

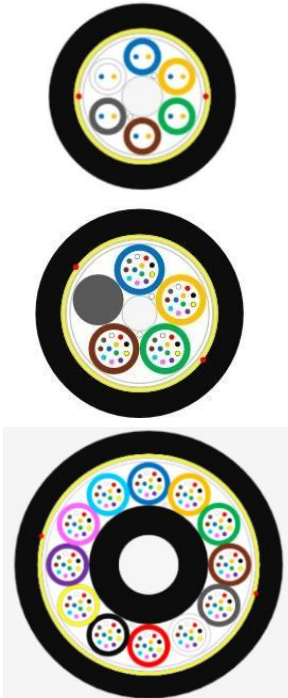
## ADSS Aéreo 12/24/48/144 SPAN 200m

Max Span: 200m

Max. Applied voltage:110kv

Max operating weather conditions: 90km/h wind speed and 0mm ice load

### Cable Design



- **Central Strength Member (CSM):** Glass fiber reinforced plastic rod (GFRP), with PE sheath covering when needed.
- **Loose Tube:** PBT plastic material, containing 2/6/12 fibers and filled with a suitable water tightness jelly.
- **Filler Elements:** PP plastic rods, when needed.
- **Stranding:** Loose tubes & fillers SZ stranded around CSM.
- **Longitudinal Water Tightness:** Dry core with water swellable elements.
- **Ripcord:** 2 ripcords under sheath.
- **Aramid Yarn:** Aramid yarn as additional strength member.
- **Outer Sheath:** Black HDPE.

### Cable Specification

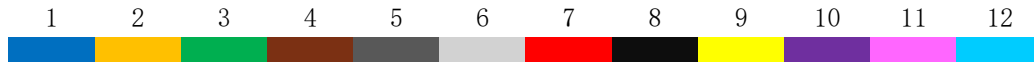
Cable description								
Item	Specified	1	2	3	4	5	6	7
Cable Cores		12	12	24	24	48	48	144
No. of Tubes		6	6	4	4	4	4	12
Fiber Counts in Tube		2	2	6	6	12	12	12
No. of Fillers		/	/	1	1	1	1	/
Tube/Filler- $\Phi$	mm	1.8	2.0	2.2	2.2	2.2	2.2	2.4
CSM - $\Phi$	mm	2	2.1	1.7	1.7	1.7	1.7	/
Coated CE- $\Phi$	mm	/	/	/	/	/	/	6.6
Thickness of Outer Sheath	mm	1.5	1.5	1.5	1.5	1.5	1.5	1.6
Nom. Cable Diameter	mm	9	9.6	9.5	9.6	9.6	9.6	15
Nom. Cable Weight	kg/m	65	70	70	72	70	68	175
MAT	N	1450	2700	1550	2600	1550	2700	3200
Crush Strength	N/10cm	1000	1000	1000	1000	1000	1000	1000
Span	m	100	200	100	200	100	200	100
SAG	%	0.8	1.0	0.8	1.0	0.8	1.0	0.8

## Color Code for Fiber and Loose Tube

Fiber color



Loose tube color(s)



## Cable Performance

Cable performance		
Test	Specified Value	Acceptance Criteria
Tensile <small>IEC 60794-1-21, E1</small>	MAT	$\Delta\alpha \leq 0.1$ dB, fiber strain $\leq 0.33\%$
Crush <small>IEC 60794-1-21, E3</small>	1000 N/10cm	$\Delta\alpha \leq 0.1$ dB, no sheath damage
Impact <small>IEC 60794-1-21, E4</small>	4.5 J	$\Delta\alpha \leq 0.1$ dB, no sheath damage
Repeated Bending <small>IEC 60794-1-21, E6</small>	R=30D, 25 cycles	$\Delta\alpha \leq 0.1$ dB, no sheath damage
Torsion <small>IEC 60794-1-21, E7</small>	1m, 10 cycles, $\pm 180^\circ$	$\Delta\alpha \leq 0.1$ dB, no sheath damage
Temperature Cycling <small>IEC 60794-1-22, F1</small>	2 cycles, -25~+70°C	$\Delta\alpha \leq 0.10$ dB/km, no sheath damage
Water Penetration <small>IEC 60794-1-22, F5</small>	3m sample, 1m height, 24 h	No water leakage

## Fiber Performance

G.652D performance		
Characteristics		Acceptance Value
Attenuation	@ 1310nm	$\leq 0.35$ dB/km
	@ 1383nm	$\leq 0.35$ dB/km
	@ 1550nm	$\leq 0.21$ dB/km
	@ 1625nm	$\leq 0.24$ dB/km
Mode field diameter (MFD)	@ 1310nm	$9.2 \pm 0.4$ $\mu\text{m}$
	@ 1550nm	$10.4 \pm 0.5$ $\mu\text{m}$
Chromatic dispersion coefficient	1288~1339nm (absolute value)	$\leq 3.5$ ps/(nm·km)
	1271~1360nm (absolute value)	$\leq 5.3$ ps/(nm·km)
	@ 1550 nm	$\leq 18$ ps/(nm·km)
Zero-dispersion wavelength		1302nm~1322 nm
Zero-dispersion slope		$\leq 0.092$ ps/(nm <sup>2</sup> ·km)
Cable cut-off wavelength $\lambda_{cc}$ (nm)		$\leq 1260$ nm
Polarization mode dispersion (PMD, for fiber on the reel)		$\leq 0.20$ ps/km <sup>1/2</sup>
Cladding diameter		$125 \pm 1.0$ $\mu\text{m}$
Cladding non-circularity		$\leq 0.70$ %
Core/cladding concentricity error		$\leq 0.7$ $\mu\text{m}$
Proof test		$\geq 0.69$ GPa (100kpsi)

## Sheath Marking

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

2020 Maintronics \*\*\* m

Note: Telephone Symbol is like 

Laser Symbol is like 

## Cable Packing and Marking

### 1.1 Standard cable length for each reel

Standard length: 4000m per reel      Tolerance:  $\pm 1\%$ .

Other cable length available.

### 1.2 Reel type

Each length of the cable shall be wound on a separate iron wooden reel.

The arbor holes provided in the reels shall be approximately 105 mm with a wood or steel hub in the arbor hole (in lieu of fiberboard).

### 1.3 Reel marking

Details given below shall be distinctly marked with a weather-proof material on both outer sides of the reel flange:

Purchaser's name

Reel number

Name of the manufacturer

Year of manufacture

Arrow showing the direction the drum shall be rolled

### 1.4 Cable end retaining methods

Iron wooden reel: inner retaining.

Wooden reel: outer retaining recommended, inner retaining or groove retaining available.



Iron wooden reel



Wooden reel