

## CAT6-EC DATASHEET

The Laird CAT6-EC series of shielded Cat6 Ethernet assemblies is built with Belden's 10GX62 cable and terminated with locking etherCON connector systems, and designed for Ethernet applications where a standard RJ45 connection isn't reliable. The push-pull locking shell keeps the connection seated under vibration, cable pull, and repeated handling—conditions that cause standard patch cables to work loose or fail in the field.

### 10G Ethernet Max Distance

Laird certifies this Cat6a cable to 328 ft (100 m) for 10G Ethernet and 500 ft (152 m) for 1G Ethernet, validated through Bit Error Rate (BER) testing. IEEE 802.3 specifies a maximum of 328 ft (100 m) for Cat6a Ethernet applications; exceeding this threshold risks signal degradation and link failure. Supported signal types—including Ethernet, PoE, and AV-over-IP—each carry distinct distance limitations. Conductor gauge (AWG) affects signal attenuation, power delivery, and usable distance—higher AWG conductors may reduce maximum range. Always consult your application's specifications prior to deployment.

## Features:

- Flexible Riser Rated Belden 10GX62F Cable
- High-Quality Neutrik etherCON connectors
- Provides immunity against high noise
- Improved protection from EMI
- IEEE Compliance: IEEE 802.3bt Type 1, Type 2, Type 3, Type 4



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### Specifications:

#### Belden 10GX62 Riser Rated Cat6a Cable:

- **Conductor AWG:** 23AWG
- **Conductor Stranding:** Solid
- **Conductor Material:** Bare Copper
- **Number of Pairs:** 4
- **Insulation Material:** Polyolefin
- **Bonded-Pair:** Yes
- **Inner Jacket Material:** Polyvinyl Chloride
- **Inner Jacket Nom. Diameter:** 0.26in (6.6mm)
- **Ripcord:** Yes
- **Outer Shield Type:** Tape
- **Outer Shield Material/Coverage %:** Bi-Laminate (Alum+Poly)/100%
- **Drainwire Type/AWG:** 26 AWG (7x34) TC
- **Outer Jacket Separator:** Center Member
- **Outer Jacket Material:** Polyvinyl Chloride
- **Outer Jacket Nom. Diameter:** 0.300in (7.62mm)
- **Overall Cable Nom. Diameter:** 0.300in (7.62mm)
- **Max. Conductor DCR:** 82 Ohm/km (25 Ohm/1000ft)
- **Max. Capacitance Unbalance:** 90 pF/100m
- **Delay Frequency:** 100MHz
- **Max. Delay:** 537.6 ns/100m
- **Max. Delay Skew:** 45 ns/100m
- **Nom. Velocity of Prop.:** 64%
- **Attenuation:**
  - 2.1dB/100m @1MHz
  - 19.1dB/100m @100MHz
  - 45.3dB/100m @500MHz
  - 61.2dB/100m @860MHz
- **Min. Return Loss:**
  - 20 dB @1MHz
  - 25 dB @100MHz
  - 15.2 dB @500MHz
  - 15.2 dB @860MHz
- **UL Voltage Rating:** 300 V (CMR)

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### Specifications:

- **Temperature:**
  - Operating: -4°F to 167°F (-20°C to +75°C)
  - Installation: 32°F to 122°F (0°C to +50°C)
  - Storage: -4°F to 167°F (-20°C to +75°C)
- **Min. Bend Radius:**
  - Stationary: 1.2in (30mm)
  - Installation: 3.0in (76mm)
- **Max. Pull Tension:** 40lbs (18kg)
- **PoE Compliance:** PoE, PoE+, PoE++

### Neutrik Cat6 etherCON Connectors:

- **Insertion Force:** ≤ 40 N
- **Withdrawal Force:** ≤ 20 N
- **Lifetime:** > 1000 mating cycles
- **Protection Class:** IP 65 in mated condition
- **Locking Device:** Push-Pull