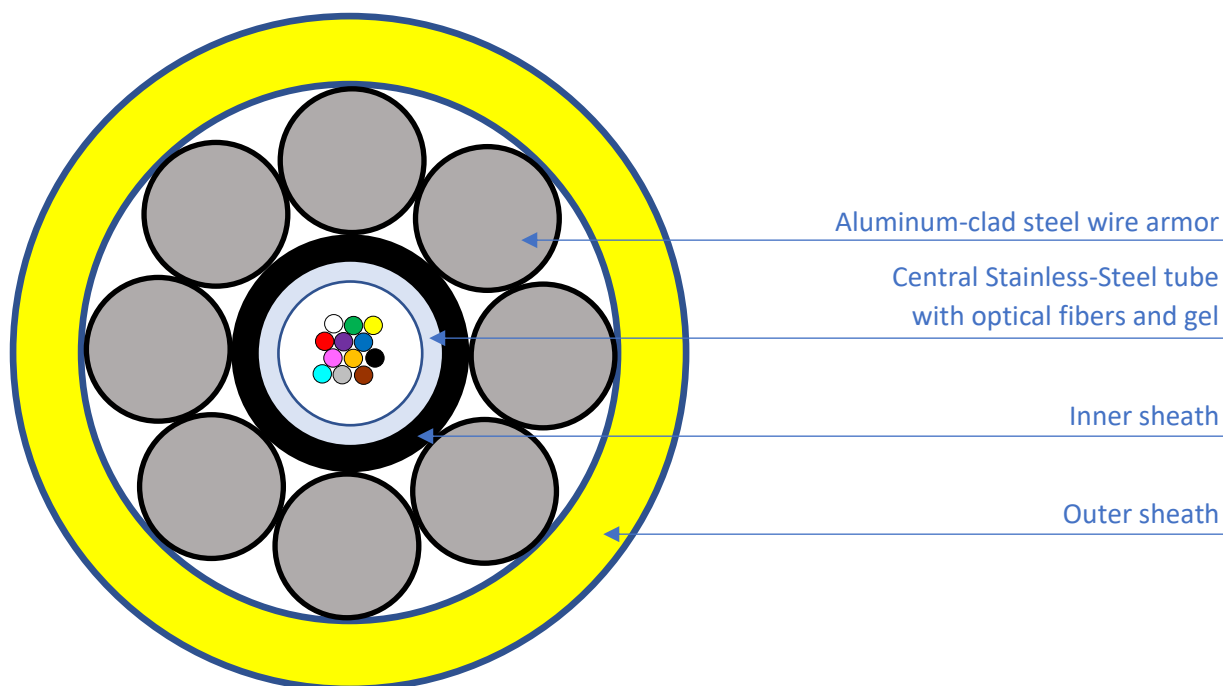


UWFC-AS30, UNDER WATER INSTALLATION CABLE

FOR INSTALLATION DEPTH ≤500 MTR



1. APPLICATION/CONSTRUCTION

Identification	UWFC-AS30-12/24/48/96/144 G.652.D		
Application	Under water installation		
Configuration	<ul style="list-style-type: none"> - Central stainless-steel tube with optical fibers filled with thixotropic compound - Strength member: Aluminum-clad steel wire armor - Inner sheath: PE, black - Outer sheath: PE, yellow (Other color is available on request) 		
Temperature Range	Storage and transport -40 to +60°C	Installation -20 to +60°C	Operation -40 to +80°C
Standards	IEC 60793-1, IEC 60793-2, IEC 60794-3-30, ITU-T G650, ITU-T G.652		
CPR	FCA (EN 50575:2014+A1:2016)		

2. DIMENSIONS

Number of fibers		12	24	48	96	144
Aluminum-clad steel wire armor diameter	mm	2.4	2.7	2.7	2.7	3.0
Cable outer diameter (±5%)	mm	12.0	13.0	13.9	14.8	17.4
Cable weight/km (±15%)	kg/km	287	352	405	479	670
Cable weight/km in sea water (±15%)	kg/km	171	216	250	303	427

3. MECHANICAL

Test	Unit	Acceptance criteria
Cable breaking load (CBL)	kN	30
Nominal temporary tensile strength (NTTS)	kN	18
Nominal operating tensile strength (NOTS)	kN	12
Nominal permanent tensile strength (NPTS)	kN	7,5
Crush resistance	kN/10cm	10
Bending radius, installation	Installation	30x cable OD
	Operation	15x cable OD
Recommended installation depth	mtr	≤500

See point 6: Test Methods

4. MARKING

Fiber 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
Binder 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

Remark: Color binders are used to separate groups of 12 fibers

Sheath: Yellow, ink jet black print marking with 1-meter intervals as follows:

Fiberworks	UWFC-AS30 <n> G.652D	<batch ID>	<meter marking>
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<n>: Fiber qty. Other jacket color is available on request

5. OPTICAL FIBER

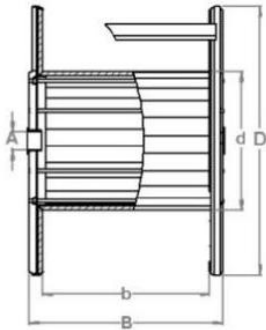
Standard	ITU-T G.652.D ZTT ALF®		
Optical	Fiber attenuation, cabled	1310 nm: 0.36dB/km	1550 nm: ≤0.22dB/km
	Mode Field Diameter (MFD)	1310 nm: 9.2 ±0.4µm	
	Zero dispersion wavelength	1300~1324 nm	
	Zero dispersion slope	≤0.092 ps/nm ² ·km	
	Polarization mode dispersion (PMD)	≤0.2 ps/√km	
	Cut-off wavelength	≤1260 nm	
	Macro bending loss 100 turns ø60mm	1550 nm: ≤0.05 dB	1625 nm: ≤0.10 dB
Mechanical	Coating diameter	250 ± 15 µm	
	Cladding diameter	125 ± 1.0 µm	
	Core/clad concentricity error	≤0.6 µm	
	Cladding non-circularity	≤1.0 %	
Proof stress	≥0.69 Gpa		

6. TEST METHODS

Test	Conditions	Acceptance criteria
Tensile strength IEC 60794-1-2 E1	Tensile load: NNTS Sample length: ≥ 50 m Test duration: 1 min	- $\Delta\alpha \leq 0.10$ dB - No damage
Crush resistance IEC 60794-1-2 E3	Crush: Ref. point 3 Test duration: 1 min Number of tests: 3	- After test, $\Delta\alpha \leq 0.05$ dB - No damage
Impact resistance IEC 60794-1-2 E4	Impact points: 3 Impact number: 1 Impact energy 30J Radius 300mm	- After test, $\Delta\alpha: \leq 0.05$ dB - No damage
Temperature cycling IEC 60794-1-2 F1	Steps: $-40^{\circ}\text{C} \sim +70^{\circ}\text{C}$ Duration: 12 hours Cycles: 2	- After test, $\Delta\alpha \leq 0.10$ dB/km - No damage
Water penetration IEC 60794-1-2 F5B	Sample length: 3 m Duration: 24 hours Water column height: 1 m	- No water leak from the opposite of the stainless-steel tube

All optical measurement @ 1550 nm

7. LOGISTICS

Cable Type	/	4000 mtr. $\pm 5\%$	Iron drum
12F	Dimensions Weight	145*80*110 (1352 kg)	 <p>D*d*B in cm</p>
24F		155*80*110 (1636 kg)	
48F		155*80*110 (1848 kg)	
96F		165*90*110 (2164 kg)	
144F		195*100*110 (2970 kg)	

Weight and dimensions for reference only. Other delivery lengths are available. Minimum order 1km

8. ORDERING INFORMATION

Elnr.	Product code	Product	Fiber qty	Fiber type	Category (fiber)
	K-UW5H-Y-G2D-G12-1m	UWFC-AS30 Sjøkabel G12	12	SM 9/125	OS2
	K-UW5H-Y-G2D-G24-1m	UWFC-AS30 Sjøkabel G24	24	SM 9/125	OS2
	K-UW5H-Y-G2D-G48-1m	UWFC-AS30 Sjøkabel G48	48	SM 9/125	OS2
	K-UW5H-Y-G2D-G96-1m	UWFC-AS30 Sjøkabel G96	96	SM 9/125	OS2
	K-UW5H-Y-G2D-G144-1m	UWFC-AS30 Sjøkabel G144	144	SM 9/125	OS2

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