



## Category 6A U/FTP - Unshielded Foiled Twisted Pair Dca LSZH Cable

The Category 6A Unshielded Foiled Twisted Pair (U/FTP) Dca cable with 4 x 2 x 23 AWG copper wire structure fully complies with ISO/IEC and TIA/EIA 568 standards. It is designed for use in horizontal network installations up to 500MHz. OptronicsPlus Cat6a U/FTP cable exceeds Cat6A/Class EA performance requirements and support 10G-BASE-T, 2G FCBASE-T, 4G FC-BASE-T and 1000Base-T applications. The Dca LSZH sheath offers excellent fire performance making this the ideal choice in public buildings and other high-risk locations.

### Features

- 23 AWG conductors
- Exceeds Cat6A performance requirements
- ISO/IEC 11801 and TIA/EIA568 compliant
- Reaction-to-fire class according to EN 13501-6: Dca
- Available with flame retardant LSZH outer jacket
- Supplied in 305m or 500m reels
- Printed metre marks

### Applications

- Cat6a/Class EA up to 500Mhz applications
- 1000BASE-T, 2G FCBASE-T and 10GBASE-T applications
- Horizontal network installations
- Backwards compatible with Cat 5e and Cat6 distribution systems

## Specifications

## CONSTRUCTION

|                            |  |
|----------------------------|--|
| Conductor                  | 23AWG solid bare copper (0.570 ±0.01 mm) |
| Insulation                 |  |
| Material                   | FOPE                                     |
| Nom. OD.                   | 1.36±0.1 mm                              |
| Minimum Thickness          | 0.39mm                                   |
| Outside-Tape Wrap Material | AL-MYLAR                                 |
| Drain Wire                 |  |
| Material                   | Tinned solid copper                      |
| Nom. OD.                   | 1/0.404 ± 0.008mm                        |
| Sheath                     | LSZH Dca                                 |
| Average Thickness          | 0.55 ±0.10 mm                            |
| Diameter                   | 7.40mm ± 0.40mm                          |
| Colour                     | Optional                                 |

## PHYSICAL CHARACTERISTICS

|   |                                  |
|---|----------------------------------|
| Sheath Normal Temp Tensile Strength (Mpa)     | ≥10.0                            |
| Sheath Normal Temp Elongation (%)             | ≥125                             |
| Insulation Normal Temp Tensile Strength (Mpa) | ≥10                              |
| Insulation Normal Temp Elongation (%)         | ≥200                             |
| Aging Condition (°C×Hrs)                      | 100°C ± 2°C, 24h, 7d             |
| Sheath After Aging Tensile Strength (Mpa)     | ≥8.0                             |
| Sheath After Aging Elongation (%)             | ≥100                             |
| Temperature Rating (°C)                       | -20°C to +75°C                   |
| Cold Bend ( -20 ± 2°C × 4)                    | 8 × Cable O.D. No visible cracks |

## ELECTRICAL CHARACTERISTICS

|  |                                      |
|--|--------------------------------------|
| Characteristic Impedance (Ω)                 | 100±15                               |
| Propagation Delay (Ns/100m)                  | ≤45                                  |
| Direct Current Resistance [20°C(Ω/100m) Max] | 9.5                                  |
| Direct Current Resistance Unbalance (%) Max  | Internal pair: 2%, Between pairs: 4% |
| Insulation Resistance (Mω Km)                | ≥5000                                |
| Mutual Capacitance of a Pair (Nf/100m)       | Not required                         |
| Capacitance Unbalance (Pf/100m)              | ≤160                                 |

## Transmission Line Performance

| FREQUENCY<br>(MHZ) | RL<br>≥dB | ATT<br>≤dB | NEXT<br>≥dB | ACRF<br>≥dB | PS NEXT<br>dB | PS ACRF<br>dB |
|--------------------|-----------|------------|-------------|-------------|---------------|---------------|
| 4                  | 23.0      | 3.8        | 66.3        | 56.0        | 63.3          | 53.0          |
| 8                  | 24.5      | 5.3        | 61.8        | 49.9        | 58.8          | 46.9          |
| 10                 | 25.0      | 5.9        | 60.3        | 48.0        | 57.3          | 45.0          |
| 16                 | 25.0      | 7.5        | 57.2        | 43.9        | 54.2          | 40.9          |
| 20                 | 25.0      | 8.4        | 55.8        | 42.0        | 52.8          | 39.0          |
| 25                 | 24.3      | 9.4        | 54.3        | 40.0        | 51.3          | 37.0          |
| 31.25              | 23.6      | 10.5       | 52.9        | 38.1        | 49.9          | 35.1          |
| 62.5               | 21.5      | 15.0       | 48.4        | 32.1        | 45.4          | 29.1          |
| 100                | 20.1      | 19.1       | 45.3        | 28.0        | 42.3          | 25.0          |
| 200                | 18.0      | 27.6       | 40.8        | 22.0        | 37.8          | 19.0          |
| 250                | 17.3      | 31.1       | 39.3        | 20.0        | 36.3          | 17.0          |
| 300                | 17.3      | 34.3       | 38.1        | 18.5        | 35.1          | 15.5          |
| 400                | 17.3      | 40.1       | 36.3        | 16.0        | 33.3          | 13.0          |
| 500                | 17.3      | 45.3       | 34.8        | 14.0        | 31.8          | 11.0          |

## Standards Compliance

- Class EA / Category 6A
- ISO/IEC 11801 2<sup>nd</sup> Edition
- ANSI/TIA/EIA-568-C.2
- EN 50173
- IEC 61156-5
- EN 50288-3-1
- IEC 60332-1-2
- IEC 60754-2
- IEC 61034
- EN 50575
- RoHS / REACH / SvHC

## Ordering Information

| DESCRIPTION   | PART NUMBER       |
|---|-------------------|
| Category 6A U/FTP LSZH Dca Cable Violet - 305m Reel | OCC-6A-31-305-Dca |
| Category 6A U/FTP LSZH Dca Cable Violet - 500m Reel | OCC-6A-31-500-Dca |

## Additional Images

