



Part Number: 7931A

Cat 6 High & Low Temp DataTwist®, (4 pr) 23 AWG
Solid BC, FEP/FEP, Gas Res, CMP

Product Description

Four Cat 6 23 AWG Bonded-Pairs solid bare copper conductors, FEP insulation, FEP jacket.

Product Specifications

Technical Specifications

Suitable Applications:	Industrial Ethernet Cable, Harsh Environments, 350MHz Enhanced Category 6, Gigabit Ethernet, 100BaseTX, 100BaseVG ANYLAN, 155ATM, 622ATM, NTSC/PAL Component or Composite Video, AES/EBU Digital Audio, AES51, RS-422, RJ-45 Compatible, High and Low Temperature, Oil and Gasoline Exposure, Limited Combustible FHC 25/50
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Construction and Dimensions

Conductor:

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

Total Number of Conductors:	8
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Insulation:

Material
FEP - Fluorinated Ethylene Propylene

Color Chart 1:

Number	Color
1	White/Blue Stripe & Blue
2	White/Orange Stripe & Orange
3	White/Green Stripe & Green
4	White/Brown Stripe & Brown

Cabling 1:

Filler
Rod Center Member

Outershield 1:

Material
Unshielded

Outerjacket 1:

Material	Nominal Diameter
FEP - Fluorinated Ethylene Propylene	0.214 in

Electrical Characteristics

Conductor DCR:

Max. Conductor DCR	Max. DCR Unbalance
9.38 Ohm/1000ft	5 %

Capacitance:

Max. Capacitance Unbalance	Nom.Mutual Capacitance
330 pF/ft	15 pF/ft

Delay:

Max. Delay	Max. Delay Skew	Nominal Velocity of Propagation (VP) [%]
537 @ 100MHz ns/100m	45 ns/100m	72 %

High Freq:

Frequency [MHz]	Max. Insertion Loss (Attenuation)	Min. NEXT [dB]	Min. PSNEXT [dB]	Min. ACR [dB]	Min. PSACR [dB]	Min. ACRF (ELFEXT) [dB]	Min. PSACRF (PSELFEXT) [dB]	Min. RL (Return Loss) [dB]	Min. SRL (Structural Return Loss)	Max./Min. Input Impedance (unFitted)	Max./Min. Fitted Impedance
1 MHz	2 db/100m	74.3 dB	72.3 dB	72.3 dB	70.3 dB	67.8 dB	64.8 dB	20 dB	na dB	100 ± 15 Ohm	
4 MHz	3.8 db/100m	65.3 dB	63.3 dB	61.5 dB	59.5 dB	55.8 dB	52.7 dB	23 dB	na dB	100 ± 15 Ohm	
8 MHz	5.3 db/100m	60.8 dB	58.8 dB	55.4 dB	53.4 dB	49.7 dB	46.7 dB	24.5 dB	na dB	100 ± 15 Ohm	
10 MHz	6 db/100m	59.3 dB	57.3 dB	53.3 dB	51.3 dB	47.8 dB	44.8 dB	25 dB	na dB	100 ± 15 Ohm	
16 MHz	7.6 db/100m	56.2 dB	54.3 dB	48.7 dB	46.7 dB	43.7 dB	40.7 dB	25 dB	na dB	100 ± 15 Ohm	
20 MHz	8.5 db/100m	54.8 dB	52.8 dB	46.3 dB	44.3 dB	41.8 dB	38.7 dB	25 dB	na dB	100 ± 15 Ohm	
25 MHz	9.5 db/100m	53.3 dB	51.3 dB	43.8 dB	41.8 dB	39.8 dB	36.8 dB	24.3 dB	na dB	100 ± 15 Ohm	
31.25 MHz	10.7 db/100m	51.9 dB	49.9 dB	41.2 dB	39.2 dB	37.9 dB	34.9 dB	23.6 dB	na dB	100 ± 15 Ohm	
62.5 MHz	15.4 db/100m	47.4 dB	45.4 dB	32 dB	30 dB	31.9 dB	28.8 dB	21.5 dB	na dB	100 ± 15 Ohm	
100 MHz	19.8 db/100m	44.3 dB	42.3 dB	24.5 dB	22.5 dB	27.8 dB	24.8 dB	20.1 dB	na dB	100 ± 15 Ohm	100 ± 15 Ohm
155 MHz	25.2 db/100m	41.5 dB	39.5 dB	16.3 dB	14.3 dB	23.9 dB	20.9 dB	18.8 dB	na dB	100 ± 22 Ohm	100 ± 15 Ohm
200 MHz	29 db/100m	39.8 dB	37.8 dB	10.8 dB	8.8 dB	21.8 dB	18.7 dB	18 dB	na dB	100 ± 22 Ohm	100 ± 15 Ohm
250 MHz	32.8 db/100m	38.3 dB	36.3 dB	5.5 dB	3.5 dB	19.8 dB	16.8 dB	17.3 dB	na dB	100 ± 32 Ohm	100 ± 15 Ohm
1 MHz											
4 MHz											
8 MHz											
10 MHz											
16 MHz											
20 MHz											
25 MHz											
31.25 MHz											
62.5 MHz											
100 MHz											
155 MHz											
200 MHz											
250 MHz											

Voltage:

UL Voltage Rating

300 V RMS

Use

Suitability - Oil Resistance:	Yes
Max Recommended Pulling Tension:	40 lbs

Safety

CSA Flammability:	FT6
UL Flammability:	UL723 (NFPA 255), NFPA 262

Temperature Range

Installation Temp Range:	-55°C To +150 °C
Operating Temp Range:	-70°C To +150°C

Mechanical Characteristics

Min Bend Radius/Minor Axis:	0.5 in
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Part Number

Plenum (Y/N):	Yes
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Standards

Telecommunications Standards:	Telecommunications Standards
CA Prop 65 (CJ for Wire & Cable):	CA Prop 65 (CJ for Wire & Cable)
CEC/C(UL) Specification:	CEC/C(UL) Specification
MII Order #39 (China RoHS):	MII Order #39 (China RoHS)
NEC Articles:	NEC Articles
NEC/(UL) Specification:	NEC/(UL) Specification
Other Specification:	Other Specification
EU Directive Compliance:	EU Directive 2003/11/EC (BFR)

History

Notes:	US Patents 5, 606, 151& 5, 573, 126. Operating temperatures subject to length de-rating.
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Product Variants

Part Number	Color	Put-Up Type	Length
7931A	BLACK	Reel	1000 ft
7931A			
7931A 0101000	BLACK	Reel	1000 ft

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