

## 10GX52F Multi-Conductor - Enhanced Category 6A F/UTP nonbonded-Pair Cable



For more Information  
please call

1-800-Belden1



### General Description:

CAT6A (625MHz), 4 Nonbonded-Pairs, F/UTP-Foil Shielded, Riser-CMR, Premise Horizontal Cable, 23 AWG Solid Bare Copper Conductors, Polyolefin Insulation, Patented EquiSpline™ Technologies, Overall Foil Screen with Drain Wire, Ripcord, PVC Jacket

### Usage (Overall)

**Suitable Applications:** Premise Horizontal Cable, 10 Gigabit Ethernet, 100BaseTX, 100BaseVG 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
PO - Polyolefin

#### Outer Shield

Outer Shield Material:

Outer Shield Trade Name	Type	Outer Shield Material	Coverage (%)
Beldfoil®	Tape	Polyester / Foil	100.000

Outer Shield Drain Wire AWG:

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

#### Outer Jacket

Outer Jacket Material:

Outer Jacket Material
PVC - Polyvinyl Chloride

Outer Jacket Diameter:

Nom. Dia. (in.)
0.275

**Outer Jacket Ripcord:** Yes

### Overall Cable

**Overall Cabling Separator Material:** EquiSpline™ Technologies

### Pair

Pair Color Code Chart:

Number	Color
1	White/Blue Stripe & Blue
2	White/Orange Stripe & Orange
3	White/Green Stripe & Green
4	White/Brown Stripe & Brown

### 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:** 33 lbs/1000 ft.

**Max. Recommended Pulling Tension:** 45 lbs.

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Min. Bend Radius/Minor Axis: 1.200 in.

Min. Bend/Installation: 3 in.

### Applicable Specifications and Agency Compliance (Overall)

#### Applicable Standards & Environmental Programs

NEC/(UL) Specification: CMR

CEC/C(UL) Specification: CMR

EU Directive 2011/65/EU (ROHS II): Yes

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): 03/07/2011

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 CMR 90C OR (UL) CMR-LP (0.6A) OR CL3R-LP (0.6A)

#### Applicable Patents:

Country

www.belden.com/p

#### Flame Test

UL Flame Test: UL1666 Riser

C(UL) Flame Test: FT4

CSA Flame Test: FT4

#### Suitability

Suitability - Indoor: Yes

Suitability - Outdoor: No

Suitability - Burial: No

Sunlight Resistance: No

Non-halogenated: No

#### Plenum/Non-Plenum

Plenum (Y/N): No

Plenum Number: 10GX53F

### Electrical Characteristics (Overall)

#### Nom. Mutual Capacitance:

Capacitance (pF/ft)

17.000

Maximum Capacitance Unbalance (pF/100 m): 90

#### Nominal Velocity of Propagation:

VP (%)

64.000

#### 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

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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	45.5	25.000
25	9.400	52.3	43	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	15.530
500	45.300	32.8	N/A	15.200
550	47.700	32.2		14.900
600	50.100	31.6		14.700
625	51.200	30.2		14.500
750	56.700	29.3		14.000
860	61.200			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
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	66.200	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	50.200	26.000	
300.000	65.300	38.700	25.200	

## ENGLISH MEASUREMENT VERSION

### 10GX52F Multi-Conductor - Enhanced Category 6A F/UTP nonbonded-Pair Cable

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.

#### Put Ups and Colors:

Item #	Putup	Ship Weight	Color	Notes	Item Desc
10GX52F 0021000	1,000 FT	41.000 LB	RED		CAT6A 4PR F/UTP CMR REEL
10GX52F 0041000	1,000 FT	41.000 LB	YELLOW		CAT6A 4PR F/UTP CMR REEL
10GX52F 0061000	1,000 FT	41.000 LB	BLUE, LIGHT		CAT6A 4PR F/UTP CMR REEL
10GX52F 0081000	1,000 FT	41.000 LB	GRAY		CAT6A 4PR F/UTP CMR REEL
10GX52F 0091000	1,000 FT	41.000 LB	WHITE		CAT6A 4PR F/UTP CMR REEL
10GX52F 0101000	1,000 FT	41.000 LB	BLACK		CAT6A 4PR F/UTP CMR REEL

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