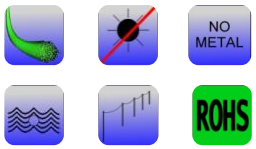
EE3A41G - SM/B1.3-AERIAL-D7,0

AERIAL CABLES WITH DIELECTRIC SUSPENSION STRAND OF 7,0 MM FRP

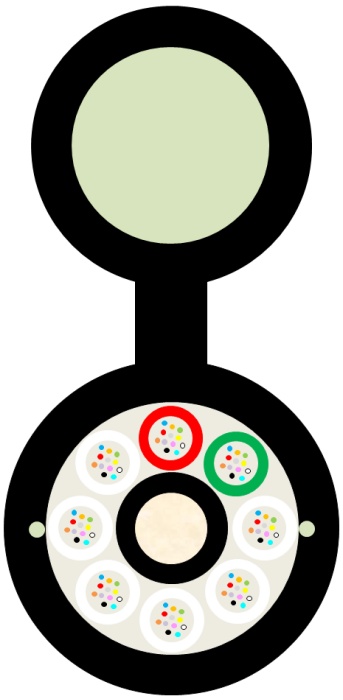


STARDARDS

TSC2 –Rev 2. Optical aerial cables
IEC 60794

DESCRIPTION AND APPLICATION

Cables from 24 to 288 singlemode optical fibres, figure-8 FRP supporting member and PE sheath for aerial installations.



CONSTRUCTION

- ***Fibres:*** Singlemode optical fibres according to ITU-T G.652D. Colour coding according to table 1.
- ***Tubes:*** PBT loose tubes filled with thixotropic compound. Tube diameter 2,3mm.
- ***Optical Core:*** Tubes stranded around a central FRP support element, with a lay length from 90mm to 130mm. Optional fillers depending on the cable structure. Colour coding according to table 2.
- ***Outer sheath:***
  UV resistant black polyethylene outer jacket.
  Aerial Fig. 8 sheath with a 7 mm FRP as self-supporting element.
  Two rip cords underneath the cable sheath. (180° opposite).
- ***Sheath marking :*** The cable sheath will be marked at regular intervals, with hot-foil in white, with the following information:

Length markers / Year(YYYY)-Batch nº / Manufacturer / CPR Code / Telenor Code / Four Letter Code

Example for 96 Fo cables:
XXXX / YYYY-NNNNN / CABLESCOM / CE CLASS Fca / FO-96/SM/B1.3-AERIAL-D7,0 / QXWE

OPTICAL FIBER CHARACTERISTICS

The parameters of the optical fibres are compliant with the ITU-T G.652 recommendation and ,IEC 60793-2-50 [2].

PARAMETER	VALUE	UNITS
Ave./Max. Individual fibre Attenuation at 1310 nm (*)	≤0.33 / ≤0.34	dB/km
Ave./Max. Individual fibre Attenuation at 1550 nm (*)	≤0.20 / ≤0.21	dB/km
Ave./Max. Individual fibre Attenuation at 1625 nm (*)	≤0.21 / ≤0.22	dB/km
Max. Chromatic Dispersion at 1550 nm (nom/typ)	≤ 18.0 /≤ 16.7	ps/nm·km
Max. Chromatic Dispersion at 1625 nm (nom/typ)	≤ 22 /≤ 21	ps/nm·km
Polarization Mode Dispersion (PMD) (*)	0.1	ps/√km
Link Design Value (PMD_Q) (Q=0.01% , N=20))	<0.06	ps/√km
Cut-off Wavelength (cabled fibre)	λcc ≤ 1260	nm
Mode Field Diameter at 1310 nm	8.8 ± 0.4	µm
Installation and Operation Fibre bending diameter	1 Turn	Ø 32mm

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TITLE	EDITION	APPROVED BY	DATE
HP_EE3A41G	3	O. Salomón	2017-09-19

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TABLE 1 : OPTICAL FIBRE COLOUR CODE

Fibre number	Colour	Fibre Number	Colour
1	White	7	Brown
2	Red	8	Black
3	Yellow	9	Violet
4	Green	10	Turquoise
5	Blue	11	Orange
6	Grey	12	Pink

TABLE 2 : LOOSE TUBE COLOUR CODE

Tube number	Tube Colour	Direction
1	Red	Green
2	Green	White
3	White	Next White
n	White	Next White

Filling elements, if any, shall de natural of colour

MECHANICAL REQUIREMENTS

Mechanical characteristics	*Standard*	*Test conditions*
Tensile strength (Δεf ≤ 0,2%) (MIT)	IEC 60794-1-21 Met.1	5.5 kN
Maximum tensile strength (Δεf ≤ 0,6%) (MAT)	IEC 60794-1-21 Met.1	9.0 kN
Minimum breaking tension	IEC 60794-1-21 Met.1	15 kN
Crush resistance	IEC 60794-1-21 Met. E3B	1000 N/250 mm
Impact resistance	IEC 60794-1-21 Met. E4	15 J
Operating temperature cycling (Δα ≤ 0,05dB)	IEC 60794-1-22 Met. F1	-40ºC / 70ºC

OTHER CHARACTERISTICS

Characteristics		*Test conditions*
Cable bending diameter (with strand),	*Installation/Operation*	30xCH /30xCH
Cable bending diameter (without strand),	*Installation (no load)/Operation (load)*	10xOD /20xOD
Minimum bending diameter for Loose Tubes,	*Installation/Operation*	30 mm
Installation temperature		-15ºC/60ºC
Operation Temperature		-40ºC/70ºC
Storage Temperature		-40ºC/70ºC

NOTE: CH = Cable height; OD = Cable Nominal Diameter

SIZE AND WEIGHT

Number of fibres	*Cablescom Code*	*Number of fibres per tube*	*Lay Length (mm)*	*Cable Nominal diameter (mm)*	*Diameter over suspension strand (mm)*	*Cable height (mm)*	*Nominal weight (kg/km)*
24	EE3A41G00002400N	12	90	10.3	10	23.3	130
48	EE3A41G00004800N	12	90	10.3	10	23.3	130
96	EE3A41G00009600N	12	105	12	10	25	162
144	EE3A41G00014400N	12	130	15	10	28	223
192	EE3A41G00019200N	12	90*/130**	15	10	28	221
288	EE3A41G00028800N	12	110*/140**	18	10	31	350

*Lay length for first layer; ** Lay length for second layer.

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