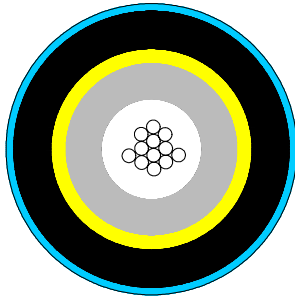


External Underground Central Loosetube Optical Cable

IEC 60794-3-11
ACMA - AS/CA S008

Cable Design



- Drawing not to scale -

- **Central loose tube construction**

- **Tube:** Thermoplastic material, containing up to 12 optical fibres filled with a low viscosity, thixotropic, non-melting gel fully compatible with fibre coating and tube material
- **Peripheral strength members:** Water swellable aramid yarns
- **Longitudinal water tightness:** Water swellable elements (dry-core technology)
- **Sheath:** UV stabilised polyethylene in compliance with AS 1049.
- **Outer jacket:** UV stabilised polyamide (Nylon) in compliance with AS 1049 integrally bonded to PE sheath

This loose tube dielectric optical cable is designed for external underground installations in ducts by pulling, jetting or floating techniques.

Technical data

Number of Fibres		2 – 4 – 6 – 8 – 12		
Number of elements		1		
Tube diameter	mm	2.4		
Cable nominal diameter	mm	5.8		
Cable nominal weight	kg/km	22		
Max. installation tension	kN	1.0		
Max. crush resistance	kN/100 mm	2.0 (Short term) / 1.0 (Long term)		
Min. bending radius	mm	At full load 150 At no load 80		
Temperature range	°C	Installation -0 -> +50	Transport & Storage -20 -> +70	Operation -10 -> +70

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	aqua

Sheath Colour:

The outer sheath colour is light blue.

Sheath Marking:

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

PRYSMIAN DW SM@RTCORE CT LITE Part Number  N 0514 T/N #### MM/YY *****

Main mechanical characteristics

Parameter	Test method	Test conditions	Acceptance criteria *
Tensile strength	IEC 60794-1-2-E1	Load: As per cable maximum tensile strength in table above.	After 30 minutes the maximum strain on the fibre should not exceed 0.6% and no attenuation increase greater than 0.1 dB occurs
Crush	IEC 60794-1-2-E3	Short time: 10 min Long time: 120 min Load: As per maximum crush resistance in table above Number of positions: 3 adjacent sections (ensuring one over tube and one over lay reversal)	No damage to the sheath or to the core structure and no attenuation increase greater than 0.1 dB occurs
Impact	IEC 60794-1-2-E4	Weight: 1.5 kg Height: 1.0 m Anvil radius: 12.5 mm Impacts: 1	After 5 minutes no fibre breaks, no damage to the sheath or to the core structure and no attenuation increase greater than 0.1 dB occurs
Torsion	IEC 60794-1-2-E7	Sample length: 1 m Bends: 360° (1turn) clockwise and after measurement (one minute) 720° (2turns) anticlockwise (two minutes)	No fibre breaks, no damage to the sheath or to the core structure and no attenuation increase greater than 0.1 dB occurs
Bend	IEC 60794-1-2-E11	Mandrel diameter: 160 mm Bend: 360° (1turn)	No attenuation increase greater than 0.1 dB occurs
Bend under tension	Concurrent to tensile test IEC 60794-1-2-E18	Mandrel diameter: 300 mm Bend: 360° (1turn)	After 1 minute no fibre breaks, no damage to the sheath or to the core structure and no attenuation increase greater than 0.1 dB occurs from no load to full load
Temperature cycling	IEC 60794-1-2-F1	Sample length: 1000 m (minimum) Temperature range: From – 10 °C to +70 °C	There should be no average attenuation increase at the temperature extremes when compared to the attenuation at ambient temperature. No individual fibre should measure an attenuation greater than 0.15 dB/km
Water penetration	IEC 60794-1-2-F5B	Sample length=3m, Water height=1m	No water leakage after 24 hour

* All optical measurements for singlemode fibres performed at 1550 nm.

Logistic

Packing:

New non-returnable timber or plastic drums

Delivery Lengths:

Standard delivery length: 4 km with a tolerance of - 1% / + 3%

Maximum delivery length: 10 km with a tolerance of - 1% / + 3%

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All sizes and values without tolerances are reference values. Specifications are for product as supplied by PrysmianGroup: any modification or alteration afterwards of product may give different result.

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