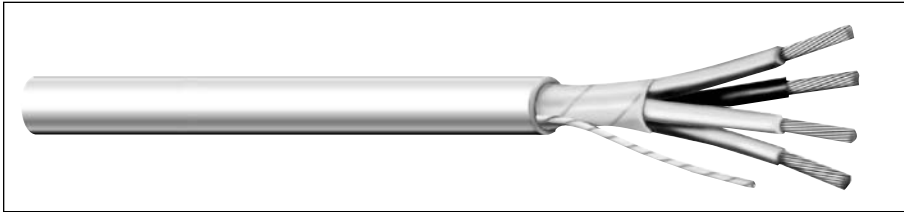


Sound, Alarm & Security Cable



The sound and security industry in the United States has grown from a simple and unsophisticated business, begun some 45 years ago, to one which has developed technology to the degree that specialized wires and cables are now much in demand.

No longer are the security and sound industries characterized by large electromechanical relays and large contactors; today these circuits incorporate the latest in microprocessors and solid state devices to not only improve functionality but also to guarantee performance.

As a major wire producer, our role is to ensure that the wires and cables that go into these systems are as reliable as the other components ... the net result is a fully integrated system which will provide peace of mind to the system user.

Also in this section are General Cable's Carol® Brand wire and cable designs suitable for a variety of applications, both in industrial and commercial

environments, including telephone systems, intercoms, burglar alarms, business machines and thermostats.

Aside from the quality materials used in these designs, specifiers and users of Carol® Brand wire and cable products have come to expect that these cables are registered and certified with the leading regulatory agencies such as Underwriters Laboratories ... and we haven't let you down!

Carol® Brand designs have proven themselves in the area of sound and security over time; most are fabricated with solid or stranded, bare copper conductors with insulations and jackets of premium grades of PVC. We offer both parallel and cabled designs both with and without shields. Sequential footage markings on the jackets are offered on all products.

General Cable Carol® Brand products are conveniently packaged in 1000' or 500' lengths to assist the installer.

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**CAROL[®]
 BRAND**

**ELECTRONICS
 WIRE & CABLE**

■ **Carol[®] Brand Composite
 Access Control Cable**

General Cable's **Carol[®] Brand Composite Access Control Cable** is manufactured for use in Building Access & Control. The cable is designed to allow for a single cable run that incorporates the four components required for card readers, door contacts, locking power and retinal scanners in commercial buildings, distribution centers, manufacturing facilities and government buildings.

The cables are installer friendly, as they save time and money on installation. With multiple cables under one jacket, time is saved in preparation and setup, pulling and termination. The convenience of these cables at installation makes them a popular choice for multiple Access Control applications.

When your job requires Access Control cable, think of Carol[®] Brand cables first. Remember, you can always **Demand Better...Expect More[™]** with General Cable Carol[®] Brand Electronic Cables. We manufacture over 1,300 standard electronic cables that we can ship direct from stock, and we have the technical staff and design expertise to meet any custom 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

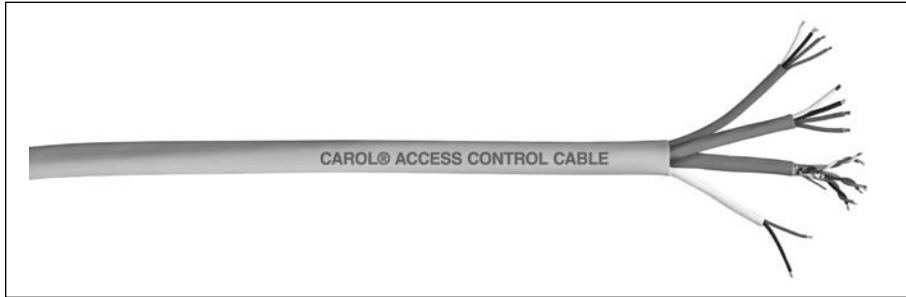
For more information, contact your local General Cable representative.



**CAROL[®]
 BRAND**

Composite Access Control Cable, Plenum

NEC Type CMP, UL, c(UL)



Product Construction:

Conductor:

- Stranded bare copper

Jacket:

- Flexguard® PVC
- Temperature range: 0°C to +60°C
- Individual elements marked for application (see diagram below)
- Yellow overall jacket

Shields:

- Choice between all 4 elements shielded or just the 3-pair element shielded

Applications:

- Security systems
- Access control
- Card reader
- Door control
- REX
- Power-limited controls

Compliances:

- NEC Article 800 Type CMP (UL), c(UL)
- RoHS Compliant Directive 2002/95/EC

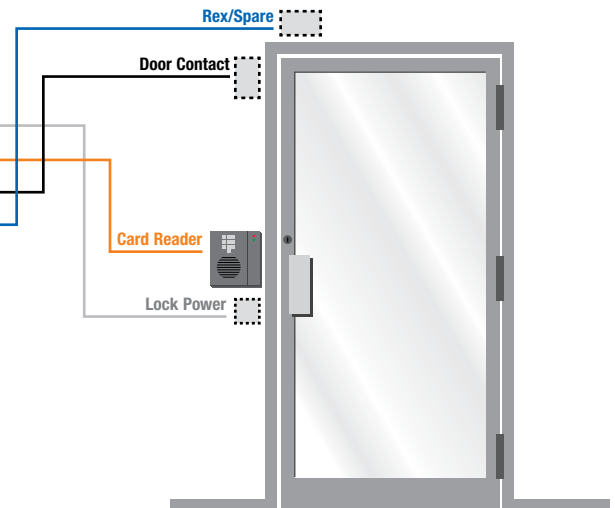
Packaging:

- 500' and 1000' reels

CATALOG NUMBER	OVERALL NOMINAL O.D. INCH (MM)	COMPONENT NO.	COMPONENT DESCRIPTIONS	CONDUCTORS COLOR CODE	COMPONENT NOMINAL O.D. INCH (MM)	INSULATION THICKNESS INCH (MM)
4EPL4S	0.430	1	4 Cond, 18 AWG, Shielded	White, Black, Red, Green	0.180 (4.572)	0.008 (0.2032)
		2	3 Pair, 22 AWG, Shielded	White & Green, Orange & Brown, Red & Black	0.195 (4.993)	0.008 (0.2032)
		3	2 Cond, 22 AWG, Shielded	Red, Black	0.125 (3.175)	0.008 (0.2032)
		4	4 Cond, 22 AWG, Shielded	White, Black, Red, Green	0.145 (3.683)	0.008 (0.2032)
4EPL1S	0.420	1	4 Cond, 18 AWG, Unshielded	White, Black, Red, Green	0.180 (4.572)	0.008 (0.2032)
		2	3 Pair, 22 AWG, Shielded	White & Green, Orange & Brown, Red & Black	0.195 (4.993)	0.008 (0.2032)
		3	2 Cond, 22 AWG, Unshielded	Red, Black	0.125 (3.175)	0.008 (0.2032)
		4	4 Cond, 22 AWG, Unshielded	White, Black, Red, Green	0.145 (3.683)	0.008 (0.2032)

Jacket Color Coding & Component Application

Jacket Color	Component	Cable Type	Application
Gray	1	4 Conductor, 18 AWG	Lock Power
Orange	2	3 Pair, 22 AWG	Card Reader
White	3	2 Conductor, 22 AWG	Door Contact
Blue	4	4 Conductor, 22 AWG	Rex/Spare



Composite Access Control Cable, Riser

NEC Type CMR, UL, c(UL)

Product Construction:

Conductor:

- Stranded bare copper

Jacket:

- PVC
- Temperature range: -20°C to +60°C
- Individual elements marked for application (see diagram below)
- Blue overall jacket

Shields:

- Choice between all 4 elements shielded or just the 3-pair shielded

Applications:

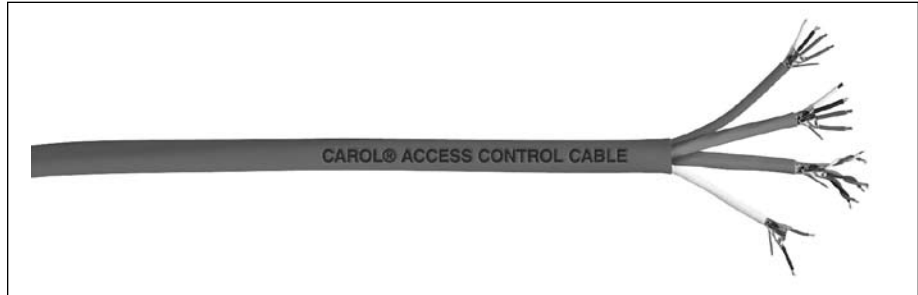
- Security systems
- Access control
- Card reader
- Door control
- REX
- Power-limited controls

Compliances:

- NEC Article 800 Type CMR (UL), c(UL)
- RoHS Compliant Directive 2002/95/EC

Packaging:

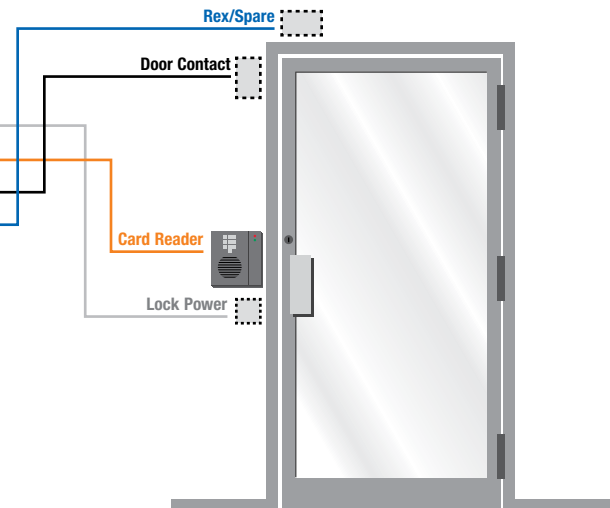
- 500' and 1000' reels



CATALOG NUMBER	OVERALL NOMINAL O.D. INCH (MM)	COMPONENT NO.	COMPONENT DESCRIPTIONS	CONDUCTORS COLOR CODE	COMPONENT NOMINAL O.D. INCH (MM)	INSULATION THICKNESS INCH (MM)
4ERS4S	0.430	1	4 Cond, 18 AWG, Shielded	White, Black, Red, Green	0.180 (4.572)	0.008 (0.2032)
		2	3 Pair, 22 AWG, Shielded	White & Green, Orange & Brown, Red & Black	0.195 (4.993)	0.008 (0.2032)
		3	2 Cond, 22 AWG, Shielded	Red, Black	0.125 (3.175)	0.008 (0.2032)
		4	4 Cond, 22 AWG, Shielded	White, Black, Red, Green	0.145 (3.683)	0.008 (0.2032)
4ERS1S	0.420	1	4 Cond, 18 AWG, Unshielded	White, Black, Red, Green	0.180 (4.572)	0.008 (0.2032)
		2	3 Pair, 22 AWG, Shielded	White & Green, Orange & Brown, Red & Black	0.195 (4.993)	0.008 (0.2032)
		3	2 Cond, 22 AWG, Unshielded	Red, Black	0.125 (3.175)	0.008 (0.2032)
		4	4 Cond, 22 AWG, Unshielded	White, Black, Red, Green	0.145 (3.683)	0.008 (0.2032)

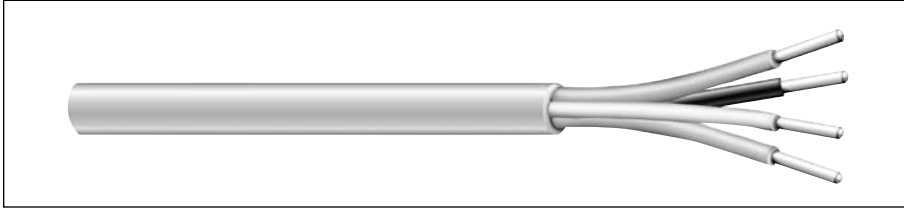
Jacket Color Coding & Component Application

Jacket Color	Component	Cable Type	Application
Gray	1	4 Conductor, 18 AWG	Lock Power
Orange	2	3 Pair, 22 AWG	Card Reader
White	3	2 Conductor, 22 AWG	Door Contact
Blue	4	4 Conductor, 22 AWG	Rex/Spare



Multi-Conductor, Unshielded, Riser

NEC Type CMR and/or CL3R



Product Construction:

Conductor:

- Stranded or solid bare copper per ASTM B-3, B-8 and B-286

Insulation:

- Premium-grade, color-coded S-R PVC
- Color code: See chart below

Jacket:

- Premium-grade, gray PVC
- Sequential footage markings to facilitate installation
- Temperature range: -20°C to +75°C
- Includes ripcord

Applications:

- Power-limited control circuits
- Wiring of the following systems:
 - Intercom
 - Security
 - Audio
 - Background music
- Suggested voltage rating: 300 volts

Compliances:

- NEC Article 725 Type CL3R (UL: 75°C, 150V)
- NEC Article 800 Type CMR (UL: 75°C, 300V)
- RoHS Compliant Directive 2002/95/EC
- California State Fire Marshall Approved

Packaging:

- Please contact Customer Service for packaging and color options

Color Code Chart

NO. OF COND.	COLOR	NO. OF COND.	COLOR
1	Black	7	Orange
2	Red	8	Yellow
3	White	9	Violet
4	Green	10	Gray
5	Brown	11	Pink
6	Blue	12	Tan

CATALOG NUMBER	NO. OF COND.	AWG SIZE	COND. STRAND	NOM. INSULATION THICKNESS		NOM. JACKET WALL		NOMINAL O.D.	
				INCHES	mm	INCHES	mm	INCHES	mm

22 AWG CONDUCTORS

E1000S	2	22	Solid	0.007	0.20	0.015	0.38	0.118	3.00
E1001S	4	22	Solid	0.007	0.20	0.015	0.38	0.126	3.20
E1002S	2	22	7/30	0.008	0.20	0.015	0.38	0.122	3.10
E1003S	3	22	7/30	0.008	0.20	0.015	0.38	0.141	3.58
E1004S	4	22	7/30	0.008	0.20	0.015	0.38	0.141	3.66
E1006S	6	22	7/30	0.008	0.20	0.015	0.38	0.164	4.17
E1008S	8	22	7/30	0.008	0.20	0.015	0.38	0.180	4.57
E1010S	10	22	7/30	0.008	0.20	0.015	0.38	0.212	5.38
E1012S	12	22	7/30	0.008	0.20	0.015	0.38	0.219	5.56

20 AWG CONDUCTORS

E1022S	2	20	7/28	0.007	0.18	0.015	0.38	0.134	3.40
E1023S	3	20	7/28	0.008	0.20	0.015	0.38	0.134	3.40
E1024S	4	20	7/28	0.008	0.20	0.015	0.38	0.142	3.60

18 AWG CONDUCTORS

E1030S	2	18	Solid	0.008	0.20	0.015	0.38	0.144	3.66
E1032S	2	18	7/26	0.009	0.23	0.015	0.38	0.156	3.96
E1033S	3	18	7/26	0.009	0.23	0.015	0.38	0.166	4.22
E1034S	4	18	7/26	0.009	0.23	0.015	0.38	0.187	4.75
E1036S	6	18	7/26	0.008	0.20	0.015	0.38	0.225	5.72
E1038S	8	18	7/26	0.008	0.20	0.015	0.38	0.245	6.22
E1040S	10	18	7/26	0.008	0.20	0.015	0.38	0.282	7.16
E1041S	12	18	7/26	0.009	0.23	0.015	0.38	0.291	7.39

16 AWG CONDUCTORS

E1042S	2	16	19/.0117	0.009	0.25	0.015	0.38	0.178	4.52
E1043S	3	16	19/.0117	0.009	0.25	0.015	0.38	0.193	4.90
E1044S	4	16	19/.0117	0.009	0.25	0.015	0.38	0.210	5.33

14 AWG CONDUCTORS

E1052S*	2	14	19/.0147	0.013	0.33	0.015	0.38	0.224	5.69
E1054S*	4	14	19/.0147	0.013	0.33	0.015	0.38	0.264	6.71

12 AWG CONDUCTORS

E1062S*	2	12	19/.0185	0.013	0.33	0.015	0.38	0.260	6.60
E1064S*	4	12	19/.0185	0.013	0.33	0.015	0.38	0.312	7.92

* NEC CL3R only



Multi-Conductor, Shielded, Riser

NEC Type CMR and/or CL3R

Product Construction:

Conductor:

- Stranded or solid bare copper per ASTM B-3, B-8 and B-286

Insulation:

- Premium-grade, color-coded S-R PVC
- Color code: See chart below

Shield:

- Overall Flexfoil® polyester supported aluminum foil
- Stranded tinned copper drain wire

Jacket:

- Premium-grade, gray PVC
- Sequential footage markings to facilitate installation
- Temperature range: -20°C to +75°C
- Includes ripcord

Applications:

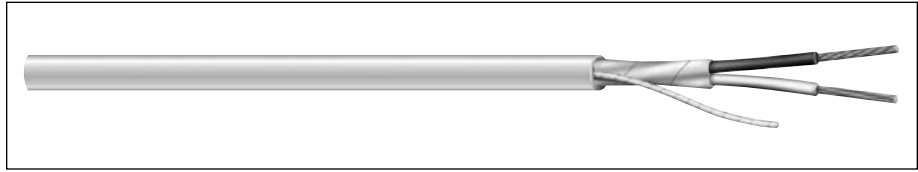
- Power-limited control circuits
- Wiring of the following systems:
 - Intercom
 - Security
 - Audio
 - Background music
- Suggested voltage rating: 300 volts

Compliances:

- NEC Article 725 Type CL3R (UL: 75°C, 150V)
- NEC Article 800 Type CMR (UL: 75°C, 300V)
- RoHS Compliant Directive 2002/95/EC
- California State Fire Marshall Approved

Packaging:

- Please contact Customer Service for packaging and color options



CATALOG NUMBER	NO. OF COND.	AWG SIZE	COND. STRAND	NOM. INSULATION THICKNESS		NOM. JACKET WALL		NOMINAL O.D.	
				INCHES	mm	INCHES	mm	INCHES	mm

22 AWG CONDUCTORS

E2000S	2	22	Solid	0.008	0.20	0.015	0.38	0.117	2.97
E2002S	2	22	7/30	0.008	0.20	0.015	0.38	0.132	3.35
E2003S	3	22	7/30	0.008	0.20	0.015	0.38	0.135	3.43
E2004S	4	22	7/30	0.008	0.20	0.015	0.38	0.147	3.73
E2006S	6	22	7/30	0.008	0.20	0.015	0.38	0.173	4.39
E2008S	8	22	7/30	0.008	0.20	0.015	0.38	0.195	4.95
E2010S	10	22	7/30	0.008	0.20	0.015	0.38	0.218	5.54
E2012S	12	22	7/30	0.010	0.25	0.015	0.38	0.238	6.05

20 AWG CONDUCTORS

E2022S	2	20	7/28	0.007	0.18	0.015	0.38	0.142	3.61
E2023S	3	20	7/28	0.008	0.20	0.015	0.38	0.151	3.84
E2024S	4	20	7/28	0.007	0.18	0.015	0.38	0.171	4.34

18 AWG CONDUCTORS

E2030S	2	18	Solid	0.009	0.20	0.015	0.38	0.147	3.73
E2032S	2	18	7/26	0.009	0.23	0.015	0.38	0.164	4.17
E2033S	3	18	7/26	0.009	0.23	0.015	0.38	0.172	4.37
E2034S	4	18	7/26	0.009	0.23	0.015	0.38	0.187	4.75
E2036S	6	18	7/26	0.008	0.20	0.015	0.38	0.230	5.54
E2038S	8	18	7/26	0.008	0.20	0.015	0.38	0.250	6.35
E2040S	10	18	7/26	0.008	0.20	0.015	0.38	0.287	7.29
E2041S	12	18	7/26	0.008	0.20	0.015	0.38	0.296	7.52

16 AWG CONDUCTORS

E2042S	2	16	19/.0117	0.009	0.23	0.015	0.38	0.189	4.80
E2043S	3	16	19/.0117	0.009	0.23	0.015	0.38	0.198	5.03
E2044S	4	16	19/.0117	0.009	0.23	0.015	0.38	0.219	5.56

14 AWG CONDUCTORS

E2052S*	2	14	19/.0147	0.013	0.33	0.015	0.38	0.245	6.22
E2054S*	4	14	19/.0147	0.013	0.33	0.015	0.38	0.269	6.83

12 AWG CONDUCTORS

E2062S*	2	12	19/.0185	0.013	0.33	0.015	0.38	0.281	7.14
E2064S*	4	12	19/.0185	0.013	0.33	0.015	0.38	0.312	7.92

* NEC CL3R only

Color Code Chart

NO. OF COND.	COLOR	NO. OF COND.	COLOR
1	Black	7	Orange
2	Red	8	Yellow
3	White	9	Violet
4	Green	10	Gray
5	Brown	11	Pink
6	Blue	12	Tan

Multi-Conductor, Unshielded, Plenum

NEC Type CMP and/or CL3P



Product Construction:

Conductor:

- Stranded or solid bare copper per ASTM B-3, B-8 and B-286

Insulation:

- Premium-grade, color-coded Flexguard® PVC
- Color code: See chart below

Jacket:

- Premium-grade natural Flexguard® PVC
- Sequential footage markings to facilitate installation
- Temperature range: 0°C to +75°C
- Ripcord available—consult Customer Service for details

Applications:

- Power-limited control circuits
- Wiring of the following systems:
 - Intercom
 - Security
 - Audio
 - Background music
- Suggested voltage rating: 300 volts

Compliances:

- NEC Article 725 Type CL3P (UL: 75°C, 150V)
- NEC Article 800 Type CMP (UL: 75°C, 300V)
- Designed to meet NFPA 262 Flame Test
- California State Fire Marshall Approved

Packaging:

- Please contact Customer Service for packaging and color options

Color Code Chart

NO. OF COND.	COLOR	NO. OF COND.	COLOR
1	Black	7	Orange
2	Red	8	Yellow
3	White	9	Violet
4	Green	10	Gray
5	Brown	11	Pink
6	Blue	12	Tan

CATALOG NUMBER	NO. OF COND.	AWG SIZE	COND. STRAND	NOM. INSULATION THICKNESS		NOM. JACKET WALL		NOMINAL O.D.	
				INCHES	mm	INCHES	mm	INCHES	mm

22 AWG CONDUCTORS

E3000S	2	22	Solid	0.007	0.18	0.015	0.38	0.108	2.74
E3001S	4	22	Solid	0.007	0.18	0.015	0.38	0.124	3.15
E3002S	2	22	7/30	0.008	0.20	0.015	0.38	0.120	3.05
E3003S	3	22	7/30	0.008	0.20	0.015	0.38	0.127	3.23
E3004S	4	22	7/30	0.008	0.20	0.015	0.38	0.139	3.53
E3006S	6	22	7/30	0.008	0.20	0.015	0.38	0.164	4.17
E3008S	8	22	7/30	0.008	0.20	0.015	0.38	0.178	4.52
E3010S	10	22	7/30	0.008	0.20	0.015	0.38	0.194	4.92
E3012S	12	22	7/30	0.008	0.20	0.015	0.38	0.211	5.36

20 AWG CONDUCTORS

E3022S	2	20	7/28	0.009	0.23	0.015	0.38	0.138	3.51
E3023S	3	20	7/28	0.009	0.23	0.015	0.38	0.146	3.71
E3024S	4	20	7/28	0.009	0.23	0.015	0.38	0.161	4.09

18 AWG CONDUCTORS

E3030S	2	18	Solid	0.008	0.20	0.015	0.38	0.142	3.61
E3032S	2	18	7/26	0.008	0.20	0.015	0.38	0.156	3.96
E3033S	3	18	7/26	0.008	0.20	0.015	0.38	0.166	4.22
E3034S	4	18	7/26	0.008	0.20	0.015	0.38	0.187	4.75
E3036S	6	18	7/26	0.008	0.20	0.015	0.38	0.216	5.49
E3038S	8	18	7/26	0.008	0.20	0.015	0.38	0.235	5.97

16 AWG CONDUCTORS

E3042S	2	16	19/.0117	0.008	0.20	0.015	0.38	0.174	4.42
E3043S	3	16	19/.0117	0.008	0.20	0.015	0.38	0.185	4.70
E3044S	4	16	19/.0117	0.009	0.23	0.015	0.38	0.205	5.21

14 AWG CONDUCTORS

E3052S*	2	14	19/.0147	0.011	0.28	0.015	0.38	0.216	5.49
E3054S*	4	14	19/.0147	0.011	0.28	0.015	0.38	0.255	6.48

12 AWG CONDUCTORS

E3062S*	2	12	19/.0185	0.011	0.28	0.015	0.38	0.252	6.40
E3064S*	4	12	19/.0185	0.011	0.28	0.015	0.38	0.298	7.57

* NEC CL3P only



Multi-Conductor, Shielded, Plenum

NEC Type CMP and/or CL3P

Product Construction:

Conductor:

- Stranded or solid bare copper per ASTM B-3, B-8 and B-286

Insulation:

- Premium-grade, color-coded Flexguard® PVC

Shield:

- Overall Flexfoil® polyester supported aluminum foil
- Stranded tinned copper drain wire

Jacket:

- Premium-grade natural Flexguard® PVC
- Sequential footage markings to facilitate installation
- Temperature range: 0°C to +75°C
- Ripcord available—consult Customer Service for details

Applications:

- Power-limited control circuits
- Wiring of the following systems:
 - Intercom
 - Security
 - Audio
 - Background music
- Suggested voltage rating: 300 volts

Compliances:

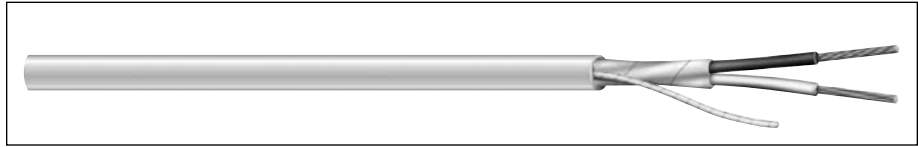
- NEC Article 725 Type CL3P (UL: 75°C, 150V)
- NEC Article 800 Type CMP (UL: 75°C, 300V)
- Designed to meet NFPA 262 Flame Test
- California State Fire Marshall Approved

Packaging:

- Please contact Customer Service for packaging and color options

Color Code Chart

NO. OF COND.	COLOR
1	Black
2	Red
3	White
4	Green
5	Brown
6	Blue
7	Orange
8	Yellow



CATALOG NUMBER	NO. OF COND.	AWG SIZE	COND. STRAND	NOM. INSULATION THICKNESS		NOM. JACKET WALL		NOMINAL O.D.	
				INCHES	mm	INCHES	mm	INCHES	mm

22 AWG CONDUCTORS

E2100S	2	22	Solid	0.007	0.18	0.015	0.38	0.116	2.95
E2102S	2	22	7/30	0.008	0.20	0.015	0.38	0.128	3.25
E2103S	3	22	7/30	0.008	0.20	0.015	0.38	0.131	3.33
E2104S	4	22	7/30	0.008	0.20	0.015	0.38	0.147	3.73
E2106S	6	22	7/30	0.008	0.20	0.015	0.38	0.176	4.47
E2108S	8	22	7/30	0.010	0.25	0.015	0.38	0.184	4.67

20 AWG CONDUCTORS

E2122S	2	20	7/28	0.009	0.23	0.015	0.38	0.143	3.63
E2123S	3	20	7/28	0.009	0.23	0.015	0.38	0.151	3.84
E2124S	4	20	7/28	0.009	0.23	0.015	0.38	0.166	4.22

18 AWG CONDUCTORS

E2200S	2	18	Solid	0.008	0.20	0.015	0.38	0.148	3.76
E2202S	2	18	7/26	0.008	0.20	0.015	0.38	0.164	4.17
E2203S	3	18	7/26	0.008	0.20	0.015	0.38	0.169	4.29
E2204S	4	18	7/26	0.008	0.20	0.015	0.38	0.185	4.70
E2206S	6	18	7/26	0.010	0.25	0.015	0.38	0.230	5.84
E2208S	8	18	7/26	0.010	0.25	0.015	0.38	0.252	6.40

16 AWG CONDUCTORS

E2242S	2	16	19/.0117	0.008	0.20	0.015	0.38	0.179	4.55
E2243S	3	16	19/.0117	0.008	0.20	0.015	0.38	0.190	4.83
E2244S	4	16	19/.0117	0.008	0.20	0.015	0.38	0.209	5.31

14 AWG CONDUCTORS

E2252S*	2	14	19/.0147	0.008	0.20	0.015	0.38	0.207	5.26
E2254S*	4	14	19/.0147	0.008	0.20	0.015	0.38	0.260	6.60

12 AWG CONDUCTORS

E2262S*	2	12	19/.0185	0.008	0.20	0.015	0.38	0.244	6.20
E2264S*	4	12	19/.0185	0.008	0.20	0.015	0.38	0.288	7.32

* NEC CL3P only

Burglar Alarm Cable also available in 500' Coil Packs*

Telephone Station/Intercom & Speaker/ Burglar Alarm

NEC Types CMR or CM/CL2 and CMX-Outdoor



Product Construction:

Conductor:

- Solid or stranded bare copper per ASTM B-3

Insulation:

- Semi-rigid, flame-retardant PVC
- Color code: See chart below

Core:

- Conductors in a quad configuration (C4412)

Jacket:

- Low-temperature, flame-retardant beige PVC (-20°C to +60°C)
- Sequential footage markings to facilitate installation
- Cables are suitable for installation with T-18 staples

Applications:

- Intercom systems and speaker extension service
- Suggested voltage rating: 300 volts
- **C4413 only:** Product is in conformance with TIA 568C, TIA 570B standards and the FCC Part 68 ruling which requires telephone system cables for voice and data services into homes to be at minimum category 3, 2 pr. 22 AWG solid.

Compliances:

- NEC Article 800 Type CMR/CMX-Indoor/Outdoor; UL Listed (60°C, 300V)
- Coil Packs (500') - NEC Article 800 Type CM/CMX-Indoor/Outdoor; ETL Listed
- Coil Packs (500') - NEC Article 725 Type CL2; ETL Listed
- C4413 only, Category 3
- RoHS Compliant Directive 2002/95/EC

Packaging:

- Please contact Customer Service for packaging and color options

CATALOG NUMBER	NO. OF COND.	AWG SIZE	COND. STRAND	NOM. INSULATION THICKNESS		NOM. JACKET THICKNESS		NOMINAL O.D.	
				INCHES	mm	INCHES	mm	INCHES	mm
INTERCOM, SPEAKER AND BURGLAR ALARM									
C4408*	2	22	Solid	0.007	0.18	0.020	0.51	0.115	2.92
C4408ST*	2	22	7/.0096	0.007	0.18	0.020	0.51	0.125	3.18
C4410	3	22	Solid	0.007	0.18	0.016	0.41	0.118	3.00
C4412*	4	22	Solid	0.007	0.18	0.015	0.38	0.125	3.18
C4412ST*	4	22	7/.0096	0.007	0.18	0.015	0.38	0.135	3.43

Color Code Chart

NO. OF PAIRS	COLOR	NO. OF PAIRS	COLOR
1	Red	3	Yellow
2	Green	4	Black



TELEPHONE STATION

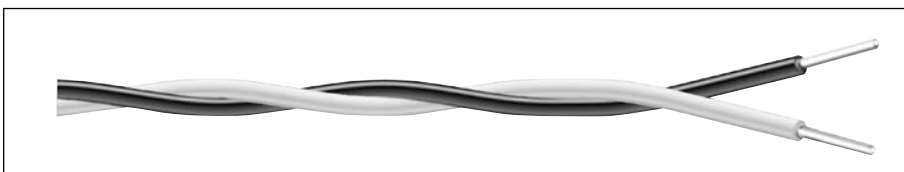
CATEGORY 3

CATALOG NUMBER	NO. OF PAIRS	AWG SIZE	COND. STRAND	NOM. INSULATION THICKNESS		NOM. JACKET THICKNESS		NOMINAL O.D.	
				INCHES	mm	INCHES	mm	INCHES	mm
C4413	2	24	Solid	0.007	0.18	0.015	0.38	0.145 x 0.095	3.68 x 2.41

Note: Outdoor rating allows cable to be exposed for short distances from the network interface device on the outside of the house to the point where the cable enters the house. This type of cable is not to be buried or direct buried.

Color Code Chart (Bandmarked)

NO. OF PAIRS	COLOR	NO. OF PAIRS	COLOR
1	White-Blue Band Blue	2	White-Orange Band Orange



BURGLAR ALARM

CATALOG NUMBER	NO. OF COND.	AWG SIZE	COND. STRAND	NOM. INSULATION THICKNESS		NOMINAL O.D.		NOM.* C-C CAP. pF/ft
				INCHES	mm	INCHES	mm	
C6310	2	22	7/30	0.024	0.61	0.156	3.96	20.0
C6311	2	20	7/28	0.024	0.61	0.172	4.37	22.5
C6312	2	18	7/0.015	0.024	0.61	0.192	4.88	24.5
C6313	3	18	7/0.015	0.024	0.61	0.202	5.13	28.5

*Capacitance between conductors

Color Code Chart

STOCK COLORS	ORDERING SUFFIX	STOCK COLORS	ORDERING SUFFIX
1. White-White	02	3. Black-White	96
2. Brown-Brown	08		

Product Construction:

Conductor:

- 22 thru 18 AWG one tinned/one bare fully annealed stranded copper
- Stranded bare copper per ASTM B-3 or stranded tinned copper per ASTM B-33

Insulation:

- Premium-grade, color-coded PVC
- Temperature range: -20°C to +60°C
- Color code: See chart below

Applications:

- Burglar alarms
- Intercom systems
- Remote control circuits
- Suggested voltage rating: 150 volts

Features:

- Polarity ridge for easy identification

Compliances:

- NEC Article 725 Type CL2 (UL: 60°C, 150V)
- RoHS Compliant Directive 2002/95/EC
- Designed to meet UL 70,000 BTU Vertical Tray Flame Test

Packaging:

- Please contact Customer Service for packaging and color options



Designed to Meet UL Vertical Tray Flame Test

Underwriters Laboratories Inc.



Antenna Rotor

Product Construction:

Conductor:

- 22 thru 18 AWG fully annealed stranded bare copper per ASTM B-3

Insulation:

- Premium-grade, color-coded PVC
- Color code: See charts below

Jacket:

- Permaline® polyethylene, black
- Temperature range: -20°C to +60°C

Applications:

- Rotor antenna controls
- Outdoor installations
- Direct burial
- Suggested voltage rating: 200 volts

Features:

- Permaline® jackets resist deterioration
- Sunlight-resistant
- Moisture- and salt-resistant

Compliances:

- RoHS Compliant Directive 2002/95/EC



CATALOG NUMBER	NO. OF COND.	AWG SIZE	COND. STRAND	NOM. INSULATION THICKNESS		NOM. JACKET THICKNESS		NOMINAL O.D.	
				INCHES	mm	INCHES	mm	INCHES	mm
C5076	4	22	7/30	0.010	0.25	0.022	0.56	0.165	4.19
C5086	5	22	7/30	0.010	0.25	0.022	0.56	0.175	4.45
C5096	8	22	7/30	0.010	0.25	0.020	0.51	0.205	5.21
C5078	4	20	10/30	0.009	0.23	0.023	0.58	0.180	4.57
C5460†	2	18	16/30	0.016	0.25	0.020	0.51	0.208	5.28
C5084	4	18	16/30	0.016	0.40	0.030	0.76	0.245	6.22

†Color Code Black/Red

Product Construction:

Conductor:

- 22 thru 16 AWG fully annealed stranded bare copper per ASTM B-3

Insulation:

- Premium-grade, color-coded PVC
- Color code: See chart below

Jacket:

- PVC, chrome gray or black (C4080, C4090)
- Temperature range: -20°C to +80°C

Applications:

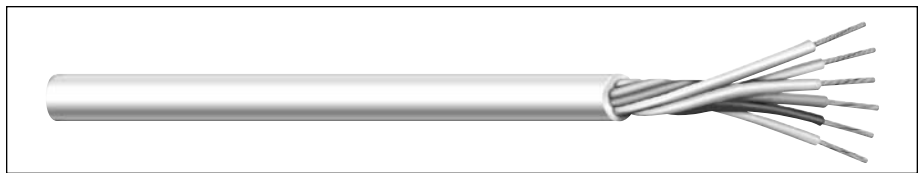
- Compatible with Alliance Ham/CB and TV rotors
- Suggested voltage rating: 200 volts

Compliances:

- RoHS Compliant Directive 2002/95/EC

Packaging:

- Please contact Customer Service for packaging and color options



CATALOG NUMBER	NO. OF COND.	AWG SIZE	COND. STRAND	NOM. INSULATION THICKNESS		NOM. JACKET THICKNESS		NOMINAL O.D.	
				INCHES	mm	INCHES	mm	INCHES	mm
C1118	4	22	7/30	0.010	0.25	0.020	0.51	0.161	4.09
C1124	5	22	7/30	0.010	0.25	0.020	0.51	0.175	4.45
C1130	8	22	7/30	0.010	0.25	0.020	0.51	0.205	5.21
C1119	4	20	10/30	0.010	0.25	0.020	0.51	0.180	4.57
C1126	5	20	10/30	0.010	0.25	0.020	0.51	0.197	5.00
C1123	4	18	16/30	0.016	0.40	0.030	0.76	0.255	6.48

COMBINATION ROTOR CABLE

C4080	8	6-22 2-18	7/30 16/30	0.012 0.016	0.30 0.41	0.030	0.76	0.260	6.60
C4090	8	6-20 2-16	10/30 26/30	0.010 0.016	0.25 0.41	0.030	0.76	0.280	7.11

Antenna Rotor Cable Color Code Chart

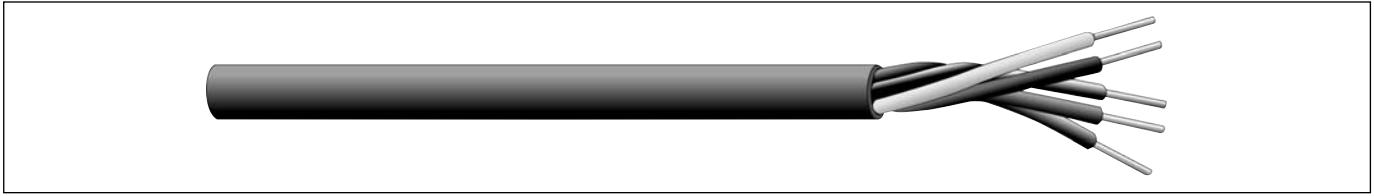
NO. OF COND.	COLOR
1	Black
2	White
3	Red
4	Green
5	Yellow
6	Blue
7	Brown
8	Orange

Combination Rotor Cable Color Code Chart

NO. OF COND.	COLOR
16/18 ga.	
1	Black
2	Red
20/22 ga.	
1	White
2	Green
3	Yellow
4	Blue
5	Brown
6	Orange

Low-Voltage Sprinkler Wire

60°C 30 Volts UL



CATALOG NUMBER	NO. OF COND.	AWG SIZE	LENGTH OF CORD (FEET)	PACKAGE TYPE	POWER RATING ⁽¹⁾			PKG PER CTN.	APPROX. WEIGHT PER CTN (LBS) ^(S)	CARTON DIMENSIONS (H x W x D)	UPC NUMBER
					VOLTS	AMPS	WATTS				

LOW VOLTAGE SPRINKLER WIRE - 30 VOLTS - UL

23824-60-01	4	18	100	Cuff	30	15	450	6	22	8.5 x 12.25 x 14	079407238248
23804-18-01	4	18	500	Spool	30	15	450	1	18	10.625 x 10.625 x 6.313	079407908047
23815-60-01	5	18	50	Cuff	30	15	450	6	13	8.5 x 12.25 x 14	079407238156
23825-60-01	5	18	100	Cuff	30	15	450	6	27	9.5 x 14 x 17	079407238255
23805-18-01	5	18	500	Spool	30	15	450	1	22	10.625 x 10.625 x 6.313	079407908054
23817-60-01	7	18	50	Cuff	30	15	450	6	18	8.5 x 12.25 x 14	079407238170
23827-60-01	7	18	100	Cuff	30	15	450	6	36	9.5 x 14 x 17	079407238279
23807-18-01	7	18	500	Spool	30	15	450	1	31	10.625 x 10.625 x 6.313	079407908078
23810-18-01	10	18	500	Reel	30	15	450	1	44	—	079407908108

(1) Amps and watts are offered ONLY as a guide to the end user.
 (S) Actual shipping weight may vary.

Color Code Chart

NO. OF CONDUCTORS	COLOR
1	Black
2	White
3	Red
4	Green
5	Orange
6	Yellow
7	Blue
8	Brown
9	Gray
10	Purple

Product Construction:

Conductor:

- 18 AWG fully annealed solid bare copper per ASTM B-3

Insulation:

- Premium-grade, color-coded PVC
- Premium-grade PE jacket, black
- Nylon rip cord to facilitate jacket removal
- Temperature range: -20°C to +60°C
- Color code: See chart at right

Jacket Marking:

- CAROL (SIZE) 30V SPRINKLER SYSTEMS WIRE - DIRECT BURIAL E54567 (UL)

Applications:

- Low-voltage golf course satellite sprinkler control
- Residential sprinkler solenoid control

Compliances:

- UL Listed under a UL Miscellaneous Wire file
- UL Listed for outdoors applications
- UL Listed for direct burial applications

Packaging:

- See tabular data above
- Please contact Customer Service for packaging and color options



Thermostat Wire

60°C 30 Volt CSA Type LVT

Product Construction:

Conductors:

- 8 AWG annealed solid bare copper per ASTM B-3

Insulation:

- Premium-grade, color-coded PVC
- Color code: See chart below

Jacket:

- Polyvinylchloride (PVC), brown
- Temperature range: -20°C to +60°C

Jacket Marking:

- CAROL (SIZE) CSA LL# TYPE LVT FT-4

Applications:

- Thermostat control
- Heating and air conditioning installations
- Touch-plate systems
- Burglar alarms
- Intercom systems
- Door bells
- Annunciator and bell systems
- Remote control units
- Signal systems
- Other low-voltage installations

Compliances:

- CSA Type LVT
- RoHS Compliant Directive 2002/95/EC

Packaging:

- Please contact Customer Service for packaging and color options



CATALOG NUMBER	NO. OF COND.	AWG SIZE	COND. STRAND	NOM. INSULATION THICKNESS		NOMINAL O.D.		APPROX. NET WEIGHT LBS/m ^(S)	STD. CTN.
				INCHES	mm	INCHES	mm		

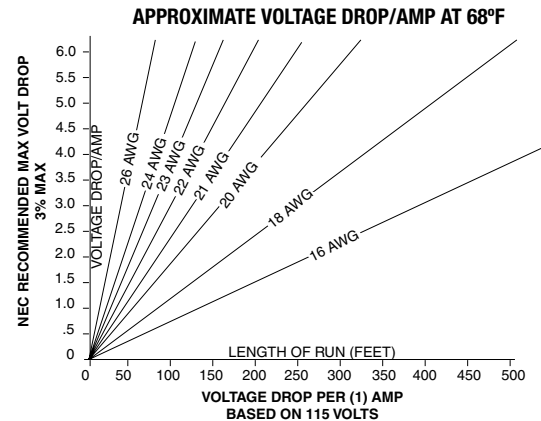
18 AWG THERMOSTAT WIRE – 30 VOLT – CSA TYPE LVT

05092	2	18	Solid	0.017	0.43	0.210	5.33	25	2000'
05093*	3	18	Solid	0.017	0.43	0.222	5.64	33	500'
05094	4	18	Solid	0.017	0.43	0.242	6.15	41	1000'
05095	5	18	Solid	0.017	0.43	0.262	6.65	50	1000'
05096*	6	18	Solid	0.017	0.43	0.280	7.11	60	1000'
05097*	7	18	Solid	0.017	0.43	0.285	7.24	65	1000'
05098*	8	18	Solid	0.017	0.43	0.304	7.75	74	1000'
05099*	9	18	Solid	0.017	0.43	0.328	8.33	83	1000'
05091*	10	18	Solid	0.017	0.43	0.360	9.14	92	250'

*Non-stock item; minimum quantity purchase required.
(S) Actual shipping weight may vary.

Color Code Chart

NO. OF CONDUCTORS	COLORS
2	White, Red
3	White, Red, Green
4	White, Red, Green, Blue
5	White, Red, Green, Blue, Yellow
6	White, Red, Green, Blue, Yellow, Brown
7	White, Red, Green, Blue, Yellow, Brown, Orange
8	White, Red, Green, Blue, Yellow, Brown, Orange, Black
9	White, Red, Green, Blue, Yellow, Brown, Orange, Black, Purple
10	White, Red, Green, Blue, Yellow, Brown, Orange, Black, Purple, Gray



Thermostat Wire

105°C 150 Volt UL Type CL2



CATALOG NUMBER	NO. OF COND.	AWG SIZE	COND. STRAND	NOM. INSULATION THICKNESS		NOMINAL O.D.		APPROX. NET WEIGHT LBS/m ^(S)	STD. CTN.
				INCHES	mm	INCHES	mm		

20 AWG THERMOSTAT WIRE – 150 VOLT – UL TYPE CL2

05482	2	20	Solid	0.008	0.203	0.128	3.25	11	1000'
05483	3	20	Solid	0.008	0.203	0.135	3.43	16	1000'
05484	4	20	Solid	0.008	0.203	0.144	3.66	19	500'
05485	5	20	Solid	0.008	0.203	0.158	4.01	24	500'
05486	6	20	Solid	0.008	0.203	0.177	4.46	27	500'
05487	7	20	Solid	0.008	0.203	0.175	4.45	31	500'
05488	8	20	Solid	0.008	0.203	0.186	4.72	35	500'
05489	9	20	Solid	0.008	0.203	0.210	5.33	40	500'
05481	10	20	Solid	0.008	0.203	0.235	5.97	45	250'

18 AWG THERMOSTAT WIRE – 150 VOLT – UL TYPE CL2

05582	2	18	Solid	0.009	0.203	0.155	3.94	16	1000'
05583	3	18	Solid	0.009	0.203	0.164	4.17	22	1000'
05584	4	18	Solid	0.009	0.203	0.180	4.57	28	500'
05585	5	18	Solid	0.009	0.203	0.200	5.08	36	500'
05586	6	18	Solid	0.009	0.203	0.215	5.46	42	500'
05587	7	18	Solid	0.009	0.203	0.215	5.46	48	500'
05588	8	18	Solid	0.009	0.203	0.235	5.97	54	500'
05589	9	18	Solid	0.008	0.203	0.245	6.22	61	500'
05581	10	18	Solid	0.008	0.203	0.300	7.62	69	250'

(S) Actual shipping weight may vary.

Color Code Chart

NO. OF CONDUCTORS	COLOR
2	White, Red
3	White, Red, Green
4	White, Red, Green, Blue
5	White, Red, Green, Blue, Yellow
6	White, Red, Green, Blue, Yellow, Brown
7	White, Red, Green, Blue, Yellow, Brown, Orange
8	White, Red, Green, Blue, Yellow, Brown, Orange, Black
9	White, Red, Green, Blue, Yellow, Brown, Orange, Black, Purple
10	White, Red, Green, Blue, Yellow, Brown, Orange, Black, Purple, Gray

Product Construction:

Conductors:

- 20 and 18 AWG annealed solid bare copper per ASTM B-3

Insulation:

- Premium-grade, color-coded PVC
- Color code: See chart below

Jacket:

- Polyvinylchloride (PVC), white
- Temperature range: -20°C to +105°C

Jacket Marking:

- CAROL AWG TYPE CL2 E# (UL)
- 105°C SUNLIGHT RESISTANT - MADE IN USA

Applications:

- Thermostat control
- Heating and air conditioning installations
- Touch-plate systems
- Burglar alarms
- Intercom systems
- Door bells
- Annunciator and bell systems
- Remote control units
- Signal systems
- Other low-voltage installations

Industry Approvals:

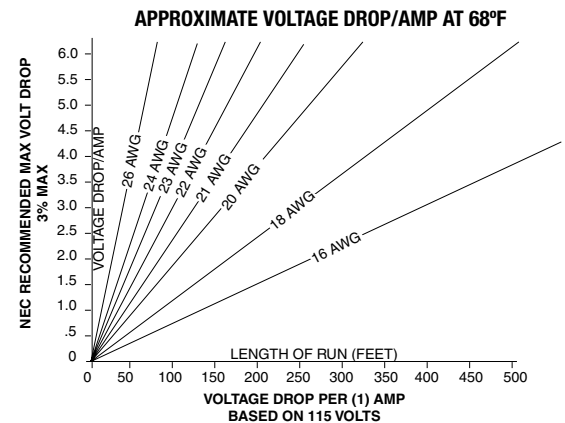
- UL Listed Type CL2

Compliances:

- RoHS Compliant Directive 2002/95/EC

Packaging:

- Please contact Customer Service for packaging and color options



Thermostat Wire, Unjacketed

60°C Low Voltage and Intercom Cable

Product Construction:

Conductors:

- 20 AWG annealed solid bare copper per ASTM B-3

Insulation:

- Premium-grade, color-coded PVC
- Temperature range: -20°C to +60°C
- Color code: See chart below

Jacket:

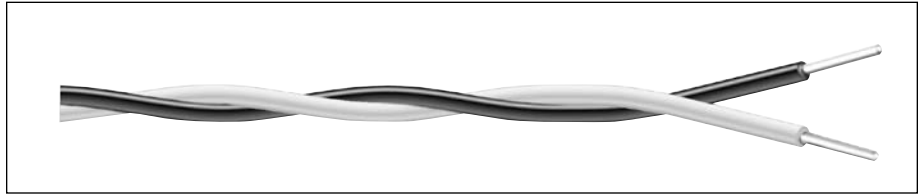
- This product is unjacketed

Applications:

- Thermostat control
- Heating and air conditioning installations
- Touch-plate systems
- Burglar alarms
- Intercom systems
- Door bells
- Annunciator and bell systems
- Remote control units
- Signal systems
- Other low-voltage installations

Packaging:

- Please contact Customer Service for packaging and color options



CATALOG NUMBER	NO. OF COND.	AWG SIZE	COND. STRAND	NOM. INSULATION THICKNESS		NOMINAL O.D.		APPROX. NET WEIGHT LBS/m ^(S)	STD. CTN.
				INCHES	mm	INCHES	mm		

20 AWG – TWISTED CONDUCTORS – NO JACKET

05782	2	20	Solid	0.008	0.203	0.098	2.49	7.5	4000'
05783	3	20	Solid	0.008	0.203	0.106	2.69	11.0	2000'
05784*	4	20	Solid	0.008	0.203	0.119	3.01	15.0	2000'
05785*	5	20	Solid	0.008	0.203	0.133	3.38	18.5	1000'
05786*	6	20	Solid	0.008	0.203	0.147	3.73	22.0	1000'
05788*	8	20	Solid	0.008	0.203	0.162	4.11	30.0	1000'

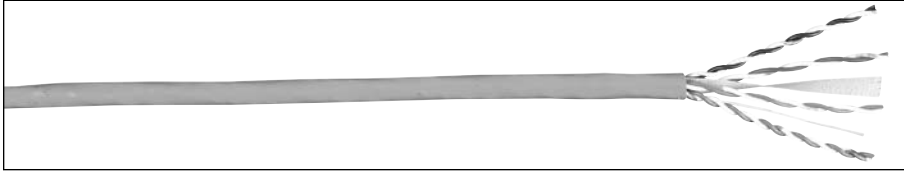
*Non-stock item; minimum quantity purchase required.
(S) Actual shipping weight may vary.

Color Code Chart

NO. OF CONDUCTORS	COLOR
2	White, Red
3	White, Red, Green
4	White, Red, Green, Blue
5	White, Red, Green, Blue, Yellow
6	White, Red, Green, Blue, Yellow, Brown
8	White, Red, Green, Blue, Yellow, Brown, Orange, Black

Carol® Helix/Hi-Temp® Category 6 Cable

Standard-Compliant Solution



PART NUMBERS

JACKET COLOR	PULL-PAC® II		SPOOL-PAC®	
	CMR (NON-PLENUM)	CMP (PLENUM)	CMR (NON-PLENUM)	CMP (PLENUM)
Blue	CR6.30.07	CP6.30.07	CR6.A3.07	CP6.A3.07
White	CR6.30.02	CP6.30.02	CR6.A3.02	CP6.A3.02
Gray	CR6.30.10	CP6.30.10	CR6.A3.10	CP6.A3.10
Green	CR6.30.06	CP6.30.06	CR6.A3.06	CP6.A3.06
Yellow	CR6.30.05	CP6.30.05	CR6.A3.05	CP6.A3.05
Red	CR6.30.03	CP6.30.03	CR6.A3.03	CP6.A3.03

ELECTRICAL PERFORMANCE

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

Notes: Values are expressed in dB per 100m (328 ft.) length. Values above 250 MHz are for informational purposes only.

PHYSICAL DATA

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

ELECTRICAL CHARACTERISTICS

DC Resistance (max) Ohms/100m (328ft) @ 20°C	9.38
DC Resistance Unbalance (max) Individual Pair %	4.0
Delay Skew (max) ns/100m	45
Nom. Velocity of Propagation % Speed of Light	CMP: 70 CMR: 68
Characteristic Impedance	Ohms
Frequency (f):	1-250 MHz 100 ± 15
Input Impedance	Ohms
Frequency (f):	1-100 MHz 100 ± 15 100-250 MHz 100 ± 22

Data subject to change without notice.

Product Construction:

Conductors:

- 23 AWG solid bare annealed copper

Separator

- Tape

Insulation

- Non-Plenum: Polyolefin
- Plenum: Fluoropolymer

Rip Cord

- Applied longitudinally under jacket

Jacket

- Non-Plenum: flame-retardant PVC
- Plenum: low-smoke, flame-retardant PVC
- TRU-Mark® print legend contains footage markings from 1000' to 0'

Applications:

- IEEE 802.3: 1000 BASE-T (Gigabit Ethernet), 100 BASE-TX, 10 BASE-T
- ANSI/TIA/EIA 854: 1000 BASE-TX
- 155 Mp/s, 1.2 Gb/s ATM
- ANSI X3.263: 100 Mb/s
- IEEE 802.3af DTE Power (PoE)
- Digital video

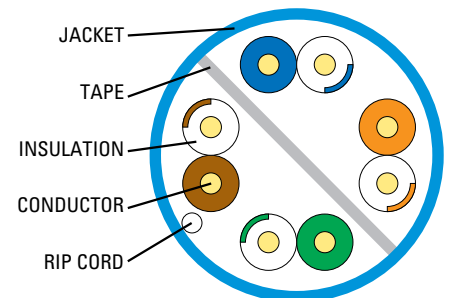
Compliances:

- ANSI/TIA/EIA 568 B.2-1 (Category 6)
- ANSI/TIA/EIA 862 (Building Automation)
- ISO/IEC 11801 Ed. 2.0 (Class E)
- ICEA S-102-700 (Category 6)
- UL & c(UL) Type CMP (NFPA 262 and CSA FT-6 Steiner Tunnel Fire Tests for Plenum Applications)
- UL 444
- RoHS Compliant Directive 2002/95/EC
- Third-party verified for guaranteed performance

Packaging:

- 1000' Pull-Pac® II
- 1000' Spool-Pac®

CATEGORY 6 CROSS-SECTION



CAROL BRAND

Helix/HiTemp®



Designed to Meet
 NFPA 262 and CSA FT-6
 Steiner Tunnel Fire Tests
 for Plenum Applications
 Underwriters Laboratories Inc.



General Cable

Carol® Helix/Hi-Temp® Category 5e Cable

Enhanced Transmission Throughput

Product Construction:

Conductors:

- 24 AWG solid bare annealed copper

Insulation

- Non-Plenum: Polyolefin
- Plenum: Fluoropolymer

Rip Cord

- Applied longitudinally under jacket

Jacket

- Non-Plenum: flame-retardant PVC
- Plenum: low-smoke, flame-retardant PVC
- TRU-Mark® print legend contains footage markings from 1000' to 0'

Applications:

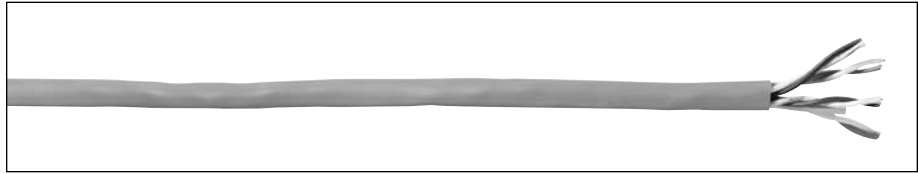
- IEEE 802.3: 1000 BASE-T (Gigabit Ethernet), 100 BASE-TX, 10 BASE-T
- 52/155 Mp/s ATM
- ANSI X3.263: 100 Mb/s
- 4/16 Mp/s token ring

Compliances:

- ANSI/TIA/EIA 568 B.2 (Category 5e)
- ICEA S-90-661 (Category 5e)
- UL & c(UL) Type CMR (UL 1666) for Non-Plenum
- UL & c(UL) Type CMP (NFPA 262 and CSA FT-6 Steiner Tunnel Fire Tests for Plenum Applications)
- UL 444
- RoHS Compliant Directive 2002/95/EC
- Third-party verified for guaranteed performance

Packaging:

- 1000' Pull-Pac® II
- 1000' Spool-Pac®



PART NUMBERS

JACKET COLOR	PULL-PAC® II		SPOOL-PAC®	
	CMR (NON-PLENUM)	CMP (PLENUM)	CMR (NON-PLENUM)	CMP (PLENUM)
Blue	CR5.30.07	CP5.30.07	CR5.A3.07	CP5.A3.07
White	CR5.30.02	CP5.30.02	CR5.A3.02	CP5.A3.02
Gray	CR5.30.10	CP5.30.10	CR5.A3.10	CP5.A3.10
Green	CR5.30.06	CP5.30.06	CR5.A3.06	CP5.A3.06
Yellow	CR5.30.05	CP5.30.05	CR5.A3.05	CP5.A3.05
Red	CR5.30.03	CP5.30.03	CR5.A3.03	CP5.A3.03

ELECTRICAL PERFORMANCE

FREQUENCY MHZ	PSACR (MIN)	AGR (MIN)	ATTENUATION (MAX)	PSNEXT (MIN)	NEXT (MIN)	PSELFEXT (MIN)	ELFEXT (MIN)	RETURN LOSS (MIN)
1	60.3	63.3	2.0	62.3	65.3	60.8	63.8	20.0
4	49.2	52.2	4.1	53.3	56.3	48.7	51.7	23.0
10	40.8	43.8	6.5	47.3	50.3	40.8	43.8	25.0
16	36.0	39.0	8.2	44.2	47.2	36.7	39.7	25.0
20	33.5	36.5	9.3	42.8	45.8	34.7	37.7	25.0
25	30.9	33.9	10.4	41.3	44.3	32.8	35.8	24.3
31.25	28.2	31.2	11.7	39.9	42.9	30.9	33.9	23.6
62.5	18.4	21.4	17.0	35.4	38.4	24.8	27.8	21.5
100	10.3	13.3	22.0	32.3	35.3	20.8	23.8	20.1
155	1.4	4.4	28.1	29.4	32.4	16.9	19.9	—
200	—	—	32.4	27.8	30.8	14.7	17.7	—
250	—	—	36.9	26.3	29.3	12.8	15.8	—
350	—	—	44.9	24.1	27.1	9.9	12.9	—

Notes: Values are expressed in dB per 100m (328 ft.) length. Values above 250 MHz are for informational purposes only.

PHYSICAL DATA

	CMR (NON-PLENUM)	CMP (PLENUM)
Nominal Cable Diameter (in)	0.200	0.180
Nominal Cable Weight (lbs/1000ft)	21	19
Minimum Bend Radius (in)	1.0	1.0
Maximum Pulling Force (lbs)	25	25
Temperature Rating (°C)		
Installation:	0 to +60	0 to +60
Operation:	-10 to +60	-10 to +60

ELECTRICAL CHARACTERISTICS

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

Data subject to change without notice.

CATEGORY 5e CROSS-SECTION

