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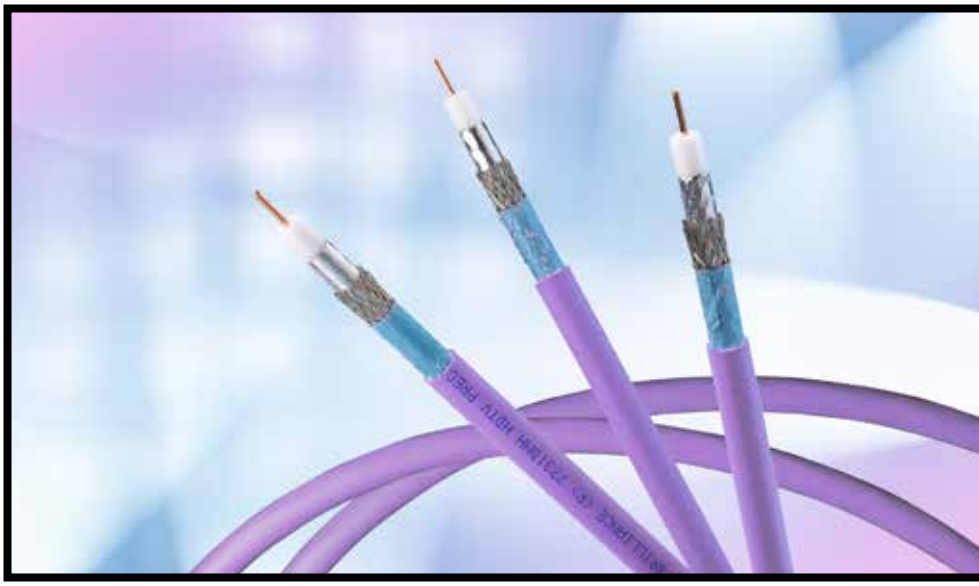
SENDING ALL THE RIGHT SIGNALS

New Product Bulletin

PB 130E

Digital Video Cables

Guaranteed signal integrity with the new Belden® Duobond® Plus HD Digital Video cables



Belden has Extended its World-class Range of Coaxial Digital Video Cables and Connectors to Deliver SD, HD and 3G Video with Advanced EMC Performance Over Outstanding Transmission Distances

- A first in the broadcast industry: HD Digital Video cables with improved Electro Magnetic Compatibility (EMC) performance for increased uptime and signal integrity
- Saving installation time and costs

Belden broadcast cables have established a strong reputation for quality and reliability, setting the standard in HD applications around the world, from major sporting events to daily news broadcasts.

Building on proven technological advances in Broadband applications, combined with the company's extensive broadcast know-how, Belden has extended its family of standard-setting HD Video cables by adding a new range of Duobond® Plus HD Digital Video cables.

These high quality coax cables are able to reliably transmit HD digital video signals with maximum signal integrity, combining all the benefits of Belden broadcast cables for the first time with the additional quality of outstanding EMC performance.

Applications

Developed to meet the professional broadcast industry's increased demand for high-definition products, Belden broadcast cables are the first choice of content providers who require flawless rich media content like HD or 3G video for their production and live streams.

These new cables offer all the benefits of the regular Belden HD Digital Video cables with the additional feature of improved EMC performance, providing the end user with extra confidence of the signal integrity when using these cables at data rates of 3 GB/s.

Benefits

Belden Duobond® Plus HD Digital Video cables set the standard. Their superior performance delivers a flawless signal without the risk of electromagnetic interference, while at the same time reducing service and maintenance costs and lowering the total cost of ownership.

All Belden's HD coaxial cables are produced to offer excellent picture quality over extended transmission distances and improve system uptime, with guaranteed Return Loss performance. The cables are physically robust, extending their life and protecting your investment, while at the same time supporting future growth plans.

Used with Belden 1-piece HD compression connectors on both ends of the cable, they require simple connectivity, thus they are easy to install, saving installation time and costs. They substantially improve system uptime thanks to Belden Installable Performance™, a unique advantage ensuring consistently high performance both before and after the installation.

A new product to serve your needs.
Be certain.

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The new Belden Duobond® Plus HD Digital Video Cables

Belden Duobond® Plus HD Digital Video cables deliver better EMC performance to retain signal integrity.

Advantages at a Glance

- Structure: bonded foil over the dielectric
- Guaranteed Return Loss (-21 dB upto 4.5 GHz)
- Available in colors: black, green, turquoise, blue, yellow, gray, purple
- Transmission rates and standards supported:
  – SDI: SMPTE 259M (279 MB/s)
  – HDTV: SMPTE 292M, 372M (1.5 GB/s)
  – 3G: SMPTE 424M (3 GB/s)
- Temperature range: -30°C to +70°C
- Screening performance according to EN50117, Cable classified as A+
- Belden 1-piece HD BNC connectors are a perfect match with these cables

Duobond® Plus

An outer layer of foil featuring a unique shorting fold which creates the effect of a solid metal conduit. This shorting fold provides metal-to-metal contact, which improves the high frequency performance of the cable. This fold prevents a slot opening from being created in the shield, thereby preventing signal egress or ingress. In addition, this outer foil is bonded to the jacket, making stripping and connectorizing easier. Duobond® Plus is also a Belden innovation.

Low Loss HDTV/SDI Digital Coax
75 Ohm Coax

Description	Part No.	UL NEC/ C(UL) CEC Type IEC	Standard Lengths		Standard Unit Weight		Conductor (stranding) Diameter Nom. DCR	Nominal Insulation OD		Shielding Material 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/ 100 m
22 AWG • Solid 0.65 mm Bare Copper Conductor • Duobond® Plus • 80% Tinned Copper Braid																			
Gas-injected Foam HDPE Insulation • FRNC/LSNH Jacket																			
HDTV/SDI Digital Video 75°C	**1855DNH**	IEC 60332-3-24 IEC 60332-1 IEC 61034 IEC 60754	328 1.640	100 500	5.5 27.6	2.5 12.5	0.65 mm 22 AWG Solid BC 72.0 Ω/km* 55.0 Ω/km**	0.142	2.90	Duobond® Plus Duobond II + 80% TC braid + Al. foil w/shrt fold 17.0 Ω/km***	0.175	4.45	75	84%	16.2	53.0	1 3.6 10 71.5 135 270 360 540 720 750 1000 1500 2250 3000 4500	0.5 0.8 1.1 2.6 3.5 4.9 5.7 7.0 8.0 8.2 9.5 11.8 14.6 17.1 21.4	1.7 2.5 3.7 8.6 11.5 16.1 18.6 22.8 26.4 26.9 31.3 38.7 48.0 56.1 70.2

Return loss: 5-1600 MHz: ≥ 23 dB
1600-4500 MHz: ≥ 21 dB

Transfer Impedance Class A+: 5-30 MHz
Requirement < 2.5 mΩ/m
Measured < 2.4 mΩ/m

Screening Attenuation Class A++:

Requirement	Measured
30-1000 MHz: ≥ 105 dB	> 110 dB
1000-2000 MHz: ≥ 95 dB	> 110 dB
2000-3000 MHz: ≥ 85 dB	> 110 dB
3000-4500 MHz: ≥ 85 dB	> 95 dB

Description	Part No.	UL NEC/ C(UL) CEC Type IEC	Standard Lengths		Standard Unit Weight		Conductor (stranding) Diameter Nom. DCR	Nominal Insulation OD		Shielding Material 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/ 100 m

20 AWG • Solid 0.8 mm Bare Copper Conductor • Duobond® Plus • 80% Tinned Copper Braid

Gas-injected Foam HDPE • FRNC/LSNH Jacket

HDTV/SDI Digital Video 75°C	**1505DNH**	IEC 60332-3-24 IEC 60332-1 IEC 61034 IEC 60754	1.640	500	48.5	22.0	0.81 mm 20 AWG Solid BC 44.0 Ω/km* 32.0 Ω/km**	0.145	3.68	Duobond® Plus Duobond II + 80% TC braid + Al. foil w/shrt fold 12.0 Ω/km***	0.233	5.92	75	83%	16.2	53.0	1	0.3	1.0
																	3.6	0.6	2.0
																	10	0.9	3.0
																	71.5	2.1	6.9
																	135	2.7	8.9
																	270	3.8	12.5
																	360	4.4	14.4
																	540	5.5	18.1
																	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
																	4500	16.4	53.8

Return loss: 5-1600 MHz: ≥ 23 dB
1600-4500 MHz: ≥ 21 dB

Transfer Impedance Class A+: 5-30 MHz
Requirement < 2.5 mΩ/m
Measured < 1.5 mΩ/m

Screening Attenuation Class A++:

Requirement	Measured
30-1000 MHz: ≥ 105 dB	> 110 dB
1000-2000 MHz: ≥ 95 dB	> 110 dB
2000-3000 MHz: ≥ 85 dB	> 110 dB
3000-4500 MHz: ≥ 85 dB	> 95 dB

18 AWG • Solid 1.0 mm Bare Copper Conductor • Duobond® Plus • 80% Tinned Copper Braid

Gas-injected Foam HDPE • FRNC/LSNH Jacket

HDTV/SDI Digital Video 75°C	**1694DNH**	IEC 60332-3-24 IEC 60332-1 IEC 61034 IEC 60754	1.640	500	61.7	28.0	1.02 mm 18 AWG Solid BC 32.0 Ω/km* 21.0 Ω/km**	0.180	4.57	Duobond® Plus Duobond II + 80% TC braid + Al. foil w/shrt fold 11.0 Ω/km***	0.274	6.96	75	82%	16.2	53.0	1	0.2	0.8
																	3.6	0.5	1.5
																	10	0.7	2.4
																	71.5	1.7	5.6
																	135	2.3	7.4
																	270	3.2	10.4
																	360	3.7	12.1
																	540	4.6	15.0
																	720	5.3	17.5
																	750	5.5	17.9
																	1000	6.4	21.0
																	1500	7.9	26.0
																	2250	9.8	32.0
																	3000	11.6	38.0
																	4500	14.6	48.0

Return loss: 5-1600 MHz: ≥ 23 dB
1600-4500 MHz: ≥ 21 dB

Transfer Impedance Class A+: 5-30 MHz
Requirement < 2.5 mΩ/m
Measured < 1.2 mΩ/m

Screening Attenuation Class A++:

Requirement	Measured
30-1000 MHz: ≥ 105 dB	> 110 dB
1000-2000 MHz: ≥ 95 dB	> 110 dB
2000-3000 MHz: ≥ 85 dB	> 110 dB
3000-4500 MHz: ≥ 85 dB	> 95 dB

16 AWG • Solid 1.29 mm Bare Copper Conductor • Duobond® Plus • 80% Tinned Copper Braid

Gas-injected Foam HDPE • FRNC/LSNH Jacket

HDTV/SDI Digital Video 75°C	**1794DNH**	IEC 60332-3-24 IEC 60332-1 IEC 61034 IEC 60754	1.640	500	83.8	38.0	1.29 mm 16 AWG Solid BC 22.4 Ω/km* 13.2 Ω/km**	0.225	5.72	Duobond® Plus Duobond II + 80% TC braid + Al. foil w/shrt fold 9.2 Ω/km***	0.320	8.13	75	84%	16.2	53.0	1	0.2	0.56
																	3.6	0.3	1.0
																	10	0.5	1.6
																	71.5	1.3	4.1
																	135	1.7	5.6
																	270	2.4	8.0
																	540	3.5	11.5
																	720	4.1	13.4
																	750	4.2	13.7
																	1000	4.9	16.1
																	1500	6.1	20.1
																	2000	7.2	23.6
																	2250	7.7	25.2
																	3000	9.1	29.8
																	4500	11.5	37.8

Return loss: 5-1600 MHz: ≥ 23 dB
1600-4500 MHz: ≥ 21 dB

Transfer Impedance Class A+: 5-30 MHz
Requirement < 2.5 mΩ/m
Measured < 1.3 mΩ/m

Screening Attenuation Class A++:

Requirement	Measured
30-1000 MHz: ≥ 105 dB	> 110 dB
1000-2000 MHz: ≥ 95 dB	> 110 dB
2000-3000 MHz: ≥ 85 dB	> 110 dB
3000-4500 MHz: ≥ 85 dB	> 95 dB

14 AWG • Solid 1.6 mm Bare Copper Conductor • Duobond® Plus • 80% Tinned Copper Braid

Gas-injected Foam HDPE • FRNC/LSNH Jacket

HDTV/SDI Digital Video 75°C	**7731DNH**	IEC 60332-3-24 IEC 60332-1 IEC 61034 IEC 60754	1.640	500	124.6	56.5	1.63 mm 14 AWG Solid BC 13.7 Ω/km* 8.2 Ω/km**	0.280	7.11	Duobond® Plus Duobond II + 80% TC braid + Al. foil w/shrt fold 5.5 Ω/km***	0.402	10.20	75	84%	16.2	53.0	1	0.2	0.5
																	3.6	0.3	0.95
																	10	0.5	1.5
																	71.5	1.1	3.6
																	135	1.5	4.8
																	270	2.1	6.9
																	360	2.4	8.0
																	540	3.0	10.0
																	720	3.6	44.7
																	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
																	4500	10.4	34.1

Return loss: 5-1600 MHz: ≥ 23 dB
1600-4500 MHz: ≥ 21 dB

Transfer Impedance Class A+: 5-30 MHz
Requirement < 2.5 mΩ/m
Measured < 1.3 mΩ/m

Screening Attenuation Class A++:

Requirement	Measured
30-1000 MHz: ≥ 105 dB	> 110 dB
1000-2000 MHz: ≥ 95 dB	> 110 dB
2000-3000 MHz: ≥ 85 dB	> 110 dB
3000-4500 MHz: ≥ 85 dB	> 95 dB

* DCR loop = DCR center conductor + shielding • ** DCR center conductor • *** DCR shielding

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Low Loss HDTV/SDI Digital Coax

Color Codes		
Part No.	**Standard**	**Optional**
1855DNH	Black, green, purple, turquoise, grey	White, orange, blue, cream, yellow
1505DNH	Black, green, purple, turquoise	Blue, grey, red, yellow
1694DNH	Black, green, purple, turquoise	Blue, grey, red, yellow
1794DNH	Black, green, purple, turquoise	Blue, grey, red, yellow
7731DNH	Black, green, purple	–

Cable Connector

	Compression BNC Connector					Crimp BNC Connector			
Part No.	**Locking 1-Piece**	**1-Piece**	**Compression Tool**	**Strip Tool**	**Boot**	**3-Piece Crimp**	**Crimp Tool**	**Strip Tool**	**Boot**
1855DNH	1855ABHDL	1855ABHD1	CPLCRBC-BR	LDT-MINI	SLS-RGB-color	1855ABHD3-ENH	BB3PHCT	BB3PST	SLS-RGB
1505DNH	1505ABHDL	1505ABHD1	CPLCRBC-BR	LDT596-250	SLS-59/6-color	1505ABHD3	BB3PHCT	BB3PST	SLS-59/6
1694DNH	1694ABHDL	1694ABHD1	CPLCRBC-BR	LDT596-250	SLS-59/6-color	1694ABHD3	BB3PHCT	BB3PST	SLS-59/6
1794DNH	1794ABHDL	1794ABHD1	CPLCRBC-1794	SDT7-250	–	–	–	–	–
7731DNH	–	FSNS11QHBNC	SNSUNI	SDT11-250	–	–	–	–	–

Color: black, blue, green, purple, red, white, yellow

Always Stay Ahead with Belden

In a highly competitive environment, it is crucial to have reliable partners who are able to add value to your business. When it comes to signal transmissions, Belden is the number one solutions provider. We understand your business and want to know your specific challenges and targets to see how effective signal transmission solutions can push you ahead of the competition. By combining the strengths of our three leading brands, Belden®; Hirschmann™; and Lumberg Automation™, we are able to offer the solution you need. Today it may be a single cable, a switch or a connector, thus solving a specific issue; tomorrow it can be a complex range of integrated applications, systems and solutions.

We guarantee the superior performance of your mission-critical systems, even in the most demanding circumstances. If signal transmission is vital to your business, get in touch with the partner that delivers. Be certain. Belden.