



**Product:** [NH50105UU](#)

DataTuff™ Industrial Ethernet CAT5e 4x2x22AWG/1 U/UTP Fire Resistant (PH120)

**Product Description**  
DataTuff™ Industrial Ethernet CAT5e 4x2x22AWG/1 U/UTP Fire Resistant (PH120)

**Technical Specifications**

**Product Overview**

|                        |   |
|------------------------|---|
| Suitable Applications: | This Category 5e Cable is a cable standard for Gigabit Ethernet, capable to continue transmitting data even when being directly attacked by fire. |
|------------------------|---|

**Construction Details**

| Size   | Stranding | Stranding Class | Material         | No. of Pairs | No. of Elements |
|--------|-----------|-----------------|------------------|--------------|-----------------|
| 22 AWG | Solid     | Class 1         | BC - Bare Copper | 4            | 8               |

| Material          | Nom. Insulation Diameter | Color Code   | Notes   |
|-------------------|--------------------------|--|---|
| PE - Polyethylene | 1.03 mm (0.0406 in)      | Blue & White with Blue Strips, Orange & White with Orange Strips, Green & White with Green Strips, Brown & White with Brown Strips | Fire Protection Barrier: Mica glass Tape(MGT) |

| Notes  |
|--|
| All 4 Pairs laid up together over a cross filler & binded by Fire Protection Barrier: Mica Glass Tape(MGT) |

Outer Jacket

| Material  |                    |
|---|--------------------|
| LSZH - Low Smoke Zero Halogen (Flame Retardant) |                    |
| Overall Cable Diameter (Nominal):               | 9.60 mm (0.378 in) |

**Electrical Characteristics**

| Max. Conductor DCR      | Nom. Characteristic Impedance |
|-------------------------|-------------------------------|
| 54.3 Ohm/km @ 20 Deg. C | 100 Ohm                       |

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

| Frequency [MHz] | Max. Insertion Loss (Attenuation) | Min. NEXT [dB] | Min. PSNEXT [dB] | Min. RL (Return Loss) [dB] |
|-----------------|-----------------------------------|----------------|------------------|----------------------------|
| 1               | 2.04 dB/70m                       | 65.3           | 62.3             | 20                         |
| 4               | 4.05 dB/70m                       | 56.3           | 53.3             | 23                         |
| 8               | 5.77 dB/70m                       | 51.8           | 48.8             | 24.5                       |
| 10              | 6.47 dB/70m                       | 50.3           | 47.3             | 25                         |
| 16              | 8.25 dB/70m                       | 47.2           | 44.2             | 25                         |

|       |              |      |      |      |
|-------|--------------|------|------|------|
| 20    | 9.27 dB/70m  | 45.8 | 42.8 | 25   |
| 25    | 10.42 dB/70m | 44.3 | 41.3 | 24.3 |
| 31.25 | 11.72 dB/70m | 42.9 | 39.9 | 23.6 |
| 62.5  | 16.99 dB/70m | 38.4 | 35.4 | 21.5 |
| 100   | 21.98 dB/70m | 35.3 | 32.3 | 20.1 |

Voltage

|                |
|----------------|
| Voltage Rating |
| 60 V           |

Mechanical Characteristics

Temperature

|                 |
|-----------------|
| Operating       |
| -40°C to + 60°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  |
| AWM Compliance:                  | AWM 21130   |
| Data Category:                   | Category 5e   |
| 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 = 0.5 %, 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  |

Product Notes

|        |   |
|--------|---|
| Notes: | • TIA 568 D .2 Cat.5E and ISO/IEC 11801 class D and IEEE 802.3 100Base TX,1000Base T, Circuit integrity performance during a fire of the relevant requirements of IEC 60331 23. • Cable will meet CAT 5e channel requirements up to 80m length or up to 70m permanent length. |
|--------|---|

History

|                      |   |
|----------------------|---|
| Update and Revision: | Revision Number: 0.19 Revision Date: 04-29-2024 |
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