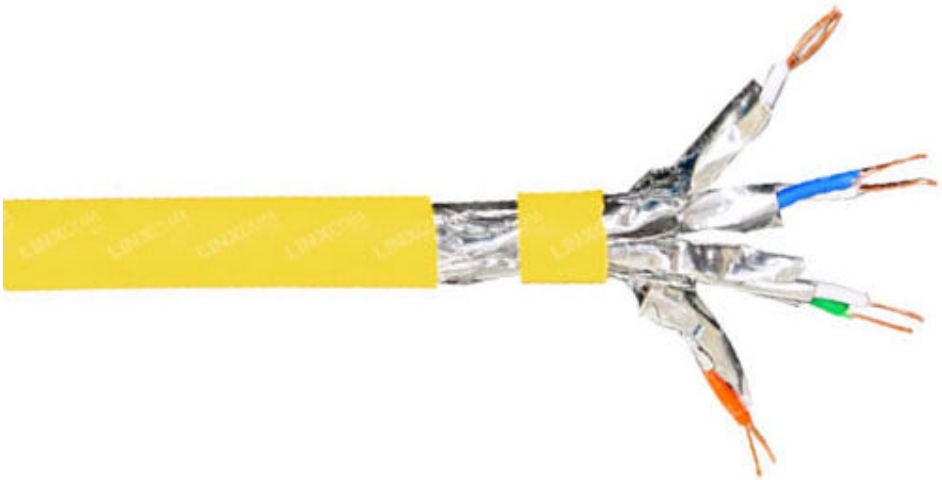
Cat7 F/FTP Ethernet Bulk Cable — LSZH

4 Pairs | 24 AWG Solid Bare Copper | 600 MHz | 305 m (1000 ft) Reel



1. GENERAL DESCRIPTION

Cat7 bulk cable is designed for high-speed structured cabling and Ethernet networks up to 10GBASE-T (10 Gigabit Ethernet) over the full 100 m channel. It features four twisted pairs of solid pure bare copper conductors, each pair individually screened with aluminium/polyester foil, an overall aluminium/polyester foil screen with drain wire, and a Low Smoke Zero Halogen (LSZH) jacket. This pair-and-overall (F/FTP) construction gives excellent EMI immunity and alien-crosstalk performance, making it suitable for data centres, hospitals and industrial installations where low smoke and halogen-free emission are required. Supplied on a reel for easy, tangle-free pulling.

2. KEY FEATURES

- Individually foil-screened pairs plus overall foil (F/FTP) — virtually eliminates pair-to-pair and alien crosstalk
- Pure bare copper solid conductors for low attenuation and stable long-run performance
- Characterised up to 600 MHz — supports 10GBASE-T over 100 m with wide headroom
- LSZH jacket: low smoke, zero halogen, reduced toxic and corrosive gas emission in fire
- Supports PoE / PoE+ / PoE++ (IEEE 802.3af / at / bt) with low heating in bundles
- Supplied on a 305 m reel for smooth, tangle-free pay-out

3. APPLICATIONS

- Horizontal and backbone cabling in structured cabling systems (permanent link / channel)
- 1000BASE-T and 10GBASE-T Ethernet
- Data centres, server rooms, hospitals and industrial plants with strong EMI
- High-end CCTV / IP camera, broadcast and PoE++ installations

4. APPLICABLE STANDARDS

- ISO/IEC 11801 — Class F generic cabling (Category 7)
- IEC 61156-5 / EN 50288-4-1 — Category 7 balanced twisted-pair cable
- IEC 60332-1 — Flame propagation (single vertical cable)
- IEC 60754-1 / -2 — Halogen content and acidity of gases
- IEC 61034 — Smoke density

5. CABLE CONSTRUCTION

Conductor	Solid pure bare copper, 24 AWG (Ø 0.57 mm nominal)
Insulation	Solid foamed / solid HDPE [select]
Pairs	4 twisted pairs, different twist lengths to minimise crosstalk
Pair Colour Code	Blue / White-Blue, Orange / White-Orange, Green / White-Green, Brown / White-Brown
Pair Screening	Individual Al/PET foil screen on each pair (FTP) — coverage [100 %]
Overall Screening	Overall Al/PET foil screen (F), foil-to-foil overlap — coverage [100 %]
Drain Wire	[24 AWG tinned copper (7/0.20 mm)]
Outer Jacket	LSZH (Low Smoke Zero Halogen) — colour: [Grey / Blue / Orange]
Marking	CAT7 F/FTP 4P 24AWG LSZH [standard] [metre marking]
Packing	305 m (1000 ft) on reel / pull box

Pair colour code

Pair	Conductor 1 (Tip)	Conductor 2 (Ring)
1	White / Blue	Blue
2	White / Orange	Orange
3	White / Green	Green
4	White / Brown	Brown

6. MECHANICAL & ENVIRONMENTAL

Overall Diameter (approx.)	[7.2 ± 0.3 mm]
Min. Bending Radius (installation)	8 × overall diameter
Max. Pulling Tension	110 N (25 lbf)
Operating Temperature	[-20 °C to +60 °C]
Installation Temperature	[0 °C to +50 °C]
Flame Retardancy	IEC 60332-1

7. ELECTRICAL CHARACTERISTICS (AT 20 °C)

Characteristic Impedance	100 Ω [± 5 Ω]
Max. DC Resistance (per conductor)	93.8 Ω/km (9.38 Ω/100 m)
Max. DC Resistance Unbalance	5 %
Max. Mutual Capacitance (1 kHz)	5.6 nF/100 m
Max. Capacitance Unbalance (pair to ground)	330 pF/100 m
Nominal Velocity of Propagation (NVP)	[~ 0.78]
Max. Operating Voltage	[72 V]
Screening Effectiveness	[Transfer impedance / coupling attenuation per IEC 61156-5]

Dielectric Strength (DC, 1 min)	[1.0 kV]

8. INSTALLATION & HANDLING GUIDELINES

- Do not exceed the max. pulling tension (110 N) or the min. bending radius (8 × OD).
- Avoid kinks, sharp bends, crushing and over-tight cable ties — screen damage degrades EMC performance.
- Keep separation from power cables according to local wiring standards (EN 50174-2).
- Use fully shielded Cat7 / Cat6A-rated connectors (GG45, TERA or shielded RJ45) and patch panels throughout the link.
- Terminate each pair foil, the overall foil and drain wire to the connector shield and ground the screen per the site earthing design; keep the shield continuous end to end.
- Test every installed link with a certified cable tester (Class F / Cat7 or Cat6A permanent link as applicable).