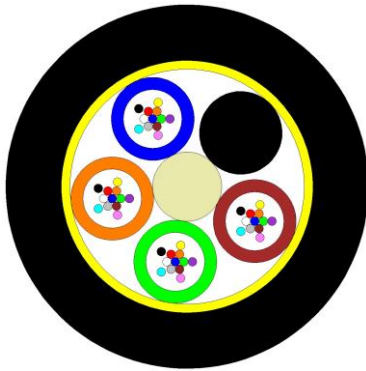


SM@RTSPAN® ADSS

All Dielectric Self-supported Aerial Cable 150m Span (Single Sheath)

Cable Design

**ACMA - AS/CA S008
IEC 60794-3-20**



- Drawing not to scale -

- **Multi-loose tube construction**
- **Central strength member (CSM):** Glass fibre reinforced plastic material (GRP) with or without over-sheathing
- **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
- **Stranding:** The required numbers of elements (tubes and fillers) are SZ stranded around the central strength member
- **Reinforcing:** High modulus aramid yarns
- **Sheath:** UV stabilised polyethylene in compliance with AS 1049

This all dielectric loose tube aerial optical cable is designed for external self-supporting applications requiring short distance spans between poles (maximum 150 metres).

Technical data

Number of Fibres		up to 60	72	96	144
Number of elements		5	6	8	12
Tube / Filler diameter	mm	2.4			
Cable nominal diameter	mm	10.5	11.2	12.6	15.7
Tolerance	mm	± 0.3			
Cable nominal weight	kg/km	80	96	120	190
Modulus of elasticity @ 20°C	kN/mm ²	8.5	9.2	6.1	5.5
Theoretical effective area	mm ²	63	72	91	144
Thermal expansion coeff. @ 20°C	1/°C	10.5 x 10 ⁻⁶	10.4 x 10 ⁻⁶	14.7 x 10 ⁻⁶	16.6 x 10 ⁻⁶
Calculated break load	kN	10.4	13.1	10.8	15.6
Max. everyday tension	kN	1.0	1.2	1.5	2.3
Max. working tension at:					
100km/hr wind & No ice	kN	2.5	2.8	3.0	4.2
50km/hr wind & 5mm radial ice	kN	2.2	2.5	2.7	3.8
Min. installation sag	%	1.5			
Max. crush resistance	kN/100mm	2.0 (Short term) / 1.0 (Long term)			
Min. bending radius	mm	At full load 20 x Cable OD (including coils in poles) At no load 15 x Cable OD			
Temperature range	°C	Installation -0 -> +50		Operation -10 -> +70	

Optical Characteristics

See the attached cabled optical fibre data sheet.

Identification

Fibre and Buffer Tube 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

Fillers are either natural (opaque) or black, jelly filled tubes (with no fibres) are also used.

Sheath Colour:

The outer sheath colour is black.

Sheath Marking:

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

PRYSMIAN DW SM@RTSPAN ADSS 150M Part Number T/N ##### MM/YY MADE IN AUSTRALIA ***** >> | << *****

^ Customised marking legend is available (subject to agreement)

Main mechanical characteristics

Parameter	Test method	Test conditions	Acceptance criteria*
Tensile strength	IEC 60794-1-21-E1	As per cable maximum tensile strength (max. working tension) in table above. Duration: 30 minutes	Fibre strain ≤ 0.2%. No physical damage and no change in attenuation throughout test.
Crush	IEC 60794-1-21-E3	Load: As per maximum crush resistance in technical data table above Duration: 10 min (short-term) / 120 min (long-term)	No physical damage. No change in attenuation after test (short-term) or during test (long-term).
Impact	IEC 60794-1-21-E4	Impact energy: 15 J Anvil radius: 300 mm	No physical damage. No change in attenuation after test.
Torsion	IEC 60794-1-21-E7	Sample length: 1 m Rotation: +/-180 degree, 10 cycles	No physical damage. No change in attenuation after test.
Bend	IEC 60794-1-21-E11	Mandrel radius: As per Min. bending radius at no load in technical data table above No. of turns/helix: 4, No. of cycles: 3	No physical damage. No change in attenuation after test.
Bend under tension	Concurrent to tensile test	Mandrel radius: As per Min. bending radius at full load in technical data table above Bend: 360°, 1 turn	No physical damage. No change in attenuation after test.
Temperature cycling	IEC 60794-1-22-F1	Sample length: 1000 m (minimum) Temperature range: As per Operation temperature range in technical data table above	No change in attenuation between 10°C & 30°C. Max. change in attenuation ≤0.15dB/km between Min. & Max. operation temperatures.

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

Logistic

Packing:

Timber drums to AS/NZS 2857 with flexible cable wrap protection

Delivery Lengths:

Standard delivery length is 6 km with a tolerance of - 1% / + 3%