N2XS(F)H 6/10 (12)kV Cable

APPLICATION

Medium Voltage LSZH 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
Low Smoke Zero Halogen to: IEC 60754-1 /2, IEC 61034-2
Flame Retardant: IEC 60332-1-2
UV Resistant: ISO 4892-3
Abrasion and Tear Resistant: EN 60229-4.1
Impact rated to: AG2 EN 60364-5.51

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 Waterblock

Semi-conductive water swellable tape

Metallic Screen

Copper Wires and tape

Longitudinal Waterblock

Non-conductive water swelling tape

Sheath

LSZH (Low Smoke Zero Halogen)

Sheath Colour

● Black

DIMENSIONS

NO. OF CORE	NOMINAL CROSS SECTIONAL AREA	NOMINAL CONDUCTOR DIAMETER	INSULATION mm		METALLIC SCREEN		NOMINAL OUTER DIAMETER OF CABLE	NOMINAL WEIGHT	MAXIMUM PULLING FORCE	MINIMUM BENDING RADIUS
		mm	Nominal Diameter Over	Nominal Thickness	Nominal Cross Section mm2	Nominal diameter Over mm	mm	KG/KM	KN	m
1	35	7.0	17.2	4.5	16	21.3	26.9	860	1.75	0.40
1	50	8.25	18.5	4.5	16	22.6	28.1	1000	2.5	0.42
1	70	9.6	19.8	4.5	25	23.9	29.5	1300	3.5	0.44
1	95	11.5	21.7	4.5	35	25.8	31.4	1670	4.75	0.47
1	120	12.9	23.1	4.5	50	27.2	32.8	2070	6	0.49
1	150	14.5	27.7	4.5	50	28.8	34.4	2350	7.5	0.52
1	185	16.0	26.2	4.5	50	30.3	35.9	2710	9.25	0.54
1	240	18.5	28.7	4.5	50	32.8	38.4	3260	12	0.58
1	300	20.5	30.7	4.5	50	34.8	40.4	3850	15	0.61
1	400	23.5	33.7	4.5	50	37.8	43.4	4720	20	0.65
1	500	26.5	37.2	4.5	50	41.5	47.1	5810	25	0.71
1	630	30.3	41.3	4.5	50	45.6	51.3	7160	31.5	0.77
1	800	34.6	46.0	4.5	50	50.3	56.4	8860	40	0.85
1	1000	38.2	49.6	4.5	50	53.9	60.2	10760	50	0.90

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	0.0979	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	1.55	0.036

ELECTRICAL CHARACTERISTICS

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	0.390
95/35	0.39	0.67	0.57	0.122	0.211	0.180	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-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 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	292	292	277	176	303	301	256	255
70/25	10.0	5.3	351	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	1140	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	1086	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 condition at trefoil formation are as below:

Soil thermal resistivity: 1/2.5 km/w

Burial depth: 0.7m

Ground temparature: 20℃/Ambient temperature: 30℃