

10GX53F Multi-Conductor - Enhanced Category 6A F/UTP Non-Bonded Pair Cable



For more Information
please call

1-800-Belden1



General Description:

CAT6A (625MHz), 4 Unbonded Pairs, F/UTP-Foil Shielded, Plenum-CMP, Premise Horizontal Cable, 23 AWG Solid Bare Copper Conductors, FEP Insulation, Patented EquiSpline™, Overall Foil Screen with Drain Wire, Ripcord, Flamarrest® Jacket

Usage (Overall)

Suitable Applications: Premise Horizontal Cable, 10 Gigabit Ethernet, 100Base TX, 100Base VG ANYLAN, 155ATM, 622ATM, NTSC/PAL Component or Composite Video, AES/EBU Digital Audio AES51, RS-422, Noisy Environments, PoE, PoE+

Physical Characteristics (Overall)

Conductor

AWG:

| # Pairs | AWG | Stranding | Conductor Material |
|---------|-----|-----------|--------------------|
| 4 | 23 | Solid | BC - Bare Copper |

Total Number of Conductors: 8

Insulation

Insulation Material:

| Insulation Material |
|---------------------|
| FEP |

Outer Shield

Outer Shield Material:

| Outer Shield Trade Name | Type | Outer Shield Material | Coverage (%) |
|-------------------------|------|-------------------------|--------------|
| Beldfoil® | Tape | Aluminum-Polyester Tape | 100.000 |

Outer Shield Drain Wire AWG:

| AWG | Stranding | Drain Wire | Conductor Material |
|-----|-----------|---------------|--------------------|
| 26 | 7x#34 | Tinned Copper | |

Outer Jacket

Outer Jacket Material:

| Outer Jacket Material |
|---|
| Flamarrest (R) PVC - Polyvinyl Chloride |

Outer Jacket Diameter:

| Nom. Dia. (mm) |
|----------------|
| 6.985 |

Outer Jacket Ripcord: Yes

Overall Cable

Overall Cabling Separator Material: Patented EquiSpline

Pair

Pair Color Code Chart:

| Number | Color |
|--------|----------------|
| 1 | Blue & White |
| 2 | Orange & White |
| 3 | Green & White |
| 4 | Brown & White |

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Mechanical Characteristics (Overall)

| | |
|-----------------------------------|----------------|
| Storage Temperature Range: | -20°C To +75°C |
| Installation Temperature Range: | -5°C To + 50° |
| Operating Temperature Range: | -20°C To +75°C |
| Bulk Cable Weight: | 56.552 Kg/Km |
| Max. Recommended Pulling Tension: | 200.169 N |
| Min. Bend Radius/Minor Axis: | 38.100 mm |
| Min. Bend/Installation: | 69.850 mm |

Applicable Specifications and Agency Compliance (Overall)

Applicable Standards & Environmental Programs

| | |
|---------------------------------------|--|
| NEC/(UL) Specification: | CMP |
| CEC/C(UL) Specification: | CMP |
| EU Directive 2011/65/EU (ROHS II): | Yes |
| Other Standards: | ISO/IEC 11801 ed 2 Amendment 2:2010 Class EA |
| EU CE Mark: | Yes |
| EU Directive 2000/53/EC (ELV): | Yes |
| EU Directive 2002/95/EC (RoHS): | Yes |
| EU RoHS Compliance Date (mm/dd/yyyy): | 03/27/2014 |
| EU Directive 2002/96/EC (WEEE): | Yes |
| EU Directive 2003/11/EC (BFR): | Yes |
| CA Prop 65 (CJ for Wire & Cable): | Yes |
| MII Order #39 (China RoHS): | Yes |
| Telecommunications Standards: | Category 6A - TIA 568.C.2 |
| ANSI Specification: | ANSI/TIA 568-C.2 Category 6A |
| Other Specification: | C(UL)US CMP 105C OR (UL) CMP-LP (0.7A) OR CL3P-LP (0.7A) |

Applicable Patents:

| |
|--|
| Country |
| www.belden.com/p |

Flame Test

| | |
|-------------------|---|
| UL Flame Test: | NFPA 262 Plenum Flame Test (UL910)(FT6) |
| C(UL) Flame Test: | FT6 |
| CSA Flame Test: | FT6 |

Suitability

| | |
|------------------------|-----|
| Suitability - Indoor: | Yes |
| Suitability - Outdoor: | No |
| Suitability - Burial: | No |
| Sunlight Resistance: | No |
| Non-halogenated: | No |

Plenum/Non-Plenum

| | |
|--------------------|---------|
| Plenum (Y/N): | Yes |
| Non-Plenum Number: | 10GX52F |

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Electrical Characteristics (Overall)

Nom. Mutual Capacitance:

| |
|---------------------------|
| Capacitance (pF/m) |
| 55.777 |

Maximum Capacitance Unbalance (pF/100 m): 90

Nominal Velocity of Propagation:

| |
|---------------|
| VP (%) |
| 68.000 |

Maximum Delay:

| |
|-------------------------|
| Delay (ns/100 m) |
| 538 @ 100MHz |

Max. Delay Skew:

| |
|------------------------------|
| Delay Skew (ns/100 m) |
| 45.000 |

Maximum Conductor DC Resistance:

| |
|-------------------------------|
| DCR @ 20°C (Ohm/100 m) |
| 8.200 |

Max. Operating Voltage - UL:

| |
|----------------|
| Voltage |
| 300 V RMS |

Electrical Characteristics-Premise (Overall)

Premise Cable Electrical Table 1:

| Freq. (MHz) | Max. Attenuation (dB/100 m) | Min. PSNEXT (dB) | Min. PSACR (dB) | Min RL (dB) |
|-------------|-----------------------------|------------------|-----------------|-------------|
| 1 | 2.100 | 73.3 | 71.2 | 20.000 |
| 4 | 3.800 | 64.3 | 60.5 | 23.000 |
| 8 | 5.300 | 59.8 | 54.4 | 24.500 |
| 10 | 5.900 | 58.3 | 52.4 | 25.000 |
| 16 | 7.500 | 55.2 | 47.8 | 25.000 |
| 20 | 8.400 | 53.8 | 45.4 | 25.000 |
| 25 | 9.400 | 52.3 | 43.0 | 24.300 |
| 31.25 | 10.500 | 50.9 | 40.4 | 23.600 |
| 62.5 | 15.000 | 46.4 | 31.4 | 21.500 |
| 100 | 19.100 | 43.3 | 24.2 | 20.100 |
| 200 | 27.600 | 38.8 | 11.2 | 18.000 |
| 250 | 31.100 | 37.3 | 6.3 | 17.300 |
| 300 | 34.300 | 36.1 | 1.9 | 16.800 |
| 350 | 37.200 | 35.1 | N/A | 16.300 |
| 400 | 40.100 | 34.3 | N/A | 15.900 |
| 450 | 42.700 | 33.5 | N/A | 15.500 |
| 500 | 45.300 | 32.8 | N/A | 15.200 |
| 550 | 47.700 | 32.2 | N/A | 14.900 |
| 600 | 50.100 | 31.6 | N/A | 14.700 |
| 625 | 51.200 | 31.4 | N/A | 14.500 |
| 750 | 56.700 | 30.2 | N/A | 14.000 |
| 860 | 61.200 | 29.3 | N/A | 13.600 |

Premise Cable Electrical Table 2:

| Freq. (MHz) | Input (Unfitted) Imp. (Ohms) | Fitted Impedance | Min. PSACRF (dB) |
|-------------|------------------------------|------------------|------------------|
| 1 | 100 ± 15 | 105 ± 10 | 68.8 |
| 4 | 100 ± 15 | 100 ± 15 | 56.8 |
| 8 | 100 ± 15 | 100 ± 15 | 50.7 |
| 10 | 100 ± 15 | 100 ± 15 | 48.8 |
| 16 | 100 ± 15 | 100 ± 15 | 44.7 |
| 20 | 100 ± 15 | 100 ± 15 | 42.8 |
| 25 | 100 ± 15 | 100 ± 15 | 40.8 |

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| | | | |
|-------|----------|----------|------|
| 31.25 | 100 ± 15 | 100 ± 10 | 38.9 |
| 62.5 | 100 ± 15 | 100 ± 10 | 32.9 |
| 100 | 100 ± 15 | 100 ± 10 | 28.8 |
| 200 | 100 ± 22 | 100 ± 10 | 22.8 |
| 250 | 100 ± 32 | 100 ± 10 | 20.8 |
| 300 | 100 ± 32 | 100 ± 10 | 19.3 |
| 350 | 100 ± 32 | 100 ± 10 | 17.9 |
| 400 | 100 ± 32 | 100 ± 10 | 16.8 |
| 450 | 100 ± 32 | 100 ± 10 | 15.7 |
| 500 | 100 ± 32 | 100 ± 10 | 14.8 |
| 550 | 100 ± 32 | 100 ± 10 | 14.0 |
| 600 | 100 ± 32 | 100 ± 10 | 13.2 |
| 625 | 100 ± 32 | 100 ± 10 | 12.9 |
| 750 | 100 ± 32 | 100 ± 10 | 11.3 |
| 860 | 100 ± 32 | 100 ± 10 | 10.1 |

Premise Cable Electrical Table 4:

| Frequency (MHz) | Min. PSANEXT (dB) | Min. PSAACRF (dB) | Min. TCL (dB) | Min. ELTCTL (dB) |
|-----------------|-------------------|-------------------|---------------|------------------|
| 1.000 | 77.000 | 77.000 | 40.000 | 35.000 |
| 4.000 | 77.000 | 76.200 | 40.000 | 23.000 |
| 8.000 | 77.000 | 70.100 | 40.000 | 16.900 |
| 10.000 | 77.000 | 68.200 | 40.000 | 15.000 |
| 16.000 | 77.000 | 64.100 | 38.000 | 10.900 |
| 20.000 | 77.000 | 62.200 | 37.000 | 9.000 |
| 25.000 | 77.000 | 60.200 | 36.000 | 7.000 |
| 31.250 | 77.000 | 58.300 | 35.100 | |
| 62.500 | 77.000 | 52.300 | 32.000 | |
| 100.000 | 72.500 | 48.200 | 30.000 | |
| 200.000 | 68.500 | 42.200 | 27.000 | |
| 250.000 | 66.500 | 40.200 | 26.000 | |
| 300.000 | 65.300 | 38.700 | 25.300 | |
| 350.000 | 64.300 | 37.300 | 24.600 | |
| 400.000 | 63.500 | 36.200 | 24.000 | |
| 450.000 | 62.700 | 35.100 | 23.500 | |
| 500.000 | 62.000 | 34.200 | 23.000 | |
| 550.000 | 62.400 | 34.400 | | |
| 600.000 | 61.800 | 33.600 | | |
| 625.000 | 61.600 | 33.300 | | |
| 750.000 | 60.400 | 31.700 | | |
| 860.000 | 59.500 | 30.500 | | |

Notes (Overall)

Notes: Jacket sequentially marked at 2 ft. intervals. Third party channel verified to TIA/EIA-568-C.2, Category 6A. Data above 625 MHz For Information Only.

Put Ups and Colors:

| Item # | Putup | Ship Weight | Color | Notes | Item Desc |
|-----------------|----------|-------------|-------------|-------|--------------------------|
| 10GX53F D151000 | 1,000 FT | 41.000 LB | BLUE | | CAT6A 4PR F/UTP CMP REEL |
| 10GX53F 0041000 | 1,000 FT | 41.000 LB | YELLOW | | CAT6A 4PR F/UTP CMP REEL |
| 10GX53F 0051000 | 1,000 FT | 41.000 LB | GREEN, DARK | | CAT6A 4PR F/UTP CMP REEL |
| 10GX53F 0081000 | 1,000 FT | 41.000 LB | GRAY | | CAT6A 4PR F/UTP CMP REEL |
| 10GX53F 0091000 | 1,000 FT | 41.000 LB | WHITE | | CAT6A 4PR F/UTP CMP REEL |
| 10GX53F 010Z250 | 250 FT | 13.250 LB | BLACK | | CAT6A 4PR F/UTP CMP |
| 10GX53F 010Z500 | 500 FT | 24.000 LB | BLACK | | CAT6A 4PR F/UTP CMP |
| 10GX53F 010Z750 | 750 FT | 33.750 LB | BLACK | | CAT6A 4PR F/UTP CMP |
| 10GX53F 0101000 | 1,000 FT | 41.000 LB | BLACK | | CAT6A 4PR F/UTP CMP REEL |
| 10GX53FD15Z1000 | 1,000 FT | 42.000 LB | BLUE | | CAT6A 4PR F/UTP CMP |
| 10GX53F009Z1000 | 1,000 FT | 42.000 LB | WHITE | | CAT6A 4PR F/UTP CMP |
| 10GX53F010Z1000 | 1,000 FT | 42.000 LB | BLACK | | CAT6A 4PR F/UTP CMP |

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