield	Superior Crosstalk Performance	Cont. Temp. Environ.	Uncont. Temp. Environ.	UL Listed
<b>200AS Series</b>										
Solid Conductors, Twisted Pairs	24	45			X			X		CMR
<b>600B Series</b>										
Series Solid Conductors, Twisted Pairs	22	46	X					X		CMR
<b>600C Series</b>										
Series Solid Conductors, Twisted Pairs	22	47		X				X		CMR
<b>750A Series</b>										
Solid Conductors, Shielded Pairs	22	48				X		X		CM
<b>760A Series</b>										
Solid Conductors, Shielded Pairs	24	49				X		X		CM
<b>800AS Series</b>										
Solid Conductors, Twisted Pairs	26	50			X			X		CMR
<b>1107B</b>										
Solid Conductors, Twisted Pairs	24	51		X				X		CMR
<b>1116A</b>										
Solid Conductors, Twisted Pairs	24	52		X				X	X	CMR
<b>1161A</b>										
Solid Conductors, Tight Twisted Pairs	24	53				X		X		CMR
<b>1206D</b>										
Solid Conductor, Twisted Pair	24	54		X				X		CM
<b>1207D</b>										
Solid Conductor, Twisted Pair	22	55		X				X		CM
<b>1249A</b>										
Solid Conductors, Twisted Pair	26	56		X			X			CL2
<b>1249C</b>										
Solid Conductors, Tight Twisted Pairs	26	57		X			X	X		CMR
<b>1304B</b>										
Solid Conductors, Twisted Pairs	24	58	X					X		CMR
<b>1305A</b>										
Solid Conductors, Twisted Pairs	26	59	X					X		CMR
<b>1350A/B</b>										
Solid Conductors, Twisted Pairs	26	60		X	X		X		X	CMR
<b>1351A</b>										
Solid Conductors, Twisted Pairs	26	61		X	X		X	X		CMR
<b>1400A</b>										
Solid Conductors, Twisted Pairs	26	62			X			X	X	CMR
<b>2249C</b>										
Solid Conductors, Twisted Pairs	26	63		X			X	X	X	CMP

# 26 AWG

## 200AS Series Shielded Twisted Pair Cable

### SPECIFICATIONS

#### Attenuation

6.3 dB/1000 ft, 2.1 dB/100m @ 0.772 MHz  
 7.3 dB/1000 ft, 2.4 dB/100m @ 1.024 MHz  
 9.3 dB/1000 ft, 3.1 dB/100m @ 1.576 MHz  
 13 dB/1000 ft, 4.3 dB/100m @ 3.156 MHz  
 15 dB/1000 ft, 4.9 dB/100m @ 4.224 MHz

**Characteristic Impedance** 100 ± 15 Ohms

**Color Code** #4

**UL Listed** (UL) CMR c(UL)

#### Conductors

Tinned copper

#### Insulation

Semi-rigid PVC

#### Insulation Thickness

0.008 in (0.20 mm)

#### Jacket

Gray PVC, inner and outer

#### Jacket Thickness

0.020 in (0.51 mm)

#### Mutual Capacitance

20 pF/ft, 66 pF/m

#### Shield

Tinned copper braid (90% coverage)

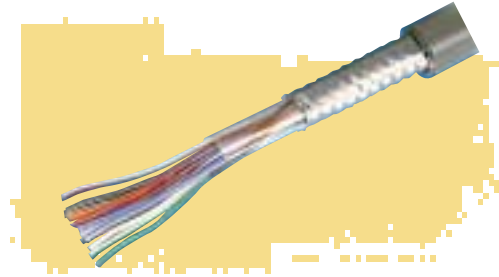
Note: Some cables are designed with fewer than 25 pairs per binder group.

### ORDERING INFORMATION

Product Code	Pair Count	Outside Diameter	Weight	Material ID
286AS 4/24 RVAR	4	0.26 in (6.6 mm)	49.3 lbs/K ft (73.5 kg/km)	105 419 790
252AS 6/24 RVAR	6	0.3 in (7.7 mm)	60.3 lbs/K ft (89.8 kg/km)	105 419 733
294AS 8/24 RVAR	8	0.33 in (8.3 mm)	70.3 lbs/K ft (104.7 kg/km)	105 419 808
253AS 10/24 RVAR	10	0.34 in (8.6 mm)	82.1 lbs/K ft (122.3 kg/km)	105 419 741
265AS 12/24 RVAR	12	0.37 in (9.4 mm)	97.0 lbs/K ft (144.5 kg/km)	102 525 813
255AS 20/24 RVAR	20	0.44 in (11.2 mm)	128.3 lbs/K ft (191.2 kg/km)	105 419 758
266AS 24/24 RVAR	24	0.47 in (12 mm)	150.5 lbs/K ft (224.2 kg/km)	105 419 774
270AS 50/24 RVAR	50	0.67 in (16.4 mm)	257.8 lbs/K ft (384.1 kg/km)	105 419 782

# 22 AWG

## 600B Series Shielded Twisted Pair Cable



### SPECIFICATIONS

#### Attenuation

4.1 dB/1000 ft, 1.3 dB/100m @ 0.772 MHz  
 4.7 dB/1000 ft, 1.5 dB/100m @ 1.024 MHz  
 5.9 dB/1000 ft, 1.9 dB/100m @ 1.576 MHz  
 8.4 dB/1000 ft, 2.8 dB/100m @ 3.156 MHz  
 10 dB/1000 ft, 3.3 dB/100m @ 4.224 MHz

**Characteristic Impedance** 100 ± 15 Ohms

**Color Code** #4

**UL Listed** (UL) CMR c(UL)

#### Conductors

Tinned copper

#### Core Wrap

Polyester film

#### Insulation

Dual semi-rigid PVC skin over PE

#### Insulation Thickness

0.012 in (0.30 mm)

#### Jacket Thickness

0.042 in (1.06mm)

#### Mutual Capacitance

15 pF/ft, 49 pF/m

#### Sheath

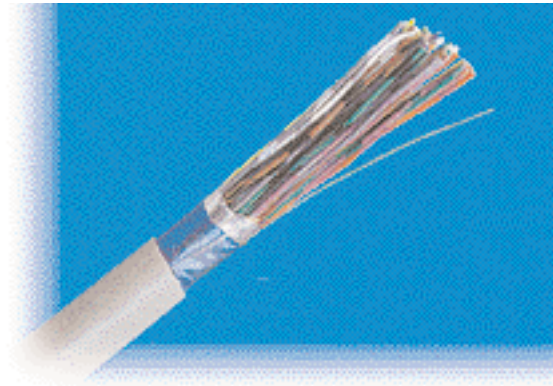
Longitudinally formed corrugated aluminum tape bonded to a light olive gray PVC jacket.

### ORDERING INFORMATION

Product Code	Pair Count	Outside Diameter	Weight	Material ID
606B 6/22 RVAR	6	0.42 in (10.7 mm)	79.9 lbs/K ft (119.1 kg/km)	106 556 749
607B 12/22 RVAR	12	0.52 in (13.2 mm)	125 lbs/K ft (186.3 kg/km)	106 556 764
608B 16/22 RVAR	16	0.57 in (14.5 mm)	154 lbs/K ft (229.5 kg/km)	106 556 780
609B 25/22 RVAR	25	0.65 in (16.5 mm)	215 lbs/K ft (320.4 kg/km)	106 556 806
613B 30/22 R1000	30	0.7 in (17.8 mm)	248 lbs/K ft (370 kg/km)	106 556 905
613B 30/22 RVAR	30	0.7 in (17.8 mm)	248 lbs/K ft (370 kg/km)	106 556 913
610B 50/22 RVAR	50	0.91 in (23.1 mm)	375 lbs/K ft (558 kg/km)	106 556 822
611B 100/22 RVAR	100	1.15 in (29.2 mm)	691 lbs/K ft (1030 kg/km)	106 556 855

# 22 AWG

## 600C Series Shielded Twisted Pair



### SPECIFICATIONS

#### Attenuation

4.1 dB/1000 ft, 1.3 dB/100m @ 0.772 MHz  
 4.7 dB/1000 ft, 1.5 dB/100m @ 1.024 MHz  
 5.9 dB/1000 ft, 1.9 dB/100m @ 1.576 MHz  
 8.4 dB/1000 ft, 2.8 dB/100m @ 3.156 MHz  
 10 dB/1000 ft, 3.3 dB/100m @ 4.224 MHz

**Characteristic Impedance** 105 ± 10 Ohms

**Color Code** #4

**UL Listed** (UL) CMR c(UL)

#### Conductors

Tinned copper

#### Insulation

Dual semi-rigid PVC skin over PE

#### Insulation Thickness

0.012 in (0.30 mm)

#### Jacket Thickness

6 - 32 Pairs: 0.030 in (0.77 mm)  
 56 Pairs: 0.04 in (1 mm)

#### Mutual Capacitance

15 pF/ft, 49 pF/m

#### Shield

Dual longitudinal polyester-aluminum or polypropylene foil overshield

#### Drain Wire

22 AWG solid tinned copper

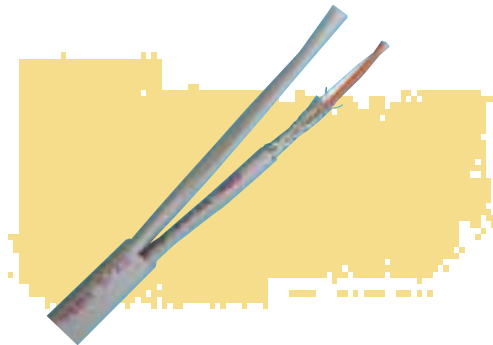
Note: The 30 pair cables have a center binder group of 5 pairs surrounded by five groups of 5 pairs each.

### ORDERING INFORMATION

Product Code	Pair Count	Outside Diameter	Weight	Material ID
606C 6/22 R1000	6	0.37 in (9.5 mm)	61.2 lbs/K ft (91.2 kg/km)	106 989 106
606C 6/22 RVAR	6	0.37 in (9.5 mm)	61.2 lbs/K ft (91.2 kg/km)	106 989 098
607C 12/22 R1000	12	0.45 in (11.4 mm)	100.3 lbs/K ft (149.5 kg/km)	106 989 155
607C 12/22 RVAR	12	0.45 in (11.4 mm)	100.3 lbs/K ft (149.5 kg/km)	106 989 163
607C 12/22 BRVAR	12	0.45 in (11.4 mm)	100.3 lbs/K ft (149.5 kg/km)	106 989 437
608C 16/22 R1000	16	0.5 in (12.8 mm)	126 lbs/K ft (187.7 kg/km)	106 989 346
608C 16/22 RVAR	16	0.5 in (12.8 mm)	126 lbs/K ft (187.7 kg/km)	106 989 353
608C 16/22 R2000	16	0.5 in (12.8 mm)	126 lbs/K ft (187.7 kg/km)	106 989 312
608C 16/22 BRVAR	16	0.5 in (12.8 mm)	126 lbs/K ft (187.7 kg/km)	106 989 445
617C 20/22 RVAR	20	0.56 in (14.2 mm)	152.9 lbs/K ft (227.8 kg/km)	106 829 393
609C 25/22 R1500	25	0.61 in (15.6 mm)	184 lbs/K ft (274.2 kg/km)	106 556 590
609C 25/22 RVAR	25	0.61 in (15.6 mm)	184 lbs/K ft (274.2 kg/km)	106 556 608
609C 25/22 BRVAR	25	0.61 in (15.6 mm)	184 lbs/K ft (274.2 kg/km)	107 536 229
616C 28/22 R1000	28	0.62 in (15.8 mm)	201.1 lbs/K ft (300 kg/km)	106 556 616
616C 28/22 RVAR	28	0.62 in (15.8 mm)	201.1 lbs/K ft (300 kg/km)	106 556 624
613C 30/22 R1000	30	0.65 in (16.6 mm)	214.6 lbs/K ft (319.8 kg/km)	106 556 632
613C 30/22 RVAR	30	0.65 in (16.6 mm)	214.6 lbs/K ft (319.8 kg/km)	106 556 640
614 30/22 RVAR	30	0.65 in (16.6 mm)	214.6 lbs/K ft (319.8 kg/km)	106 556 699
615C 32/22 RVAR	32	0.65 in (16.6 mm)	225.6 lbs/K ft (336.1 kg/km)	106 556 723
618C 56/22 RVAR	56	0.86 in (21.8 mm)	400.5 lbs/K ft (596 kg/km)	107 732 398

# 22 AWG

## 750A Series Shielded Twisted Pair Cable



### SPECIFICATIONS

#### Attenuation

6.1 dB/1000 ft, 2.0 dB/100m @ 0.772 MHz  
 7.1 dB/1000 ft, 2.3 dB/100m @ 1.024 MHz  
 9.3 dB/1000 ft, 3.1 dB/100m @ 1.576 MHz  
 13 dB/1000 ft, 4.3 dB/100m @ 3.156 MHz  
 15 dB/1000 ft, 4.9 dB/100m @ 4.224 MHz

**Characteristic Impedance** 85 ± 15 Ohms

**Color Code** #2

**UL Listed** (UL) CM c(UL)

#### Conductors

Tinned copper

#### Insulation

PE

#### Insulation Thickness

0.017 in (0.43 mm)

#### Jacket

Gray PVC, inner and outer

#### Jacket Thickness

2 - 8 Pairs: 0.020 in (0.51 mm)  
 12 Pairs: 0.032 in (0.82 mm)

#### Mutual Capacitance

20 pF/ft, 66 pF/m

#### Shield

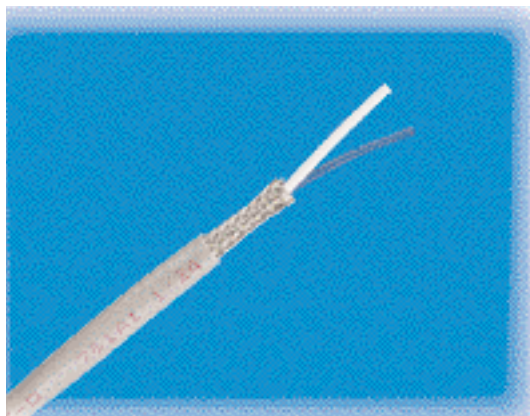
Each pair individually shielded with a single layer of tinned copper braid (90% coverage)

### ORDERING INFORMATION

Product Code	Pair Count	Outside Diameter	Weight	Material ID
750A 2/22 R1000	2	0.26 x .48 in (6.1 x 11.7 mm)	42 lbs/K ft (62.6 kg/km)	106 557 085
750A 2/22 RVAR	2	0.26 x .48 in (6.1 x 11.7 mm)	42 lbs/K ft (62.6 kg/km)	106 557 077
758A 4/22 RVAR	4	0.48 in (12.3 mm)	75 lbs/K ft (117.8 kg/km)	106 557 747
752A 6/22 RVAR	6	0.60 in (15.3 mm)	108 lbs/K ft (160.9 kg/km)	106 557 762
759A 8/22 RVAR	8	0.68 in (17.4 mm)	142 lbs/K ft (211.6 kg/km)	106 557 788
753A 12/22 RVAR	12	0.80 in (20.4 mm)	208 lbs/K ft (309.9 kg/km)	106 557 804

# 24 AWG

## 760A Series Shielded Twisted Pair Cable



### SPECIFICATIONS

#### Attenuation

6.2 dB/1000 ft, 2.0 dB/100m @ 0.772 MHz  
 7.4 dB/1000 ft, 2.4 dB/100m @ 1.024 MHz  
 9.7 dB/1000 ft, 3.2 dB/100m @ 1.576 MHz  
 14 dB/1000 ft, 4.6 dB/100m @ 3.156 MHz  
 16 dB/1000 ft, 5.2 dB/100m @ 4.224 MHz

**Characteristic Impedance** 100 ± 15 Ohms

**Color Code** #2

**UL Listed** (UL) CM c(UL)

#### Conductors

Tinned copper

#### Insulation

PE

#### Insulation Thickness

0.019 in (0.48 mm)

#### Jacket

Gray PVC, inner and outer

#### Jacket Thickness

0.032 in (0.82 mm)

#### Mutual Capacitance

16 pF/ft, 52 pF/m

#### Shield

Each pair individually shielded with two layers of tinned copper braid (90% coverage) (763 has a single layer)

### ORDERING INFORMATION

Product Code	Pair Count	Outside Diameter	Weight	Material ID
764A 8/24 RVAR	8	0.81 in (20.7 mm)	275 lbs/K ft (409 kg/km)	105 432 132
762A 10/24 RVAR	10	0.86 in (22 mm)	342 lbs/K ft (510 kg/km)	105 432 140
763A 12/24 RVAR	12	0.77 in (19.7 mm)	314 lbs/K ft (468 kg/km)	105 432 157



# 26 AWG

## 800AS Series Shielded Twisted Pair Cable

### SPECIFICATIONS

#### Attenuation

8.6 dB/1000 ft, 2.8 dB/100m @ 0.772 MHz  
 9.8 dB/1000 ft, 3.2 dB/100m @ 1.024 MHz  
 12 dB/1000 ft, 3.9 dB/100m @ 1.576 MHz  
 17 dB/1000 ft, 5.6 dB/100m @ 3.156 MHz  
 20 dB/1000 ft, 6.6 dB/100m @ 4.224 MHz

**Characteristic Impedance** 100 ± 15 Ohms

**Color Code** #4

**UL Listed** (UL) CMR c(UL)

**Conductors** Tinned copper

**Insulation** Semi-rigid PVC

**Insulation Thickness** 0.006 in (0.15 mm)

**Jacket** Gray PVC, inner and outer

**Jacket Thickness** 4 - 20 Pairs 0.020 in (0.51 mm)  
 25 - 128 Pairs 0.021 (0.53 mm)

**Mutual Capacitance** 20 pF/ft, 66 pF/m

**Shield** Tinned copper braid (90% coverage)

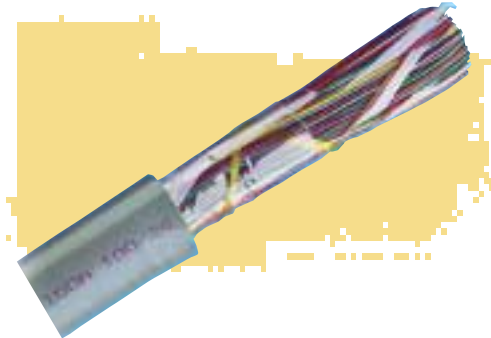
Note: Some cables are designed with fewer than 25 pairs per binder group.

### ORDERING INFORMATION

Product Code	Pair Count	Outside Diameter	Weight	Material ID
812AS 4/26 RVAR	4	0.24 in (6.1 mm)	39.5 lbs/K ft (58.9 kg/km)	105 419 477
816AS 6/26 RVAR	6	0.27 in (6.8 mm)	46.3 lbs/K ft (69 kg/km)	105 419 519
811AS 8/26 RVAR	8	0.28 in (7.1 mm)	53 lbs/K ft (79 kg/km)	105 419 469
820AS 10/26 RVAR	10	0.3 in (7.7 mm)	60.3 lbs/K ft (89.8 kg/km)	105 419 535
807AS 16/26 RVAR	16	0.33 in (8.4 mm)	77.4 lbs/K ft (115.3 kg/km)	105 419 428
800AS 20/26 RVAR	20	0.37 in (9.5 mm)	90.5 lbs/K ft (134.8 kg/km)	105 419 345
824AS 25/26 RVAR	25	0.38 in (9.7 mm)	103.1 lbs/K ft (153.6 kg/km)	105 363 469
808AS 32/26 RVAR	32	0.42 in (10.7 mm)	124.9 lbs/K ft (186.1 kg/km)	105 419 436
813AS 50/26 RVAR	50	0.5 in (12.8 mm)	173.3 lbs/K ft (258.2 kg/km)	105 419 485
809AS 64/26 RVAR	64	0.53 in (13.6 mm)	208.6 lbs/K ft (310.8 kg/km)	105 419 444
806AS 100/26 RVAR	100	0.64 in (16.4 mm)	300.1 lbs/K ft (447.1 kg/km)	105 419 410
810AS 128/26 RVAR	128	0.72 in (18.4 mm)	376.7 lbs/K ft (561 kg/km)	105 419 451

# 24 AWG

## 1107B Shielded Twisted Pair Cable



### SPECIFICATIONS

#### Attenuation

10.0 dB/1000 ft, 3.3 dB/100m @ 1 MHz

**Characteristic Impedance** 85 ± 15 Ohms

**Color Code** #4

**UL Listed** (UL) CMR c(UL)

#### Conductors

Tinned copper

#### Insulation

Semi-rigid PVC

#### Insulation Thickness

0.007 in (0.18 mm)

#### Jacket

Gray PVC

#### Jacket Thickness

2 - 18 Pairs 0.020 in (0.51 mm)  
25 - 32 Pairs 0.022 in (0.56 mm)  
100 Pairs 0.030 (0.84 mm)

#### Mutual Capacitance

24 pF/ft, 78 pF/m

#### Shield

Single longitudinal polyester-aluminum foil overshield  
(2 - 4 Pairs single foil)

#### Drain Wire

24 AWG solid tinned copper

### ORDERING INFORMATION

Product Code	Pair Count	Outside Diameter	Weight	Material ID
1107 002BGY 2/24 W1000	2	0.15 in (3.8 mm)	12.6 lbs/K ft (18.8 kg/km)	700 195 845
1107 004BGY 4/24 W1000	4	0.17 in (4.3 mm)	19.6 lbs/K ft (29.2 kg/km)	700 195 852
1107 004BGY 4/24 R1000	4	0.17 in (4.3 mm)	19.6 lbs/K ft (29.2 kg/km)	700 195 860
1107 006BGY 6/24 R1000	6	0.21 in (5.4 mm)	27.4 lbs/K ft (40.8 kg/km)	700 195 878
1107 008BGY 8/24 R1000	8	0.28 in (7.2 mm)	38.3 lbs/K ft (57.1 kg/km)	700 195 886
1107 008BGY 8/24 RVAR	8	0.28 in (7.2 mm)	38.3 lbs/K ft (57.1 kg/km)	700 195 902
1107 012BGY 12/24 R1000	12	0.31 in (7.9 mm)	51.5 lbs/K ft (76.7 kg/km)	700 195 894
1107 012BGY 12/24 RVAR	12	0.31 in (7.9 mm)	51.5 lbs/K ft (76.7 kg/km)	700 195 910
1107 018BGY 18/24 RVAR	18	0.34 in (8.7 mm)	74.3 lbs/K ft (110.7 kg/km)	700 195 928
1107 025BGY 25/24 RVAR	25	0.39 in (9.9 mm)	94.4 lbs/K ft (140.7 kg/km)	700 183 726
1107 032BGY 32/24 RVAR	32	0.4 in (10.22 mm)	118.4 lbs/K ft (176.5 kg/km)	700 195 936
1107 100BGY 100/24 RVAR	100	0.72 in (18.4 mm)	343.5 lbs/K ft (523.0 kg/km)	700 195 944

# 24 AWG

## 1116A Series Shielded Twisted Pair Cable

### SPECIFICATIONS

#### Attenuation

7.0 dB/1000 ft, 2.3 dB/100m @ 0.772 MHz  
 7.9 dB/1000 ft, 2.6 dB/100m @ 1 MHz  
 9.9 dB/1000 ft, 3.2 dB/100m @ 1.576 MHz  
 16 dB/1000 ft, 5.2 dB/100m @ 4.224 MHz

**Characteristic Impedance** 100 ± 15 Ohms

**Color Code** #5

**UL Listed** (UL) CMR c(UL)

#### Conductors

Tinned copper

#### Core Wrap

Polyester film

#### Insulation

Semi-rigid PVC

#### Insulation Thickness

0.010 in (0.25 mm)

#### Jacket

PVC

#### Jacket Thickness

0.025 in (0.64 mm)

#### Mutual Capacitance

18 pF/ft, 59 pF/m

#### Shield

Dual longitudinal polyester-aluminum foil overshield

#### Drain Wire

24 AWG solid tinned copper

### ORDERING INFORMATION

Product Code	Pair Count	Outside Diameter	Weight	Material ID
1116 002A RVAR	2	0.22 in (5.6 mm)	18.8 lbs/K ft (28 kg/km)	106 771 199
1116 005A RVAR	5	0.26 in (6.6 mm)	31.5 lbs/K ft (46.9 kg/km)	106 771 207
1116 016A RVAR	16	0.39 in (9.9 mm)	79.2 lbs/K ft (118 kg/km)	106 771 215
1116 025A R4050	25	0.45 in (11.4 mm)	102.7 lbs/K ft (154.1 kg/km)	107 617 862
1116 028A RVAR	28	0.49 in (12.4 mm)	125.9 lbs/K ft (187.6 kg/km)	106 771 223

# 24 AWG

## 1161A Shielded Tight Twisted Pair Cable



### SPECIFICATIONS

#### Attenuation

6.0 dB/1000ft, 1.97dB/100m @ 772 kHz  
 6.5 dB/1000ft, 2.1dB/100m @ 1 MHz kHz  
 12.5 dB/1000ft, 4.1 B/100m @ 4 MHz  
 20.0 dB/1000ft, 6.6 dB/100m @ 10 MHz  
 25.0 dB/1000ft, 8.3 dB/100m @ 16 MHz

**Characteristic Impedance** 100 ± 15 Ohms

**Color Code** #2

**UL Listed** (UL) CMR c(UL)

**Conductors** 24 AWG (0.4 mm) tinned copper

**Insulation** Solid high density PE

**Insulation Thickness** 0.10 in (0.25 mm)

**Jacket** Light olive gray PVC

**Jacket Thickness**  
 4 - 16 Pairs 0.020 in (0.51 mm)  
 25 - 28 Pairs 0.030 in (0.76 mm)  
 32 - 50 Pairs 0.40 in (1.02 mm)

**Mutual Capacitance** 17 pF/ft (5.6 pF/100m) maximum

**Shield** Longitudinal aluminum foil laminate

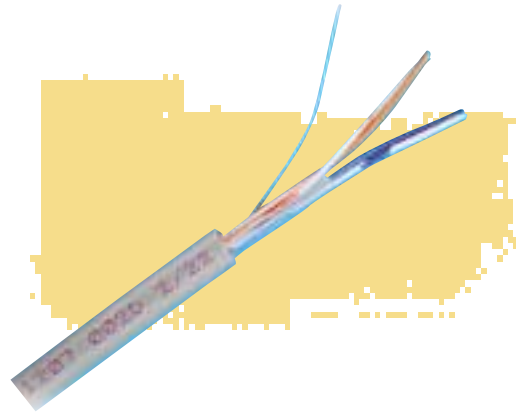
**Drain Wire** 24 AWG solid tinned copper

### ORDERING INFORMATION

Product Code	Pair Count	Outside Diameter	Weight	Material ID
1161 004A RVAR	4	0.25 in (6.4 mm)	26.2 lbs/K ft (3.9 kg/km)	108 236 605
1161 006A RVAR	6	0.28 in (7.1 mm)	34.9 lbs/K ft (5.2 kg/km)	108 236 613
1161 012A RVAR	12	0.34 in (8.6 mm)	56.6 lbs/K ft (8.4 kg/km)	108 236 621
1161 016A RVAR	16	0.39 in (9.9 mm)	72.4 lbs/K ft (10.8 kg/km)	108 236 647
1161 025A RVAR	25	0.49 in (12.4 mm)	111.3 lbs/K ft (16.6 kg/km)	108 236 662
1161 028A RVAR	28	0.51 in (12.9 mm)	131.1 lbs/K ft (19.5 kg/km)	108 324 609
1161 032A RVAR	32	0.55 in (16.5 mm)	146.2 lbs/K ft (21.8 kg/km)	108 341 744
1161 050A RVAR	50	0.65 in (16.5 mm)	199.3 lbs/K ft (29.7 kg/km)	108 236 696

# 24 AWG

## 1206D Shielded Twisted Pair Cable



### SPECIFICATIONS

#### Attenuation

6.0 dB/1000 ft, 2.0 dB/100m @ 0.772 MHz  
 6.8 dB/1000 ft, 2.2 dB/100m @ 1 MHz  
 8.3 dB/1000 ft, 2.7 dB/100m @ 1.576 MHz  
 13 dB/1000 ft, 4.3 dB/100m @ 4.224 MHz

**Characteristic Impedance** 100 ± 15 Ohms

**Color Code** #5

**UL Listed** (UL) CM c(UL)

#### Conductors

Tinned copper

#### Insulation

PP

#### Insulation Thickness

0.009 in (0.23 mm)

#### Jacket

Gray PVC

#### Jacket Thickness

0.030 in (0.76 mm)

#### Mutual Capacitance

14 pF/ft, 46 pF/m

#### Shield

Longitudinal polyester-aluminum foil  
overshield

#### Core Wrap

Polyester film

#### Drain Wire

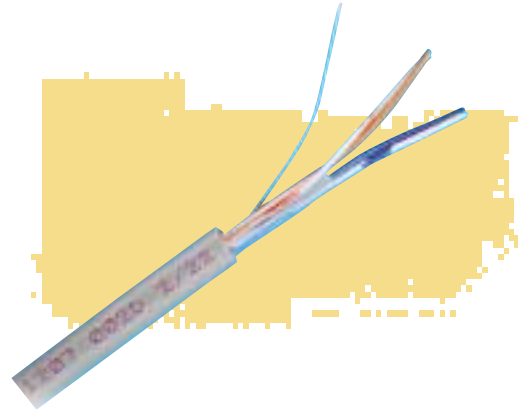
24 AWG solid tinned copper

### ORDERING INFORMATION

Product Code	Pair Count	Outside Diameter	Weight	Material ID
1206 002D R1000	2	0.23 in (5.8 mm)	19.4 lbs/K ft (28.9 kg/km)	106 930 365
1206 002D RVAR	2	0.23 in (5.8 mm)	19.4 lbs/K ft (28.9 kg/km)	106 903 495
1206 005D R1000	5	0.26 in (6.6 mm)	30.5 lbs/K ft (45.4 kg/km)	106 930 381

# 22 AWG

## 1207D Shielded Twisted Pair Cable



### SPECIFICATIONS

#### Attenuation

5.0 dB/1000 ft, 1.6 dB/100m @ 0.772 MHz  
 5.4 dB/1000 ft, 1.8 dB/100m @ 1 MHz  
 6.6 dB/1000 ft, 2.2 dB/100m @ 1.576 MHz  
 10 dB/1000 ft, 3.3 dB/100m @ 4.224 MHz

**Characteristic Impedance** 100 ± 15 Ohms

**Color Code** #5

**UL Listed** (UL) CM c(UL)

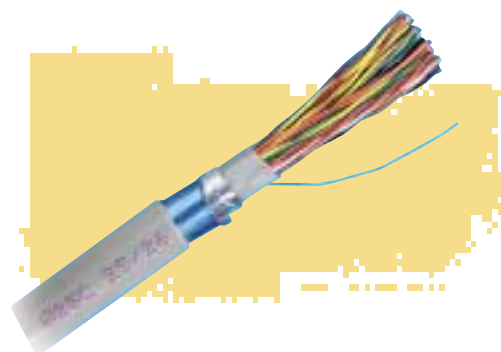
<b>Insulation</b>	PP
<b>Insulation Thickness</b>	0.010 in (0.25 mm)
<b>Jacket</b>	Gray PVC
<b>Jacket Thickness</b>	0.030 in (0.76 mm)
<b>Mutual Capacitance</b>	14 pF/ft, 46 pF/m
<b>Shield</b>	Longitudinal polyester-aluminum foil overshield
<b>Conductors</b>	Tinned copper
<b>Core Wrap</b>	Polyester film
<b>Drain Wire</b>	22 AWG solid tinned copper

### ORDERING INFORMATION

Product Code	Pair Count	Outside Diameter	Weight	Material ID
1207 002D R1000	2	0.25 in (6.4 mm)	25.4 lbs/K ft (37.8 kg/km)	106 930 399
1207 002D RVAR	2	0.25 in (6.4 mm)	25.4 lbs/K ft (37.8 kg/km)	106 903 503
1207 005D RVAR	5	0.31 in (7.9 mm)	42.1 lbs/K ft (62.7 kg/km)	106 903 511

# 26 AWG

## 1249A Shielded Twisted Pair Cable



### SPECIFICATIONS

#### Attenuation

5.9 dB/1000 ft, 1.9 dB/100m @ 0.772 MHz  
 6.6 dB/1000 ft, 2.2 dB/100m @ 1.024 MHz  
 8.2 dB/1000 ft, 2.7 dB/100m @ 1.576 MHz  
 11.5 dB/1000 ft, 3.8 dB/100m @ 3.156 MHz

**Characteristic Impedance** 120 ± 15 Ohms

**Color Code** #2

**UL Listed** (UL) CL2

#### Conductors

Tinned copper

#### Insulation

Dual, semi-rigid PVC skin over expanded PE

#### Insulation Thickness

0.008 in (0.20 mm)

#### Jacket

PVC inner and outer

#### Jacket Thickness

4 - 25 Pairs 0.025 in (0.63 mm)  
 32 and 50 Pairs 0.030 in (0.76 mm)

#### Mutual Capacitance

12.5 pF/ft, 40 pF/m

#### Shield

Dual longitudinal polyester/aluminum foil tape

#### Drain Wire

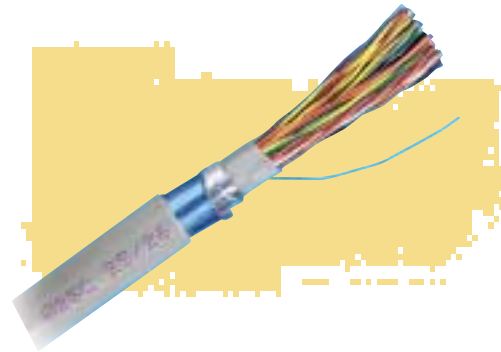
24 AWG tinned solid copper

### ORDERING INFORMATION

Product Code	Pair Count	Outside Diameter	Weight	Material ID
1249 004A RVAR	4	0.30 in (7.6 mm)	33.9 lbs/K ft (50.5 kg/km)	105 310 650
1249 006A RVAR	6	0.33 in (8.3 mm)	41.3 lbs/K ft (61.5 kg/km)	105 193 940
1249 012A RVAR	12	0.39 in (9.9 mm)	59.7 lbs/K ft (88.9 kg/km)	105 193 932
1249 016A RVAR	16	0.43 in (10.9 mm)	72.9 lbs/K ft (108.6 kg/km)	105 193 957
1249 020A RVAR	20	0.44 in (11.2 mm)	82.2 lbs/K ft (122.4 kg/km)	105 194 344
1249 025A RVAR	25	0.49 in (12.5 mm)	96.7 lbs/K ft (144.0 kg/km)	105 194 377
1249 032A RVAR	32	0.54 in (13.7 mm)	120.5 lbs/K ft (179.5 kg/km)	105 194 369
1249 050A RVAR	50	0.64 in (16.2 mm)	170.1 lbs/K ft (253.3 kg/km)	105 194 351

# 26 AWG

## 1249C Shielded Tight Twisted Pair Cable



### SPECIFICATIONS

#### Attenuation

6.5 dB/1000 ft, 2.1 dB/100m @ 0.772 MHz  
 7.5 dB/1000 ft, 2.5 dB/100m @ 1.024 MHz  
 9.1 dB/1000 ft, 3.0 dB/100m @ 1.576 MHz  
 13 dB/1000 ft, 4.3 dB/100m @ 3.156 MHz  
 15 dB/1000 ft, 4.9 dB/100m @ 4.224 MHz

**Characteristic Impedance** 100 ± 15 Ohms

**Color Code** #2

**UL Listed** (UL) CMR c(UL)

#### Conductors

Tinned copper

#### Insulation

Dual, semi-rigid PVC skin over PE

#### Insulation Thickness

0.006 in (0.15 mm)

#### Jacket

Gray PVC inner and outer

#### Jacket Thickness

2 - 6 Pairs: 0.018 in (0.45 mm)  
 12 - 28 Pairs: 0.020 in (0.50 mm)  
 32 pairs: 0.023 in (0.50 mm)  
 50 - 100 Pairs: 0.030 in (0.76 mm)

#### Mutual Capacitance

16 pF/ft, 52 pF/m

#### Shield

Dual longitudinal polyester-aluminum foil overshield

#### Drain Wire

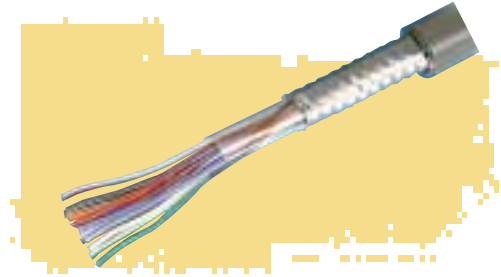
24 AWG solid tinned copper

### ORDERING INFORMATION

Product Code	Pair Count	Outside Diameter	Weight	Material ID
1249 002C RVAR	2	0.23 in (5.8 mm)	19.1 lbs/K ft (28.4 kg/km)	107 798 142
1249 004C RVAR	4	0.25 in (6.4 mm)	25 lbs/K ft (37.3 kg/km)	106 371 313
1249 006C R4000	6	0.28 in (7.1 mm)	31.7 lbs/K ft (47.2 kg/km)	106 371 321
1249 006C RVAR	6	0.28 in (7.1 mm)	31.7 lbs/K ft (47.2 kg/km)	106 371 339
1249 012C RVAR	12	0.33 in (8.2 mm)	49.5 lbs/K ft (73.7 kg/km)	106 371 545
1249 016C RVAR	16	0.38 in (9.6 mm)	60.9 lbs/K ft (90.7 kg/km)	106 371 560
1249 020C RVAR	20	0.48 in (12.2 mm)	71.7 lbs/K ft (106.8 kg/km)	106 371 370
1249 025C RVAR	25	0.43 in (11.0 mm)	83.8 lbs/K ft (124.9 kg/km)	106 371 396
1249 028C RVAR	28	0.45 in (11.4 mm)	90.9 lbs/K ft (135.4 kg/km)	106 371 404
1249 032C RVAR	32	0.48 in (12.2 mm)	103.3 lbs/K ft (152.9 kg/km)	106 371 446
1249 050C RVAR	50	0.58 in (14.7 mm)	155.3 lbs/K ft (231.4 kg/km)	106 371 461
1249 100C RVAR	100	0.76 in (19.3 mm)	276.0 lbs/K ft (411.0 kg/km)	108 685 595



# 24 AWG 1304B Shielded Twisted Pair Cable



## SPECIFICATIONS

### Attenuation

6.0 dB/1000 ft, 2.0 dB/100m @ 0.772 MHz

6.9 dB/1000 ft, 2.3 dB/100m @ 1.024 MHz

8.9 dB/1000 ft, 2.9 dB/100m @ 1.576 MHz

13 dB/1000 ft, 4.3 dB/100m @ 3.156 MHz

15 dB/1000 ft, 4.9 dB/100m @ 4.224 MHz

**Characteristic Impedance** 100 ± 15 Ohms

**Color Code** #2

**UL Listed** (UL) CMR c(UL)

**Conductors** Tinned copper

**Insulation** Semi-rigid PVC

**Insulation Thickness** 0.009 in (0.23 mm)

**Jacket** Gray PVC

**Jacket Thickness** 0.044 in (1.1 mm)

**Mutual Capacitance** 19 pF/ft, 62 pF/m

**Shield** Longitudinally formed corrugated aluminum tape; it is not bonded to the jacket.

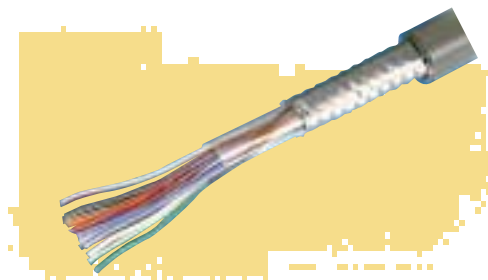
**Core Wrap** Polyester film

## ORDERING INFORMATION

Product Code	Pair Count	Outside Diameter	Weight	Material ID
1304 100B RVAR	100	0.91 in (23.1 mm)	472 lbs/K ft (703.0 kg/km)	106 209 943

# 26 AWG

## 1305A Shielded Twisted Pair Cable



### SPECIFICATIONS

#### Attenuation

7.3 dB/1000 ft, 2.4 dB/100 m @ 0.772 MHz  
 8.5 dB/1000 ft, 2.8 dB/100 m @ 1.024 MHz  
 10.6 dB/1000 ft, 3.5 dB/100 m @ 1.576 MHz  
 15 dB/1000 ft, 4.9 dB/100 m @ 3.156 MHz  
 18 dB/1000 ft, 5.9 dB/100 m @ 4.224 MHz

**Characteristic Impedance** 100 ± 15 Ohms

**Color Code** #2

**UL Listed** (UL) CMR c(UL)

**Conductors** Tinned copper

**Insulation** Semi-rigid PVC

**Insulation Thickness** 0.008 in (0.20 mm)

**Jacket Thickness** 0.043 in (1.1 mm)

**Mutual Capacitance** 19 pF/ft, 62 pF/m

**Sheath** Longitudinally formed corrugated aluminum tape bonded to a gray PVC jacket

**Core Wrap** Polyester film

### ORDERING INFORMATION

Product Code	Pair Count	Outside Diameter	Weight	Material ID
1305 050A RVAR	50	0.58 in (14.7 mm)	197 lbs/K ft (293 kg/km)	105 260 517
1305 100A RVAR	100	0.75 in (19.1 mm)	333 lbs/K ft (496 kg/km)	105 203 772

# 26 AWG 1350A/B Shielded Twisted Pair Braided Cable



## SPECIFICATIONS

### Attenuation

4.0 dB/100 ft. @ 25 Mhz,  
8.1 dB/100 ft. @ 100 MHz

**Characteristic Impedance** 110 Ohms  $\pm$ 5 Ohms  
from 10 - 50 MHz

**Color Code** #1

**UL Listed** (UL) CMR c(UL)

### Conductors

Solid copper, 26 AWG

### Insulation

Fluorinated ethylene propylene (FEP)

### Insulation Thickness

0.038 in (0.97 mm)

### Shield

Aluminum/polyester laminate  
Two units combined and have braid  
overshield

### Jacket

1350A: PVC  
1350B: Non-halogen fire retardant  
polyolefin

### Jacket Thickness

0.023 in (0.58 mm)

### Mutual Capacitance

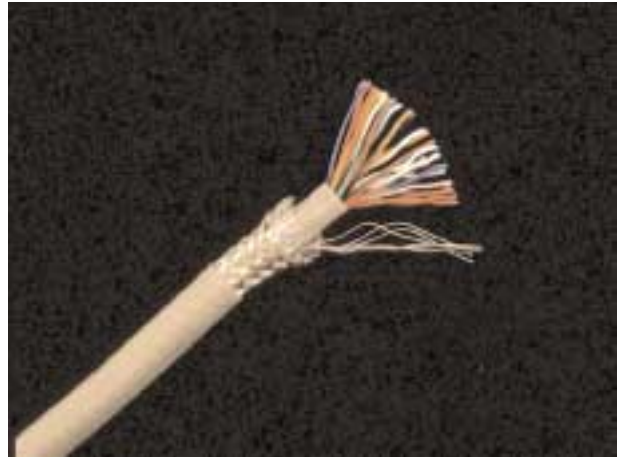
16 pF/ft, 52.5 pF/ft @ 1KHz

## ORDERING INFORMATION

Product Code	Pair Count	Outside Diameter	Weight	Material ID
1350 008ABL RVAR	8	Oval .23 in x .34 in (5.8 x 8.6 mm)	.059 lbs/K ft (87.9 kg/km)	108 310 228
1350 008AOR RVAR	8	Oval .23 in x .34 in (5.8 x 8.6 mm)	.059 lbs/K ft (87.9 kg/km)	108 320 417
1350 008AGR RVAR	8	Oval .23 in x .34 in (5.8 x 8.6 mm)	.059 lbs/K ft (87.9 kg/km)	108 320 433
1350 008ABR RVAR	8	Oval .23 in x .34 in (5.8 x 8.6 mm)	.059 lbs/K ft (87.9 kg/km)	108 320 441
1350 008AGY RVAR	8	Oval .23 in x .34 in (5.8 x 8.6 mm)	.059 lbs/K ft (87.9 kg/km)	700 073 729
1350 008BBL RVAR	8	Oval .23 in x .34 in (5.8 x 8.6 mm)	.065 lbs/K ft (96.8 kg/km)	108 711 144
1350 008BOR RVAR	8	Oval .23 in x .34 in (5.8 x 8.6 mm)	.065 lbs/K ft (96.8 kg/km)	108 711 151
1350 008BGR RVAR	8	Oval .23 in x .34 in (5.8 x 8.6 mm)	.065 lbs/K ft (96.8 kg/km)	108 711 169
1350 008BBR RVAR	8	Oval .23 in x .34 in (5.8 x 8.6 mm)	.065 lbs/K ft (96.8 kg/km)	108 711 177

# 26 AWG

## 1351A Shielded Twisted Pair Braided Cable



### SPECIFICATIONS

#### Attenuation

0.8 dB/1000 ft @ 1.0 MHz  
2.4 dB/1000 ft @ 10.0 MHz  
6.5 dB/1000 ft @ 50.0 MHz  
7.0 dB/1000 ft @ 70.0 MHz

**Characteristic Impedance** 100 ± 5 Ohms

**Color Code** #2

**UL Listed** (UL) CMR c(UL)

**Conductors** Solid, tinned copper 26 AWG

**Insulation** High density polyethylene (HDPE)

**Insulation Thickness** 0.029 in (0.74 mm)

**Shield** Longitudinal polyester-aluminum foil under tinned copper braid

**Jacket** PVC

**Jacket Thickness** 4 and 8 pairs 0.017 in (0.43 mm)  
12 pairs 0.022 in (0.56 mm)

**Mutual Capacitance** 17 pF/ft, 55.7 pF/ft maximum at frequency of 1 KHz

### ORDERING INFORMATION

Product Code	Pair Count	Outside Diameter	Weight	Material ID
1351 004A RVAR	4	0.26 in (6.6 mm)	41.2 lbs/K ft (61.4 kg/km)	108 449 588
1351 008A RVAR	8	0.29 in (7.3 mm)	54.4 lbs/K ft (81 kg/km)	700 073 729
1351 012A RVAR	12	0.35 in (8.9 mm)	72.5 lbs/K ft (112 kg/km)	108 333 279

# 26 AWG

## 1400A Shielded Twisted Pair Cable

### SPECIFICATIONS

#### Attenuation

8.6 dB/1000 ft, 2.8 dB/100m @ 0.772 MHz  
 9.8 dB/1000 ft, 3.2 dB/100m @ 1.024 MHz  
 12 dB/1000 ft, 3.9 dB/100m @ 1.576 MHz  
 17 dB/1000 ft, 5.6 dB/100m @ 3.156 MHz  
 20 dB/1000 ft, 6.6 dB/100m @ 4.224 MHz

**Characteristic Impedance** 100 ± 15 Ohms

**Color Code** #4

**UL Listed** (UL) CMR c(UL)

**Conductors** Tinned copper

**Insulation** Semi-rigid PVC

**Insulation Thickness** 0.006 in (0.15 mm)

**Jacket** Gray PVC, inner and outer designed for operating temperatures up to 90°C (176°F)

**Jacket Thickness** 0.021 in (0.53 mm)

**Mutual Capacitance** 20 pF/ft, 66 pF/m

**Shield** Tinned copper braid (90% coverage)

Note: Some cables are designed with fewer than 25 pairs per binder group.

### ORDERING INFORMATION

Product Code	Pair Count	Outside Diameter	Weight	Material ID
1400 002A RVAR	2	0.23 in (5.8 mm)	31.9 lbs/K ft (47.5 kg/km)	108 058 397
1400 004A RVAR	4	0.24 in (6.4 mm)	39.3 lbs/K ft (58.5 kg/km)	106 280 886
1400 006A RVAR	6	0.27 in (6.6 mm)	47.2 lbs/K ft (68.7 kg/km)	106 663 917
1400 008A RVAR	8	0.29 in (7.2 mm)	53.5 lbs/K ft (78.2 kg/km)	106 622 509
1400 010A RVAR	10	0.30 in (6.9 mm)	61.8 lbs/K ft (88.4 kg/km)	107 504 771
1400 012A RVAR	12	0.3 in (7.7 mm)	66 lbs/K ft (98.3 kg/km)	107 009 318
1400 016A RVAR	16	0.34 in (8.7 mm)	80.5 lbs/K ft (119.9 kg/km)	106 280 860
1400 017A RVAR	17	0.34 in (8.7 mm)	82.9 lbs/K ft (123.5 kg/km)	107 229 460
1400 020A RVAR	20	0.37 in (9.4 mm)	91.0 lbs/K ft (136 kg/km)	107 715 211
1400 028A RVAR	28	0.4 in (10.2 mm)	115.3 lbs/K ft (171.8 kg/km)	107 229 486

# 26 AWG

## 2249C Shielded Tight Twisted Pair Cable

### SPECIFICATIONS

#### Attenuation

6.5 dB/1000 ft, 2.1 dB/100m @ 0.772 MHz  
 7.5 dB/1000 ft, 2.5 dB/100m @ 1.024 MHz  
 9.1 dB/1000 ft, 3.0 dB/100m @ 1.544 MHz  
 13 dB/1000 ft, 4.3 dB/100m @ 3.152 MHz  
 15 dB/1000 ft, 4.9 dB/100m @ 4.224 MHz

**Characteristic Impedance** 100 ± 15 Ohms

**Color Code** #2

**UL Listed** (UL) CMP c(UL) 150°C 300 volts

#### Conductors

Tinned copper

#### Insulation

FEP

#### Insulation Thickness

0.004 in (0.10 mm)

#### Jacket

FEP 28 and 32 Pairs (inner)  
 PVDF-CP (outer)

#### Jacket Thickness

0.016 in (0.41 mm)

#### Mutual Capacitance

16 pF/ft, 52 pF/m

#### Shield

Dual longitudinal polyester-aluminum  
 foil overshield

#### Drain Wire

24 AWG solid tinned copper

### ORDERING INFORMATION

Product Code	Pair Count	Outside Diameter	Weight	Material ID
2249 028C RVAR	28	0.410 in (10.5 mm)	100.3 lbs/K ft (149.5 kg/km)	106 078 389
2249 032C RVAR	32	0.420 in (10.7 mm)	108.0 lbs/K ft (160.9 kg/km)	106 078 405

# Notes

# Coaxial Cable

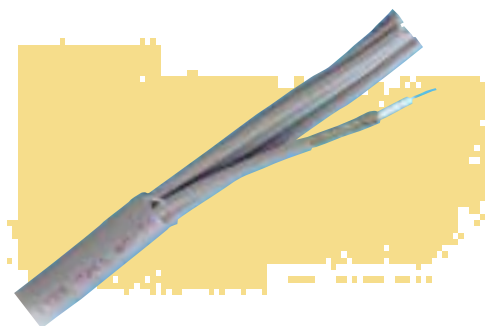
Avaya designs and manufactures a specialized line of high precision coaxial cables intended to be used in Central Offices or business premises primarily for the interconnection of transport equipment. The need to interconnect digital signalling and fiber optic equipment has generated an ever-growing demand for superior coaxial cables. Ongoing Avaya Labs research ensures that coaxial cables meet the specific requirements of applications that range from internal cabling to interconnect cabling.

Avaya recognizes that peak performance of any transmission system can be limited by the quality of the medium utilized for interconnection. Conductor nominal diameters along with dielectric dimensions are set and strictly controlled to provide specific transmission loss levels and characteristic impedance values.

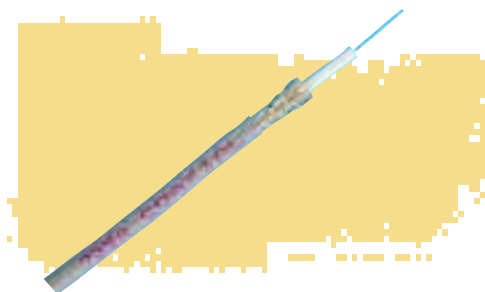
Avaya's 734 and 735 coaxial cables continue to set the standard in the industry. 734 and 735 cables provide small diameters, high flexibility, superior electrical performance levels and are UL LISTED CMR. Eight conductors bundled together in a protective sheath provide exceptional performance. 2735 and 2734 cables have been tested for low flame spread and low smoke characteristics and are UL LISTED CMP. These products are suitable for application in air handling spaces.

Avaya's 1725A Extended Distance coaxial cable provides additional physical distance flexibility for switching centers, with a 16 AWG silver-plated copper center conductor.

A partial list of connectors and tool kits for 75 Ohm coaxial cables contains the most common interfaces for telecommunications access points. These connectors match the dimensions of Avaya coaxial cable while the tools provide reliable, quick terminations.



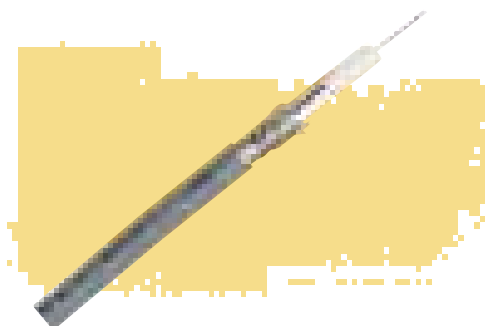
*1735 Coaxial Cable*



*735A Coaxial Cable*



*734D Coaxial Cable*



*1725A Coaxial Cable*



# Selection Guide

## Coaxial Cable

Product Code	AWG	Page	DS3/4	UL Listed
<b>1725A</b>				
75 Ohm, Coaxial	16	67	X	CMR
<b>734, 1734</b>				
75 Ohm, Coaxial	20	68	X	CMR
<b>735, 1735</b>				
75 Ohm, Coaxial	26	69	X	CMR
<b>2734</b>				
Plenum, Coaxial	20	70	X	CMP
<b>2735</b>				
Plenum, Coaxial	26	71	X	CMP
Coaxial Connectors		72		

### COAX CABLE SPEC COMPARISON

Specification	1725A	734A	734D	735A
DSX-3 Cabling Distance	715 ft	450 ft	450 ft	225 ft
Impedance	75 Ohms	75 Ohms	75 Ohms	75 Ohms
Center Conductor	16 AWG	20 AWG	20 AWG	26 AWG
Conductor Type	Silver-plated Copper	Solid Copper	Silver-plated Copper	Silver-plated Copper
Shielding	Tinned Copper Braid Over Aluminum Polyester Foil	Tinned Copper Braid Over Aluminum Polyester Foil	Tinned Copper Braid Over Aluminum Polyester Foil	Tinned Copper Braid Over Aluminum Polyester Foil
Jacket	PVC	PVC	PVC	PVC
Outside Diameter	0.320"	0.236"	0.236"	0.133"
Attenuation @22.4MHz	7.8dB/Kft	11.5dB/Kft	11.5dB/Kft	24.8dB/Kft
Return Loss	35dB From 5-150 MHz	30dB From 15-19 MHz	30dB From 15-19 MHz	30dB From 15-19 MHz
UL 444 Rating	C(UL)US Type CMR	C(UL)US Type CMR	C(UL)US Type CMR	C(UL)US Type CMR
Cable Temp. Rating	75C	75C	75C	75C
MID Order Code	(R1500) 700 195 613	(R1000) 105 529 044 (RVAR) 105 529 036	(R1000) 107 106 387 (RVAR) 107 106 395	(R1000) 106 007 891 (RVAR) 106 007 743

# 16 AWG 1725A Coaxial Cable



## Attenuation

3.7 dB/1000ft, 1.2 dB/100m at 5 MHz  
 5.2 dB/1000ft, 1.7 dB/100m at 10 MHz  
 11.7 dB/1000ft, 3.8 dB/100m at 50 MHz  
 16.5 dB/1000ft, 5.4 dB/100m at 100 MHz  
 23.3 dB/1000ft, 7.7 dB/100m at 200 MHz

**Characteristic Impedance** 75 Ohm at 20-75 MHz

**UL Listed** C(UL)US Type CMR

## Conductors

Solid silver-plated copper, 16 AWG

## Insulation

Expanded PE

## Insulation Thickness

0.030 in (0.77 mm)

## Jacket

PVC

## Shield

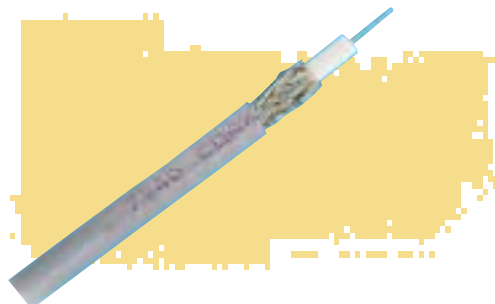
Tinned copper braid over aluminum polyester foil

## ORDERING INFORMATION

Product Code	Conductor Count	Material ID
1725A 001 R1500	1	700 195 613

# 20 AWG

## 734 and 1734 Coaxial Cable



### Attenuation

5.4 dB/1000 ft, 1.8 dB/100m at 5 MHz  
 7.5 dB/1000 ft, 2.5 dB/100m at 10 MHz  
 17.0 dB/1000 ft, 5.6 dB/100m at 50 MHz  
 27.0 dB/1000 ft, 8.9 dB/100m at 100 MHz  
 38.0 dB/1000 ft, 13 dB/100m at 200 MHz

**Mutual Capacitance** 17.5 pF/ft (57 pF/m)

**Characteristic Impedance** 75 Ohm at 20-75 MHz

**Velocity of Propagation** 80%

**UL Listed** (UL) CMR c(UL)

### Conductors

734A: Solid, copper 20 AWG  
 734D: Solid, silver plated copper 20 AWG

### Insulation

Expanded PE

### Insulation Thickness

0.059 in (150 mm)

### Jacket

PVC - Designed for operating temperatures up to 176°F (90°C)

### Jacket Thickness

0.025 in (0.63 mm)

### Shield

Longitudinal polyester-aluminum foil under tinned copper braid

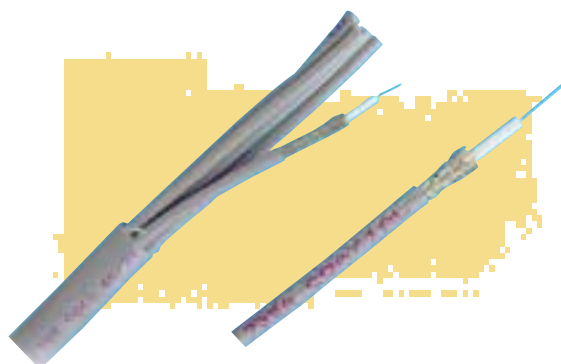
## ORDERING INFORMATION

Product Code	Conductor Count	Outside Diameter	Weight	Material ID
734A R1000	1	0.24 in (6.1 mm)	31.0 lbs/kft (46.2 kg/km)	105 529 044
734A RVAR	1	0.24 in (6.1 mm)	31.0 lbs/kft (46.2 kg/km)	105 529 036
734D R1000	1	0.24 in (6.1 mm)	31.0 lbs/kft (46.2 kg/km)	107 106 387
734D RVAR	1	0.24 in (6.1 mm)	31.0 lbs/kft (46.2 kg/km)	107 106 395
*734C RVAR	1	0.24 in (6.1 mm)	31.0 lbs/kft (46.2 kg/km)	108 388 109
1734 003D RVAR	3	0.58 in (14.7 mm)	126 lbs/kft (187 kg/km)	108 600 735
1734 006D RVAR	6	0.78 in (19.8 mm)	233 lbs/kft (347 kg/km)	108 552 662
1734 008D RVAR	8	0.85 in (21.5 mm)	308 lbs/kft (459 kg/km)	108 552 670
1734 009D RVAR	9	0.92 in (23.4 mm)	335 lbs/kft (500 kg/km)	108 600 743
1734 012D RVAR	12	1.00 in (25.4 mm)	445 lbs/kft (663 kg/km)	108 600 750
*1734 003C RVAR	3	0.58 in (14.7 mm)	126 lbs/kft (187 kg/km)	108 600 693
*1734 006C RVAR	6	0.78 in (19.8 mm)	233 lbs/kft (347 kg/km)	108 549 452
*1734 008C RVAR	8	0.85 in (21.5 mm)	308 lbs/kft (459 kg/km)	108 549 460
*1734 009C RVAR	9	0.92 in (23.4 mm)	335 lbs/kft (500 kg/km)	108 600 701
*1734 012C RVAR	12	1.00 in (25.4 mm)	445 lbs/kft (663 kg/km)	108 600 719

\*Features a lightly bonded foil shield for improved Structural Return Loss (SRL)

# 26 AWG

## 735 and 1735 Coaxial Cable



### Attenuation

11.6 dB/1000 ft, 3.8 dB/100m at 5 MHz  
 16.5 dB/1000 ft, 5.4 dB/100m at 10 MHz  
 36.0 dB/1000 ft, 12 dB/100m at 50 MHz  
 5.8 dB/1000 ft, 1.9 dB/100m at 1 MHz  
 52.0 dB/1000 ft, 17 dB/100m at 100 MHz  
 74.0 dB/1000 ft, 24 dB/100m at 200 MHz

**Mutual Capacitance** 17.5 pF/ft, 57.4 pF/m

**Characteristic Impedance** 75 Ohm at 25 - 75 MHz

**Velocity of Propagation** 80%

**UL Listed** (UL) CMR c(UL)

**Conductors** Solid, silver plated copper 26 AWG

**Core Wrap** 1735A: Longitudinally applied over stranded core

**Insulation** Expanded PE

**Insulation Thickness** 0.030 in (0.77 mm)

**Jacket** PVC (Slate), 1735A Codes are multiple units of 735A

**Shield** Longitudinal polyester-aluminum foil under tinned copper braid

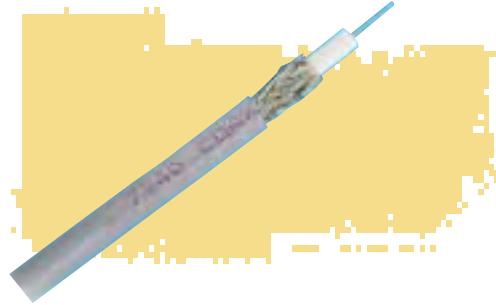
**Structural Return Loss** 30 dB min at 15 - 90 MHz  
 25 dB at 90 - 200 MHz  
 20 dB at 200 - 500 MHz  
 (100% of cable)

## ORDERING INFORMATION

Product Code	Conductor Count	Jacket Thickness	Outside Diameter	Weight	Material ID
735A R1000	1	0.014 in (0.36 mm)	0.13 in (3.3 mm)	11.5 lbs/K ft (17.1 kg/km)	106 007 891
735A RVAR	1	0.014 in (0.36 mm)	0.13 in (3.3 mm)	11.5 lbs/K ft (17.1 kg/km)	106 007 743
1735 003A R1000	3	0.023 in (0.59 mm)	0.32 in (8.18 mm)	47.9 lbs/K ft (71.4 kg/km)	106 075 724
1735 003A RVAR	3	0.023 in (0.59 mm)	0.32 in (8.18 mm)	47.9 lbs/K ft (71.4 kg/km)	106 075 716
1735 006A R1000	6	0.025 in (0.64 mm)	0.44 in (11 mm)	85 lbs/K ft (126.7 kg/km)	106 075 708
1735 006A RVAR	6	0.025 in (0.64 mm)	0.44 in (11 mm)	85 lbs/K ft (126.7 kg/km)	106 075 864
1735 008A RVAR	8	0.025 in (0.64 mm)	0.49 in (12.5 mm)	116.5 lbs/K ft (173.6 kg/km)	107 201 964
1735 009A R1000	9	0.025 in (0.64 mm)	0.53 in (13.5 mm)	129.1 lbs/K ft (192.4 kg/km)	106 075 880
1735 009A RVAR	9	0.025 in (0.64 mm)	0.53 in (13.5 mm)	129.1 lbs/K ft (192.4 kg/km)	106 077 316
1735 012A RVAR	12	0.027 in (0.69 mm)	0.58 in (14.8 mm)	169.0 lbs/K ft (251.8 kg/km)	106 642 366

# 20 AWG

## 2734 Plenum Coaxial Cable



### Attenuation

17.0 dB/1000 ft, 5.6 dB/100m at 50 MHz  
 27.0 dB/1000 ft, 8.9 dB/100m at 100 MHz  
 38.0 dB/1000 ft, 13 dB/100m at 200 MHz  
 5.4 dB/1000 ft, 1.8 dB/100m at 5 MHz  
 7.5 dB/1000 ft, 2.5 dB/100m at 10 MHz

**Mutual Capacitance** 17.0 pF/ft, 56 pF/m

**Characteristic Impedance** 75 Ohm

**Velocity of Propagation** 80%

**UL Listed** (UL) CMP c(UL)

**Conductors** 2734B Solid, silver plated copper  
 20 AWG

**Insulation** Expanded FEP

**Insulation Thickness** 0.15 in (3.81 mm)

**Jacket** PVC - Designed for operating  
 temperatures up to 176°F (90°C)

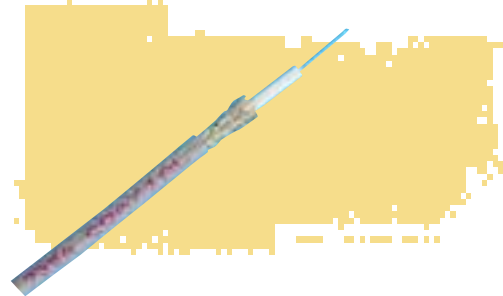
**Jacket Thickness** 2734B: 0.023 in (0.59 mm)

**Shield** Longitudinal polyester-aluminum foil  
 under tinned copper braid

### ORDERING INFORMATION

Product Code	Conductor Count	Outside Diameter	Weight	Material ID
2734B RVAR	1	0.24 in (6.1 mm)	31.0 lbs/kft (46.2 kg/km)	108 248 576

# 26 AWG 2735 Plenum Coaxial Cable



### Attenuation

11.6 dB/1000 ft, 3.8 dB/100m at 5 MHz  
 16.5 dB/1000 ft, 5.4 dB/100m at 10 MHz  
 36.0 dB/1000 ft, 12 dB/100m at 50 MHz  
 5.8 dB/1000 ft, 1.9 dB/100m at 1 MHz  
 52.0 dB/1000 ft, 17 dB/100m at 100 MHz  
 74.0 dB/1000 ft, 24 dB/100m at 200 MHz

**Mutual Capacitance** 17.0 pF/ft, 57 pF/m

**Characteristic Impedance** 75 Ohm

**Velocity of Propagation** 80%

**UL Listed** (UL) CMP c(UL)

### Conductors

Solid, silver plated copper 26 AWG

### Insulation

Expanded PE

### Insulation Thickness

0.077 in (1.96 mm)

### Jacket

PVC (Slate)

### Jacket Thickness

0.018 in (0.45 mm)

### Shield

Longitudinal polyester-aluminum foil under tinned copper braid

### Structural Return Loss

30 dB min at 15 - 90 MHz  
 25 dB at 90 - 200 MHz  
 20 dB at 200 - 500 MHz  
 (100% of cable)

## ORDERING INFORMATION

Product Code	Conductor Count	Outside Diameter	Weight	Material ID
2735B RVAR	1	0.14 in (0.36 mm)	14.4 lbs/kft (21.5 mm)	107 736 092

# Coaxial Cable

## Coaxial Connectors and Tool Kits

### ORDERING INFORMATION

Product Code	Description	Material ID
BNC/S735A	Straight BNC Connector for 735A Series Cable	105 744 585
BNC/S734A	Straight BNC Connector for 734A Series Cable	105 744 569
BNC/R734A	90 Degree BNC Connector for 734A Series Cable	105 744 577
440E/734A	440E Connector for some lighwave multiplexers	105 746 044
440B/735A	440B Connector for 735A Series Cable	106 014 533
BNC KS-23558L15	Straight BNC Connector for 734A/D Series Cable	407 013 853
BNC KS-23558L16	Straight BNC Connector for 735A Series Cable	407 013 879
BNC KS-23626L15	90 Degree BNC Connector for 734A/D Series Cable	407 013 911
BNC KS-23626L16	90 Degree BNC Connector for 735A Series Cable	407 013 937
BNC/S735A	90 Degree Connector for 735A Series Cable	105 744 593
BNC/BH	Isolated BNC-to-BNC Bulkhead Connector	106 641 301
DSAB-LP1-BNC	Loop-back Plug, push-on 6-inch (152 mm)	106 657 588
BNC/S19224L2	Straight BNC Connector for KS-19224L2 Cable	105 744 627
DDF-PC1A-00-BNC	Loop-back Plug, locking BNC, 6-inch (152 mm)	107 200 560
1047A Tool Kit	Tool Kit for Crimping and Soldering	106 070 006
1047B Tool Kit	Tool Kit for Crimping	106 458 185

# Notes



# Index

**These indexes are provided to assist you in quickly locating product listings.**

**Glossary:** Refer to our glossary for clarification of technical terms.

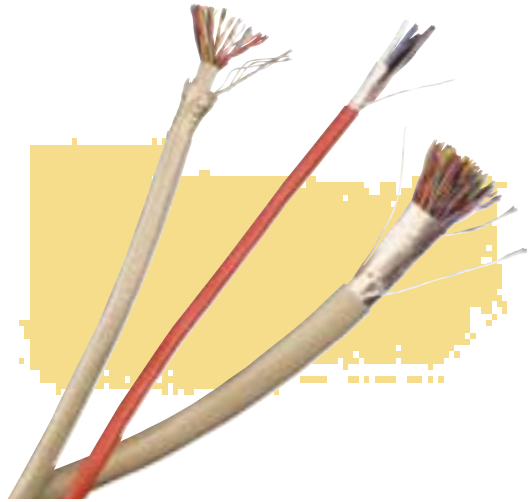
**Abbreviations:** Look up any abbreviation used in this product guide.

**American Wire Gauge (AWG) System:** Read this brief description of AWG to better understand this important standard.

**Color Codes:** These codes referenced throughout the listing sections are identified by number. These codes allow easy identification of conductors in larger cables.

**Product Code Index:** A convenient cross reference of the product codes by page number.

**Material ID Index:** A convenient listing of the ordering number (Material ID), product code and page number.



## Glossary

**802.3** — Defined by the IEEE, these standards govern the use of the Carrier Sense Multiple Access/Collision Detection (CSMA/CD) network access method used by Ethernet network.

**802.5** — Defined by the IEEE, these standards govern the use of the token ring network access method.

**Abrasion Resistance** — Ability of a wire, cable or material to resist surface wear.

**Ambient Temperature** — The temperature of a medium (gas or liquid) surrounding an object.

**American Wire Gauge (AWG)** — A standard system for designating wire diameter.

**Ampacity** — The maximum current an insulated wire or cable can safely carry without exceeding either the insulation or jacket material limitations.

**Analog Signal** — A signal in which the data is represented by continuously varying quantities.

**Annealing** — A process of controlled heating followed by gradual cooling to relieve mechanical stresses. Annealing copper makes it less brittle.

**Attenuation** — Power loss in an electrical system. In cables, generally expressed in dB per unit length.

**Audio Frequency** — The range of frequencies audible to the average human ear. Usually considered as 20-20,000 Hz.

**Backbone** — Cable on which two or more stations or networks may be attached.

**Breakdown Voltage** — The voltage level at which the insulation between two conductors becomes conductive.

**Cable** — A group of individually insulated conductors in twisted or parallel configuration usually with a jacket.

**Capacitance** — The property in a system of conductors and dielectrics, which permits the storage of electrically separated charges whenever a difference in potential exists between the conductors.

**Characteristic Impedance** — A frequency dependent resistance, which quantifies the complex opposition to current flow offered by a transmission line.

**Current Carrying Capacity** — The maximum current an insulated conductor can safely carry without exceeding its insulation and jacket temperature limitations.

**Cut-through Resistance** — A measure of insulation's ability to withstand penetration by sharp edges.

**Decibel (dB)** — A standard unit for expressing transmission gain or loss and relative power levels.

**Dielectric** — Any insulating (nonconducting) medium used to separate two conductors.

**Dielectric Constant** — The ratio of the capacitance of an insulated wire with that of the same uninsulated wire in air.

**Dielectric Strength** — Measures the maximum voltage that insulation can withstand without breakdown.

**Digital Signal** — A signal in which the data is represented by a series of discrete steps or pulses.

**Drain Wire** — An uninsulated wire added during manufacturing either immediately inside or outside a shield to facilitate shield grounding connections.

**Ductile** — Capable of being drawn out or hammered thin, or of being flexed or bent without failure.

**Elongation** — The fractional increase in length of a material stressed in tension.

**Farad** — The standard unit of capacitance. A one farad capacitor is one in which a one coulomb charge produces a one volt potential difference between the plates.

**Flame Resistance** — The ability of a material not to propagate flame once the heat source is removed.

**Flammability** — The measure of the material's ability to support combustion.

**Flex Life** — The measurement of the ability of a conductor or cable to withstand repeated bending.

**Frequency** — The number of cycles completed by alternating current in one second.

**Giga** — prefix denoting 1,000,000,000.

**Hard Drawn Copper Wire** — Copper wire that has not been annealed after drawing.

**Hertz** — Standard unit of frequency equal to one cycle per second.

**Impedance** — The total opposition that a circuit offers to the flow of alternating current at a particular frequency. It is a combination of resistance R and reactance X, measured in ohms.

**Impedance Match** — A condition in which the impedance of a particular circuit cable or component is the same as the impedance of the circuit, cable, or device to which it is connected.

**Insulation** — A material having high resistance to the flow of electric current.

**Insulation Resistance** — An insulation's ability to resist the flow of current through it, usually expressed in megohm-feet.

## Glossary (continued)

**Interaxial Spacing** — Center to center conductor spacing between any two wires.

**Jacket** — An outer covering, usually nonmetallic, mainly used for protection against the environment.

**Kilo** — A numerical prefix denoting 1000 .

**Kilohertz** — One thousand hertz, or one thousand cycles per second.

**Meg or Mega** — A numerical prefix denoting one million (1,000,000 or 10).

**Micro** — A numerical prefix denoting one millionth (10).

**Micro Farad** — One millionth of a farad. This is the common unit for designating capacitance in electronics and communications.

**Milli** — Prefix meaning one-thousandth (10).

**Multiconductor** — Any cable consisting of two or more conductors.

**Mutual Capacitance (C)** — The capacitance between two conductors when all other conductors, including the shield, are short-circuited to ground.

**Ohm** — The standard unit of electrical resistance. One volt will cause one ampere of current to flow through one ohm of resistance.

**Pair** — Two wires forming a single circuit, held together by twisting, binding, or a common jacket.

**PIC** — Plastic Insulated Conductor, conductors covered with an extruded coating of plastic.

**Pico** — Prefix meaning one trillionth ( $10^{-12}$ ).

**Picofarad** — One trillionth of a farad. A unit of capacitance usually used to designate capacitance unbalance between pairs and capacitance unbalance of the two wires of a pair to ground.

**Plenum** — The air return path of a central air handling system, either ductwork or open space i.e., the space over a suspended ceiling.

**Plenum Cable** — Cable approved by Underwriters Laboratories for installation in plenums without the need for conduit.

**Primary Insulation** — The first layer of non-conductive material applied over a conductor, whose prime function is to act as electrical insulation.

**Propagation Delay** — Time required for a signal to pass from the input to the output of a device.

**Propagation Time** — Time required for an electrical wave to travel between two points on a transmission line.

**Quad** — A four-conductor cable.

**Rated Temperature** — The maximum temperature at which an electric component can operate for extended periods without loss of its basic properties.

**Rated Voltage** — The maximum voltage at which an electric component can operate for extended periods without undue degradation or safety hazard.

**Resistance** — The property of a conductor that determines the current produced by a given potential difference. It impedes the flow of current and results in the dissipation of power as heat. Measured in ohms.

**Self Extinguishing** — The characteristic of a material whose flame is extinguished after the igniting flame is removed.

**Shield** — A metallic layer placed around a conductor or group of conductors to prevent electrostatic or electromagnetic interference between the enclosed wires and external fields.

**Structural Return Loss** — A measurement of the signal reflections inside a cable by physical nonuniformity or imperfections of the cable. A higher value is an indication of a higher performance cable.

**Temperature Rating** — The maximum and minimum temperature at which an insulating material may be used in continuous operation without loss of its basic properties.

**Thermoplastic** — A plastic material, which softens and flows when heated and becomes firm when cooled. This process can be repeated.

**Thermoset** — A plastic material, which is cross-linked by a heating process known as curing. Once cured, thermosets cannot be reshaped.

**Twisted Pair** — Two insulated conductors spiraled together.

**Velocity of Propagation** — The speed at which a signal travels from a sender through a transmission line.

**Voice Frequency** — Any of the frequencies that is audible to the human ear. For telephone transmission the range is generally from 300 to 3,400 Hz.

**Volt** — The standard unit of electromotive force or electrical pressure. One volt is the amount of pressure that will cause one ampere of current to flow through one ohm of resistance.

**Voltage** — The electromotive force or electrical pressure, measured in volts.

**Voltage Rating** — The highest voltage that may be continuously applied to a wire in conformance with standards or specifications.

**Wire** — An individual conductor, which may be either bare or insulated.

## Abbreviations

- APVC** — A specially blended semi-rigid PVC that exhibits superior cut-through resistance and low-surface friction
- AWG** — American Wire Gauge
- AWM** — Appliance Wiring Material
- ASTM** — Asynchronous Transfer Mode
- Cg** — Capacitance between any conductor and ground
- Cm** — Mutual capacitance of pairs
- CATV** — Community Antenna Television
- Cond.** — Conductor
- CEC** — Canadian Electrical Code
- CEPT** — European Conference of Postal & Telecommunication Administrations
- CLEC** — Competitive Local Exchange Carrier
- CSA** — Canadian Standards Association
- dB** — decibel, sometimes used with a unit of length, e.g. dB/100m
- dc** — Direct current
- DS1** — A standard North American and Japanese digital signal equal to 24 voice circuits and a bit rate of 1.544 Mb/s
- DS3** — A standard North American and Japanese digital signal equal to 672 voice circuits and a bit rate of 44.736 Mb/s
- DSO** — A standard North American and Japanese digital signal number equal to 1 voice circuit and a bit rate of 64 b/s
- Halar™ Ectfe** — Ethylene and monoChloroTriFluoroEthylene
- E1** — A CEPT digital signal equal to 30 voice circuits and a bit rate of 2.048 Mb/s
- E2** — A CEPT digital signal equal to 120 voice circuits and a bit rate of 8.448 Mb/s
- E3** — A CEPT digital signal equal to 480 voice circuits and a bit rate of 34.368 Mb/s
- EIA** — Electronics Industries Association
- EW&C** — Electronic Wire and Cable
- FEP e.g., Teflon™** — Fluorinated ethylene-propylene
- FRPE** — Fire Retardant Polyethylene
- FRPO** — Fire Retardant Polyolefin
- FOAM/SKIN or SR-PVC/XPE** — Semi-rigid PVC skin over foamed PE
- IEC** — International Electrotechnical Commission
- IEEE** — Institute of Electrical and Electronic Engineers
- ILEC** — Independent Local Exchange Carrier
- GHz** — gigahertz (1,000,000,000 cycles/second)
- ITU** — International Telecommunications Union
- kHz** — kilohertz (1,000 cycles/second)
- kg** — kilograms
- LAN** — Local Area Network
- LFPVC** — Low Flame PVC
- LSPVC** — Low Smoke PVC
- MHz** — megahertz (1,000,000 cycles/second)
- MOQ** — Minimum Order Quantity
- mm** — millimeters
- NEC®** — National Electrical Code
- NEMA** — National Electrical Manufacturers Association
- NFPA** — National Fire Protection Association
- OF** — Optical Fiber
- $\Omega$  — Ohms
- $\Omega/1000 \text{ ft.}$  — Ohms per 1,000 feet
- $\Omega/100\text{m}$  — Ohms per 100 meters
- PE** — Polyethylene
- pF** — picofarads, used with a unit of length, e.g. pF/m
- PP** — Polypropylene
- PVC** — Polyvinyl Chloride
- PVDF** — Polyvinylidene Fluoride
- PVDF-CP** — Polyvinylidene Fluoride CO Polymer
- SGL** — Connector cable with a single connector
- SR-PVC** — Semi-rigid PVC
- SR-PVC/XPE** — Semi-rigid PVC skin over foamed PE
- SRL** — Structural Return Loss
- TIA** — Telecommunications Industries Association
- Type CL2** — UL Listed as general purpose power limited signaling cable, UL 1581 or IEEE 383 vertical tray fire tested
- Type CM** — UL Listed as general purpose communications cable, UL 1581 or IEEE 383 vertical tray fire tested
- Type CMG** — UL Listed as general purpose communications cable, CSA C22.2 No. 0.3-M vertical tray fire tested
- Type CMH** — CSA, FT1 tested
- Type CMP** — UL Listed as plenum communications cable, UL 910 fire tested
- Type CMR** — UL Listed as riser communications cable, UL 1666 fire tested
- Type CMX** — UL Listed as residential and restricted general purpose communications cable, VW-1 fire tested
- Type MP** — UL Listed as multipurpose, general purpose cable
- UL** — Underwriters Laboratories

## AWG Information

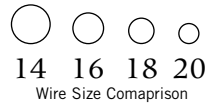
### American Wire Gauge

There is no legal standard wire gauge for copper conductors in the U.S. Through usage and industrial standardization, however, the American Wire Gauge (AWG) wire-size specification system has been generally accepted as the national standard. This system was originally designed by J.R. Brown in 1857 and was formerly known as the Brown & Sharp (B&S) Gauge. Today's American Wire Gauge is an extension of the original version published by the National Bureau of Standards.

The sizes in this gauging system roughly represent the number of steps involved in the process of wire drawing. This explains why the size numbers are retrogressive, with smaller numbers denoting larger wires (with a smaller number of drawing steps involved), and larger numbers designating smaller wires.

The AWG numbering system does have a logical basis. Two specific diameters are assigned AWG size numbers—#36 is 0.0050" diameter while #0000 (4/0) is 0.4600" diameter (both in solid conductor).

All other size/diameter pairs are derived through a logical, geometric progression.



Why is the AWG system so important? It provides a standard reference for comparison of various conductor materials based, technically, on the cross-sectional area of the wires.

Understanding that AWG sizes are based on cross-sectional area helps explain, in simple terms, the apparent discrepancy between the diameters of stranded conductors and their solid conductor counterparts. Since the cross-sectional area is related to the diameter (of solid conductors), the AWG is often mistaken as being the diameter. Stranded conductors generally have a slightly larger outside diameter than the corresponding solid conductor because of the cross-sectional area that is lost between the strands.

**AWG WIRE SIZE COMPARISON FOR SOLID COPPER WIRE**

American Wire Gauge AWG	Diameter		Weight		Break Strength (maximum)		D.C. Resistance ohms per	
	in	mm	lbs. per 1000 ft	kg per km	lbs	kg	1000 ft	km
40	0.0031	0.079	0.0291	0.0433	0.3106	0.1409	1080	3540
39	0.0035	0.089	0.0371	0.0552	0.3917	0.1776	847	2780
38	0.0040	0.102	0.0484	0.0720	0.4939	0.2240	648	2130
37	0.0045	0.114	0.0613	0.0912	0.6228	0.2825	512	1680
36	0.0050	0.127	0.0757	0.113	0.7854	0.3582	415	1360
35	0.0056	0.142	0.0949	0.141	0.9904	0.4492	331	1080
34	0.0063	0.160	0.120	0.179	1.249	0.5665	261	857
33	0.0071	0.180	0.153	0.228	1.575	0.7144	206	675
32	0.0080	0.203	0.194	0.289	1.986	0.9008	162	532
31	0.0089	0.226	0.240	0.357	2.504	1.136	131	430
30	0.0100	0.254	0.303	0.451	3.157	1.432	104	340
29	0.0113	0.287	0.387	0.576	3.981	1.806	81.2	266
28	0.0126	0.320	0.481	0.716	5.020	2.277	65.3	214
27	0.0142	0.361	0.610	0.908	6.331	2.872	51.4	169
26	0.0159	0.404	0.765	1.14	7.983	3.621	41.0	135
25	0.0179	0.455	0.970	1.44	10.07	4.568	32.4	106
24	0.0201	0.511	1.22	1.82	12.69	5.756	25.7	84.2
23	0.0226	0.574	1.55	2.31	15.41	6.990	20.3	66.6
22	0.0253	0.643	1.94	2.89	19.43	8.813	16.2	53.2
21	0.0285	0.724	2.46	3.66	24.50	11.11	12.8	41.9
20	0.0320	0.813	3.10	4.61	30.89	14.01	10.1	33.2
19	0.0359	0.912	3.90	5.80	38.95	17.67	8.1	26.4
18	0.0403	1.020	4.92	7.32	49.12	22.28	6.4	21.0

## Color Codes

### COLOR CODE #1

Pair Number	Color
1	Red-White
2	Orange-White
3	Green-White
4	Brown-White
5	Blue-Red
6	Orange-Red
7	Green-Red
8	Brown/red

### COLOR CODE #2

Pair Number	Color
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
13	Black/Green
14	Black/Brown
15	Black/Slate
16	Yellow/Blue
17	Yellow/Orange
18	Yellow/Green
19	Yellow/Brown
20	Yellow/Slate
21	Violet/Blue
22	Violet/Orange
23	Violet/Green
24	Violet/Brown
25	Violet/Slate

### COLOR CODE #3

Pair Number	Color
1	Black/Red
2	Black/White
3	Black/Green
4	Black/Blue
5	Black/Yellow
6	Black/Brown
7	Black/Orange
8	Red/White
9	Red/Green
10	Red/Blue
11	Red/Yellow
12	Red/Brown
13	Red/Orange
14	Green/White
15	Green/Blue
16	Green/Yellow
17	Green/Brown
18	Green/Orange
19	White/Blue
20	White/Yellow
21	White/Brown
22	White/Orange
23	Blue/Yellow
24	Blue/Brown
25	Blue/Orange

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## Color Codes (continued)

### COLOR CODE #4

Pair Number	Color
1	White-Blue/Blue-White
2	White-Orange/Orange-White
3	White-Green/Green-White
4	White-Brown/Brown-White
5	White-Slate/Slate-White
6	Red-Blue/Blue-Red
7	Red-Orange/Orange-Red
8	Red-Green/Green-Red
9	Red-Brown/Brown-Red
10	Red-Slate/Slate-Red
11	Black-Blue/Blue-Black
12	Black-Orange/Orange-Black
13	Black-Green/Green-Black
14	Black-Brown/Brown-Black
15	Black-Slate/Slate-Black
16	Yellow-Blue/Blue-Yellow
17	Yellow-Orange/Orange-Yellow
18	Yellow-Green/Green-Yellow
19	Yellow-Brown/Brown-Yellow
20	Yellow-Slate/Slate-Yellow
21	Violet-Blue/Blue-Violet
22	Violet-Orange/Orange-Violet
23	Violet-Green/Green-Violet
24	Violet-Brown/Brown-Violet
25	Violet-Slate/Slate-Violet

### COLOR CODE #5

Pair Number	Color
1	White-Blue/Blue
2	White-Orange/Orange
3	White-Green/Green
4	White-Brown/Brown
5	White-Slate/Slate
6	Red-Blue/Blue-Red
7	Red-Orange/Orange-Red
8	Red-Green/Green-Red
9	Red-Brown/Brown-Red
10	Red-Slate/Slate-Red
11	Black-Blue/Blue-Black
12	Black-Orange/Orange-Black
13	Black-Green/Green-Black
14	Black-Brown/Brown-Black
15	Black-Slate/Slate-Black
16	Yellow-Blue/Blue-Yellow
17	Yellow-Orange/Orange-Yellow
18	Yellow-Green/Green-Yellow
19	Yellow-Brown/Brown-Yellow
20	Yellow-Slate/Slate-Yellow
21	Violet-Blue/Blue-Violet
22	Violet-Orange/Orange-Violet
23	Violet-Green/Green-Violet
24	Violet-Brown/Brown-Violet
25	Violet-Slate/Slate-Violet

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### PRODUCT CODES

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