



Product: [50106AH1](#)

BELDEN 50106AH1 Industrial Ethernet CAT6A Cable, SF/FTP, Profinet Type C, 4 Pair, 24AWG Stranded, PUR Jkt, E357312-S, AWM 20554 80C, 30V, FT2

Product Description

BELDEN 50106AH1 Industrial Ethernet CAT6A Cable, SF/FTP, Profinet Type C, 4 Pair, 24AWG Stranded Tinned Copper Conductors, Polyethylene Insulation, Tinned Copper Braid Shield, PUR Jacket, E357312-S, AWM 20554 80C, 30V, FT2

Technical Specifications

Product Overview

Suitable Applications:	Ethernet:10Base-T, 100Base-TX, 1000Base-T, 1000Base-TX, 10GBase-T
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Construction Details

Conductor

Size	Stranding	Material
24 AWG	7x32	TC - Tinned Copper

Insulation

Material	Nom. Insulation Diameter	Color Code
PE - Polyethylene (Foam)	1.45 mm (0.0571 in)	White & Blue, White & Orange, White & Green, White & Brown

Outer Shield

Shield Type	Material	Coverage
Braid	Tinned Copper (TC)	85%
Tapes (Each Pair)	Bi-Laminate (Alum+Poly)	

Outer Jacket

Material	Nom. Diameter
PUR - Polyurethane	8.9 mm (0.35 in)

Electrical Characteristics

Electricals

Max. Conductor DCR	Nom. Characteristic Impedance
95 Ohm/km	100 Ohm

Delay

Max. Delay Skew
≤ 20 ns/100m

High Frequency

Frequency [MHz]	Max. Insertion Loss (Attenuation)	Min. NEXT [dB]	Min. ACRF (ELFEXT) [dB]	Min. RL (Return Loss) [dB]
4	5.7 dB/100m	66.3	56.0	23.0
10	9.5 db/100m	59.5	46.4	25.0
16	11.5 dB/100m	57.1	44.1	25.0
31.25	15.8 dB/100m	53.1	38.0	23.3
62.5	22.4 dB/100m	48.4	32.2	20.8
100	29.0 dB/100m	45.2	27.8	19.0
200	41.1 dB/100m	40.8	22.0	17.3

250	46.6 dB/100m	39.3	20.1	17.3
300	51.4 dB/100m	38.2	18.5	17.3
350	55.8 dB/100m	37.1	17.1	17.3
500	67.9 dB/100m	34.8	14.0	17.3

Mechanical Characteristics

Temperature

Operating
-30°C To +70°C

Bend Radius

Installation Min.	Flexing Min.
71.2 mm (2.80 in)	133.5 mm (5.256 in)

Standards and Compliance

Environmental Suitability:	Indoor/Outdoor, Indoor, Outdoor, Non-Halogenated, Sunlight Resistance, UV Resistance, Oil Resistance
Flammability / Reaction to Fire:	FT2, IEC 60332-1-2
AWM Compliance:	AWM 20554
Data Category:	Category 6A
ISO/IEC Compliance:	IEC 61156-xx, UL 758
European Halogen Free Standards:	IEC 60754-1 - Halogen Amount = Zero
European Directive Compliance:	EU Directive 2011/65/EU (RoHS 2)

Product Notes

Notes:	Min No. of Drag Chain Cycles: ≥ 2.5 million Drag Chain Parameters: $r=15 D$, $a= 3m/s^2$, $v= 3m/s$, chain length : 5 m
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History

Update and Revision:	Revision Number: 0.50 Revision Date: 01-12-2025
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