

## 1685ANH

## Paired –Belden Category 6A Unbonded Cable

		<p>For more information please call 1-800-Belden1</p>
<p><u>See Put-ups and Colors</u></p>		
<p><b>Related Documents: No.8 for Data Twist Cables (Modified Western Electric).pdf</b></p>		

### Description:

23 AWG solid bare copper conductors, non-plenum, Foamed Polyethylene insulation, twisted pairs, individual foil shield, drain wire, overall foil shield , ripcord under overall LSZH jacket.

### SUITABLE APPLICATIONS:

Suitable Applications	Horizontal and building backbone cable; Support current and future Category 6a and 6 applications, such as: 10GBase-T (10 Gigabit Ethernet), 1000Base-T (Gigabit Ethernet), 100 Base-T, 10 Base-T, FDDI, ATM
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### PHYSICAL CHARACTERISTICS:

#### CONDUCTOR:

Number of Pairs	4
Total Number of Conductors	8
AWG	23
Stranding	Solid
Conductor Material	BC - Bare Copper

#### INSULATION:

Insulation Material	Foamed Polyethylene
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#### Pairs Color Code Chart:

Pair Number	Insulation Color	
	Wire 1	Wire 2
1	White	Blue
2	White	Orange
3	White	Green
4	White	Brown

#### INDIVIDUAL PAIR SHIELD:

Individual Pair Shield Type	Tape
Individual Pair Shield Material	Aluminum Foil – Polyester Tape
Individual Pair Shield Coverage	100 %

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### OUTER SHIELD:

Outer Shield Type	Tape
Outer Shield Material	Aluminum Foil – Polyester Tape
Outer Shield Coverage	100 %
Outer Shield Drain Wire Material	TC – Tinned Copper
Outer Shield Drain Wire Size	Solid 26 AWG

### OUTER JACKET:

Outer Jacket Material	LSZH – Low Smoke Zero Halogen
Outer Jacket Ripcord	Yes

### OVERALL NOMINAL DIAMETER:

Overall Nominal Diameter	7.3 mm
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### MECHANICAL CHARACTERISTICS:

Operating Temperature Range	- 20°C To + 75°C
Max. Recommended Pulling Tension	110 N
Min. Bend Radius (Install)	59 mm

### APPLICABLE SPECIFICATION AGENCY COMPLIANCE:

#### APPLICABLE STANDARDS:

IEC Specification	IEC 61156-5
EU RoHS Compliant (Y/N)	Y
EU RoHS Compliance Date	Dec 2007

#### FLAME TEST:

Flame Test	IEC 60332-1
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#### SUITABILITY:

Suitability – Indoor (Y/N)	Y
Non-halogenated	Y

#### PLENUM/NON-PLENUM:

Plenum (Y/N)	N
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#### ELECTRICAL CHARACTERISTICS:

Nom. Mutual Capacitance @ 1 KHz	5.6 nF/100m
Max. pair to ground Capacitance unbalance	160 pF/100m
Maximum Delay Skew	25 ns/100m
Maximum Conductor DC Resistance @ 20 Deg.C	9.38 Ohms/100m
Maximum DCR Unbalance @ 20 Deg.C	2% / 4% (within a pair/between pairs)
Nom. Velocity of propagation	74 %
Transfer impedance according to IEC 61156-5	Grade 2

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Coupling attenuation according to IEC61156-5	Type II
Maximum Intended Operating Voltage	72 V DC

### OTHER PROPERTIES:

Halogen Content per IEC 60754-1	≤ 5 mg/g
Acid Gas Emission pH per IEC 60754-2	≥ 4.3
Acid Gas Emission Conductivity per IEC 60754-2	< 10 µs/mm
Smoke Density as per IEC 61034-2	≥ 60% Light Transmittance

### ELECTRICAL CHARACTERISTICS - PREMISES:

Premise Cable Electricals Table 1:

Frequency (MHz)	Max. Attenuation (dB/100m)	Min. Return Loss (dB)	Min. NEXT (dB)	Min. PSNEXT (dB)	Min. ACRF (dB)	Min. PSACRF (dB)	Min. PSANEXT (dB)	Min. PSAACRF (dB)
4	3.8	23.0	66.3	63.3	56.0	53.0	67.0	66.2
8	5.3	24.5	61.8	58.8	49.9	46.9	67.0	60.1
10	5.9	25.0	60.3	57.3	48.0	45.0	67.0	58.2
16	7.5	25.0	57.2	54.2	43.9	40.9	67.0	54.1
20	8.4	25.0	55.8	52.8	42.0	39.0	67.0	52.2
25	9.4	24.3	54.3	51.3	40.0	37.0	67.0	50.2
31.25	10.5	23.6	52.9	49.9	38.1	35.1	67.0	48.3
62.5	15.0	21.5	48.4	45.4	32.1	29.1	65.6	42.3
100	19.1	20.1	45.3	42.3	28.0	25.0	62.5	38.2
200	27.6	18.0	40.8	37.8	22.0	19.0	58.0	32.2
250	31.1	17.3	39.3	36.3	20.0	17.0	56.5	30.2
300	34.3	17.3	38.1	35.1	18.5	15.5	55.3	28.7
400	40.1	17.3	36.3	33.3	16.0	13.0	53.5	26.2
500	45.3	17.3	34.8	31.8	14.0	11.0	52.0	24.2
*625	51.2	17.3	33.4	30.4	12.1	9.1	50.6	22.3

Frequency (MHz)	Characteristic Imped. Upper limit (Ω)	Characteristic Imped. Lower limit (Ω)	Min. ACR (dB/100m)	Min. PSACR (dB/100m)	Min. TCL (dB/100m)	Min. ELTCTL (dB/100m)	Max. P D (ns/100m)
4	115.2	86.8	62.5	59.5	34.0	23.0	552
8	112.6	88.8	56.4	53.4	31.0	16.9	547
10	111.9	89.4	54.4	51.4	30.0	15.0	545
16	111.9	89.4	49.8	46.8	28.0	10.9	543
20	111.9	89.4	47.4	44.4	27.0	9.0	542

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25	112.9	88.5	45.0	42.0	26.0	7.0	541
31.25	114.1	87.7	42.4	39.4	25.1	5.1	540
62.5	118.3	84.5	33.4	30.4	22.0	---	539
100	121.9	82.0	26.2	23.2	20.0	---	538
200	128.8	77.6	13.2	10.2	17.0	---	536
250	131.5	76.0	8.3	5.3	16.0	---	536
300	131.6	76.0	3.9	0.9	---	---	536
400	131.6	76.0	---	---	---	---	536
500	131.6	76.0	---	---	---	---	536
*625	131.6	76.0	---	---	---	---	536

### NOTES:

Note Jacket sequentially marked.

\*Limits below 4 MHz are for information only. Values at 625MHz are for information only.

### PUT-UPS AND COLORS:

Item	Description	Put-Up	Jacket Color
1685ANH 006305M	4PR 23 AWG PO LSZH F/FTP CAT6a	305 M	BLUE
1685ANH 008305M	4PR 23 AWG PO LSZH F/FTP CAT6a	305 M	GREY
1685ANH 010305M	4PR 23 AWG PO LSZH F/FTP CAT6a	305 M	BLACK

Revision Number: 2

Revision Date: 17-08-2017

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