

 **Part Number:** 121700ACat 5e Armored DataTuff®, (4 pr) 24 AWG Solid BC,
PO/PVC/PVC, Alum Armor, CM

Product Description

Four Cat 5e 24 AWG Bonded-Pairs solid bare copper conductors, polyolefin insulation, PVC inner jacket, aluminum interlocked armor, PVC outer jacket.

Product Specifications

Technical Specifications

| | |
|-------------------------------|---|
| Suitable Applications: | Industrial Ethernet Cable, Harsh Environments, 350MHz Enhanced Category 5e, Gigabit Ethernet, 100BaseTX, 100BaseVG ANYLAN, 155ATM, 622ATM, NTSC/PAL Component or Composite Video, AES/EBU Digital Audio, AES51, RS-422, RJ-45 Compatible, Flexible Applications, Armored for Extra Protection |
|-------------------------------|---|

Construction and Dimensions

Conductor:

| AWG | Stranding | Material | Nominal Diameter | No. of Pairs |
|------------------------------------|-----------|------------------|------------------|--------------|
| 24 | Solid | BC - Bare Copper | 0.02 in | 4 |
| Total Number of Conductors: | | | 8 | |

Insulation:

| Material | Nominal Diameter | Nominal Wall Thickness |
|-----------------|------------------|------------------------|
| PO - Polyolefin | 0.038 in | 0.009 in |

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 |

Stranding:

| Lay Length |
|------------|
| Yes mm |

Innerjacket:

| Material | Nominal Diameter | Ripcord |
|--------------------------|------------------|---------|
| PVC - Polyvinyl Chloride | 0.206 in | Yes |

Outershield 1:

| Material |
|------------|
| Unshielded |

Outerjacket 1:

| Material | Nominal Diameter | Nominal Wall Thickness | Separator Material |
|---|------------------|------------------------|--------------------|
| Industrial Grade PVC - Polyvinyl Chloride | 0.553 in | 0.045 in | Polyester |

Armor:

| Type of Armor | Material | Diameter over Armoring |
|-------------------|----------|------------------------|
| Interlocked Armor | Aluminum | 0.463 mm |

Electrical Characteristics

Conductor DCR:

| Max. Conductor DCR | Max. DCR Unbalance |
|--------------------|--------------------|
| 9 Ohm/1000ft | 3 % |

Capacitance:

| Max. Capacitance Unbalance | Nom.Mutual Capacitance |
|----------------------------|------------------------|
| 66 pF/ft | 15 pF/ft |

Delay:

| Max. Delay | Max. Delay Skew | Nominal Velocity of Propagation (VP) [%] |
|-------------|-----------------|--|
| 510 ns/100m | 25 ns/100m | 70 % |

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] | Max./Min. Input Impedance (unFitted) | Max./Min. Fitted Impedance |
|-----------------|-----------------------------------|----------------|------------------|---------------|-----------------|-------------------------|-----------------------------|----------------------------|--------------------------------------|----------------------------|
| 1 MHz | 2 db/100m | 65.3 dB | 65.3 dB | 63.3 dB | 63.3 dB | 63.8 dB | 60.8 dB | 20 dB | 100 ± 12 Ohm | |
| 4 MHz | 4 db/100m | 56.3 dB | 56.3 dB | 52.3 dB | 52.3 dB | 51.7 dB | 48.7 dB | 23 dB | 100 ± 12 Ohm | |
| 8 MHz | 5.7 db/100m | 51.8 dB | 51.8 dB | 46.1 dB | 46.1 dB | 45.7 dB | 42.7 dB | 24.5 dB | 100 ± 12 Ohm | |
| 10 MHz | 6.4 db/100m | 50.3 dB | 50.3 dB | 43.9 dB | 43.9 dB | 43.8 dB | 40.8 dB | 25 dB | 100 ± 12 Ohm | |
| 16 MHz | 8.1 db/100m | 47.3 dB | 47.3 dB | 39.1 dB | 39.1 dB | 39.7 dB | 36.7 dB | 25 dB | 100 ± 12 Ohm | |
| 20 MHz | 9.2 db/100m | 45.8 dB | 45.8 dB | 35.2 dB | 35.2 dB | 37.7 dB | 34.7 dB | 25 dB | 100 ± 12 Ohm | |
| 25 MHz | 10.3 db/100m | 44.3 dB | 44.3 dB | 34.1 dB | 34.1 dB | 35.8 dB | 32.8 dB | 24.3 dB | 100 ± 15 Ohm | |
| 31.25 MHz | 11.6 db/100m | 42.9 dB | 42.9 dB | 31.3 dB | 31.3 dB | 33.9 dB | 30.9 dB | 23.6 dB | 100 ± 15 Ohm | |
| 62.5 MHz | 16.8 db/100m | 38.4 dB | 38.4 dB | 21.6 dB | 21.6 dB | 27.8 dB | 24.8 dB | 21.5 dB | 100 ± 15 Ohm | |
| 100 MHz | 21.7 db/100m | 35.3 dB | 35.3 dB | 17.1 dB | 17.1 dB | 23.8 dB | 20.8 dB | 20.1 dB | 100 ± 15 Ohm | 100 ± 10 Ohm |
| 155 MHz | 27.7 db/100m | 32.5 dB | 32.5 dB | 4.7 dB | 4.7 dB | 19.9 dB | 16.9 dB | 19 dB | 100 ± 18 Ohm | 100 ± 10 Ohm |
| 200 MHz | 32 db/100m | 30.8 dB | 30.8 dB | 3 dB | 3 dB | 17.7 dB | 14.7 dB | 19 dB | 100 ± 20 Ohm | 100 ± 10 Ohm |
| 250 MHz | 36.4 db/100m | 29.3 dB | 29.3 dB | 0 dB | 0 dB | 15.8 dB | 12.8 dB | 18 dB | 100 ± 20 Ohm | 100 ± 10 Ohm |
| 300 MHz | 40.5 db/100m | 28.2 dB | 28.2 dB | 0 dB | 0 dB | 14.2 dB | 11.2 dB | 18 dB | 100 ± 20 Ohm | 100 ± 10 Ohm |
| 310 MHz | 41.3 db/100m | 27.9 dB | 27.9 dB | | | 13.9 dB | 10.9 dB | 18 dB | 100 ± 20 Ohm | 100 ± 10 Ohm |
| 350 MHz | 44.3 db/100m | 27.2 dB | 27.2 dB | | | 12.9 dB | 9.9 dB | 17 dB | 100 ± 22 Ohm | 100 ± 10 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 | | | | | | | | | | |
| 300 MHz | | | | | | | | | | |
| 310 MHz | | | | | | | | | | |
| 350 MHz | | | | | | | | | | |

Voltage:

| UL Voltage Rating |
|-------------------|
| 300 V RMS |

Use

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

Safety

| | |
|-------------------|-------------------|
| CSA Flammability: | FT4 |
| UL Flammability: | UL1685 UL Loading |

Temperature Range

| | |
|--------------------------|----------------|
| Installation Temp Range: | -25°C To +75°C |
| Operating Temp Range: | -40°C To +75°C |
| Storage Temp Range: | -40°C To +85°C |

Mechanical Characteristics

| | |
|-----------------------------|--------|
| Min Bend Radius/Minor Axis: | 6.5 in |
|-----------------------------|--------|

Part Number

| | |
|---------------|----|
| Plenum (Y/N): | No |
|---------------|----|

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/(UL) Specification: | NEC/(UL) Specification |
| Other Specification: | Other Specification |
| EU Directive Compliance: | EU Directive 2003/11/EC (BFR) |

History

| | |
|--------|---|
| Notes: | US Patent #'s 5606151; 5734126 Operating temperatures are subject to length de-rating. Cable passes -40C Cold Bend per UL 1581. |
|--------|---|

Product Variants

| Part Number | Color | Put-Up Type | Length |
|-----------------|-------|-------------|---------|
| 121700A 0081000 | GRAY | Reel | 1000 ft |
| 121700A 0101000 | BLACK | Reel | 1000 ft |
| 121700A 0103000 | BLACK | Reel | 3000 ft |
| 121700A 0105000 | BLACK | Reel | 5000 ft |

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