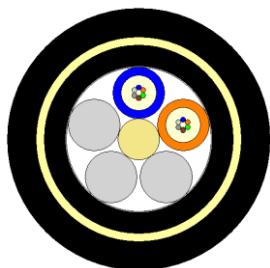


# Optical fibre cables for aerial installation (ADSS)

## Cable Design

Acc. to IEC 60794



- **Central Strength Member (CSM):** glass fibre reinforced plastic rod (FRP)
- **Loose tube:** thermoplastic material, containing optical fibres and filled with a suitable water tightness compound.
- **Filler elements:** thermoplastic rods (when needed).
- **Stranding:** loose tubes and fillers SZ stranded around the CSM.
- **Longitudinal water tightness:** dry core with water swellable elements.
- **Inner sheath :** polyethylene. One ripcord is laid beneath.
- **Peripheral strength elements :** aramid yarns.
- **Outer sheath:** tracking resistant compound<sup>(1)</sup>. One ripcord is laid beneath.

- Figure : 24 fibres cable (not to scale) -

1) outer sheath is tracking resistant up to 25kV according to specification IEEE P 1222 §3.7 Class B, Test requirement §4.1.13, 5.1.13 and Annex A"

## Technical data

No. of Fibres		12	16	24	36	48	60
Design		1 x 12	2 x 8	2 x 12	3 x 12	4 x 12	5 x 12
Loose Tube – Ø	mm	2.8					
CSM – Ø	mm	2.4					
Inner / Outer Sheath Thickness	mm	0.8 / 1.4					
Cable diameter	mm	12.8	12.8	12.8	12.9	13.2	13.6
Cable weight	kg / km	120	120	125	125	130	135
Modulus of elasticity	kN / mm <sup>2</sup>	62.9	64.3	66.9	74.4	77.7	82.8
Effective area	mm <sup>2</sup>	6.0	6.3	6.7	7.9	9.6	12.1
Thermal expansion coefficient	·10 <sup>-6</sup> °C <sup>-1</sup>	24.7	23.4	21.1	17.2	12.3	8.6
MOT (maximum tension in operation , no fibre strain)	kN	2.5	3.1	3.5	4.3	5.5	7.0
MRCL(maximum allowable tension, MAT)	kN	3.5	4.53	5.11	6.02	7.69	9.99
Breaking strength	kN	7.5	8.2	9.1	11.5	14.5	19.0
Max. Span	m	150	200	300	400	500	650
Minimum Bending Radius	mm	Without Tension 15 x Cable-Ø			Under Maximum Tension 20 x Cable-Ø		
Temperature Range	°C	Installation - 30 to + 70		Transport & Storage - 50 to + 70		Operation -40 to + 70	

Please refer to our General Installation, Safety & Handling recommendations before handling.

## Main characteristics

Test	Test Standard	Specified Value	Acceptance Criteria
Maximum Tension	IEC 60794-1-2-E1	MOT : see table above MRCL : see table above	$\Delta I/I \text{ fibre} \leq 0.05\%$ , $\Delta \alpha \leq 0.1 \text{ dB}$ $\Delta I/I \text{ fibre} \leq 0.2\%$ , $\Delta \alpha$ reversible
Crush	IEC 60794-1-2-E3	2000 N / 100 mm, max. 15 min	$\Delta \alpha \leq 0.05 \text{ dB}$ , no damage
Impact	IEC 60794-1-2-E4	10 Nm, 3 impacts, R= 300 mm	$\Delta \alpha \leq 0.05 \text{ dB}$ after the test
Cable Bend	IEC 60794-1-2-E11	R=20x D, 4 turns, 3 cycles	$\Delta \alpha \leq 0.05 \text{ dB}$ , no damage
Temperature Cycling	IEC 60794-1-2-F1	-40°C to +70°C	$\Delta \alpha \leq 0.05 \text{ dB/km}$
Water Penetration	IEC 60794-1-2-F5B	sample=3m, water column=1m,24h	no water leakage under 1 <sup>st</sup> sheath








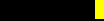




All optical measurements at 1550 nm.

## Optical Characteristics




See the attached cabled optical fibre data sheet.

## Identification

### Fibre Colours

No.	1	2	3	4	5	6	7	8	9	10	11	12
Colour	blue	orange	green	brown	slate	white	red	black	yellow	violet	pink	aqua
												

### Buffer Tube Colours

No.	1	2	3	4	5
Colour	blue	orange	green	brown	slate
					

### Filler Elements Colours:

All filler elements are uncoloured (natural).

### Sheath Colour:

The outer sheath colour is black.

### Sheath Marking:

The outer sheath is marked in 1 meter intervals as follows:

**DRAKA UFINET TELECOM** <year of manufacture> <no. and type of fibres> <MRCL value in kN>  
**AT** <length marking in meters>

## Logistic

### Packing:

Wooden drums with protection.

### Delivery Lengths:

Standard delivery lengths are 2 km, 4 km, 6 km with a tolerance of - 1% / + 3%

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