



**Product:** [10GA24](#)

CAT 6A 23AWG, U/UTP, LSZH Jkt, Indoor

## Product Description

23 AWG solid bare copper conductors, non-plenum, Polyethylene insulation, twisted pairs, central spline, overall cabling, special Barrier tape, LSZH jacket

## Technical Specifications

### Product Overview

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, ISDN, ATM as well as PoE application etc.
Patent:	This product has one or more applicable patents. More information on patents can be found at <a href="https://www.belden.com/resources/patents">https://www.belden.com/resources/patents</a> .

### Physical Characteristics (Overall)

#### Conductor

AWG	Stranding	Material	No. of Pairs
23	Solid	BC - Bare Copper	4

Total Number of Pairs:	4
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#### Insulation

Material
PE - Polyethylene

Bonded-Pair:	No
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#### Color Chart

Number	Color
Pair #1	White & Blue
Pair #2	White with Orange Stripe & Orange
Pair #3	White with Green Stripe & Green
Pair #4	White with Brown Stripe & Brown

#### Cabling

Filler
Central Spline (Red color)

#### Outer Jacket Material

Material	Nominal Diameter	Separator Material
LSZH - Low Smoke Zero Halogen (Flame Retardant)	7.2±0.3 mm	Barrier Tape

### Electrical Characteristics

#### Conductor DCR

Max. Conductor DCR	Max. DCR Unbalance	Max DCR Unbalanced Between Pairs [%]
80 Ohm/km at 20°C	2 %	4 %

#### Capacitance

Max. Capacitance Unbalance	Nom. Mutual Capacitance
160 pF/100m	56 pF/m

Operating Voltage:	72 V DC
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#### Delay

Frequency [MHz]	Max. Delay Skew	Nominal Velocity of Propagation (VP) [%]
100 MHz	45 ns/100m	67%

#### High Freq

Frequency [MHz]	Max. Insertion Loss (Attenuation)	Min. NEXXT [dB]	Min. PSNEXXT [dB]	Min. PSACR [dB]	Min. ACRF (ELFEXT) [dB]	Min. PSACRF (PSELFEXT) [dB]	Min. RL (Return Loss) [dB]	Min. PSANEXXT	Min. PSAACRF	Min. TCL [dB]	Min. ELTCTL [dB]
1 MHz	2.1 dB/100m	75.3 dB	72.3 dB	71.2 dB	68.0 dB	65.0 dB	20.0 dB	67.0 dB	67.0 dB	40.0 dB	35.0 dB
4 MHz	3.8 dB/100m	66.3 dB	63.3 dB	60.5 dB	56.0 dB	53.0 dB	23.0 dB	67.0 dB	66.2 dB	34.0 dB	23.0 dB
10 MHz	5.9 dB/100m	60.3 dB	57.3 dB	54.4 dB	48.0 dB	45.0 dB	25.0 dB	67.0 dB	58.2 dB	30.0 dB	15.0 dB
16 MHz	7.5 dB/100m	57.2 dB	54.2 dB	52.4 dB	43.9 dB	40.9 dB	25.0 dB	67.0 dB	54.1 dB	28.0 dB	10.9 dB
31.25 MHz	10.5 dB/100m	52.9 dB	49.9 dB	47.8 dB	38.1 dB	35.1 dB	23.6 dB	67.0 dB	48.3 dB	25.1 dB	
62.5 MHz	15.0 dB/100m	48.4 dB	45.4 dB	45.4 dB	32.1 dB	29.1 dB	21.5 dB	65.6 dB	42.3 dB	22.0 dB	
100 MHz	19.1 dB/100m	45.3 dB	42.3 dB	43.0 dB	28.0 dB	25.0 dB	20.1 dB	62.5 dB	38.2 dB	20.0 dB	
125 MHz	21.5 dB/100m	43.8 dB	40.8 dB	40.4 dB	26.1 dB	23.1 dB	19.4 dB	61.0 dB	36.3 dB	19.0 dB	
200 MHz	27.6 dB/100m	40.8 dB	37.8 dB	31.4 dB	22.0 dB	19.0 dB	18.0 dB	58.0 dB	32.2 dB	17.0 dB	
250 MHz	31.1 dB/100m	39.3 dB	36.3 dB	24.2 dB	20.0 dB	17.0 dB	17.3 dB	56.5 dB	30.2 dB	16.0 dB	
300 MHz	34.3 dB/100m	38.1 dB	35.1 dB	11.2 dB	18.5 dB	15.5 dB	17.3 dB	55.3 dB	28.7 dB		
500 MHz	45.3 dB/100m	34.8 dB	31.8 dB	6.3 dB	14.0 dB	11.0 dB	17.3 dB	52.0 dB	24.2 dB		
600 MHz	50.1 dB/100m	33.6 dB	30.6 dB	1.9 dB	12.4 dB	9.4 dB	17.3 dB	50.8 dB	22.6 dB		
650 MHz	52.3 dB/100m	33.1 dB	30.1 dB		11.7 dB	8.7 dB	17.3 dB	50.3 dB	21.9 dB		

Table Notes: Jacket sequentially marked. Limits for 1MHz, 600MHz, 650MHz are for information only.

#### Temperature Range

Installation Temp Range:	0°C to +50°C
Storage Temp Range:	-20°C to +60°C
Operating Temp Range:	-20°C to +60°C

#### Mechanical Characteristics

Bulk Cable Weight:	52 kg/km
Max. Pull Tension:	110 N
Min. Bend Radius During Installation:	50 mm

#### Standards

ISO/IEC Compliance:	ISO/IEC 11801-1, IEC 61156-5
Data Category:	Category 6A
TIA/EIA Compliance:	ANSI/TIA 568.2-D
IEEE Compliance:	IEEE 802.3bt Type 1, Type 2, Type 3, Type 4

#### Applicable Environmental and Other Programs

Environmental Space:	Indoor
EU Directive Compliance:	Yes
EU RoHS Compliance Date (yyyy-mm-dd):	2013-01-01

#### Suitability

Suitability - Indoor:	Yes
Suitability - Non-Halogenated:	Yes

#### Flammability, LSOH, Toxicity Testing

IEC Flammability:	IEC 60332-1-2
IEC 60754-2 - Halogen Acid Gas Amount - Max. Conductivity:	10 µS/mm
IEC 60754-2 - Halogen Acid Gas Amount - Min. pH:	4.3
IEC 61034-2 (EN 61034-2) (VDE 0482-1034) - Smoke Density Min. Transmittance:	60%

#### Plenum/Non-Plenum

Plenum (Y/N):	No
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#### Part Number

## Variants

Item #	Color	Length
10GA24 010305M	Black	305 m
10GA24 006305M	Blue	305 m
10GA24 008305M	Gray	305 m
10GA24 005305M	Green	305 m
10GA24 003305M	Orange	305 m
10GA24 002305M	Red	305 m
10GA24 009305M	White	305 m
10GA24 004305M	Yellow	305 m

## Product Notes

Notes:	Cold bend test: -30 x 4 Hrs, No Crack
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## History

Update and Revision:	Revision Number: 0.28 Revision Date: 09-08-2021
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