

Specification of 161kV XLPE Underground Transmission Cable

Conductor	Nominal cross-sectional area	(mm ²)	200	250	325	400	500	600	800	1000	1200	1400	1600	1800	2000	
	Shape	---	Compact-round stranded						4 or 5 segmental compact-round stranded							
	Outside diameter (Tolerance) (Tolerance)	(mm)	17.0	19.0	21.7	24.1	26.9	29.5	34.0	38.0	41.7	45.0	48.2	51.0	53.8	
		(mm)	+0.3						+0.5			+0.7		+1.0		
		(mm)	-0.3						-0.5			-0.7		-1.0		
	Unit weight	(Kg/Km)	1776	2298	2937	3654	4448	5466	7100	8772	10512	12332	14020	15772	17576	
Thickness of conductor shielding (including semi-conductive tape)		(mm)	1.0						2.0							
Thickness of insulation		(mm)	23													
Outside diameter of insulation (Tolerance) (Tolerance)	(mm)	65.0	67.0	69.7	72.1	74.9	77.5	84.0	88.0	91.7	95.0	98.2	101.0	103.8		
	(mm)	+2.5						+3.0								
	(mm)	-2.0						-2.5								
Thickness of insulation shielding		(mm)	1.5													
Thickness of water-black swelling layer		(mm)	0.4													
Concentric shielding	Dia. of wire	(mm)	2.0													
Copper wires	No. of wires	No.	80													
Thickness of binder tape		(mm)	0.2													
Thickness of water impervious layer		(mm)	0.2													
PVC Jacket	Thickness	(mm)	4.5					5.0		5.5				6.0		
	Outside diameter (Tolerance) (Tolerance)	(mm)	84.0	86.0	88.7	91.1	93.9	97.5	104.0	109.0	111.7	116.0	119.2	123.0	125.8	
		(mm)	+3.0						+3.5							
		(mm)	-2.5						-3.0							
Electrical characteristic	Max. D.C. conductor resistance at 20°C (Ω/km)	Ω/km	0.0933	0.0754	0.058	0.0471	0.0376	0.0308	0.0231	0.0187	0.0156	0.0133	0.0117	0.0104	0.00933	
	Insulation resistance at 15.6 °C (MΩ-km)	MΩ.km	3700	3400	3200	3000	2800	2700	2400	2200	2100	2000	1900	1800	1800	
	Jacket resistance at 20°C (MΩ-km)	MΩ.km	9.5	9.2	8.9	8.7	8.4	8.2	7.6	7.4	7.1	6.9	6.7	6.5	6.4	
	Max. static electric capacitance (μ F/km)	μ F/Km	0.12	0.13	0.14	0.14	0.15	0.16	0.19	0.20	0.21	0.23	0.24	0.25	0.26	
Approx. weight of complete cable (kg/km)		Kg/km	9800	10600	11500	12450	13550	15100	17550	19900	22050	24250	26250	28700	30800	

*According to TPC spec. A046(95.04)



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