

# N2XS2Y XLPE HDPE 8.7/15 (17.5) kV Cable



## APPLICATION

Medium Voltage HDPE sheathed power distribution cables particularly noted for applications in wind energy installations.

## CHARACTERISTICS

**Voltage Rating  $U_0/U$  (Um)**

8.7/15 (17.5)kV

## STANDARDS

IEC 60502-2, EN 60228

## THE CABLE TEST

We have world-class testing facility, and made rigorous testing regime, every meter of cable before leaving the factory must go through strict testing, testing qualified products will be shipped to customers, effectively ensure product quality and meet customer requirements.

## SUSTAINABILITY COMMITMENT

Guowang Cable actively implements the "carbon reduction" goal, strives to promote the green's low-carbon transformation, strengthens energy-saving and emission reduction technology innovation, and promotes the company's healthy and sustainable development.

## CONSTRUCTION

### Conductor

Class 2 stranded compacted copper conductor

### Conductor Screen

Semi-conductive extruded XLPE

### Insulation

XLPE (Cross-Linked Polyethylene)

### Insulation Screen

Semi-conductive material (bonded)

### Wrapping

Non swelling semi conductive tape

### Metallic Screen

Copper Wires and Tape

### Wrapping

Polyester tape

### Sheath

HDPE (High Density Polyethylene)

### Sheath Colour

- Black

## DIMENSIONS

NO. OF CORES	NOMINAL CROSS SECTIONAL AREA	NOMINAL DIAMETER OF CONDUCTOR	INSULATION mm		METALLIC SCREEN		NOMINAL OUTER DIAMETER OF CABLE	NOMINAL WEIGHT	MAXIMUM PULLING FORCE	MINIMUM BENDING RADIUS
	mm <sup>2</sup>	mm	NOMINAL THICKNESS	Nominal Diameter Over	Nominal Cross Section mm <sup>2</sup>	Nominal diameter Over mm	mm	KG/KM	KN	m
1	35	7.0	4.5	17.2	16	21.1	25.9	920	1.75	0.39
1	50	8.25	4.5	18.5	16	22.4	27.1	1060	2.5	0.41
1	70	9.6	4.5	19.8	25	23.7	28.5	1370	3.5	0.43
1	95	11.5	4.5	21.7	35	25.6	30.4	1740	4.75	0.46
1	120	12.9	4.5	23.1	50	27.0	31.8	2140	6	0.48
1	150	14.5	4.5	27.7	50	28.6	33.4	2430	7.5	0.50
1	185	16.0	4.5	26.2	50	30.1	34.9	2790	9.25	0.52
1	240	18.5	4.5	28.7	50	32.6	37.4	3350	12	0.56
1	300	20.5	4.5	30.7	50	34.6	39.4	3940	15	0.59
1	400	23.5	4.5	33.7	50	37.6	42.4	4810	20	0.64
1	500	26.5	4.5	37.2	50	41.3	46.1	5920	25	0.69
1	630	30.3	4.5	41.3	50	45.4	50.3	7290	31.5	0.75
1	800	34.6	4.5	46.0	50	50.1	55.4	9010	40	0.83
1	1000	38.2	4.5	49.6	50	53.7	59.2	10930	50	0.89

## ELECTRICAL CHARACTERISTICS

NOMINAL CROSS SECTIONAL AREA CONDUCTOR/METALLIC SCREEN mm <sup>2</sup>	MAXIMM CONDUCTOR DC RESISTANCE AT 20°C Ω/km	MAXIMM CONDUCTOR AC RESISTANCE AT 90°C Ω/km	MAXIMM METALLIC SCREEN DC RESISTANCE AT 20°C Ω/km	MAXIMM METALLIC SCREEN DC RESISTANCE AT 80°C Ω/km	ELECTRICAL FIELD STRESS KV/mm		RESISTANCE Ω/km	CAPACITANCE μF/km	CAPACITANCE REACTANCE Ω/km	CHARGING CURRENT A/km	REACTANCE Ω/km
					Conductor screen	Insulation					
35/16	0.524	0.668	1.12	1.38	2.84	1.32	2.05	0.17	19.1	0.46	0.082
50/16	0.387	0.494	1.12	1.38	2.72	1.37	1.88	0.19	17.2	0.51	0.075
70/25	0.268	0.342	0.72	0.89	2.63	1.41	1.23	0.20	15.6	0.56	0.070
95/35	0.193	0.247	0.51	0.63	2.52	1.45	0.88	0.23	13.7	0.63	0.063
120/50	0.153	0.196	0.36	0.44	2.46	1.48	0.64	0.25	12.7	0.69	0.060
150/50	0.124	0.159	0.36	0.44	2.41	1.51	0.60	0.27	11.6	0.75	0.056
185/50	0.0991	0.128	0.36	0.44	2.37	1.54	0.57	0.30	10.8	0.81	0.053
240/50	0.0754	0.0979	0.36	0.44	2.31	1.57	0.54	0.33	9.6	0.90	0.049
300/50	0.0601	0.0789	0.36	0.44	2.27	1.59	0.52	0.36	8.9	0.98	0.047
400/50	0.0470	0.0630	0.36	0.44	2.23	1.62	0.51	0.40	7.9	1.10	0.043
500/50	0.0366	0.0506	0.36	0.44	2.17	1.63	0.49	0.44	7.2	1.21	0.042
630/50	0.0283	0.0412	0.36	0.44	2.13	1.65	0.48	0.50	6.4	1.37	0.040
800/50	0.0221	0.0344	0.36	0.44	2.1	1.67	0.48	0.57	5.6	1.55	0.038
1000/50	0.0221	0.0344	0.36	0.44	2.1	1.67	0.48	0.57	5.6	1.55	0.038

NOMINAL CROSS SECTIONAL AREA CONDUCTOR/METALLIC SCREEN mm <sup>2</sup>	INDUCTANCE L mH/km			INDUCTANCE REACTANCE XL Ω/km			IMPEDANCE Ω/km		
	2	3	4	2	3	4	2	3	4
35/16	0.45	0.76	0.64	0.141	0.238	0.200	0.683	0.710	0.697
50/16	0.43	0.73	0.61	0.134	0.229	0.192	0.512	0.544	0.530
70/25	0.41	0.70	0.59	0.128	0.220	0.186	0.365	0.407	0.389
95/35	0.38	0.67	0.57	0.120	0.210	0.178	0.274	0.324	0.304
120/50	0.37	0.65	0.55	0.116	0.204	0.174	0.228	0.282	0.262
150/50	0.36	0.63	0.54	0.112	0.197	0.170	0.194	0.253	0.233
185/50	0.34	0.61	0.53	0.108	0.192	0.166	0.167	0.230	0.210
240/50	0.33	0.59	0.51	0.103	0.184	0.162	0.142	0.209	0.189
300/50	0.32	0.57	0.50	0.100	0.179	0.158	0.128	0.196	0.177
400/50	0.31	0.55	0.49	0.096	0.172	0.154	0.115	0.183	0.167
500/50	0.30	0.53	0.48	0.094	0.167	0.152	0.107	0.174	0.160
630/50	0.29	0.51	0.47	0.091	0.160	0.149	0.100	0.166	0.155
800/50	0.28	0.49	0.47	0.089	0.155	0.147	0.095	0.158	0.151
1000/50	0.28	0.49	0.47	0.089	0.155	0.147	0.095	0.158	0.151

2-Cable in trefoil formation, te distance between cables De

3-Cable in flat formation(in the ground), the distance between cables De + 70 mm

4-Cable in flat formation(in the air), the distance between cables 2 x De

## CURRENT RATING FOR SINGLE-CORE CABLES-AMPERES

NOMINAL CROSS SECTIONAL AREA mm <sup>2</sup>	MAXIMUM SHORT CIRCUIT CAPACITY CONDUCTOR kA/sec	MAXIMUM SHORT CIRCUIT CAPACITY METALLIC SCREEN kA/sec	FLAT FORMATION		TREFOIL FORMATION		FLAT FORMATION		TREFOIL FORMATION	
			CONFIGURATIONS							
			SPP; CB	BOTH-ENDS	SPP; CB	BOTH-ENDS	SPP; CB	BOTH-ENDS	SPP; CB	BOTH-ENDS
			CABLES IN EARTH				CABLES IN AIR			
35/16	5.0	3.7	245	243	230	230	248	246	211	210
50/16	7.2	3.7	291	288	273	273	298	296	253	252
70/25	10.0	5.3	356	348	334	333	370	363	313	311
95/35	13.6	7.1	430	413	403	400	454	438	383	380
120/50	17.2	9.8	491	456	460	454	523	492	440	435
150/50	21.5	9.8	554	505	518	510	598	555	502	495
185/50	26.5	9.8	628	560	586	575	685	625	574	564
240/50	34.3	9.8	733	634	684	667	814	725	681	665
300/50	42.9	9.8	830	697	773	750	935	812	779	757
400/50	57.2	9.8	953	773	882	849	1093	920	906	874
500/50	71.5	9.8	1088	850	1002	957	1270	1034	1047	1003

SPB - Single Point Bonding; CB - Cross bonding Both-ends; BE - Both-ends bonding

Laying Condition at trefoil formation are as below:

Soil thermal resistivity: 1/2.5 km/w

Burial depth: 0.7m

Ground temperature: 20°C/Ambient temperature: 30°C