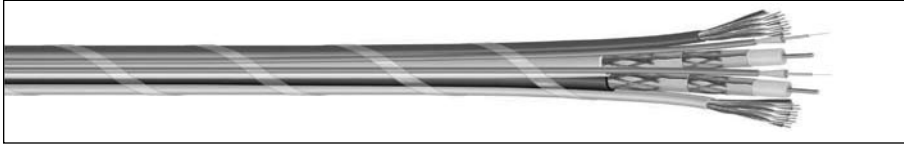


Specialty Cable



General Cable has a variety of wire and cable available for special applications. This section includes an array of products from our Fluorobus flat bus ground/power distribution cable to high-speed serial interface cable, known as Fire Wire, and computer cables.

For more information on these cables or for other special applications, please contact your General Cable sales representative.

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**CAROL
 BRAND**

**ELECTRONICS
 WIRE & CABLE**

■ **Armored
 Electronics Products**

General Cable now offers the capability to armor virtually any Carol® Brand Electronics cable.

This rugged exterior and protection allows for the installation of almost any Electronics cable in markets with the toughest and most rigorous building code requirements. Cables placed in armor are not only acceptable for use in Riser applications, but according to NEC Article 300.22(B), these cables are acceptable in Plenum applications as well.

The process to convert a standard Carol Brand Electronics cable to an armored cable is simple and is explained on the back of this bulletin. All you really need to know is:

- 1) which cable you want to armor,
- 2) whether you want steel or aluminum interlock armor, and
- 3) what put-up lengths you would like to receive product on.

General Cable continues to expand its Carol Brand Electronics product offering to allow our customers to participate in more diversified markets. You can always *Demand Better...Expect More™* with General Cable Carol Brand Electronics cables. We manufacture over 1,300 standard electronic cables that we ship direct from stock, and we have the technical staff and design expertise to meet any customer cable requirement.



- Special Application Cable
 - Hook-Up Wire
 - Plenum Cable
 - Coaxial Cable
 - Microphone Cable
 - Computer Cable
- General Purpose Cable
- Multi-Conductor Communication & Control Cable
- Multi-Paired Communication & Control Cable
- Fire Alarm Cable
- Sound & Security Cable



HOW TO ARMOR YOUR ELECTRONICS

Step 1 - Find a Carol Brand part # in the catalog that you want to armor.

Step 2 - Build your Carol Brand Armored part #

Carol® Brand Communication & Control Cable, Multi-Conductor, Unshielded

CATALOG NUMBER	NO. OF COND.	AWG SIZE	COND. STRAND.	NOM. INSULATION THICKNESS		NOMINAL JACKET THICKNESS		NOMINAL O.D.		NOM. C-C CAP. pF/FT
				INCHES	mm	INCHES	mm	INCHES	mm	
C2409A	2	14	19/0147	0.030	0.81	0.032	0.81	0.260	6.81	30.5

- ❶ Pick the root part # you want to armor.
- ❷ Pick the put-up length that you want.
- ❸ Pick the color of jacket for the wire.
- ❹ Pick the type of armor you want.

C2409A^❶
Root #

41^❷
Put-Up

02^❸
Cable Jacket Color

A^❹
Armor Indicator

Armored Part # looks like: C2409A.41.02A

Description is now: 14 AWG / 2 Conductor, Unshielded, White Jacket Communication Cable in Aluminum Armor on a 1000' Reel.

Armor Codes & Charts

Armor Sizing Chart				
CABLE DIAMETER	ARMOR STRIP WIDTH	CLEARANCE (IN)	ARMOR O.D. (IN)	ARMOR WEIGHT (LBS/MFT)
0.190	3/8"	0.060	0.350	29.000
0.250	3/8"	0.100	0.450	38.600
0.300	3/8"	0.100	0.500	43.400
0.350	3/8"	0.100	0.550	48.300
0.400	3/8"	0.100	0.600	53.100
0.450	3/8"	0.100	0.650	57.900
0.500	3/8"	0.100	0.700	62.700
0.550	3/8"	0.100	0.750	67.600
0.600	3/8"	0.100	0.800	72.400
0.650	3/8"	0.100	0.850	77.200
0.700	1/2"	0.100	0.900	109.400
0.750	1/2"	0.100	0.950	115.800
0.800	1/2"	0.100	1.000	122.300

Wire Jacket Color	
CODE	COLOR
01	BLACK
02	WHITE
03	RED
04	ORANGE
05	YELLOW
06	GREEN
07	DARK BLUE
08	BROWN
09	MAROON
10	GRAY
11	ANTIQUÉ GOLD
12	IVORY
13	PINK

Armor Codes	
TYPE	CODE
Aluminum	A
Steel	S

Put-Up Codes	
SIZE	CODE
250'	35
500'	38
1000'	41

NOTE 1: Consult factory for additional put-up lengths
NOTE 2: Product provided on reels

NOTE: Additional colors available

Products in the Electronics Catalog that can be armored:

- Section 2 - Communication & Control Cable, Multi-Conductor
- Section 3 - Communication & Control Cable, Multi-Paired
- Section 4 - Computer Cable
- Section 5 - Coaxial Cable

- Section 6 - Fire Alarm / Life Safety Cable
- Section 7 - Sound, Alarm, & Security
- Section 8 - Audio / Home Entertainment Cable

Delivering the renewable power of Wind Energy

Wind knows no boundaries,
and neither does General Cable.

Answering the Call

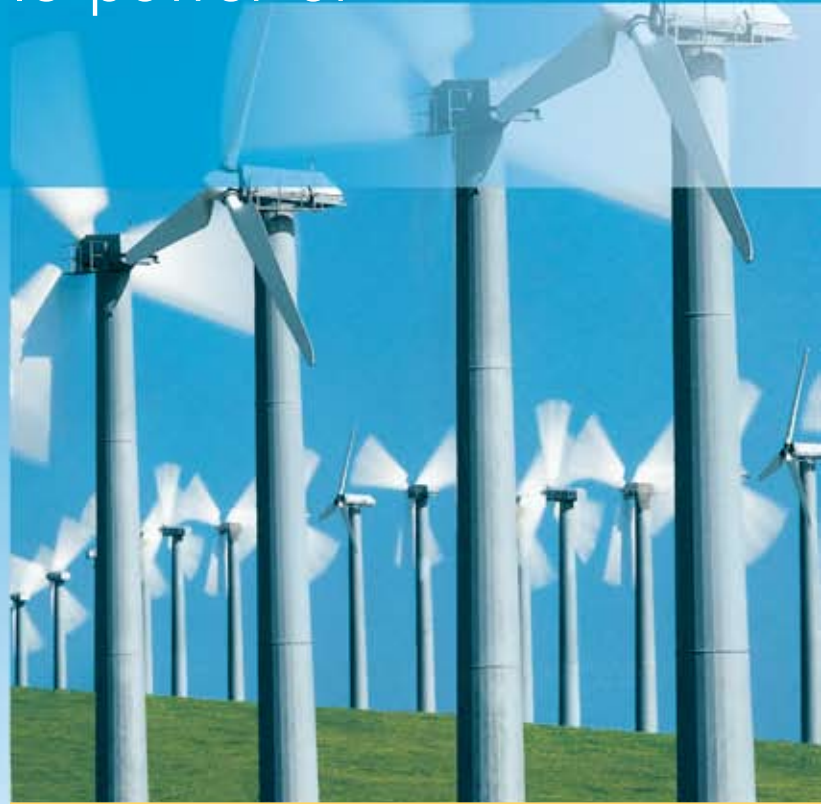
Wind. It's plentiful, renewable, and clean. That's why wind power has increased more than fivefold since the beginning of the 21st century, taking center stage as the fastest growing alternative energy source in the global arena. With increased energy demand and mounting political pressure, alternative energy mandates are cropping up all over the world, with many countries calling for significant growth in wind generation capacity over the next decade. General Cable has the experience, the innovation, and the global presence to answer that call.

Since the first modern wind turbine was developed in the 1980s, General Cable has been committed to delivering the renewable power of wind energy through ground-breaking wire and cable technologies. General Cable has developed cables that are flexible yet tough enough to withstand the continuous motion of today's wind turbines. Our commitment to providing the highest quality and reliable products lowers cost and extends turbine operating life by reducing failures and maintaining continuous power.

Knowing No Boundaries

Wind knows no boundaries, and neither does General Cable. From Brazil, Mexico, and the U.S. to Germany, Spain, China, India, and Australia, initiatives are in place to increase wind power, with targets to support a significantly higher percentage of energy needs.

With a solid presence in North America, South America, Europe, Asia, Africa, the Middle East, and Oceania, General Cable has the geographical presence to focus on region-specific wind power needs and to meet domestic and global specifications. At the same time, General Cable's



One Company approach means we have a keen ability to unite and leverage our broad knowledge and shared resources to bring innovative solutions to the entire world.

Setting the Benchmark

Whether it is terrestrial wind farms requiring direct buried cables or offshore wind farms requiring high-performance submarine cables, General Cable has one of the most diverse and expansive ranges of products to meet virtually every application in the wind power industry. From fiber optic and bare overhead conductors to underground URD and low-voltage power, control, and electronic cables, General Cable offers the full array of cables needed for wind turbines to generate, distribute, and transmit energy.

As the benchmark in the wire and cable industry, renowned for our engineering and material development capabilities, General Cable is positioned to rapidly respond to the needs of the evolving wind farm market with next-generation cabling systems.

Call us today at **888.593.3355** for additional information.



Fluorobus Cable

Flat Bus Ground / Power Distribution Cable

CATALOG NUMBER	CONDUCTOR	INSULATION	FINISHED DIMENSIONS	DCR	POWER RATING
SP00C0011010	Flat Solid BC 0.010" x 0.987"	Tetzel® (ETFE)	0.028 x 1.022	0.82 Ohms per 1000 ft. @ 25°C	32 Amps Nom. 100 Amps Max.
SP00C0012010	Flat Solid BC 0.020" x 0.987"	Tetzel® (ETFE)	0.037 x 1.022	0.41 Ohms per 1000 ft. @ 25°C	64 Amps Nom. 100 Amps Max.

Information is subject to change without notice.

Applications:

- Ideally suited for low-voltage primary and secondary power distribution in electronic and data processing equipment. High-speed, solid-state circuits require relatively high currents with low voltage. For this reason, it is essential that DC power distribution lines have low inductance, low resistance and high capacitance. More important, tightly bundled or laminated flat cable source-and-return circuits deliver lower impedance and higher capacitance by one to two orders of magnitude, compared to round wire circuits with equal resistance.
- This system can serve as a low-cost flexible alternative to laminated bus bars. The Fluorobus low-profile routing capability is a useful packaging feature, and its large surface area (relative to round wire conductor of equal resistance) provides improved heat dissipation, minimizes voltage drop and results in a higher current rating.
- This flat conductor circuit delivers superior EMI/RFI performance, both as a source and as a receiver.

Features	Benefits
Low Profile:	Conserves space
Flexible:	Ease of routing
Large Surface Area:	Improved heat dissipation minimizes voltage drop High current rating

Temperature Rating:

- -50°C to +150°C

Voltage Rating:

- 300 volts and 600 volts (AWM) available (consult Customer Service)

Dielectric Constant:

- 2.6

Dielectric Strength:

- 900 VRMS

Packaging and Color:

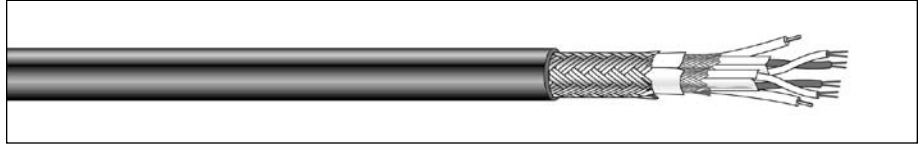
- Please consult Customer Service for packaging and color options

Fire Wire*

IEEE 1394 High-Speed Serial Interface

Applications:

- Transport digital data for computers and for professional and consumer electronic products
- Personal computers
- Audio/image/video products
- Printers/scanners
- Disc arrays
- Digital video cameras/displays/recorders



CATALOG NUMBER

Z028C0061110

Compliances:

- UL: AWM 20276
- 80°C 30V VW-1
- CSA: PCC FT1

Packaging and Jacket Colors:

- Please consult Customer Service for packaging and color options

SIGNAL PAIRS	POWER CONDUCTOR	OVERALL SHIELDING	OVERALL JACKET	SIGNAL PR. IMPED.	SIGNAL PR. CAPAC.	NOM. MHz	ATTENUATION	
							DB	100'
2/C #22 7/36 TC Foam Poly Insulation Individual Foil & Braid No. 1: Red, Green No. 2: Blue, Orange	2/C #22 7/36 TC Polyolefin Insulation Black, White	Aluminum/ Mylar® (Foil Out) + 95% Braid	Flexible PVC	110 Ohms	12.5 pF/ft	1000.0	37	55

* Apple Computer trademark

Computer Cable

Mainframes, Data Transfer, Tape Drives, File Servers, Disc Drives, Workstations, Disc Arrays, Personal Computers, etc.

PART NUMBER	APPLICATION	DESCRIPTION
EO28P0501510	HIPPI	50 Pair, 28 AWG, 105 Ohm
EO24C0045510	Fiber Channel	2 Pair "Quad", 24 AWG, 150 Ohm
EO26C0045510	Fiber Channel	2 Pair "Quad", 26 AWG, 150 Ohm
EO28C0045510	Fiber Channel	2 Pair "Quad", 28 AWG, 150 Ohm
EO30C0045510	Fiber Channel	2 Pair "Quad", 30 AWG, 150 Ohm
EO28P0181510	IEEE-1284	18 Pair, 28 AWG, O/A Foil + Braid

Test & Measurement, Data Transfer, Electronic Publishing, Video Conferencing, Sound Synthesizers, PC Workstations, Multi-Media, Consumer Electronics, Cable TV, Digital Cameras/Camcorders, etc.

PART NUMBER	APPLICATION	DESCRIPTION
ZO28C0066110	IEEE-1394 (Fire Wire)	2 Pair, 28 AWG, 2/C 22 AWG

ISDN, CD-ROM Drives, Modems, Scanners, Printers, Audio I/O Devices, Keyboards, Telephone ISDN, etc.

PART NUMBER	APPLICATION	DESCRIPTION
ZO28C0042010	Universal Serial Bus	1 Pair, 28 AWG, 2/C 20 AWG
ZO28C0042210	Universal Serial Bus	1 Pair, 28 AWG, 2/C 22 AWG
ZO28C0042410	Universal Serial Bus	1 Pair, 28 AWG, 2/C 24 AWG
ZO28C0042610	Universal Serial Bus	1 Pair, 28 AWG, 2/C 26 AWG
ZO28C0042810	Universal Serial Bus	1 Pair, 28 AWG, 2/C 28 AWG

Video Monitors, CRTs, Workstations

PART NUMBER	APPLICATION	DESCRIPTION
ZO28C0101120	Monitor 10/C	3/Coax 28 AWG, 7/C 28 AWG

Applications:

- General Cable manufactures a diverse array of multiconductor cables for computers and the interconnection of their peripherals. Today's need for speed and signal capacity demands the most in cable materials and construction. Our state-of-the-art manufacturing allows us to control impedance, minimize signal skew and provide the proper shielding for applications from USB and Fire Wire right up through the latest Fiber Channel protocols. Whether your applications require parallel or serial signal transmission, General Cable has the technology to fill your needs.

Packaging and Jacket Colors:

- Please consult Customer Service for packaging and color options



Composite Data and Control Cable

NEC Type CMP (UL) c(UL)

Product Construction:

Conductor:

- 22 AWG and 18 AWG fully annealed stranded tinned copper per ASTM B-33

Insulation:

- 22 AWG - foam FEP
- 18 AWG - plenum PVC
- Color code: See chart below

Pair Shield (22 AWG):

- 100% Flexfoil® aluminum/polyester foil with 25% overlap, minimum
- Stranded tinned copper drain wire

Jacket:

- Plenum PVC, natural or as requested
- Temperature range: -20°C to +75°C

Applications:

- Multimedia systems
- Data and control circuits
- Suggested voltage rating: 300 volts

Compliances:

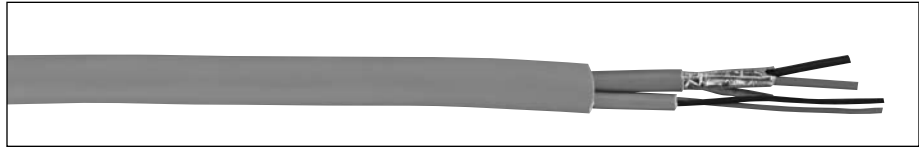
- NEC Article 800
- Designed to meet NFPA 262 and CSA FT-6 Steiner Tunnel Fire Tests for Plenum Applications

Features:

- Fire-retardant, low-smoke jacket

Packaging:

- Please contact Customer Service for packaging and color options



CATALOG NUMBER	NO. OF PAIRS	AWG SIZE	COND. STRAND	NOM. INSULATION THICKNESS		NOM. JACKET THICKNESS		NOMINAL O.D.		NOMINAL CAP. * pF/ft	
				INCHES	mm	INCHES	mm	INCHES	mm	A	B
22 AWG SHIELDED PAIR AND 18 AWG UNSHIELDED PAIR WITH OVERALL JACKET											
C8125	1 each	(22	7/30 TC	0.020	0.51)	0.015	0.381	0.195	4.95	13 (22)	35.0
		(18	16/30 TC	0.009	0.23)					30 (18)	

*A - Capacitance between conductors

*B - Capacitance between one conductor and other conductors connected to shield

Color Code Chart

AWG	COLOR
22	Blue & White
18	Black & Red