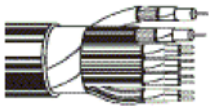
Detailed Specifications & Technical Data

ENGLISH MEASUREMENT VERSION

1347A Composite - Composite Data, Audio, Video, Security and Control Cable



Description:

Coax (2 - 1505A Type) 20 AWG BC, GIFPE isulation, Duofoil® plus TC braid (95% cv.), PVC inner jackets. Pairs (4 - 9451 Type): 22 AWG TC, PP insul., drain, Beldfoil® shield bonded to pair jacket. Color coded jackets. Cabled. Overall flex. PVC jacket.

Usage (Overall)

Suitable Applications: Electronic News Gathering (ENG), Electronic Field Production (EFP), Analog Audio + Digital Video Composite Applications, 2V + 4A

Coax

Physical Characteristics

Conductor

AWG:

# Coax	AWG	Stranding	Conductor Material	Dia. (in.)
2	20	Solid	BC - Bare Copper	0.034

Insulation

Insulation Material:

Insulation Material	Dia. (in.)
Gas- injected FPE - Foam Polyethylene	0.145

Outer Shield

Outer Shield Material:

Outer Shield Trade Name	Type	Outer Shield Material	Coverage (%)
Duofoil®	Tape	Aluminum Foil-Polyester Tape-Aluminum Foil	100.000
	Braid	TC - Tinned Copper	95.000

Outer Jacket

Outer Jacket Material:

Outer Jacket Material
PVC - Polyvinyl Chloride

Outer Jacket Color Code Chart:

Number	Color
1	Black
2	White

Overall Diameter

Overall Nominal Diameter: 0.233 in.

Applicable Specifications and Agency Compliance

Applicable Standards & Environmental Programs

Series Type: 59/U

Electrical Characteristics

Nom. Characteristic Impedance:

Impedance (Ohm)
75

Nom. Inductance:

Inductance (µH/ft)
0.107

Nom. Capacitance Conductor to Shield:

Capacitance (pF/ft)
16.300

Nominal Velocity of Propagation:

VP (%)
82.000

Nominal Delay:

Delay (ns/ft)
1.220

Nom. Conductor DC Resistance:

DCR @ 20°C (Ohm/1000 ft)
10.000

Nominal Outer Shield DC Resistance:

DCR @ 20°C (Ohm/1000 ft)
3.800

Minimum Return Loss:

Start Freq. (MHz)	Stop Freq. (MHz)	Min. RL (dB)
5.000	850.000	20.000
850.000	4500.000	15.000

Nom. Attenuation:

Freq. (MHz)	Attenuation (dB/100 ft.)
1.000	0.300
3.600	0.600
5.000	0.630
7.000	0.740
10.000	0.900
67.500	2.050
71.500	2.100
88.500	2.200
100.000	2.300
135.000	2.700
143.000	2.800
180.000	3.100
270.000	3.800
360.000	4.400
540.000	5.500
720.000	6.400
750.000	6.500
1000.000	7.600
1500.000	9.300
2000.000	10.900
2250.000	11.600
3000.000	13.400
4500.000	16.400

Max. Operating Voltage - UL:	300 V RMS
Other Electrical Characteristic 1:	Impedance tested in accordance with ASTM D-4566 paragraph 43.2, option 2 using a 75 Ohm fixed bridge and termination. 75 +/- 1.5 Ohms. Return Loss tested in accordance with ASTM D-4566 paragraph 45.3, using a 75 Ohm fixed bridge and termination.

Twisted Pair

Physical Characteristics

Conductor

AWG:

# Pairs	AWG	Stranding	Conductor Material
4	22	7x30	BC - Bare Copper

Insulation

Insulation Material:

Insulation Material	Dia. (in.)
PP - Polypropylene	0.046

Outer Shield

Outer Shield Material:

Outer Shield Trade Name	Type	Outer Shield Material	Coverage (%)
Beldfoil®	Tape	Aluminum Foil-Polyester Tape	100.000

Outer Shield Drain Wire AWG:

AWG	Stranding	Drain Wire Conductor Material
22	7x30	TC - Tinned Copper

Outer Jacket

Outer Jacket Material:

Outer Jacket Material	Nom. Wall Thickness (in.)
PVC - Polyvinyl Chloride	0.020

Outer Jacket Color Code Chart:

Number	Color
1	Brown
2	Red
3	Orange
4	Yellow

Overall Diameter

Overall Nominal Diameter: 0.135 in.

Electrical Characteristics

Input/Unfitted Impedance:

Impedance (Ohm)
45.000

Nom. Inductance:

Inductance (µH/ft)
0.170

Nom. Capacitance Conductor to Conductor:

Capacitance (pF/ft)
35.000

Nom. Capacitance Cond. to Other Conductor & Shield:

Capacitance (pF/ft)
67.000

Nominal Velocity of Propagation:

VP (%)
66.000

Nominal Delay:

Delay (ns/ft)
1.500

Maximum Conductor DC Resistance:

DCR @ 20°C (Ohm/100 m)
14.100

Nominal Outer Shield DC Resistance:

DCR @ 20°C (Ohm/1000 ft)
14.300

Max. Operating Voltage - UL:

Voltage
300 V RMS

Max. Recommended Current:

Current
2.9 Amps per conductor @ 25°C

Physical Characteristics (Overall)

Outer Shield

Outer Shield Material:

Outer Shield Material
Unshielded

Outer Jacket

Outer Jacket Material:

Outer Jacket Material
PVC - Polyvinyl Chloride

Overall Cabling

Overall Nominal Diameter:	0.630 in.

Mechanical Characteristics (Overall)

Operating Temperature Range:	-20°C To +60°C
Bulk Cable Weight:	189.000 lbs/1000 ft.
Max. Recommended Pulling Tension:	213.000 lbs.
Min. Bend Radius (Install)/Minor Axis:	6.300 in.

Applicable Specifications and Agency Compliance (Overall)

Applicable Standards & Environmental Programs

NEC/(UL) Specification:	CMP
CEC/C(UL) Specification:	CMG
EU Directive 2000/53/EC (ELV):	Yes
EU Directive 2002/95/EC (RoHS):	Yes
EU RoHS Compliance Date (mm/dd/yyyy):	06/05/2006
EU Directive 2002/96/EC (WEEE):	Yes
EU Directive 2003/11/EC (BFR):	Yes
CA Prop 65 (CJ for Wire & Cable):	Yes
MII Order #39 (China RoHS):	Yes

Flame Test

UL Flame Test:	UL1666 Riser
C(UL) Flame Test:	FT4
IEEE Flame Test:	1202

Plenum/Non-Plenum

Plenum (Y/N):	No

Electrical Characteristics (Overall)

Max. Operating Voltage - UL:

Voltage
300 V RMS

Put Ups and Colors:

Item #	Putup	Ship Weight	Color	Notes	Item Desc
1347A B591000	1,000 FT	232.000 LB	BLACK, MATTE	C	COMPOSITE CABLE PVC
1347A B59500	500 FT	108.500 LB	BLACK, MATTE	C	COMPOSITE CABLE PVC

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Notes:
C = CRATE REEL PUT-UP.

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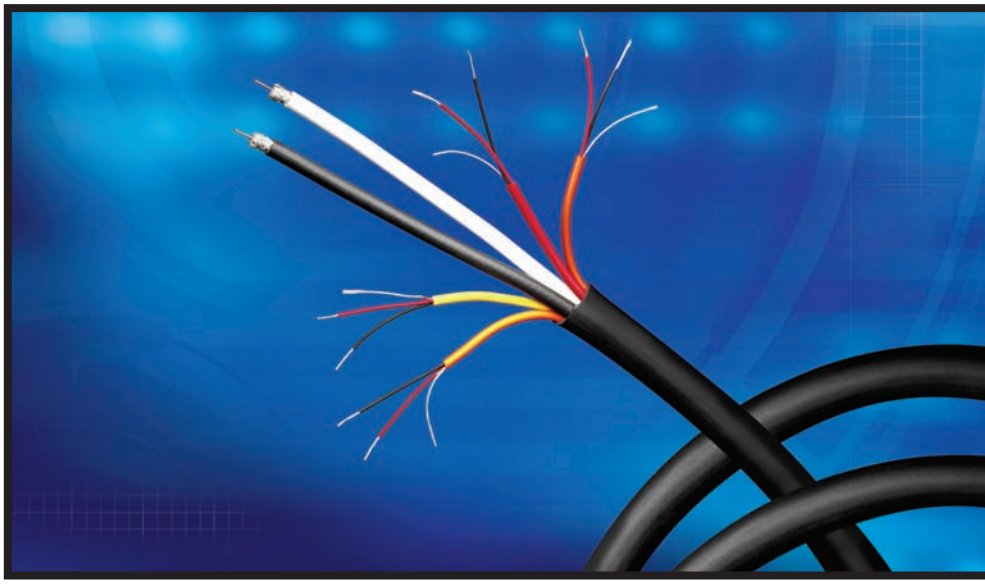
New Product Bulletin

NP 248

Brilliance® Digital and Analog Audio/Video Composite Cables

Utilizing two standards-setting Belden® cables, 1505A Precision Video cable and 9451 Audio cable, this new composite design provides exceptional video, audio and power functionality to ENG/EFP cameras.



Belden Brilliance Composite Camera Cable Is Designed for SDI/HDTV Video in ENG and EFP Applications

Belden Brilliance 1347A Audio/Video Composite Camera cable is ideal for the interconnection of digital remote field cameras. 1347A is a round, smooth composite cable that is comprised of two industry leading cables: Belden RG-59 Type SDI coaxes (P/N 1505A) and Belden single-pair coaxes for audio and power applications (P/N 9451). This rugged, yet flexible, new cable is appropriate for live or recorded on-site news reporting (ENG, or Electronic News Gathering). It is also appropriate for EFP (Electronic Field Production), or the on-site recording of videos produced for companies or private enterprises (i.e., advertisements or training films).

Superior Cable Construction Means Superior Performance

The two 1505A RG-59 Type SDI coaxes in this composite cable construction feature 20 AWG solid .032" bare copper conductors, gas-injected foam polyethylene insulation, Duofoil plus tinned copper braid shields for 95% shield coverage and Black and White PVC jackets. These coaxes have been sweep tested from 5-1600 MHz and 1600-4500 MHz, achieving minimum Return Loss values of 23dB and 21dB, respectively.

The four 9451 single twisted pair audio/power coaxes are comprised of two 22 AWG stranded (7x30") tinned copper conductors, crush-resistant polypropylene insulation, overall Beldfoil shields for 100% coverage, 22 AWG stranded drain wire and a Matte Black overall PVC jacket. The pair jackets are brown/red and orange/yellow.

Outstanding Installer Benefits

Pulling and termination of the new composite is especially easy since the cable is extremely flexible – even in low temperatures. Each coax is color-coded for easy channel identification and the each of the coax pairs have a Beldfoil® shield bonded to its crush-resistant polypropylene insulation for ease of termination. Installers can also use industry-standard BNC connectors.

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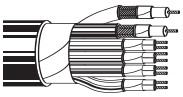
Digital Audio and Video Composite Camera Cables for ENG/EFP Applications

RG-59U Type Coax

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	Overall 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
(2) RG-59 Type SDI Coax + (4) 22 AWG Audio Cables (9451 Type) • (2) 20 AWG Solid Coax with Duofoil® + TC Braid Shield (95% Coverage) • (4) Jacketed 22 AWG STP Audio Cables																			
Insulation: Gas-Injected Foam Polythylene (Coax) and Polypropylene (Pairs) • Matte Black Overall PVC Jacket																			
UL 300V 60°C	**1347A** new	NEC: CMR CEC: CMG FT4	500 1000	152.4 304.8	108.5 232.0	49.3 105.5	(2) Coax: 20 AWG (solid) .034" BC 10.0Ω/M′ 32.8Ω/km Jackets: Black, white	.145 Coax OD: .233	3.68 5.92	Duofoil + TC Braid 95% Shield Coverage 3.8Ω/M′ 12.5Ω/km	.630	16.0	75	83%	16.3	53.5	1	.3	1.0
																	3.6	.6	2.0
													Coax Sweep Test and Min. RL:				5	.6	2.1
													5-1600 MHz		23dB		7	.7	2.4
													1600-4500 MHz		21dB		10	.9	3.0
																	67.5	2.1	6.7
																	71.5	2.1	6.9
																	88.5	2.2	7.2
							(4) Pairs: 22 AWG (7x30) .030" BC 14.1Ω/M′ 46.2Ω/km Jackets: Brown, Red, Orange, Yellow	.076 Pair OD: .135	1.93 3.43	Each Pair: Beldfoil Shielded 100% Shield Coverage w/22 AWG TC Drain Wire 14.3Ω/M′ 46.9Ω/km			45	66%	35.0	114.8	100	2.3	7.5
																	135	2.7	8.9
																	143	2.8	9.2
																	180	3.1	10.2
																	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
																	2000	10.9	35.8
																	2250	11.6	38.1
																	3000	13.4	44.0
																	4500	16.4	53.8



BC = Bare Copper • DCR = DC Resistance • STP = Shielded Twisted Pairs • 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.