

Ultra-Lightweight Aerial Cable – TOL 403 6011

4-48 Fibres G657A1



Features

- Up to 48 fibres
- 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

Application

The Hexatronic Ultra-lightweight cable range is designed for aerial installations for fibre access networks. As a secondary application the cables 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.

Design

The cables are of a 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 pairs with 3x0.32 mm 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.



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Typical Data

Temperature range

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

Bend radius*60mm

Tensile force (break)*1350-1800N

Crush resistance*>2kN

Crush resistance**>2kN/100mm

Torsion*Pass

Impact resistance*>10Nm

Kink**Pass

High voltage test (11kV)***Pass

Cable weight

4–12 fibre33kg/km
 24–48 fibre37kg/km

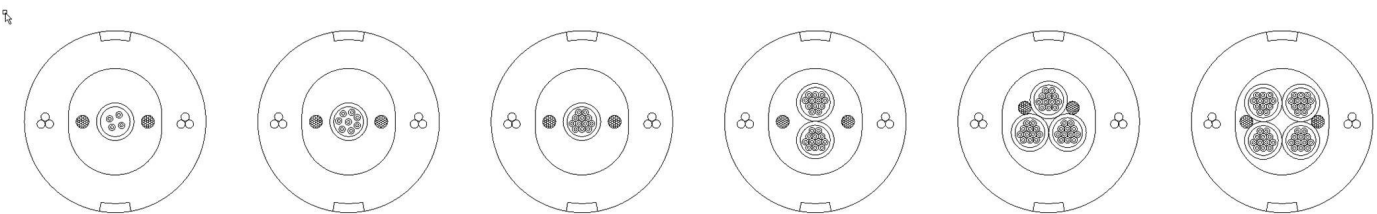
Diameter

4–48 fibre7.0mm

* 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, taking into account wind loads and 5mm ice coverage, but up to 80m is possible for special cases.

Delivery Information

Supplied lengths250m to 6km

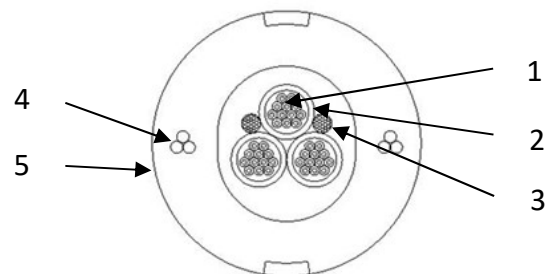
The cable is length water blocking according to IEC 60794-1-2-F5B. Mechanical and environmental test in accordance with IEC 60794-5-10 and BT CW1842. Fibre parameters and tests according to the IEC series 60793-2 and 60793-1.

Transmission Characteristics

Attenuation	@ 1310nm	@ 1550nm	@ 1625nm
Max	0.35dB/km	0.21dB/km	0.24dB/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

Fibres	1	2	3	4	5	6	7	8	9	10	11	12
	Blue	Orange	Green	Brown	Grey	White	Red	Black	Yellow	Violet	Pink	Turquoise
Loose tubes	1	2	3	4								
	Blue	Orange	Green	Brown								



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Ordering Information

To comply with PIA regulations Hexatronic part numbers for the ULW cable range consist of a base number and a suffix containing a unique two letter customer code and a reel length code. The customer name and the part number are also printed on the sheath.

Example: H403011/36XX-1 = ULW cable 36F G657A1 for customer “XX” with length “1” (1000m).

Product Base No.	Product Name	Tubes/Fibres	Colour Code
H4036011/04	ULW Cable 4f G657A1	1x4 (4f)	TIA 598
H4036011/08	ULW Cable 8f G657A1	1x8 (8f)	TIA 598
H4036011/12	ULW Cable 12f G657A1	1x12 (12f)	TIA 598
H4036011/24	ULW Cable 24f G657A1	2x12 (24f)	TIA 598
H4036011/36	ULW Cable 36f G657A1	3x12 (36f)	TIA 598
H4036011/48	ULW Cable 48f G657A1	4x12 (48f)	TIA 598

Reel length code	Reel length
1	1000m
2	500m
3	2000m
4	4000m