

Ultra-Lightweight Aerial Cable

Product Overview

The Hexatronic Ultra-Lightweight cable range is designed for aerial installations for fibre access networks.

As a secondary application the cable can also be installed underground in ducts. The cables are designed to fulfil all requirements to be installed in the British Telecom overhead and underground environments.

Features

- Up to 48f
- Super lightweight and durable design based on unique miniature loose tubes
- For aerial or duct installations
- Bend resistant G657A1 fibres
- Dry design with longitudinal water tightness
- Suitable for use with a minimum vertical separating distance of 1.8m from 11kv
- Controlled tensile breaking force for maximum security, less than 2000N
- 7mm cable diameter

Design

The cables are of loose tube design with bend resistant G657A1 fibres organised in 4, 8 or 12 fibre miniature loose tubes depending on cable fibre count. This design gives an excellent bend performance and an extremely wide operational temperature range.

The unique miniature loose tubes also provide superior cable preparation and handling properties both for termination and midspan access scenarios.

Water swellable elements are used to make the cable design longitudinally watertight. Two 3x0.32mm brass coated steel wires are used as strength members. The design makes it possible to control the breaking force of the cable so that the cable will break only when a certain load is reached.

Typical Data

Temperature range:

Operation.....-20 to +60°C
 Storage.....-30 to +70°C
 Handling.....-15 to +50°C

Bend radius*.....30mm
 Tensile force (break)*.....1350-2000N
 Crush resistance*.....2kN
 Crush resistance**.....2kN/100mm
 Torsion*.....Pass
 Impact resistance*.....>10Nm
 Kink**.....Pass
 High voltage test (11kv)***.....Pass

Cable weight:

4-12 fibre.....33kg/km
 24-48 fibre.....37kg/km

Diameter:4

4-48 fibre.....7.0mm

*According to BT CW1842 13.1.1-13.1.1.5

**According to IEC 60794-1-21

***According to BT CW1500-11

Installation

The cable shall only be installed using approved suspension clamps. Recommended maximum span length for PIA applications is 68m, considering wind loads and 5mm ice coverage but up to 80m is possible for special cases.

Delivery Information

Supplied lengths.....250m to 6km

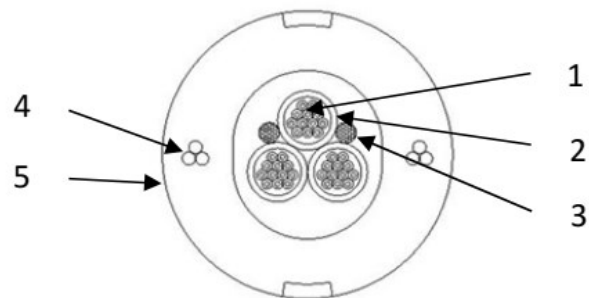
The cable is length blocking according to IEC 60794-1-2-FSB. Mechanical and environmental test in accordance with IEC 60794-5-10 and BT CW1842. Fibre parameters and tests according to the IEC series 60793-2 and 60793-1

Transmission Characteristics

| Attenuation | @ 1310nm | @ 1383nm | @ 1550nm | @ 1625nm |
|----------------------|-----------|-----------|-----------|-----------|
| Typical | 0.32dB/km | 0.32dB/km | 0.18dB/km | 0.20dB/km |
| Max average in Cable | 0.33dB/km | 0.33dB/km | 0.21dB/km | 0.23dB/km |
| Max individual | 0.36dB/km | 0.36dB/km | 0.23dB/km | 0.25dB/km |

Cross-section Design

1. Primary coated fibre.....Silica, acrylate
2. Loose tubes, jelly filled.....Polyamide
3. Water blocking element....Water blocking yarn
4. Strength member.....Brass coated steel wires
5. Sheath.....Black HDPE with yellow stripes



Colour Code system

| | | | | | | | | | | | | |
|-----------------------------|------|--------|-------|-------|-------|-------|-----|-------|--------|--------|------|------|
| TIA-598 Fibers and Tubes | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
| | Blue | Orange | Green | Brown | Slate | White | Red | Black | Yellow | Violet | Rose | Aqua |
| | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 |
| | Blue | Orange | Green | Brown | Slate | White | Red | Clear | Yellow | Violet | Rose | Aqua |

To comply with PIA regulations Hexatronic part numbers for the Ultra Lightweight cable range consist of a base number and a suffix containing the "CF" customer code and a reel length code.

This information is also printed on the sheath.

EG: CFSDU-H4036011/36CF-1 = ULW cable 36f G657A1 with length 1 (1000m)

Ordering Information

| Part number | Description | |
|-----------------------|--|------|
| CFMDU-H4036011/48CF-3 | CFMDU - Ultra Lightweight Cable - 48f - A1 - 2000m | 2000 |
| CFMDU-H4036011/48CF-4 | CFMDU - Ultra Lightweight Cable - 48f - A1 - 4000m | 4000 |
| CFMDU-H4036011/36CF-3 | CFMDU - Ultra Lightweight Cable - 36f - A1 - 2000m | 2000 |
| CFMDU-H4036011/36CF-4 | CFMDU - Ultra Lightweight Cable - 36f - A1 - 4000m | 4000 |
| CFMDU-H4036011/24CF-3 | CFMDU - Ultra Lightweight Cable - 24f - A1 - 2000m | 2000 |
| CFMDU-H4036011/24CF-4 | CFMDU - Ultra Lightweight Cable - 24f - A1 - 4000m | 4000 |
| CFMDU-H4036011/12CF-3 | CFMDU - Ultra Lightweight Cable - 12f - A1 - 2000m | 2000 |
| CFMDU-H4036011/12CF-4 | CFMDU - Ultra Lightweight Cable - 12f - A1 - 4000m | 4000 |