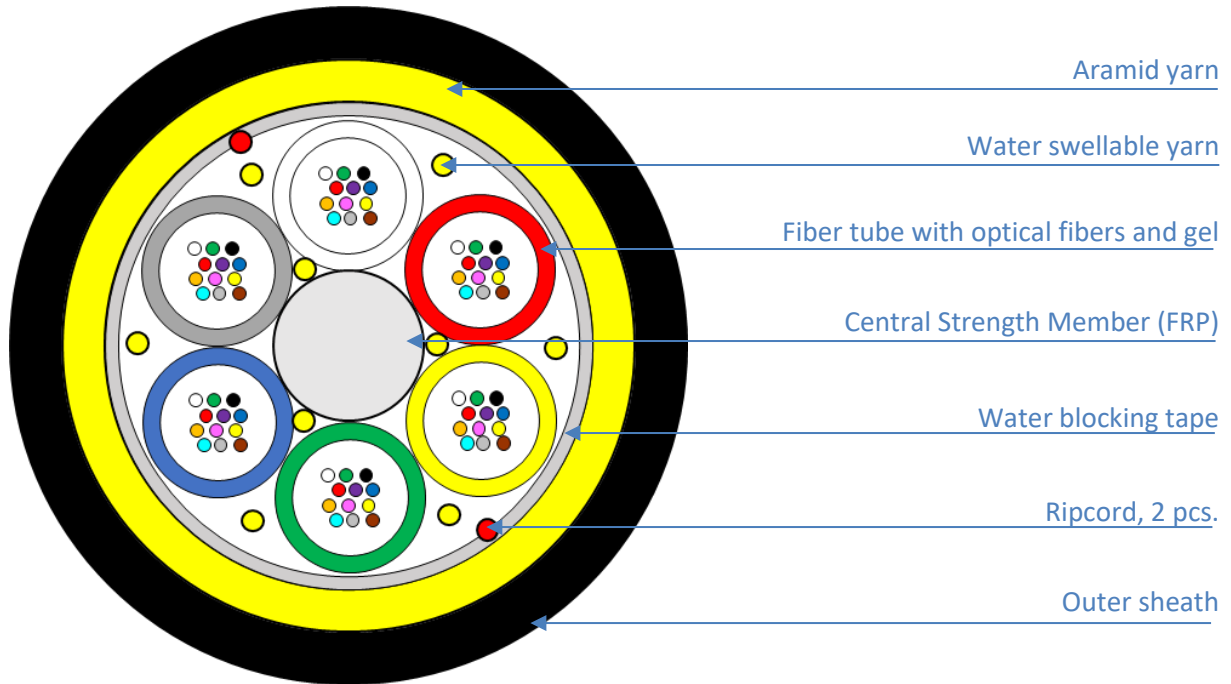
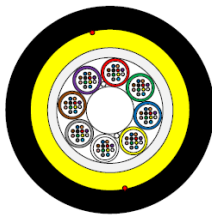



QXAE ADSS 1,5kN, ≤70-METER SPAN LENGTH

AERIAL DIELECTRIC SELF SUPPORTING CABLE



1. Application/Construction

Identification	QXAE ADSS 1,5kN – 24/48/96/144/216/432 G.652.D		
Application	Self-supporting aerial installation for span length ≤70 meter		
Cross section (not to scale)	24/48/96/144 Fibers	216/288/432 Fibers	
			
Configuration	-Loose tubes with 12 or 24 optical fibers filled with thixotropic compound		
	-Stranded loose tube and fillers (if necessary), SZ stranding		
	-Central strength member made of fiber reinforced plastic (FRP), or coated FRP		
	-Cable strand: Dry, with water blocking yarn and tape		
	-Aramid yarns as additional strength member		
	-Outer sheath: HDPE, halogen free, black, two ripcords under the sheath		
Temperature range	Storage and Transport -40 to +70°C	Installation -30 to +60°C	Operation -40 to +70°C
Standards	IEC 60793-1, IEC 60793-2, IEC 60794-4-20		

2. Dimensions

Number of fibers	/	24	48	96	144	216	288	432
Loose tube x fibers	pcs	2 x 12	4 x 12	8 x 12	12 x 12	18 x 12	24 x 12	18 x 24
Loose tube/dummies	pcs	2/6	4/4	8/0	12/0	6/0 in 12/0 out	9/0 in 15/0 out	6/0 in 12/0 out
Loose tube \varnothing ($\pm 0,1$)	mm	2.1			2.2	2.1 in 2.2 out	2.2 in 2.3 out	2.6 in 2.7 out
CSM (FRP)	mm	3.6 (2.8)			6.7 (2.8)	2.3	4.5 (2.8)	2.8
Outer sheath thickness	mm	1.5			1.6	1.5	1.6	1.8
Outer dia. (Nominal)	mm	11.4			14.9		17.6	18.0
Weight/km	kg	104			166	163	225	232

Sizes and values without tolerances are nominal values, sheath thickness does not consider ripcord portion

3. Mechanical properties

Number of fibers	24	48	96	144	216	288	432
Max. pulling force	2500 N						
Max tensile load - RTS	1500 N						
Crush resistance / 10 cm	1000 N						
Bending radius (Dynamic)	20 x OD						
Bending radius (Static)	10 x OD						

See point 6: Test Methods

4. Marking

Fibre colors	1	2	3	4	5	6	7	8	9	10	11	12
	White	Red	Yellow	Green	Blue	Grey	Brown	Black	Violet	Aqua	Orange	Pink
	13	14	15	16	17	18	19	20	21	22	23	24
	White	Red	Yellow	Green	Blue	Grey	Brown	Natural	Violet	Aqua	Orange	Pink
Tube colors 24F~144F	1	2	3	4	5	6	7	8	9	10	11	12
	White	Red	Yellow	Green	Blue	Grey	Brown	Black	Violet	Aqua	Orange	Pink
Tube colors 216F & 432F Inner layer	1	2	3	4	5	6						
	White	Red	Yellow	Green	Blue	Grey						
Tube colors 216F & 432F Outer layer	7	8	9	10	11	12	13	14	15	16	17	18
	White	Red	Yellow	Green	Blue	Grey	Brown	Black	Violet	Aqua	Orange	Pink

Tube colors 288F Inner layer	1	2	3	4	5	6	7	8	9				
	White	Red	Yellow	Green	Blue	Grey	Brown	Black	Violet				
Tube colors 288F Outer layer	10	11	12	13	14	15	16	17	18	19	20	21	
	White	Red	Yellow	Green	Blue	Grey	Brown	Natural	Violet	Aqua	Orange	Pink	
	22	23	24										
	Aqua	Orange	Pink										

Remark:

- 216F & 432F cable, 7~18th tube with black tracer, except 14th with white tracer.
- 288F cable, 10~21st tube with black tracer, except for 17th tube with white tracer. 22~24th tube no tracer

Outer sheath: Black, ink jet print marking with 1-meter intervals as follows

Alloptix/Fiberworks ADSS QXAE 1,5kN <n> G.652.D <batch ID> <meter marking>

<n>: Fiber qty.

5. Optical fiber

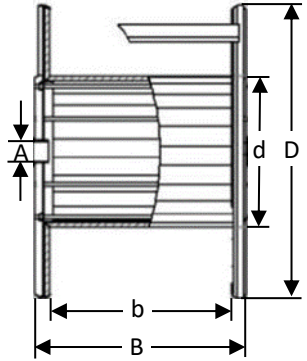
Standard	ITU-T G.652.D	
Optical	Fiber attenuation, cabled	1310 nm: ≤ 0.36 dB/km 1550 nm: ≤ 0.22 dB/km
	Mode field diameter (MFD)	1310 nm: 9.2 ± 0.4 μm 1550 nm: 10.4 ± 0.6 μm
	Zero dispersion wavelength	1300 ~ 1324 nm
	Zero dispersion slope	≤ 0.092 ps/nm ² · km
	Polarization mode dispersion (PMD)	≤ 0.2 ps/√km
	Cut-off wavelength	≤ 1260 nm
	Macro bending loss, 100 turns ø50 mm	1550 nm: ≤ 0.05 dB 1625 nm: ≤ 0.10 dB
Geometric	Outer diameter (uncolored)	245 ± 10 μm
	Cladding diameter	125 ± 1.0 μm
	Core/clad concentricity error	≤ 0.6 μm
	Cladding non-circularity	≤ 1.0 %
Mechanical	Proof stress	≥ 0.69 Gpa

6. Test methods

Test	Conditions	Acceptance criteria
Tensile strength IEC 60794-1-2-E1	Tensile load: See Point 3 Sample length: ≥ 50 m Test duration: 1 min	- Fiber strain ≤ 0.33%, Δα reversible - No damage to outer jacket and inner elements
Crush resistance IEC 60794-1-2 E3	Crush: see Point 3 Number of tests: 3 Test duration: 1 min	- Δα reversible - No damage to outer jacket and inner elements

Impact IEC 60794-1-2 E4	Impact energy: 1 J R = 300 mm Number of paces/tests: 3	- $\Delta\alpha$ reversible - No damage to outer jacket and inner elements
Repeated bending IEC 60794-1-2-E6	Bending radius: 15x cable ϕ Cycles: 25 Tension: 100 N	- $\Delta\alpha$ reversible - No damage to outer jacket and inner elements
Torsion IEC 60794-1-2 E7	Sample length: 2 m Angles: $\pm 180^\circ$ Cycles: 10 Tension: 100 N	- $\Delta\alpha$ reversible - No damage to outer jacket and inner elements
Bend IEC 60794-1-2 E11A	Bending radius: 10x cable ϕ Bends: 4 Cycles: 3	- $\Delta\alpha$ reversible - No damage to outer jacket and inner elements
Temperature cycling IEC 60794-1-2 F1	Steps: $-30^\circ\text{C}\sim+60^\circ\text{C}$ Cycles: 2 Test duration: 8 hours	- $\Delta\alpha \leq 0.15$ dB/km - Attenuation reversible - No damage
Water penetration IEC 60794-1-2 F5	Sample length: 3 m Water column height: 1 m Test duration: 24 hours	- No water leak through the open end in 24 h
Filling compound flow IEC 60794-1-2-E14	Sample length: 0,2 m Temperature: 70°C Test duration: 24 hours	- No compound flow from the cable in 24 h

7. Logistics

Cable Type	/	2 km drum -1% / +3%	4 km drum -1% / +3%	 <p>A=80 mm D*d*B in cm</p>
G24/G48/G96	Drum type Dimension Weight	/	Wood D125*d50*B75 498 kg	
G144		/	Wood D165*d70*B75 818 kg	
G216		/	Wood D175*d80*B75 823 kg	
G288		/	Iron/Wood D165*d80*B105 1106 kg	
G432		/	Iron/Wood D175*d80*B105 1147 kg	

8. Ordering information

Elnr.	Product code	Product	Fiber Qty.	Fiber type	Category (fiber)
1025450	K-QXAE-S-G2D-G24-1m	QXAE ADSS LUFTKABEL 1,5kN, G24	24	SM 9/125	OS2
1025451	K-QXAE-S-G2D-G48-1m	QXAE ADSS LUFTKABEL 1,5kN, G48	48	SM 9/125	OS2
1025452	K-QXAE-S-G2D-G96-1m	QXAE ADSS LUFTKABEL 1,5kN, G96	96	SM 9/125	OS2
1025453	K-QXAE-S-G2D-G144-1m	QXAE ADSS LUFTKABEL 1,5kN, G144	144	SM 9/125	OS2
1025454	K-QXAE-S-G2D-G216-1m	QXAE ADSS LUFTKABEL 1,5kN, G216	216	SM 9/125	OS2
1025455	K-QXAE-S-G2D-G288-1m	QXAE ADSS LUFTKABEL 1,5kN, G288	288	SM 9/125	OS2
1025456	K-QXAE-S-G2D-G432-1m	QXAE ADSS LUFTKABEL 1,5kN, G432	432	SM 9/125	OS2

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