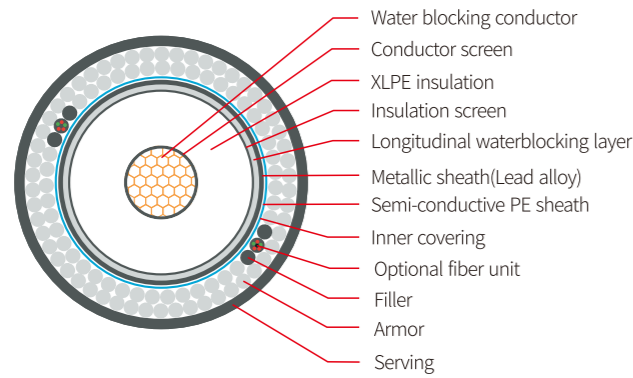


## 64/110kV Single Core Optical Fiber Composite Submarine Cable



<b>Conductor</b>	240~1600mm <sup>2</sup> annealed stranded wire
<b>Insulation</b>	XLPE
<b>Armour</b>	Galvanized steel wire
<b>Metallic sheath</b>	Lead alloy
<b>Temperature</b>	-30°C ~+90°C
<b>Rated voltage</b>	64/110kV
<b>Scope of application</b>	applies to solidly earthed system with power frequency of 50-60 Hz and rated voltage of 64/110kV(U <sub>m</sub> =126kV).Mainly used for high-power electric power transmission between mainland and island, island and island or mainland and platform; control signal transmission of smart grid and communication signal transmission.

### Operational performance

- Maximal allowable working temperature of the cable conductor is 90°C
- Under short circuit condition with maximal duration not exceeding 5s, the operating temperature of cable conductor shall not exceed 250°C
- Installed temperature shall not be lower than 0°C.
- Cable shall meet smart grid control, transmit communication signal, and realize safety early warning and temperature measure control.
- Factory joint shall have the same electric and mechanical performance of the main body of the cable.

Installation temperature Min.0°C

Max. operating temperature:90°C

Max. short circuit temperature:250°C

In air

In conduit

Specification	mm <sup>2</sup>	1x240	1x300	1x400	1x500	1x630	1x800	1x1000	1x1200	1x1400	1x1600	
<b>Conductor O.D.(approx.)</b>	mm	18.4	20.6	23.4	26.6	29.9	33.6	38.5	42.2	45.6	48.4	
<b>XLPE Insulation Thickness(nom.)</b>	mm	19.0	18.5	17.5	17.0	16.5	16.0	16.0	16.0	16.0	16.0	
<b>Cable O.D.(approx.)</b>	mm	111.8	113.0	114.2	116.4	118.7	121.8	127.1	131.2	135.0	138.6	
<b>Min. Bending Radius</b>	mm	2236	2260	2284	2328	2374	2436	2542	2624	2700	2772	
<b>Weight</b>	<b>Air</b>	kg/km	25369	26113	27440	29207	31039	33853	37502	40918	44235	47625
	<b>Sea</b>	kg/km	15552	16084	17197	18566	19973	22201	24814	27399	29921	32538
<b>Maximal Tensile</b>	<b>Armor</b>	kN	117.1	117.1	119.5	121.9	124.4	129.2	134.1	139	143.9	148.8
	<b>Conductor</b>	kN	16.8	21.0	28.0	35.0	44.1	56.0	70.0	84.0	98.0	112.0

### Electrical Parameters

Resistance	Max. DC Resistance at 20°C	Ω/km	0.0754	0.0601	0.047	0.0366	0.0283	0.0221	0.0176	0.0151	0.0129	0.0113
	Max. AC Resistance at 90°C	Ω/km	0.098	0.078	0.061	0.0486	0.0387	0.0315	0.0233	0.020	0.0174	0.0154
		μF/km	0.125	0.135	0.153	0.169	0.186	0.207	0.223	0.242	0.256	0.269
<b>Inductance</b>		mH/km	0.667	0.645	0.616	0.594	0.57	0.547	0.52	0.501	0.486	0.474
<b>Design Power (Reference power factor 0.85)</b>	MVA		59.4	63.2	66.9	70.8	74.2	77.6	83.1	86.2	89.1	91.8
<b>Max short circuit current of conductor</b>	kA/1s		34.7	43.3	57.8	72.2	91	115.6	144.5	173.4	202.2	231.1
<b>Max short circuit current of Lead sheath</b>	kA/1s		17.0	17.3	17.6	18.7	19.3	20.7	22.7	24.5	26.3	28.1

### Ampacity

Ampacity	Seabed	A	553	597	643	688	730	771	835	872	907	938
	Intertidal zone	A	475	508	542	575	605	636	684	711	737	761
	Land	A	367	390	413	437	458	479	513	532	550	567