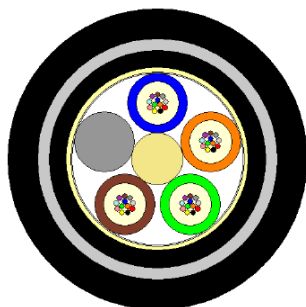


Optical fibre ADSS cables with rodent protection

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.
- **Peripheral strength elements:** aramid yarns.
- **Inner sheath:** polyethylene. One ripcord is laid beneath.
- **Non Metallic Armour as rodent protection:** glass yarns.
- **Outer sheath:** HDPE. One ripcord is laid beneath.

- Figure : 48 fibres cable (not to scale) -

Technical data

No. of Fibres		12	16	24	36	48	60			
Design (No. tubes x fibres per tube)		1 x 12	2 x 8	2 x 12	3 x 12	4 x 12	5 x 12			
Loose tube / filler - Ø	mm	2.8								
CSM – Ø	mm	2.4								
Inner/ Outer sheath thickness	mm	0.8 / 1.4								
Cable diameter	mm	13.9	13.9	14.0	14.5	14.5	14.9	15.5	15.5	16.4
Cable weight	kg / km	145	150	150	160	160	170	180	185	210
Modulus of elasticity	kN/mm ²	64.4	64.3	72.0	78.9	80.8	87.5	90.2	92.6	96.0
Effective area	mm ²	6.3	7.2	7.9	10.1	11.0	15.7	19.1	23.5	34.7
Thermal expansion coefficient	·10 ⁻⁶ °C ⁻¹	24.5	20	17.7	12.4	10.9	6.3	4.6	2.9	0.9
MOT (maximum tension in operation ,no fibre strain)	kN	3.2	3.8	4.4	5.5	6.5	9.0	11.0	14.0	21.0
MRCL(maximum allowable tension, MAT)	kN	4.0	5.2	6.0	7.2	8.9	12.0	15.0	19.0	28.0
Breaking strength	kN	8.1	9.9	11.2	16.0	17.8	27.5	35.0	44.0	67.0
Max. Span	m	150	200	300	400	500	650	800	1000	1500
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	$\Delta I/I$ fibre $\leq 0.05\%$, $\Delta\alpha \leq 0.1$ dB $\Delta I/I$ fibre $\leq 0.2\%$, $\Delta\alpha$ reversible
Crush	IEC 60794-1-2-E3	2000 N / 100 mm, max. 15 min	$\Delta\alpha \leq 0.05$ dB, no damage
Impact	IEC 60794-1-2-E4	10 Nm, 3 impacts, R= 300 mm	$\Delta\alpha \leq 0.05$ dB after the test
Cable bend	IEC 60794-1-2-E11	R=20x D, 4 turns, 3 cycles	$\Delta\alpha \leq 0.05$ dB,no damage
Temperature cycling	IEC 60794-1-2-F1	-40°C to +70°C	$\Delta\alpha \leq 0.05$ dB/km
Water penetration	IEC 60794-1-2-F5	sample=3m, water column=1m,24h	no water leakage under 1st 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	grey	white	red	black	yellow	violet	pink	turquoise

Buffer Tube Colours

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

Fillers colour: 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>
KPVP <length marking in meters>**

Logistic

Packing

Standard 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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