

1353A Multi-Conductor - AES/EBU Digital Audio Cable



Description:

24 AWG Bonded-Pairs stranded (7x32) bare copper conductors, polyolefin insulation, PVC jacket.

Usage (Overall)

Suitable Applications: Field Deployable Cat 5e Patch, CobraNet, eSnake, Ethersound, Digital Audio over Ethernet

Physical Characteristics (Overall)

Conductor

AWG:

# Pairs	AWG	Stranding	Conductor Material	Dia. (in.)
1	24	7x32	BC - Bare Copper	.022

Insulation

Insulation Material:

Insulation Material	Wall Thickness (in.)	Dia. (in.)
PO - Polyolefin	.0085	.041

Outer Shield

Outer Shield Material:

Outer Shield Material
Unshielded

Outer Jacket

Outer Jacket Material:

Outer Jacket Material	Nom. Wall Thickness (in.)
PVC - Polyvinyl Chloride	.022

Overall Cabling

Overall Nominal Diameter: 0.126 in.

Pair

Pair Color Code Chart:

Number	Color
1	White/Brown Stripe & Brown

Mechanical Characteristics (Overall)

Operating Temperature Range: -20°C To +60°C

Bulk Cable Weight: 7.500 lbs/1000 ft.

Max. Recommended Pulling Tension: 18 lbs.

Min. Bend Radius (Install)/Minor Axis: 1.500 in.

Applicable Specifications and Agency Compliance (Overall)

Applicable Standards & Environmental Programs

NEC/(UL) Specification: CMR

CEC/C(UL) Specification: CMG

Other Standards: 11801 Category 5e Patch

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EU Directive 2000/53/EC (ELV):	Yes
EU Directive 2002/95/EC (RoHS):	Yes
EU RoHS Compliance Date (mm/dd/yyyy):	03/15/2007
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
Telecommunications Standards:	568-B.2 Category 5e Patch
Other Specification:	NEMA WC-63.1 Category 5, ICEA 661, Category 5e Patch, TIA/EI-568-B.2, Category 5e

Flame Test

UL Flame Test:	UL1666 Riser
CSA Flame Test:	FT4

Suitability

Suitability - Indoor:	Yes
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Plenum/Non-Plenum

Plenum (Y/N):	No
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Electrical Characteristics (Overall)

Nominal Velocity of Propagation:

VP (%)	70
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Maximum Delay:

Delay (ns/100 m)	510
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Maximum Conductor DC Resistance:

DCR @ 20°C (Ohm/100 m)	9
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Max. Operating Voltage - UL:

Voltage	300 V RMS
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Maximum DCR Unbalanced:

DCR Unbalance @ 20°C (%)	3
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Electrical Characteristics-Premise (Overall)

Premise Cable Electrical Table 1:

Freq. (MHz)	Max. Attenuation (dB/100 m)	Min RL (dB)	Min. SRL (dB)
1	2.400	20.000	23.0
4	4.900	23.000	23.0
6	6.000		
8	6.900	24.500	23.0
10	7.800	25.000	23.0
12	8.400		
16	9.900	25.000	23.0
20	11.100	25.000	23.0
25	12.500	24.300	22.0
31.25	14.100	23.600	21.0
62.5	20.400	21.500	18.0
100	26.400	20.100	16.0

Premise Cable Electrical Table 2:

Freq. (MHz) Fitted Impedance

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1	105 ± 15
4	100 ± 15
8	100 ± 15
10	100 ± 15
16	100 ± 15
20	100 ± 15
25	100 ± 15
31.25	100 ± 15
62.5	100 ± 15
100	100 ± 15

Notes (Overall)

Notes: US Patents 5, 734, 126. EtherNet/IP is a trademark of ControlNet Internation, Ltd. under license by Open DeviceNet Vendor Association, Inc. Operating temperatures are subject to length de-rating.

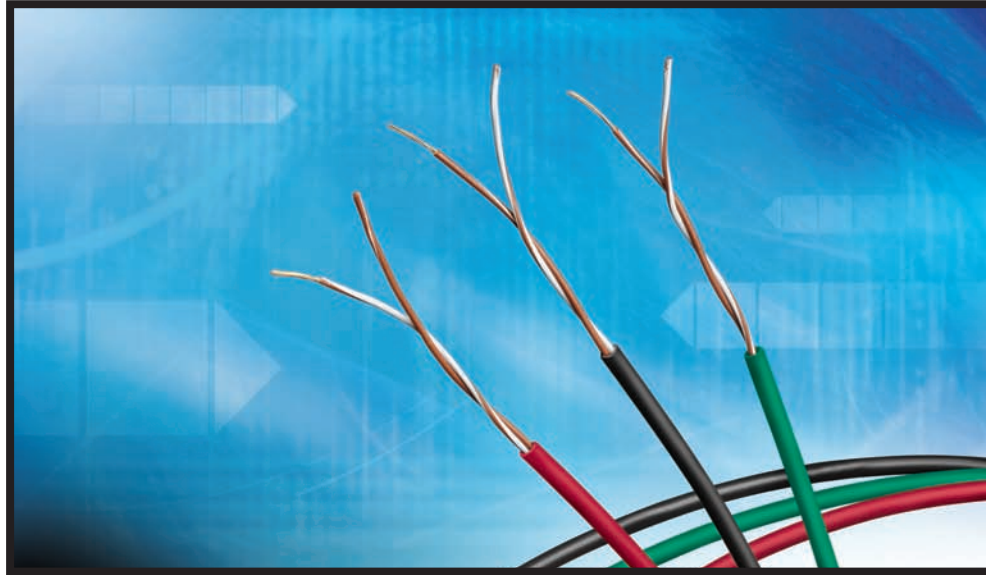
Put Ups and Colors:

Item #	Putup	Ship Weight	Color	Notes	Item Desc
1353A N3UU1000	1,000 FT	9.000 LB	GREEN, MIL		1 PR #24 PP FRPVC
1353A 001U1000	1,000 FT	9.000 LB	BROWN		1 PR #24 PP FRPVC
1353A 002U1000	1,000 FT	9.000 LB	RED		1 PR #24 PP FRPVC
1353A 003U1000	1,000 FT	9.000 LB	ORANGE		1 PR #24 PP FRPVC
1353A 004U1000	1,000 FT	9.000 LB	YELLOW		1 PR #24 PP FRPVC
1353A 006U1000	1,000 FT	9.000 LB	BLUE, LIGHT		1 PR #24 PP FRPVC
1353A 007U1000	1,000 FT	9.000 LB	VIOLET		1 PR #24 PP FRPVC
1353A 008U1000	1,000 FT	9.000 LB	GRAY		1 PR #24 PP FRPVC
1353A 009U1000	1,000 FT	9.000 LB	WHITE		1 PR #24 PP FRPVC
1353A 010U1000	1,000 FT	9.000 LB	BLACK		1 PR #24 PP FRPVC
1353A 0101000	1,000 FT	9.000 LB	BLACK		1 PR #24 PP FRPVC
1353A 010500	500 FT	5.500 LB	BLACK		1 PR #24 PP FRPVC

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Belden® Digital Audio Cable

Belden Brilliance® AES/EBU Digital Audio Cable, Part No. 1353A, is a robust single-pair Cat 5e patch cord that utilizes Belden's exclusive Bonded-Pair technology for outstanding reliability in both indoor and outdoor applications.



Belden Brilliance AES/EBU Digital Audio Cables Provide Optimal Digital/Analog Performance and Installation Ease

Belden Brilliance 1353A, a new Cat 5e digital audio single-pair cable, is ideal for use in professional and commercial audio applications. Since it is essentially 'single pair-Category 5e,' tested to 100 MHz, its low capacitance (15 pF/ft, 49 pF/m) makes it excellent for both analog and digital audio. It is especially valuable where small size, low weight, and high performance are required, and can be used anywhere a traditional analog or digital shielded pair might be employed, even where cabling may experience rough handling and harsh environmental conditions.

Installation Efficiency

This robust 100 ohm UTP with 24 AWG stranded (7x32) bare copper conductors is truly something new, filling a user-requirement gap that has previously gone unaddressed. Many installers routinely use Category 5e or Category 6 cables for audio applications. But, until now if you wanted a single Cat 5e pair, it was necessary to take a four-pair cable and laboriously separate out a pair. The availability of this new ready-to-use jacketed single pair eliminates those inconvenient steps, saving installation time and improving installation efficiency.

Installable Performance®

Belden's patented Bonded-Pair technology provides maximum ruggedness and consistent electrical properties during and after installation. During installation, cables are typically pulled, bent, and even kinked. All of these actions can alter the dimensions and physical properties of the cable, degrading its electrical performance. However, the Bonded-Pair design attaches the two wires together (without glue!) for a uniform conductor-to-conductor spacing. This helps the cable withstand the rigors of installation and maintain high performance.

The balanced nature of a twisted pair maximizes 'common mode rejection' and cancels out electromagnetic noise such as EMI, RFI and crosstalk from other pairs. Belden's Bonded-Pair design goes one better since it does not allow gaps to form between conductors so pairs are even more consistent in dimensions and therefore less likely to pick up noise from other sources.

This cable is UTP, a single 'unshielded twisted pair'. Having no shield and no drain wire virtually eliminates problems associated with shields, such as 'ground loops.' But, in applications that require a ground connection to work, such as phantom powered microphones or some intercom systems, this cable would not be appropriate.

Not Just for Digital Use, But Analog Too, and More

As a bonus, the 1353A Single-pair Digital Audio Cable can be used for analog applications as well as digital. In general, in a digital cable it's the impedance that's the critical electrical parameter, not just capacitance as in analog cables. By nature of their design, Belden Digital Audio Cables have a low capacitance due to their high impedance, making them excellent analog cables. Even if your immediate needs happen to be strictly based on analog, installing an AES/EBU digital audio cable like Belden 1353A will give you the best possible analog audio service and "futureproof" your facility when you upgrade to digital.

For unbalanced applications such as base-band video, consumer unbalanced audio, or digital audio on coax (AES3-id or S/PDIF), the

use of baluns will allow the installer to use 1353A for those applications too. It will even carry up to six channels of broadband with its 100 MHz bandwidth, with appropriate baluns. For more information, consult the white paper "Video and UTP" in the technical papers section at www.belden.com

Outstanding Construction for Indoor/Outdoor Versatility



This innovative new product's jacket is made of a rugged matte-finish PVC, yet the cable is still highly flexible and very round. Overall nominal cable diameter is 0.126 in. so the minimum installed bend radius is 1.26 in. The insulation on the pair is polyolefin. Operating temperature range for Belden 1353A is -20°C to 60°C and this cable complies with NEC/(UL) CMR (riser) and CEC/(UL) CMG fire ratings.

AES/EBU Digital Audio Cable TIA/EIA-568-B.2 Category 5e Patch Cable

Description	Part No.	UL NEC/ C(UL) CEC Type	No. of Pairs	Standard Lengths		Standard Unit Weight		Nominal OD		Nom. Imp. (Ω)	Nom. Vel. of Prop.	Nom. Capacitance		Max. DCR (Ω) 100m	Max. DCR Unbal. (%)	Freq. (MHz)	Max. Atten. (dB/ 100m)	Fitted Imped (Ω)	Min. RL (dB)	Min. SRL (dB)
				Ft.	m	Lbs.	kg	Inch	mm			pF/Ft.	pF/m							

24 AWG Stranded (7 x 32) Bare Copper Conductors • Bonded-Pairs

Non Plenum • Polyolefin Insulation • PVC Jacket (see colors below)

	300V RMS 1353A 	NEC:	1	500	152.4	5.5	2.5	0.126	3.20	100	70%	15	49	9.0	3.0	1	2.4	105±15	20.0	23.0	
		CMR		U-1000	U-304.8	9.0	4.1										4	4.9	100±15	23.0	23.0
		CEC:		U-1000	U-304.8	9.0	4.1										8	6.9	100±15	24.5	23.0
		CMG FT4		1000	304.8	9.0	4.1										10	7.8	100±15	25.0	23.0
																	16	9.9	100±15	25.0	23.0
															20	11.1	100±15	25.0	23.0		
															25	12.5	100±15	24.3	22.0		
															31.25	14.1	100±15	23.6	21.0		
															62.5	20.4	100±15	21.5	18.0		
															100	26.4	100±15	20.1	16.0		

Jacket Colors Available:

Brown	Violet
Red	Gray
Orange	White
Yellow	Black
Lt. Blue	Military Green