

Precision Video Cable for Analog and Digital

Overview



Analog Video

Belden® precision video cables are used in critical analog and digital video circuits and high quality applications such as live broadcast in network studios and pre- or post-production facilities. They should be used where superior signal integrity is required.

Precision video cables usually have solid center conductors and dual shields. The dielectrics can either be foamed or solid. Tighter impedance and attenuation tolerances, superior Return Loss (RL) specifications, and improved shielding give precision video cables their no-compromise performance.

The frequency response loss curves of the solid dielectric cables, such as 8281, are different from those with foam dielectric, like 1505A. Therefore, different equalization equipment is necessary and commercially available. Avoid mixing 8281 and 1505A for this reason.

Digital Video

Precision video cables are also recommended for the latest digital video applications. Since its inception in the early '80s, digital broadcast is quickly becoming the preferred video format. The advantages of the digital format are many. Digital is very stable, minimizing equipment adjustments. Copies or reproductions retain the quality of the original. Signal degradation is virtually eliminated, and noise immunity is greatly improved. Digital video is transmitted over a cable in either a Parallel or Serial format.

Parallel Digital Video (D₁, D₂ & D₃)

The Parallel format transmits each bit of an 8 or 10 bit digital word simultaneously or parallel down a separate signal path at a frequency of 27 Mb/s. This type of transmission requires the use of a 100 to 120 ohm 12-1/2 pair data cable (Belden part nos. 8142 or 8112 page 19.56). These cables are limited to a transmission distance of less than 30 meters.

Serial Digital Video (SDI)

The Society of Motion Picture and Television Engineers (SMPTE) has developed two different standards for serial digital transmissions (SDI). A third format that transmits at 540 Mb/s is under development. There is also a European standards body known as ITU (formerly CCIR) that developed the specifications for Europe known as PAL. Each of these specifications differs in frequency and transmission technology, i.e., composite or component.

- **SMPTE 259M** — Covers digital video transmissions of composite NTSC 143 Mb/s (Level A) and PAL 177 Mb/s (Level B). It also covers 525/625 component transmissions of 270 Mb/s (Level C) and 360 Mb/s (Level D).
- **SMPTE 292M** — Covers the newest format for HDTV transmissions at 1.458 Gb/s.
- **SMPTE 344M** — Covers component widescreen transmissions of 540 Mb/s.
- **ITU-R BT.601** — International standard covers component PAL transmissions of 177 Mb/s.

Precision Video Cable for Analog and Digital

Sub-Miniature RG-59/U Type



Description	Part No.	UL NEC/ C(UL) CEC Type	Standard Lengths		Standard Unit Weight		Conductor (stranding) Diameter Nom. DCR	Nominal Core OD		Shielding Materials Nom. DCR	Nominal OD		Nom. Imp. (Ω)	Nom. Vel. of Prop.	Nominal Capacitance		Nominal Attenuation		
			Ft.	m	Lbs.	kg		Inch	mm		Inch	mm			pF/Ft.	pF/m	MHz	dB/100 Ft.	dB/100m

28.5 AWG Solid .012" Bare Copper Conductor • Duobond® (100% Coverage) + Tinned Copper Braid Shield (95% Coverage)

Gas-injected Foam HDPE Insulation • PVC Jacket (Available in 10 colors)*

DigiTruck®	179DT	NEC:	500 [▲]	152.4	5.0	2.3	28.5 AWG	.056	1.42	Duobond (100%)	.100	2.54	75	77%	17.4	57.4	1	1.2	3.9
SDI/HDTV	new	CMR	1000	304.8	8.0	3.6	(solid)			(100%)							5	1.9	6.1
Digital Video		CEC:					.012"			+ TC Braid							10	2.4	7.8
75°C		CMG FT4					BC			(95% Cov.)							67.5	5.9	19.3
							108Ω/M'			8.9Ω/M'							71.5	6.0	19.6
							350Ω/km			29.2Ω/km							100	6.9	22.6
																	135	7.9	25.8
																	270	10.8	35.4
																	360	12.5	41.0
																	540	15.4	50.5
																	720	17.9	58.7
																	750	18.3	60.0
																	1000	21.3	69.9
																	1500	26.3	86.3
																	2000	30.8	101.1
																	2250	32.8	107.6
																	3000	38.3	125.7

▲500 ft. put-up available in Black only.

25 AWG Stranded (19x37) .021" Bare Copper Conductor • Duofoil® (100% Coverage) + Tinned Copper Braid Shield (95% Coverage)

Gas-injected Foam HDPE Insulation • PVC Jacket (Available in 10 colors)*

SDI/HDTV	1865A	NEC:	1000	304.8	14.0	6.4	25 AWG	.094	2.39	Duofoil (100%)	.150	3.81	75	82%	16.5	54.1	1	.5	1.5
Digital Video		CMR					(19x37)			(100%)							3.6	1.0	3.1
75°C		CEC:					.021"			+ TC Braid							10	1.6	5.2
		CMG FT4					BC			(95% Cov.)							71.5	3.7	12.1
							27.4Ω/M'			5.4Ω/M'							135	5.0	16.4
							89.9Ω/km			17.7Ω/km							270	7.1	23.3
																	360	8.2	26.9
																	540	10.1	33.1
																	720	11.8	38.7
																	750	12.0	39.4
																	1000	13.9	45.6
																	1500	17.0	55.8
																	2250	20.8	68.2
																	3000	24.0	78.7

23 AWG Solid .023" Bare Copper Conductor • Duofoil (100% Coverage) + Tinned Copper Braid Shield (95% Coverage)

Gas-injected Foam HDPE Insulation • PVC Jacket (Available in 10 colors)*

SDI/HDTV	1855A	NEC:	500 [▲]	152.4	9.0	4.1	23 AWG	.102	2.59	Duofoil (100%)	.159	4.03	75	82%	16.3	53.5	1	.4	1.3
Digital Video		CMR	1000	304.8	16.0	7.3	(solid)			(100%)							3.6	.8	2.6
75°C		CEC:					.023"			+ TC Braid							10	1.2	3.9
		CMG FT4					BC			(95% Cov.)							71.5	3.1	10.0
							20.1Ω/M'			7.6Ω/M'							135	3.8	12.5
							65.9Ω/km			24.9Ω/km							270	5.4	17.7
																	360	6.2	20.3
																	540	7.7	25.3
																	720	9.5	31.1
																	750	9.6	31.5
																	1000	10.5	34.4
																	1500	13.0	42.6
																	2250	16.0	52.5
																	3000	18.5	60.7

▲500 ft. put-up available in Black only.

BC = Bare Copper • DCR = DC Resistance • HDPE = High-density Polyethylene • TC = Tinned Copper

Contact the Belden Customer Service Department for a Comprehensive Connector Cross Reference. **1-800-BELDEN-1**. Request quotations of RG/U cables not listed.

*Available in Brown, Red, Orange, Yellow, Green, Blue, Purple, Gray, White or Black.

Precision Video Cable for Analog and Digital

Miniature RG-59/U Type



19 • Brilliance® Broadcast

Description	Part No.	UL NEC/ C(UL) CEC Type	Standard Lengths		Standard Unit Weight		Conductor (stranding) Diameter Nom. DCR	Insulation Diameter		Shielding Materials Nom. DCR	Nominal OD		Nom. Imp. (Ω)	Nom. Vel. of Prop.	Nominal Capacitance		Nominal Attenuation		
			Ft.	m	Lbs.	kg		Inch	mm		Inch	mm			pF/Ft.	pF/m	MHz	dB/100 Ft.	dB/100m

23 AWG Stranded (7x32) .023" Bare Compacted Copper Conductor* • Tinned Copper Braid Shield (95% Coverage)

Polyethylene Insulation • Black Polyethylene Jacket																			
80°C	8279	—	500	152.4	13.0	5.9	23 AWG (7x32)	.146	3.71	TC + 95% Shield	.220	5.59	75	66%	21.0	68.9	1	.4	1.1
			1000	304.8	29.0	13.2	.023" BCC			4.5Ω/M'							3.6	.6	2.0
							19.1Ω/M'			14.8Ω/km							10.0	1.2	3.9
							62.6Ω/km										71.5	3.3	10.8
																	135	4.7	15.4
																	270	6.8	22.3
																	360	8.0	26.2
																	540	9.9	32.5
																	720	11.6	38.0
																	750	11.9	39.0
																	1000	13.8	45.3

23 AWG Solid .022" Bare Copper Conductor • Duofoil® (100% Coverage) + Tinned Copper Braid Shield (95% Coverage)

Polyethylene Insulation • Black Polyethylene Jacket																			
80°C	9209	—	U-500	U-152.4	15.0	6.8	23 AWG (solid)	.146	3.71	Duofoil + 95% TC Braid	.220	5.59	75	66%	21.0	68.9	1	.4	1.2
			U-1000	U-304.8	29.0	13.2	.022" BC			4.5Ω/M'							3.6	.5	1.8
							20.4Ω/M'			14.8Ω/km							10.0	1.2	3.8
							66.9Ω/km										71.5	2.9	9.5
																	135	4.0	13.0
																	270	5.6	18.4
																	360	6.6	21.5
																	540	8.3	27.2
																	720	9.7	31.7
																	750	9.9	32.5
																	1000	11.6	38.0

Flame-retardant Semi-foam Polyethylene Insulation • Black PVC Jacket																			
UL AWM Style 1354 (30V 75°C)	9209A	NEC: CMR CEC: CMG FT4	U-1000	U-304.8	35.0	15.9	23 AWG (solid)	.146	3.71	Duofoil + 95% TC Braid	.220	5.59	75	66%	21.0	68.9	1	.4	1.2
							.022" BC			4.5Ω/M'							3.6	.5	1.8
							20.4Ω/M'			14.8Ω/km							10.0	1.2	3.8
							66.9Ω/km										71.5	2.9	9.5
																	135	4.0	13.0
																	270	5.6	18.4
																	360	6.6	21.5
																	540	8.6	28.3
																	720	10.1	33.2
																	750	10.4	34.1
																	1000	12.8	41.9

BC = Bare Copper • BCC = Bare Compacted Copper • DCR = DC Resistance • TC = Tinned Copper

Contact the Belden Customer Service Department for a Comprehensive Connector Cross Reference. **1-800-BELDEN-1**. Request quotations of RG/U cables not listed.

*Compacted conductor combines impedance uniformity of solid conductors and "nick-resistance" of stranded conductor.

Precision Video Cable for Analog and Digital

RG-59/U Type and Double Braided RG-59/U Type



Description	Part No.	UL NEC/ C(UL) CEC Type	Standard Lengths		Standard Unit Weight		Conductor (stranding) Diameter Nom. DCR	Nominal Core OD		Shielding Materials Nom. DCR	Nominal OD		Nom. Imp. (Ω)	Nom. Vel. of Prop.	Nominal Capacitance		Nominal Attenuation		
			Ft.	m	Lbs.	kg		Inch	mm		Inch	mm			pF/Ft.	pF/m	MHz	dB/100 Ft.	dB/100m

20 AWG Solid .032" Bare Copper Conductor • Duofoil® (100% Coverage) + Tinned Copper Braid Shield (95% Coverage)

Gas-injected Foam HDPE Insulation • PVC Jacket (Available in 10 colors)*

SDI/HDTV	1505A	NEC:	500 [▲]	152.4	15.5	7.0	20 AWG (solid)	.145	3.68	Duofoil + 95%	.233	5.92	75	83%	16.3	53.5	1	.3	1.0
Digital Video		CMR	1000 [◆]	304.8	35.0	15.9	.032"			TC Braid							3.6	.6	1.8
75°C		CEC:	5000 [◆]	1524.0	165.0	74.8	.032"			BC	3.8Ω/M'						10	.9	2.9
		CMG FT4								10.0Ω/M'	12.5Ω/km						71.5	2.1	6.9
																	135	2.7	8.9
																	270	3.8	12.5
																	360	4.4	14.4
																	540	5.5	18.0
																	720	6.4	21.0
																	750	6.5	21.3
																	1000	7.6	24.9
																	1500	9.3	30.5
																	2250	11.6	38.0
																	3000	13.4	44.0

*500 ft. put-up available in Black, Red or Blue only.

◆1000 ft. and 5000 ft. put-ups available in all ten colors: Brown, Red, Orange, Yellow, Green, Blue, Purple, Gray, White or Black.

Plenum • Foam FEP Teflon® Insulation • Flamarrest® Jacket (Available in 10 colors)*

SDI/HDTV	1506A	NEC:	500 [▼]	152.4	14.5	6.6	20 AWG (solid)	.133	3.38	Duofoil + 95%	.196	4.98	75	84%	16.1	52.8	1	.3	1.0
Digital Video		CMR	1000	304.8	29.0	13.2	.032"			TC Braid							3.6	.6	2.0
75°C		CEC:					.032"			BC	3.2Ω/M'						10	1.1	3.4
		CMPT FT6								10.0Ω/M'	10.5Ω/km						71.5	2.3	7.4
																	135	3.2	10.5
																	270	4.6	14.9
																	360	5.3	17.2
																	540	6.4	21.0
																	720	7.3	23.9
																	750	7.5	24.6
																	1000	9.4	30.8
																	1500	12.8	42.0
																	2250	17.5	57.4
																	3000	21.9	71.8

*500 ft. put-up available in Black or Natural only.

◆1000 ft. put-up available in all ten colors: Brown, Red, Orange, Yellow, Green, Blue, Purple, Gray, Natural or Black.

22 AWG Stranded (7x29) .031" Bare Compacted Copper Conductor* • Tinned Copper/Bare Copper Double Braid Shield (98% Coverage)

Polyethylene Insulation • PVC Jacket (Matte Red, Blue, Green, Gray or Black)

High-Flex	8281F	—	500 [*]	152.4	34.5	15.7	22 AWG (7x29)	.198	4.90	TC Double Braid	.305	7.75	75	66%	21.0	68.9	1	.3	.9
60°C			1000	304.8	67.0	30.4	.031"			98% Shield							3.6	.5	1.7
										BCC	1.7Ω/M'						10.0	.9	2.9
										12.2Ω/M'	5.6Ω/km						71.5	2.5	8.0
									40.0Ω/km								135	3.6	11.6
																	270	5.1	16.7
																	360	6.0	19.7
																	540	7.4	24.3
																	720	8.7	28.5
																	750	8.9	29.2
																	1000	10.5	34.4

*500 ft. put-up available in Black only.

22 AWG Stranded (7x29) .031" Bare Compacted Copper Conductor* • Tinned Copper/Bare Copper Double Braid Shield (95% Coverage)

Gas-injected Foam HDPE Insulation • PVC Jacket (Matte Black, Red, Green, Blue, Yellow, White, Orange or Purple)

High-Flex	1505F	NEC:	1000	304.8	45.0	20.4	22 AWG (7x29)	.145	3.68	TC Double Braid	.242	6.15	75	80%	17.0	55.7	1	.2	.7
SDI/HDTV		CM					.031"			95% Shield							3.6	.5	1.6
Video Patch		CEC:					.031"			BCC	2.4Ω/M'						10	.9	2.9
75°C		CM								12.2Ω/M'	7.8Ω/km						71.5	2.5	8.2
									40.0Ω/km								135	3.5	11.5
																	270	5.1	16.7
																	360	6.0	19.7
																	540	7.4	24.3
																	720	8.7	28.5
																	750	8.9	29.2
																	1000	10.5	34.4
																	1500	13.3	43.6
																	2250	16.9	55.4
																	3000	20.3	66.6

*Compacted conductor combines impedance uniformity of solid conductors and "nick-resistance" of stranded conductor.

BC = Bare Copper • BCC = Bare Compacted Copper • DCR = DC Resistance • FEP = Fluorinated Ethylene Propylene • HDPE = High-density Polyethylene • TC = Tinned Copper

Contact the Belden Customer Service Department for a Comprehensive Connector Cross Reference. **1-800-BELDEN-1**. Request quotations of RG/U cables not listed.

Teflon is a DuPont trademark.



For more information, contact Belden Technical Support: **1-800-BELDEN-1** • www.belden.com

Precision Video Cable for Analog and Digital

Double Braided RG-59/U Type



19 • Brilliance® Broadcast

Description	Part No.	UL NEC/ C(UL) CEC Type	Standard Lengths		Standard Unit Weight		Conductor (stranding) Diameter Nom. DCR	Nominal Core OD		Shielding Materials Nom. DCR	Nominal OD		Nom. Imp. (Ω)	Nom. Vel. of Prop.	Nominal Capacitance		Nominal Attenuation		
			Ft.	m	Lbs.	kg		Inch	mm		Inch	mm			pF/Ft.	pF/m	MHz	dB/100 Ft.	dB/100m

20 AWG Solid .031" Bare Copper Conductor • Tinned Copper/Bare Copper Double Braid Shield (98% Coverage)

Polyethylene Insulation • Gray PVC Jacket †

60°C	9231	NEC:	500	152.4	39.0	17.7	20 AWG (solid) .031"	.198	5.03	TC Double Braid	.305	7.75	75	66%	21.0	68.9	1	.3	1.0
VW-1		CMH	1000	304.8	76.0	34.5											3.6	.5	1.6
		CEC:								98% Shield							10.0	.8	2.6
		CMH FT1								BC Coverage							71.5	2.0	6.6
							9.9Ω/M'			1.1Ω/M'							135	3.5	11.5
							32.5Ω/km			3.6Ω/km							270	4.3	14.1
										100% Sweep tested. 5 MHz to 850 MHz.							360	5.0	16.4
																	540	6.2	20.3
																	720	7.2	23.6
																	750	7.4	24.3
																	1000	9.1	29.8

†Non-contaminating PVC jacket

Polyethylene Insulation • Clear Polyethylene Jacket

Indoor Use 80°C	9141	—	1000	304.8	73.0	33.2	20 AWG (solid) .031"	.200	5.06	TC Double Braid	.305	7.75	75	66%	20.0	65.6	1	.3	1.0
																	3.6	.5	1.6
										98% Shield							10.0	.8	2.6
										BC Coverage							71.5	2.0	6.6
							9.9Ω/M'			1.1Ω/M'							135	3.5	11.5
							32.5Ω/km			3.6Ω/km							270	4.3	14.1
										100% Sweep tested. 5 MHz to 850 MHz.							360	5.0	16.4
																	540	6.2	20.3
																	720	7.2	23.6
																	750	7.4	24.3
																	1000	9.1	29.8

20 AWG Solid .031" Bare Copper Conductor • Tinned Copper/Bare Copper Double Braid Shield (98% Coverage)

Polyethylene Insulation • Polyethylene Jacket (Available in Red, Yellow, Green, Blue, White, Orange or Black)

80°C	8281	—	500 [▲]	152.4	37.5	17.0	20 AWG (solid) .031"	.198	5.03	TC Double Braid	.305	7.75	75	66%	21.0	68.9	1	.3	.8
				1000	304.8	74.0											33.6	3.6	.5
										98% Shield							10.0	.8	2.6
										BC Coverage							71.5	2.1	6.9
							9.9Ω/M'			1.1Ω/M'							135	3.0	9.8
							32.5Ω/km			3.6Ω/km							270	4.3	14.1
										For Plenum version of 8281, see 88281.							360	5.1	16.6
										100% Sweep tested. 5 MHz to 850 MHz.							540	6.3	20.7
																	720	7.4	24.3
																	750	7.6	24.9
																	1000	9.2	30.2

[▲]500 ft. put-up not available in White.

Flame-retardant Semi-Foam Polyethylene Insulation • PVC Jacket (Available in 9 colors)*

UL AWM Style 1354 (30V 80°C)	8281B	NEC:	1000	304.8	84.0	38.1	20 AWG (solid) .031"	.198	5.03	TC Double Braid	.305	7.75	75	66%	21.0	68.9	1	.3	.8
		CMR															3.6	.5	1.8
		CEC:								98% Shield							10.0	.8	2.6
		CMG FT4								BC Coverage							71.5	2.1	6.9
							9.9Ω/M'			1.1Ω/M'							135	3.0	9.8
							32.5Ω/km			3.6Ω/km							270	4.4	14.4
										For Plenum version of 8281B, see 88281.							360	5.1	16.6
										100% Sweep tested. 5 MHz to 850 MHz.							540	6.6	21.5
																	720	7.8	25.4
																	750	8.0	26.2
																	1000	10.2	33.5

*8281B available in Red, Orange, Yellow, Green, Blue, Purple, Gray, White or Black.

20 AWG Solid .031" Bare Copper Conductor • Tinned Copper/Bare Copper Double Braid Shield (98% Coverage)

Plenum • FEP Insulation • Black Fluorocopolymer Jacket

150°C	88281	NEC:	500	152.4	44.5	20.2	20 AWG (solid) .031"	.185	4.70	TC Double Braid	.271	6.88	75	70%	19.0	62.4	1	.2	.7
		CMP	1000	304.8	86.0	39.1											3.6	.5	1.6
		CEC:								98% Shield							10.0	.8	2.6
		CMP FT6								BC Coverage							71.5	2.3	7.5
							9.9Ω/M'			1.1Ω/M'							135	3.3	10.8
							32.5Ω/km			3.6Ω/km							270	5.1	16.7
										100% Sweep tested. 5 MHz to 216 MHz.							360	6.1	20.0
																	540	8.0	26.2
																	720	9.7	31.8
																	750	10.0	32.8
																	1000	12.3	40.3

Suitable for Outdoor and Direct Burial applications.

BC = Bare Copper • DCR = DC Resistance • FEP = Fluorinated Ethylene Propylene • TC = Tinned Copper

Contact the Belden Customer Service Department for a Comprehensive Connector Cross Reference. **1-800-BELDEN-1**. Request quotations of RG/U cables not listed.

*Compacted conductor combines impedance uniformity of solid conductors and "nick-resistance" of stranded conductor.



Precision Video Cable for Analog and Digital

Low Loss Serial Digital Coax

RG-6/U and RG-11/U Type



Description	Part No.	UL NEC/ C(UL) CEC Type	Standard Lengths		Standard Unit Weight		Conductor (stranding) Diameter Nom. DCR	Nominal Core OD		Shielding Materials Nom. DCR	Nominal OD		Nom. Imp. (Ω)	Nom. Vel. of Prop.	Nominal Capacitance		Nominal Attenuation		
			Ft.	m	Lbs.	kg		Inch	mm		Inch	mm			pF/Ft.	pF/m	MHz	dB/ 100 Ft.	dB/ 100m

RG-6/U Type • 18 AWG Solid .040" Bare Copper Conductor • Duofoil® (100% Coverage) + Tinned Copper Braid Shield (95% Coverage)

Gas-injected Foam HDPE Insulation • PVC Jacket (Available in 10 colors)*																				
SDI/HDTV	1694A	NEC:	500 [▲]	152.4	20.5	9.3	18 AWG	.180	4.57	Duofoil	.274	6.96	75	82%	16.2	53.1	1	.2	.8	
Digital Video		CMR	1000	304.8	45.0	20.5	(solid)			+ 95%							3.6	.5	1.5	
75°C		CEC:	4500	1371.6	202.5	91.9	.040"			TC Braid								10	.7	2.4
		CMG FT4								2.8Ω/M'	For Plenum version of 1694A, see 1695A.							71.5	1.6	5.2
									BC	2.8Ω/M'								135	2.1	6.9
									6.4Ω/M'	9.2Ω/km								270	3.0	9.7
									21.0Ω/km									360	3.4	11.3
																		540	4.3	13.9
																		720	4.9	16.1
																		750	5.0	16.4
																		1000	5.9	19.3
																		1500	7.3	24.0
																		2250	9.1	30.0
																		3000	10.7	35.0

*500 ft. put-up available in Black only.

Gas-injected Foam HDPE Insulation • Black Low-Smoke, Zero-Halogen Jacket

LSZH and ABS Type Approved new																				
SDI/HDTV	1694SB	NEC:	1000	304.8	46.0	20.9	18 AWG	.180	4.57	Duofoil	.274	6.96	75	82%	16.2	53.1	1	.2	.8	
Digital Video		CMG-LS					(solid)			+ 95%								3.6	.5	1.5
75°C		CEC:					.040"			TC Braid								10	.7	2.4
		CMG-LS FT4								2.8Ω/M'	100% Sweep tested. 5 MHz to 4.5 GHz.							71.5	1.6	5.2
		Limited Smoke							BC	2.8Ω/M'								135	2.1	6.9
									6.4Ω/M'	9.2Ω/km								270	3.0	9.7
									21.0Ω/km									360	3.4	11.3
																		540	4.3	13.9
																		720	4.9	16.1
																		750	5.0	16.4
																		1000	5.9	19.3
																		1500	7.3	24.0
																		2250	9.1	30.0
																		3000	10.7	35.0

Black jacket suitable for Indoor, Outdoor and Aerial applications.

*500 ft. put-up available in Black or Natural only.

RG-11/U Type • 14 AWG Solid .064" Bare Copper Conductor • Duofoil (100% Coverage) + Tinned Copper Braid Shield (95% Coverage)

Gas-injected Foam HDPE Insulation • PVC Jacket (Available in 10 colors)*																				
SDI/HDTV	7731A	NEC:	500 [*]	152.4	46.5	21.1	14 AWG	.280	7.11	Duofoil	.400	10.2	75	85%	16.0	52.4	1	.2	.5	
Digital Video		CMP	1000	304.8	95.0	43.1	(solid)			+ 95%								3.6	.3	1.0
75°C		CEC:	4000	1219.2	388.0	176.0	.064"			TC Braid								10	.5	1.5
		CMG FT4								1.5Ω/M'	100% Sweep tested. 5 MHz to 3 GHz.							71.5	1.1	3.6
									BC	1.5Ω/M'								135	1.5	4.8
									2.5Ω/M'	4.9Ω/km								270	2.1	6.9
									8.2Ω/km									360	2.5	8.0
																		540	3.1	10.0
																		720	3.6	11.7
																		750	3.7	12.0
																		1000	4.3	14.1
																		1500	5.5	18.0
																		2250	6.9	22.6
																		3000	8.2	26.9

*500 ft. put-up available in Red or Black only.

Plenum • Foam FEP Teflon Insulation • Fluorocopolymer Jacket (Available in 10 colors)**

SDI/HDTV	7732A	NEC:	500 [*]	152.4	45.0	20.5	14 AWG	.274	6.96	Duofoil	.348	8.84	75	83%	16.3	53.5	1	.2	.5	
Digital Video		CMP	1000	304.8	90.0	40.8	(solid)			+ 95%								3.6	.3	.9
150°C		CEC:	2000 [▼]	609.6	176.0	80.0	.064"			TC Braid								10	.4	1.3
		CMG FT6								1.6Ω/M'	100% Sweep tested. 5 MHz to 3 GHz.							71.5	1.2	4.1
									BC	1.6Ω/M'								135	1.8	5.8
									2.5Ω/M'	5.3Ω/km								270	2.6	8.5
									8.2Ω/km									360	3.1	10.2
																		540	3.9	12.8
																		720	4.6	15.0
																		750	4.7	15.4
																		1000	5.5	18.0
																		1500	6.9	22.7
																		2250	9.2	30.2
																		3000	10.2	33.5

*500 ft. put-up available in Black or Natural only.

▼2000 ft. put-up available in Natural only.

Suitable for Outdoor and Direct Burial applications.

BC = Bare Copper • DCR = DC Resistance • FEP = Fluorinated Ethylene Propylene • HDPE = High-density Polyethylene • TC = Tinned Copper

Teflon is a DuPont trademark.

Contact the Belden Customer Service Department for a Comprehensive Connector Cross Reference. 1-800-BELDEN-1. Request quotations of RG-U cables not listed.

* Available in Black, Brown, Red, Orange, Yellow, Green, Blue, Purple, Gray or White.

** Available in Black, Brown, Red, Orange, Yellow, Green, Blue, Purple, Gray or Natural.



VideoFLEX® Snake Cable for Precision Digital and Analog

Bundled Miniature and RG-59/U Type



Description	Part No.	UL NEC/ C(UL) CEC Type	No. of Cond.	Standard Lengths		Standard Unit Weight		Conductor (stranding) Diameter Nom. DCR	Nominal Core OD		Shielding Materials Nom. DCR	Nominal OD		Nom. Imp. (Ω)	Nom. Vel. of Prop.	Nominal Capacitance		Nominal Attenuation		
				Ft.	m	Lbs.	kg		Inch	mm		Inch	mm			pF/Ft.	pF/m	MHz	dB/ 100 Ft.	dB/ 100m

Miniature • 23 AWG Solid .023" Bare Copper Conductors • Duofoil® (100% Coverage) + Tinned Copper Braid Shield (95% Coverage)

Gas-injected Foam HDPE Insulation • Overall Matte Black PVC Jacket (Color Code: See chart below)																				
SDI/HDTV Digital Video 75°C/60°C (UL) (1855A Bundled)	7787A	NEC: CMR CEC: CMG FT4	3	500 1000	152.4 304.8	47.5 94.0	21.6 42.7	23 AWG (solid) .023"	.102 .159	2.55 4.03	Duofoil + 95% TC Braid 7.6Ω/M' 24.9Ω/km	.432	10.97	75	83%	16.5	54.1	1 3.6 10 71.5 135 270 360 540 720 750	.4 .8 1.2 3.1 3.8 5.4 6.2 7.7 9.1 9.5	1.3 2.6 3.9 10.0 12.5 17.7 20.3 25.3 29.8 31.2
	7788A	NEC: CMR CEC: CMG FT4	4	1000	304.8	110.0	49.9	same as above	.102 .159	2.55 4.03	same as above	.481	12.22					1000 1500 2500 3000	10.5 13.0 16.9 18.5	34.4 42.6 55.4 60.7
	7789A	NEC: CMR CEC: CMG FT4	5	500 1000	152.4 304.8	73.0 142.0	33.1 64.4	same as above	.102 .159	2.55 4.03	same as above	.539	13.69							
	7790A	NEC: CMR CEC: CMG FT4	6	500 1000	152.4 304.8	88.5 176.0	40.2 79.8	same as above	.102 .159	2.55 4.03	same as above	.597	15.16							
	7791A	NEC: CMR CEC: CMG FT4	10	500 1000	152.4 304.8	155.5 304.0	70.5 137.9	same as above	.102 .159	2.55 4.03	same as above	.796	20.22							
	7792A	NEC: CMR CEC: CMG FT4	12	500 1000	152.4 304.8	178.5 367.0	81.0 166.5	same as above	.102 .159	2.55 4.03	same as above	.825	20.96							

Sweep tested 5 MHz to 3 GHz.

RG-59/U Type • 20 AWG Solid .032" Bare Copper Conductors • Duofoil (100% Coverage) + Tinned Copper Braid Shield (95% Coverage)

Gas-injected Foam HDPE Insulation • Overall Matte Black PVC Jacket (Color Code: See chart below)																				
SDI/HDTV Digital Video 75°C/60°C (UL) (1505A Bundled)	7794A	NEC: CMR CEC: CMG FT4	3	500 1000	152.4 304.8	94.5 187.0	43.0 84.8	20 AWG (solid) .032"	.145 .235	3.68 5.97	Duofoil + 95% TC Braid 3.8Ω/M' 12.5Ω/km	.631	16.03	75	83%	16.2	53.1	1 3.6 10 71.5 135 270 360 540 720 750	.3 .6 .9 2.1 2.7 3.8 4.4 5.5 6.4 6.5	1.0 1.8 2.9 6.9 8.9 12.5 14.4 18.0 21.0 21.3
	7795A	NEC: CMR CEC: CMG FT4	4	500 1000	152.4 304.8	116.5 237.0	53.0 107.7	same as above	.145 .235	3.68 5.97	same as above	.706	17.93					1000 1500 2500 3000	7.6 9.4 12.4 13.8	24.9 30.8 40.7 45.3
	7796A	NEC: CMR CEC: CMG FT4	5	500 1000	152.4 304.8	153.0 299.0	69.4 135.6	same as above	.145 .235	3.68 5.97	same as above	.790	20.07							
	7798A	NEC: CMR CEC: CMG FT4	10	500 1000	152.4 304.8	319.5 625.0	145.2 284.1	same as above	.145 .235	3.68 5.97	same as above	1.166	29.62							

Sweep tested 5 MHz to 3 GHz.

BC = Bare Copper • DCR = DC Resistance • HDPE = High-density Polyethylene • TC = Tinned Copper

See Connector Reference Guide at www.belden.com for connector recommendations.

Color Code Chart

Cond.	Color	Cond.	Color	Cond.	Color
1	Red	5	Yellow	9	Purple
2	Green	6	Brown	10	Black
3	Blue	7	Orange	11	Pink
4	White	8	Gray	12	Tan



VideoFLEX® Snake Cable for Precision Digital and Analog

RG-59/U and RG-6/U Types



Description	Part No.	UL NEC/ C(UL) CEC Type	No. of Cond.	Standard Lengths		Standard Unit Weight		Conductor (stranding) Diameter	Nominal Core OD		Shielding Materials	Nominal OD		Nom. Imp. (Ω)	Nom. Vel. of Prop.	Nominal Capacitance		Nominal Attenuation		
				Ft.	m	Lbs.	kg		Inch	mm		Inch	mm			pF/Ft.	pF/m	MHz	dB/ 100 Ft.	dB/ 100m

RG-59/U • 20 AWG Solid .032" Bare Copper Conductors • Duofoil® (100% Coverage) + Tinned Copper Braid Shield (95% Coverage)

Plenum • Foam FEP Insulation • Plenum-Grade PVC Jackets (Color Code: See chart below) • **Center Spine • No Overall Jacket**

	300V RMS	1283S3 <small>new</small>	NEC: 3 CMP: 500 CEC: 1000 CMP	250 500 1000	76.2 152.4 304.8	26.3 54.0 103.0	11.9 24.5 46.7	20 AWG (solid) .032" BC 10.0Ω/M' 32.8Ω/km	.133	3.38	Duofoil (95%) + TC Braid 3.8Ω/M' 12.5Ω/km	.422	10.72	75	83%	16.2	53.1	1	.3	1.0	
																		3.6	.6	2.0	
																			10	.9	2.9
																			71.5	2.1	6.9
																			135	2.7	8.9
																			270	3.8	12.5
																			360	4.4	14.4
																			540	5.5	18.0
																			720	6.4	21.0
																			750	6.5	21.3
																		1000	7.6	24.9	
																		1500	9.4	30.8	
																		2500	12.4	40.7	
																		3000	13.8	45.3	

Sweep tested.
5 MHz to 3 GHz.

Suitable for Indoor and Outdoor applications.

RG-6/U Type • 18 AWG Solid .040" Bare Copper Conductors • Duofoil® (100% Coverage) + Tinned Copper Braid Shield (95% Coverage)

Gas-injected Foam HDPE Insulation • Overall Matte Black PVC Jacket (Color Code: See chart below)

	SDI/HDTV Digital Video 75°C/60°C (UL) (1694A Bundled)	7710A	NEC: 3 CMR: 1000 CEC: CMG FT4	500 1000	152.4 304.8	137.5 285.0	62.4 129.3	18 AWG (solid) .040" BC 6.4Ω/M' 21.0Ω/km	.180	4.57	Duofoil + 95% TC Braid 3.0Ω/M' 9.9Ω/km	.770	19.56	75	82%	16.2	53.1	1	.24	.8	
																		3.58	.45	1.5	
																			5	.54	1.8
																			7	.63	2.1
																			10	.72	2.4
																			67.5	1.57	5.2
																			71.5	1.60	5.3
																			88.5	1.75	5.7
																			100	1.84	6.0
																			135	2.10	6.9
																		143	2.16	7.1	
																		180	2.42	7.9	
																		270	2.97	9.8	
																		360	3.43	11.3	
																		540	4.25	13.9	
																		720	4.95	16.2	
																		750	5.00	16.4	
																		1000	5.89	19.3	
																		1500	7.33	24.1	
																		2000	8.57	28.1	
																		2250	9.14	30.0	
																		3000	10.67	35.0	

Sweep tested
5 MHz to 3 GHz.

BC = Bare Copper • DCR = DC Resistance • FEP = Fluorinated Ethylene Propylene • HDPE = High-density Polyethylene • TC = Tinned Copper

Contact the Belden Customer Service Department for a Comprehensive Connector Cross Reference. **1-800-BELDEN-1**. Request quotations of cables not listed. See Connector Reference Guide at www.belden.com for connector recommendations.

Color Code Chart

Cond.	Color	Cond.	Color
1	Red	6	Brown
2	Green	7	Orange
3	Blue	8	Gray
4	White	9	Purple
5	Yellow	10	Black



Precision Video Cable for Analog and Digital Parallel Digital Video



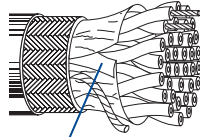
19 • Brilliance® Broadcast

Description	Part No.	UL NEC/ C(UL) CEC Type	No. of Pairs	Color Code	Standard Lengths		Standard Unit Weight		Nom. DCR		Nominal OD		Nom. Imp. (Ω)	Nom. Vel. of Prop.	Nom. Capacitance			
					Ft.	m	Lbs.	kg	Cond.	Shield	Inch	mm			* pF/ Ft.	* pF/ m	** pF/ Ft.	** pF/ m

28 AWG Stranded (7x36) TC Conductors • Twisted Pairs • Overall Beldfoil® + TC Braid Shield (65% Coverage) • TC Drain Wire[†]

Datalene® Insulation • Chrome PVC Jacket

UL AWM Style 2919 (30V 80°C)	8142	NEC: CL2	12.5 (12 pairs + 1 single)	See Chart 5 (Tech Info Section)	100	30.5	6.8	3.1	65.0Ω/M'	3.1Ω/M'	.375	9.52	120	78%	11.0	36.1	20.0	65.6
					500	152.4	33.0	15.0	213.0Ω/km	10.1Ω/km								
					1000	304.8	66.0	30.0										

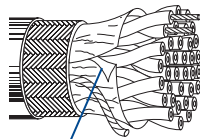


Shorting Fold

24 AWG Stranded (7x32) TC Conductors • Twisted Pairs • Overall Beldfoil + TC Braid Shield (65% Coverage) • TC Drain Wire^{††}

Datalene Insulation • Chrome PVC Jacket

UL AWM Style 2919 (30V 80°C)	8112	NEC: CM	12.5 (12 pairs + 1 single)	See Chart 5 (Tech Info Section)	100	30.5	9.2	4.2	24.0Ω/M'	2.4Ω/M'	.440	11.18	100	78%	12.5	41	22	72.2
		NEC: CM			500	152.4	51.0	23.1	78.7Ω/km	7.9Ω/km								
					1000	304.8	101.0	45.8										



Shorting Fold

DCR = DC Resistance • TC = Tinned Copper

*Capacitance between conductors.

**Capacitance between one conductor and other conductors connected to shield.

† Drain wire is 28 AWG stranded tinned copper

†† Drain wire is 24 AWG stranded tinned copper

Datalene insulation features include low dielectric constant and a dissipation factor for high-speed, low-distortion data handling. Physical properties include good crush resistance and light weight.

Precision Video Cable for Analog and Digital

Digital Video Time Code and

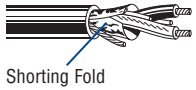
Precision Video Twinax



Description	Part No.	UL NEC/ C(UL) CEC Type	Standard Lengths		Standard Unit Weight		Conductor (stranding) Diameter Nom. DCR	Nominal Core OD		Shielding Materials Nom. DCR	Nominal OD		Nom. Imp. (Ω)	Nom. Vel. of Prop.	Nominal Capacitance		Nominal Attenuation		
			Ft.	m	Lbs.	kg		Inch	mm		Inch	mm			pF/Ft.	pF/m	MHz	dB/100 Ft.	dB/100m

110 Ohm • 26 AWG Stranded (7x34) .018" TC Conductors • Twisted Pair • Beldfoil® Shield (100% Coverage) • 26 AWG Stranded TC Drain Wire

Datalene® Insulation (Color Code: Black, White) • PVC Jacket (Chrome or Purple)																			
75°C	9180	NEC: CMR CEC: CMG FT4	1000	304.8	10.0	4.5	26 AWG (7x34) .018" TC 37.3Ω/M' 122.3Ω/km	.049	1.24	Beldfoil w/Stranded TC Drain Wire 23.1Ω/M' 75.8Ω/km	.144	3.66	110	76%	13.0	42.7	.38 .77 1.0 1.5 2.0 3.1 4.1 5.6 8.2 11.3 12.3 24.6	.8 1.2 1.3 1.5 1.7 1.9 2.1 2.4 2.8 3.1 3.2 4.2	2.6 4.0 4.3 5.0 5.6 6.3 7.0 8.0 9.3 10.3 10.6 14.0



Shorting Fold

Twinax • 124 Ohm • 16 AWG Solid .051" BC Conductors • Duofoil® (100% Coverage) + TC Braid Shield (90% Coverage)

Foam Polyethylene Insulation (Color Code: Clear, Blue) • Black PVC Jacket																			
UL AWM Style 2448 (30V 60°C)	9860	NEC: CMX CEC: CMX	500	152.4	52.0	23.6	16 AWG (solid) .051" BC 4.2Ω/M' 13.8Ω/km	.322	8.18	Duofoil + 90% TC Braid 1.3Ω/M' 4.3Ω/km	.440	11.18	124	78%	10.9	35.8	1 10 50 100 200 400	.2 .7 1.8 2.9 4.1 6.2	.6 2.3 5.9 9.5 13.5 20.3



BC = Bare Copper • DCR = DC Resistance • TC = Tinned Copper

Contact the Belden Customer Service Department for a Comprehensive Connector Cross Reference. **1-800-BELDEN-1**.

Maximum Transmission Distance at Serial Digital Data Rates

Data Rate:	143 Mb/s		177 Mb/s		270 Mb/s		360 Mb/s		540 Mb/s		1.5 Gb/s	
Spec:	SMPTE 259M		ITU-R BT. 601		SMPTE 259M		SMPTE 259M		SMPTE 344M*		SMPTE 292M	
Application:	Composite NTSC		Composite PAL		Component Video		Component Widescreen		Component Widescreen		HDTV	
Part No.	Ft.	m	Ft.	m	Ft.	m	Ft.	m	Ft.	m	Ft.	m
1865A	810	247	760	232	600	183	520	158	420	128	170	52
8279	910	277	810	247	640	195	550	168	440	134	170	52
1855A-7787A	1000	305	910	277	750	229	650	198	530	162	210	64
9209	1030	314	930	283	750	229	650	198	540	165	200	61
9209A	1030	314	930	283	750	229	650	198	540	165	200	61
1505A-7794A	1430	436	1320	402	1110	338	960	293	790	241	300	91
1505F	1200	366	1071	326	857	261	732	223	588	179	225	69
1506A	1360	415	1200	366	940	286	810	247	670	204	270	82
9231	1430	436	1270	387	1000	305	850	259	680	207	260	79
9141	1430	436	1270	387	1000	305	850	259	680	207	260	79
8281	1430	436	1270	387	1000	305	860	262	700	213	260	79
8281B	1430	436	1270	387	1000	305	850	259	680	207	250	76
8281F	1250	381	1100	335	860	262	730	222	590	180	240	73
88281	1300	396	1150	351	910	277	770	235	600	183	200	61
1694A-7710A	1760	536	1620	494	1360	415	1180	360	970	296	370	113
1695A	1670	509	1520	463	1250	381	1080	329	880	268	310	94
7855A	2220	677	2000	610	1670	509	1460	445	1210	369	470	143
7731A	2730	832	2460	750	2000	610	1740	530	1430	436	540	165
7732A	2420	738	2140	652	1690	515	1440	439	1150	351	430	131

*Values proposed at time of printing.

The serial digital interconnect standards are designed to operate where the signal loss at 1/2 the clock frequency does not exceed the approximate loss values listed below.

The maximum length values shown are based on typical attenuation values for the cables listed and the following criteria:

Maximum length = 30 dB loss at 1/2 the clock frequency: SMPTE 259M, PAL, Widescreen.

Maximum length = 20 dB loss at 1/2 the clock frequency: SMPTE 292M.

The bit error rate (BER) can vary dramatically as the calculated distances are approached. BER is dependent on receiver design and the losses of the actual coax used.

Distribution and routing equipment manufacturers should be contacted to verify their maximum recommended transmission.

Return Loss Headroom — Refer to graph on page 19.78.



For more information, contact Belden Technical Support: **1-800-BELDEN-1** • www.belden.com