



Product: [NH50106SFR](#)

DataTuff™ Industrial Ethernet CAT6 4x2x23AWG/1 S/FTP Fire Resistant Anti-Rodent and Water- block

Product Description

23 AWG solid bare twisted copper conductors, Mica Glass Tape Fire Protection barrier on each conductor, Polyethylene insulation, S/FTP, Fire Reistant, Tinned Copper Braid Shield with Central Drain Wire, Mica Glass Tape and Water Blocking tape, LSZH Jacket, Anti-Rodent and Water- block

Technical Specifications

Product Overview

Suitable Applications:	Industrial Ethernet Cat 6 connection with Fire Resistant capability
------------------------	---

Construction Details

Conductor

Element	Size	Stranding	Material	No. of Pairs	No. of Elements
Conductor(s)	23 AWG	Solid	BC - Bare Copper	4	8

Insulation

Material	Nom. Insulation Diameter	Color Code	Notes
PE - Polyethylene	1.58 mm (0.0622 in)	Blue & White with Blue Strip, Orange & White with Orange Strip, Green & White with Green Strip, Brown & White with Brown Strip	Fire Protection Barrier: Mica glass Tape(MGT), Twist Direction = S, 25% AL-mylar tape(Overlapping)

Inner Shield

Shield Type	Material	Coverage	Drainwire Type	Notes
Braid	Tinned Copper (TC)	60%	26 AWG (Solid) TC	Fire Protection Barrier: Mica Glass Tape(MGT), Water blocking structure: Water block tape

Outer Jacket

Nom. Diameter
11.90 mm (0.4685 in)

Electrical Characteristics

Electricals

Max. Conductor DCR	Max. Capacitance Unbalance	Nom. Characteristic Impedance
73.2 Ohm/km (22.3 Ohm/1000ft)	330 pF/100m	100 Ohm

Delay

Max. Delay	Max. Delay Skew
536 ns/100m	45 ns/100m

High Frequency

Frequency [MHz]	Max. Insertion Loss (Attenuation) [dB/100m]	Min. NEXT [dB]	Min. PSNEXT [dB]	Min. ACRF (ELFEXT) [dB]	Min. PSACRF (PSELFEXT) [dB]	Min. RL (Return Loss) [dB]
1	2.03	74.3	72.3	67.8	64.8	20.0
4	3.78	65.3	63.3	55.8	52.8	23.0
8	5.32	60.8	58.8	49.7	46.7	24.5
10	5.95	59.3	57.3	47.8	44.8	25.0
16	7.55	56.2	54.2	43.7	40.7	25.0
20	8.47	54.8	52.8	41.8	38.8	25.0
25	9.51	53.3	52.8	39.8	36.8	24.32

31.25	10.67	51.9	49.9	37.9	34.9	23.64
62.5	15.38	47.4	45.4	31.9	28.9	21.54
100	19.8	44.3	42.3	27.8	24.8	20.11
200	28.98	39.8	37.8	21.8	18.8	18.0
250	32.85	38.3	36.3	19.8	16.8	17.32

Voltage

UL Voltage Rating
60 V

Mechanical Characteristics

Table Notes:	Temperature range : -40°C To +80°C
--------------	------------------------------------

Standards and Compliance

Environmental Suitability:	UV Resistance, Oil Resistance
Flammability / Reaction to Fire:	IEC 60332-1-2, IEC 60332-3-22, IEC 60331-23, BS EN 50200 PH120
Data Category:	Category 6
TIA/EIA Compliance:	EIA/TIA 568
ISO/IEC Compliance:	IEC 61034-2 - Smoke Density Min Transmittance = 60%
European Halogen Free Standards:	IEC 60754-1 - Halogen Amount = 0.50%, IEC 60754-2 - Halogen Acid Gas Amount - Max. Conductivity = 10 µS/mm, IEC 60754-2 - Halogen Acid Gas Amount - Min. pH = 4.3
Other Standard Compliance(s):	BS EN 50289-4-16

History

Update and Revision:	Revision Number: 0.43 Revision Date: 08-13-2024
----------------------	---

Part Numbers

Variants

Item #	Color	Putup Type	Length	EAN
NH50106SFR-A500	Black	Reel	500 m	8719605224965

© 2025 Belden, Inc

All Rights Reserved.

Although Belden makes every reasonable effort to ensure their accuracy at the time of this publication, information and specifications described here in are subject to error or omission and to change without notice, and the listing of such information and specifications does not ensure product availability.

Belden provides the information and specifications herein on an "ASIS" basis, with no representations or warranties, whether express, statutory or implied. In no event will Belden be liable for any damages (including consequential, indirect, incidental, special, punitive, or exemplary damages) whatsoever, even if Belden has been advised of the possibility of such damages, whether in an action under contract, negligence or any other theory, arising out of or in connection with the use, or inability to use, the information or specifications described herein.

All sales of Belden products are subject to Belden's standard terms and conditions of sale.

Belden believes this product to be in compliance with all applicable environmental programs as listed in the data sheet. The information provided is correct to the best of Belden's knowledge, information and belief at the date of its publication. This information is designed only as a general guide for the safe handling, storage, and any other operation of the product itself or the one that it becomes a part of. The Product Disclosure is not to be considered a warranty or quality specification. Regulatory information is for guidance purposes only. Product users are responsible for determining the applicability of legislation and regulations based on their individual usage of the product.