HDTV/SDI

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

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

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

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

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

CCTV

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

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

CCTV *RG 59 and RG 11 Ratings*

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

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

General Cable

CAROL BRAND

Carol® Brand Alarm & Security Solutions

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

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

- Access Control
- Video Surveillance/CCTV
- Component Video
- Lighting Control & Touch Panel Systems
- Fire Alarm and Life Safety
- Home Theater and Burglar Alarms
- Data Communications

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

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

Many cables also available in **ARMORED CONSTRUCTIONS** *for easy plenum installations*
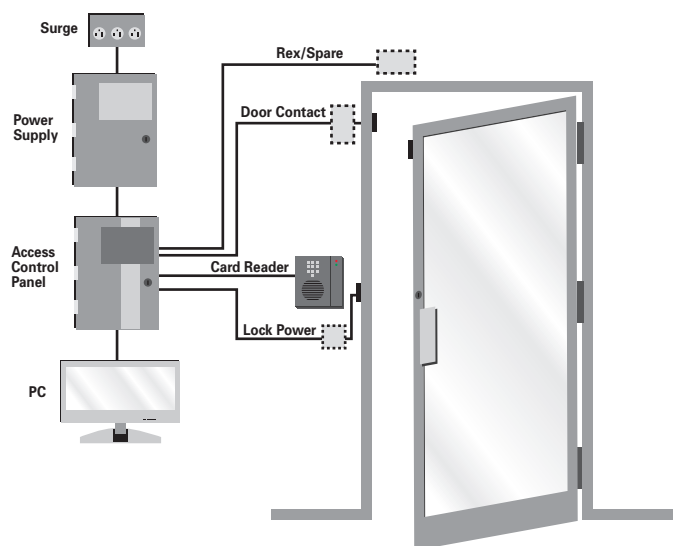
The General Cable Alarm and Security Solutions Guide provides a quick and easy reference tool to identify every Carol® Brand cable for the appropriate alarm and security application. Whatever the security application need calls for, we have a cable that delivers the performance you need.

Access Control

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

Cable Solution	Description
4EPL4S	4 Shielded Elements Overall Jacket Access Control Plenum*
4EPL1S	4 Elements 1 Shielded Overall Jacket Access Control Plenum*
4ERS4S	4 Shielded Elements Overall Jacket Access Control Riser**
4ERS1S	4 Elements 1 Shielded Overall Jacket Access Control Riser**
ZF22C0186519	18C Composite Access Control Plenum
E2002S	22/2 Conductor Shielded Riser
E2004S	22/4 Conductor Shielded Riser
E2006S	22/6 Conductor Shielded Riser
E2008S	22/8 Conductor Shielded Riser
E2010S	22/10 Conductor Shielded Riser
E2012S	22/12 Conductor Shielded Riser
E2102S	22/2 Conductor Shielded Plenum
E2104S	22/4 Conductor Shielded Plenum
E2106S	22/6 Conductor Shielded Plenum
E2108S	22/8 Conductor Shielded Plenum
E2032S	18/2 Conductor Shielded Riser
E2034S	18/4 Conductor Shielded Riser
E2036S	18/6 Conductor Shielded Riser

Cable Solution	Description
E2038S	18/8 Conductor Shielded Riser
E2202S	18/2 Conductor Shielded Plenum
E2204S	18/4 Conductor Shielded Plenum
E2206S	18/6 Conductor Shielded Plenum
E2208S	18/8 Conductor Shielded Plenum

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

Catalog Number	Overall Nominal 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 (4.593)	0.008 (0.2032)
		3	2 Cond, 22 AWG, Shielded	Red, Black	0.125 (3.175)	0.008 (0.2032)
		4	4 Cond, 22 AWG, Shielded	White, Black, Red, Green	0.145 (3.683)	0.008 (0.2032)
4EPL1S	0.420	1	4 Cond, 18 AWG, Unshielded	White, Black, Red, Green	0.180 (4.572)	0.008 (0.2032)
		2	3 Pair, 22 AWG, Shielded	White & Green, Orange & Brown, Red & Black	0.195 (4.593)	0.008 (0.2032)
		3	2 Cond, 22 AWG, Unshielded	Red, Black	0.125 (3.175)	0.008 (0.2032)
		4	4 Cond, 22 AWG, Unshielded	White, Black, Red, Green	0.145 (3.683)	0.008 (0.2032)

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

Catalog Number	Overall Nominal 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 (4.593)	0.008 (0.2032)
		3	2 Cond, 22 AWG, Shielded	Red, Black	0.125 (3.175)	0.008 (0.2032)
		4	4 Cond, 22 AWG, Shielded	White, Black, Red, Green	0.145 (3.683)	0.008 (0.2032)
4ERS1S	0.420	1	4 Cond, 18 AWG, Unshielded	White, Black, Red, Green	0.180 (4.572)	0.008 (0.2032)
		2	3 Pair, 22 AWG, Shielded	White & Green, Orange & Brown, Red & Black	0.195 (4.593)	0.008 (0.2032)
		3	2 Cond, 22 AWG, Unshielded	Red, Black	0.125 (3.175)	0.008 (0.2032)
		4	4 Cond, 22 AWG, Unshielded	White, Black, Red, Green	0.145 (3.683)	0.008 (0.2032)

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