N2XS(F)2Y XLPE HDPE 8.7/15 (17.5) kV Cable

APPLICATION

Medium Voltage HDPE power distribution cable with particular application in wind energy installations. Longitudinally sealed cables for aid protection against water ingress.

CHARACTERISTICS

Voltage Rating Uo/U (Um)
8.7/15 (17.5) kV

STANDARDS

IEC 60502-2, EN 60228
UV Resistant: ISO 4892-3
Abrasion and Tear Resistant: EN 60229-4.1
Impact rated to: AG2 EN 60364-5.5 1

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 Screen
Semi-conductive extruded XLPE (Cross-linked Polyethylene)

Insulation
XLPE (Cross-linked Polyethylene)

Insulation Screen
Semi-conductive extruded XLPE (Cross-linked Polyethylene)

Longitudinal Waterblocking
Semi-conductive water swelling tape

Metallic Screen
Copper Wires and Tape

Longitudinal Waterblocking
Non-conductive water swelling tape

Outer Sheath
HDPE (High Density Polyethylene)

GUOWANG CABLE GROUP

DIMENSIONS

NO. OF CORE	NOMINAL CROSS SECTIONAL AREA		NOMINAL INSULATION THICKNESS	NOMINAL SHEATH THICKNESS	NOMINAL OVERALL DIAMTER	NOMINAL WEIGHT
	Conductor	Screen	mm	mm	mm	kg/km
1	50	16	3.4	1.7	21.80	840
1	70	16.08	3.4	1.7	23.60	1055
1	95	16.08	3.4	1.8	25.10	1316
1	120	16.08	3.4	1.8	26.50	1561
1	150	25.37	3.4	1.9	28.50	1934
1	185	25.37	3.4	1.9	30.00	2270
1	240	25.37	3.4	2.0	32.60	2847
1	300	25.37	3.4	2.1	35.00	3408
1	400	35.47	3.4	2.2	38.00	4320
1	500	34.47	3.4	2.3	41.60	5307
1	630	35.47	3.4	2.4	46.50	6716
1	800	35.47	3.4	2.5	50.8	8490

ELECTRICAL CHARACTERISTICS

NOMINAL CROSS SECTIONAL AREA CONDUCTOR/ METALLIC SCREEN mm2	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	0.076
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	0.064
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	0.054
240/50	0.0754	0.0978	0.36	0.44	2.31	1.57	0.54	0.33	9.6	0.90	0.050
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	0.0629	0.36	0.44	2.23	1.62	0.51	0.40	7.9	1.10	0.044
500/50	0.0366	0.0505	0.36	0.44	2.17	1.63	0.49	0.44	7.2	1.21	0.042
630/50	0.0283	0.0410	0.36	0.44	2.13	1.65	0.48	0.50	6.4	1.37	0.040
800/50	0.0221	0.0343	0.36	0.44	2.1	1.67	0.48	0.57	5.6	1.55	0.038
1000/50	0.0176	0.0296	0.36	0.44	2.08	1.69	0.47	0.62	5.2	1.68	0.036

NOMINAL CROSS SECTIONAL AREA CONDUCTOR/METALLIC SCREEN mm2	INDUCTANCE L mH/km			INDUCTANCE REACTANCE XL Ω/km			IMPEDANCE Ω/km		
	2	3	4	2	3	4	2	3	4
35/16	0.46	0.76	0.64	0.144	0.239	0.202	0.684	0.710	0.698
50/16	0.43	0.73	0.62	0.136	0.229	0.194	0.512	0.544	0.531
70/25	0.41	0.70	0.60	0.13	0.221	0.188	0.366	0.407	0.39
95/35	0.39	0.67	0.57	0.122	0.211	0.18	0.275	0.324	0.306
120/50	0.38	0.65	0.56	0.118	0.204	0.176	0.229	0.283	0.263
150/50	0.36	0.63	0.55	0.114	0.198	0.172	0.195	0.254	0.234
185/50	0.35	0.61	0.54	0.110	0.193	0.168	0.168	0.231	0.211
240/50	0.33	0.59	0.52	0.105	0.185	0.163	0.144	0.209	0.190
300/50	0.32	0.57	0.51	0.102	0.180	0.180	0.129	0.196	0.178
400/50	0.31	0.55	0.50	0.098	0.173	0.156	0.116	0.184	0.168
500/50	0.30	0.53	0.49	0.095	0.167	0.153	0.108	0.175	0.162
630/50	0.29	0.51	0.48	0.092	0.161	0.150	0.101	0.166	0.156
800/50	0.29	0.155	0.148	0.090	0.155	0.148	0.096	0.159	0.152
1000/50	0.088	0.151	0.146	0.088	0.151	0.146	0.093	0.154	0.149

2 -Cables in trefoil formation, the distance between cables De
3 -Cables in flat formation (in the ground), the distance between cables De + 70 mm
4 -Cables in flat formation (in the air), the distance between cables 2 x De

CURRENT RATING FOR SINGLE-CORE CABLES-AMPERES

NOMINAL CROSS SECTIONAL AREA mm2	MAXIMM SHORT CIRCUIT CAPACITY CONDUCTOR kA/sec	MAXIMM 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	248	246	233	232	252	251	213	213
50/16	7.2	3.7	295	292	277	276	303	301	256	255
70/25	10.0	5.3	361	353	338	337	376	370	317	316
95/35	13.6	7.1	436	418	408	405	462	446	388	385
120/50	17.2	9.8	497	462	465	459	533	502	446	441
150/50	21.5	9.8	561	512	524	516	609	566	509	501
185/50	26.5	9.8	636	568	593	581	698	638	582	571
240/50	34.3	9.8	742	643	692	675	830	740	690	674
300/50	42.9	9.8	840	707	782	758	953	829	790	767
400/50	57.2	9.8	964	783	891	858	114	940	918	886
500/50	71.5	9.8	1100	861	1011	966	1294	1056	1061	1016
630/50	90.1	9.8	1256	947	1144	1083	1508	1184	1224	1164
800/50	114.4	9.8	1417	1027	1277	1196	1738	1309	1395	1314
1000/50	143.0	9.8	1570	1095	1395	1295	1957	1417	1549	1446

SPB - Single Point Bonding; CB - Cross-bonding Both-ends; BE -Both-ends bonding
Laying conditions at trefoil formation are as below:
-Soil thermal resistivity: 1 /2.5 k m/W
-Burial depth: 0. 7m
-Ground temperature: 20°C I Ambient temperature: 30°C