# Excel Category 6A Screened Twisted Pair (F/FTP) S-Foil Cable – LSOH

**excel**
without compromise.

CE  CAT6A  DELTA

X **25 Year System Warranty**

X **Lightweight, Compact Design**

X **Category 6A compliant**

X **CPR compliant to Cca s1a,d1,a1**

## Features

- 25 Year System Warranty
- Category 6A compliant
- Suitable for 10GBASE-T, 10 Gigabit Ethernet Applications
- Lightweight, Compact Design
- Specified to 500MHz
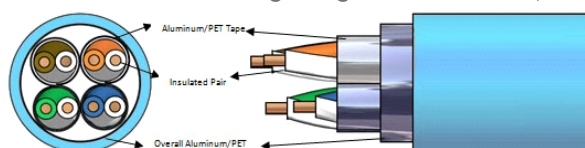- "S" foil screen
- Low Smoke Zero Halogen Outer

## Product Overview

Excel Category 6A – Augmented Category 6 – cables, and associated connectors, take the performance capabilities of copper infrastructure to new levels. The cable has been designed to exceed the ISO/IEC, TIA and CENELEC for Category 6A/Augmented Category 6 component requirements. This delivers Class EA/ Augmented Category 6 link performance over distances of up 90 metres which supports the applications including 10GBASE-T, 10 Gigabit Ethernet.

Each cable consists of two sets of two pairs are wrapped together in an "S" configuration with high quality, strong, aluminium/polyester foil tape providing screening for each pair. The "S" Foil configuration ensures separation of the pairs that ensures the performance.  These are then wrapped in another, overall foil. By using two sets of two pairs has resulted in a reduced diameter and weight cable. The smaller cable diameter has reduced the cable cross-sectional area by 19.7%. This design change has been instigated to benefit the installer and end user in many direct and indirect ways.  Reducing the size and weight means the cable occupies less space in the containment which in turn improves airflow in under floor installations. Less weight means that the containment can be of lighter construction. It also means that handling the cable on site is easier. Smaller diameter cable means that there is waste packaging to dispose of. The individual pairs are set to different lay lengths to ensure optimum performance.

Excel Category 6A cables are jacketed in an Ice Blue low smoke zero halogen (LSOH) compound. Supplied on 500 metre plywood drums, each cable has a print legend identifying the specification, part code and sequential metre marking which counts down from 500 metres to 1 metre, on each drum to reduce waste.

The print legend on the cable now also includes information regarding the DOP Number, Test and classification of the cable for traceability



## Typical Applications

■ 1000BASE-T Gigabit Ethernet ■ 10GBASE-T 10 Gigabit Ethernet ■ 1.2/2.4Gbs ATM ■ Digital and analogue video

■ IEEE 802.3af Power over Ethernet (PoE) ■ IEEE 802.3at Power over Ethernet Plus (PoE+)

## Cable Specifications

| | |
|---|---|
| Conductor | 23AWG, Solid Plain Copper |
| Insulation | Foamed Polyethylene |
| Screen applied to 2 pairs unit | Aluminium Foil Tape - wrapped in an "S" shape around the 2 pairs |
| Overall Screen | Aluminium Foil Tape |
| Outer Sheath | Flame resistant, Low Smoke Zero Halogen |
| Outer Diameter | 6.90 mm +/- 0.3mm |
| Installation Temperature Range | 0°C to +60°C |
| Operating Temperature Range | -20°C to +60°C |
| Minimum Bend Radius | 60mm (during installation) |
| Minimum Bend Radius | 31mm (during operation) |
| Standard of flame retardancy | IEC 60332-1-[1,2] (2004-07), IEC 60754-(1,2) |
| CPR Euroclass | EN 50575:2014 +A1:2016 Cca s1b,d1,a1 |
| Cable jacket tested to | IEC 62321, US EPA 3540C |
| Smoke Emission | EN 50399, EN61034-2 |
| Average weight per metre | 0.06 Kg/m |
| Drum Weight | 30.88 Kg |
| Drum Dimensions | 380mm Diameter x 484mm Width |
| Drum Size | 500m |
| NVP | 76% |
| Construction | IEC 61156-5 ed2.0 Augmented Category 6A |

| Freq. (MHz) | Ins. Loss (dB/100m) Max. | RL (dB) Min. | NEXT (dB/100m) Min. | ACR-F (dB/100m) Min. | PS NEXT (dB/100m) Min. | PS ACR-F (dB/100m) Min. | Delay Skew (ns/100m) Max. | Prop. Delay (ns/100m) Max. |
|---|---|---|---|---|---|---|---|---|
| 1 | - | 20.0 | - | - | - | - | - | - |
| 4 | 3.8 | 23.0 | 66.3 | 56.0 | 63.3 | 53.0 | 45 | 552.0 |
| 10 | 5.9 | 25.0 | 60.3 | 48.0 | 57.3 | 45.0 | 45 | 545.4 |
| 16 | 7.5 | 25.0 | 57.2 | 43.9 | 54.2 | 40.9 | 45 | 543.0 |
| 20 | 8.4 | 25.0 | 55.8 | 42.0 | 52.8 | 39.0 | 45 | 542.0 |
| 31.25 | 10.5 | 24.3 | 52.9 | 38.1 | 49.9 | 35.1 | 45 | 540.4 |
| 62.5 | 15 | 23.6 | 48.4 | 32.1 | 45.4 | 29.1 | 45 | 538.6 |
| 100 | 19.1 | 21.5 | 45.3 | 28.0 | 42.3 | 25.0 | 45 | 537.6 |
| 200 | 27.6 | 18.0 | 40.8 | 22.2 | 37.8 | 19.0 | 45 | 536.5 |
| 250 | 31.1 | 17.3 | 39.3 | 20.0 | 36.6 | 17.0 | 45 | 536.3 |
| 300 | 34.3 | 17.3 | 38.1 | 18.5 | 35.1 | 15.5 | 45 | 536.1 |
| 400 | 40.1 | 17.3 | 36.3 | 16.0 | 33.3 | 13.0 | 45 | 535.8 |
| 500 | 45.3 | 17.3 | 34.8 | 14.0 | 31.8 | 11.0 | 45 | 535.6 |

*Nominal velocity of propagation (NVP 76%) Note 1: All tests include 401 points swept frequency measurements.*
*Note 2: All electrical characteristics are given at 20°C*

## Part Number Information

| Part No. | Description |
|---|---|
| 170-196 | Category 6A (F/FTP) S-Foil Cable LSOH - 500m - Ice Blue |

## System Warranty

The Excel System Warranty provides a 25-year product and applications assurance of compliance with the industry performance standard appropriate to the class of cabling installed. The warranty may be applied for by an accredited Excel Partner who has designed, supplied and installed the said system.

Excel is a world-class premium performing end-to-end infrastructure solution - designed, manufactured, supported and delivered - without compromise.

Contact us at **sales@excel-networking.com**

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This document is subject to change without notice. The current version is available from our website**here**.

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