

# Category 6A F/FTP Cable - LSFROH - International

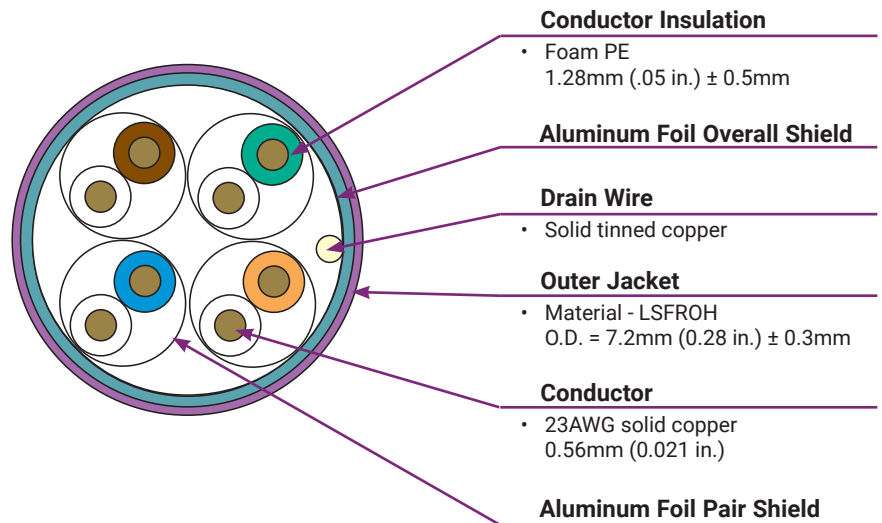
Siemon's category 6A / Class E<sub>A</sub> 4-pair F/FTP cable supports channel performance exceeding ANSI/TIA and ISO/IEC category 6A requirements. This cable uses a 5-foil screened design consisting of 4 individual foils wrapped pairs plus an overall foil shield. When combined with our shielded Z-MAX® 6A connectivity, the end result is a channel capable of supporting 10GBASE-T operation over 100-meter, 4-connector topologies. In addition, the fully shielded construction ensures virtually zero alien crosstalk. This cable has been formulated to meet IEC 60332-3-25 which is a more demanding flammability specification for bundled cables.

## Compliance

- ISO/IEC 11801-1 Ed 1.0
- ANSI/TIA-568.2-E (Category 6A)
- IEC 61156-5 Ed 2.0 (Category 6A)
- IEC 60332-3-25, IEC 60754-2, IEC 61034
- EN 50399 Class C<sub>ca</sub>S<sub>1a</sub>d<sub>1a</sub>1
- IEEE 802.3af (Type 1 PoE)
- IEEE 802.3at (Type 2 PoE)
- IEEE 802.3bt (Type 3 PoE)
- IEEE 802.3bt (Type 4 PoE)
- Power over HDBaseT (PoH)

## Cable Construction

- Nominal Cable Diameter: 7.2mm (0.28 in.)
- Conductor Insulation: Foam PE
- Material: LSFROH
- Drain Wire: (Solid Tinned Copper)
- Aluminium Foil Overall Shield
- Conductor: 23 AWG (0.56mm) Solid Copper
- Aluminium Foil Pair Shield



Data | Power | Reach | Delivered



# Product Information

## Electrical Specifications

|   |                        |
|---|------------------------|
| DC Resistance                                   | 73.2Ω/Km max. @20°C    |
| DC Resistance Unbalance                         | 2%                     |
| Mutual Capacitance                              | 56 nF/km (nom.) @ 1KHz |
| Capacitance Unbalance                           | <1600 pF/km            |
| Characteristic Impedance Function Fitted (ohms) | 100 ± 15% @ 100 MHz    |
| NVP   | 74%                    |
| TCL   | 40-10 log(f) dB        |
| Coupling Attenuation                            | ≤55 dB                 |
| Delay Skew                                      | 20ns/100m max.         |

## Physical Properties

| LSOH                     |                           |
|--------------------------|---------------------------|
| Pulling Tension (max)    | 110N (25 lbf)             |
| Bend Radius (min)        | 50mm (2.0 in.)            |
| Installation Temperature | 0 to 50°C (+32 to 122°F)  |
| Operating Temperature    | -20 to 75°C (-4 to 167°F) |

## TRANSMISSION PERFORMANCE



WORST CASE



SIEMON TYPICAL

| Frequency (MHz) | Insertion Loss (dB) |      | NEXT (dB) |      | PS NEXT (dB) |      | ACR (dB) |      | PSACR (dB) |      | ACR-F (dB) |      | PSACR-F (dB) |      | Return Loss (dB) |      | Propagation Delay (ns) |     |
|-----------------|---------------------|------|-----------|------|--------------|------|----------|------|------------|------|------------|------|--------------|------|------------------|------|------------------------|-----|
| 1.0             | 2.1                 | 1.8  | 75.3      | 93.5 | 73.3         | 92.7 | 73.2     | 93.1 | 71.2       | 90.9 | 73.3       | 97.1 | 71.3         | 93.7 | 20.0             | 23.9 | 570.0                  | 448 |
| 4.0             | 3.8                 | 3.6  | 66.3      | 98.3 | 64.3         | 95.9 | 62.5     | 94.7 | 60.5       | 92.4 | 61.3       | 96.4 | 59.3         | 93.9 | 23.0             | 27.3 | 552.0                  | 442 |
| 10.0            | 5.9                 | 5.5  | 60.3      | 87.5 | 58.3         | 87.2 | 54.4     | 82.0 | 52.4       | 81.6 | 53.3       | 86.4 | 51.3         | 85.7 | 25.0             | 32.7 | 545.4                  | 439 |
| 16.0            | 7.5                 | 7.1  | 57.2      | 83.4 | 55.2         | 82.9 | 49.8     | 76.3 | 47.8       | 75.8 | 49.2       | 81.2 | 47.2         | 81.1 | 25.0             | 31.2 | 543.0                  | 438 |
| 20.0            | 8.4                 | 8.0  | 55.8      | 77.4 | 53.8         | 76.7 | 47.4     | 69.4 | 45.4       | 68.7 | 47.3       | 75.0 | 45.3         | 74.4 | 25.0             | 32.4 | 542.0                  | 437 |
| 31.25           | 10.5                | 10.1 | 52.9      | 81.1 | 50.9         | 80.4 | 42.4     | 71.0 | 40.4       | 70.3 | 43.4       | 73.5 | 41.4         | 73.1 | 23.6             | 30.0 | 540.4                  | 436 |
| 62.5            | 15.0                | 14.3 | 48.4      | 87.1 | 46.4         | 84.1 | 33.4     | 72.7 | 31.4       | 69.8 | 37.4       | 74.2 | 35.4         | 73.1 | 21.5             | 31.8 | 538.6                  | 435 |
| 100.0           | 19.1                | 18.2 | 45.3      | 80.6 | 43.3         | 79.4 | 26.2     | 62.3 | 24.2       | 61.1 | 33.3       | 68.3 | 31.3         | 66.8 | 20.1             | 31.3 | 537.6                  | 435 |
| 200.0           | 27.6                | 25.8 | 40.8      | 74.4 | 38.8         | 71.2 | 13.2     | 48.5 | 11.2       | 45.4 | 27.3       | 63.9 | 25.3         | 62.4 | 18.0             | 31.3 | 536.5                  | 434 |
| 250.0           | 31.1                | 28.9 | 39.3      | 74.4 | 37.3         | 7.8  | 8.3      | 45.9 | 6.3        | 42.7 | 25.3       | 61.0 | 23.3         | 59.5 | 17.3             | 29.5 | 536.3                  | 434 |
| 300.0           | 34.3                | 31.9 | 38.1      | 72.5 | 36.1         | 69.8 | 3.9      | 41.9 | -1.9       | 37.8 | 23.8       | 62.0 | 21.8         | 60.3 | 17.3             | 26.2 | 536.1                  | 434 |
| 400.0           | 40.1                | 37.2 | 36.3      | 68.9 | 34.3         | 65.7 | -3.8     | 31.7 | -5.8       | 28.4 | 21.3       | 54.6 | 19.3         | 52.3 | 17.3             | 26.2 | 535.8                  | 434 |
| 500.0           | 45.3                | 41.6 | 34.8      | 65.9 | 32.8         | 64.0 | -10.4    | 23.9 | -12.4      | 22.1 | 19.3       | 55.9 | 17.3         | 53.8 | 17.3             | 28.0 | 535.6                  | 434 |
| 550.0*          | -                   | 44.0 | -         | 58.2 | -            | 54.9 | -        | 14.0 | -          | 10.4 | -          | 41.5 | -            | 40.4 | -                | 20.3 | -                      | 434 |
| 625.0*          | -                   | 46.2 | -         | 57.6 | -            | 56.5 | -        | 11.2 | -          | 9.3  | -          | 41.5 | -            | 39.8 | -                | 22.6 | -                      | 434 |
| 750.0*          | -                   | 51.9 | -         | 58.6 | -            | 56.0 | -        | 6.6  | -          | 4.2  | -          | 42.6 | -            | 40.4 | -                | 19.2 | -                      | 434 |

\*Values for frequencies beyond 500 MHz are for information only.

All performance based on 100 meters (328 ft.).

## Ordering Information

### Part Number Description

9N6J4-A5.....LSFROH (IEC 60332-3-25), violet jacket, Class E<sub>ca</sub>, D<sub>ca</sub>, C<sub>ca</sub>, 305m (1000 ft.) reel



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