

# NA2XS(F)H XLPE LSZH 8.7/15 (17.5) kV Cable



## APPLICATION

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

## CHARACTERISTICS

### Voltage Rating $U_0/U$ (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 Aluminium

### 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 swellable tape

### Screen

Copper wires and copper tape

### Longitudinal Waterblocking

Swellable Tapes

### Outer Sheath

LSZH (Low Smoke Zero Halogen)

### Sheath Colour

- Black

## DIMENSIONS

NO. OF CORE	NOMINAL CROSS SECTIONAL AREA	NOMINAL CONDUCT OR DIAMETER	INSULATION mm		METALLIC SCREEN		NOMINAL OUTER DIAMETER OF CABLE	NOMINAL WEIGHT	MAXIMUM PULLING FORCE	MINIMUM BENDING RADIUS
	Conductor	mm	Nominal Diameter Over	Nominal Thickness	Nominal Cross Section mm <sup>2</sup>	Nominal diameter Over mm	mm	KG/KM	KN	m
1	50	8.25	18.50	4.50	16	22.6	28.10	720	1.5	0.42
1	70	9.5	19.70	4.50	25	23.8	29.40	590	2.1	0.44
1	95	11.3	21.50	4.50	35	25.6	31.20	1100	2.85	0.47
1	120	12.5	22.70	4.50	50	26.8	32.40	1330	3.6	0.49
1	150	14.2	24.40	4.50	50	28.5	34.10	1440	4.5	0.51
1	185	15.8	26.00	4.50	50	30.1	35.70	1580	5.55	0.54
1	240	17.9	28.10	4.50	50	32.2	37.80	1780	7.2	0.57
1	300	20.0	30.20	4.50	50	34.3	39.90	1990	9	0.60
1	400	22.9	33.10	4.50	50	37.2	42.80	2300	12	0.64
1	500	25.7	36.40	4.50	50	40.7	46.30	2710	15	0.69
1	630	29.3	40.30	4.50	50	44.6	50.30	3190	18.9	0.75
1	800	33.0	44.4	4.5	50	48.7	54.6	3780	24	0.82
1	1000	38.0	49.4	4.5	50	53.7	60	4510	30	0.90

## 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	Insulation					
50/16	0.641	0.822	1.12	1.38	2.72	1.37	2.2	0.19	17.2	0.51	0.076
70/25	0.443	0.568	0.72	0.89	2.63	1.4	1.45	0.2	15.7	0.56	0.07
95/35	0.32	0.411	0.51	0.63	2.53	1.45	1.04	0.23	13.9	0.63	0.064
120/50	0.253	0.325	0.36	0.44	2.48	1.47	0.77	0.25	12.9	0.67	0.061
150/50	0.206	0.265	0.36	0.44	2.42	1.51	0.71	0.27	11.8	0.74	0.057
185/50	0.164	0.211	0.36	0.44	2.37	1.53	0.65	0.29	10.9	0.8	0.054
240/50	0.125	0.161	0.36	0.44	2.32	1.56	0.60	0.32	9.9	0.88	0.050
300/50	0.100	0.130	0.36	0.44	2.28	1.59	0.57	0.35	9.1	0.96	0.048
400/50	0.0778	0.102	0.36	0.44	2.24	1.61	0.54	0.39	8.1	1.07	0.044
500/50	0.0605	0.0800	0.36	0.44	2.18	1.62	0.52	0.43	7.3	1.18	0.043
630/50	0.0469	0.0634	0.36	0.44	2.14	1.65	0.51	0.49	6.5	1.33	0.041
800/50	0.0367	0.0512	0.36	0.44	2.11	1.67	0.49	0.54	5.9	1.49	0.039
1000/50	0.0291	0.0426	0.36	0.44	2.08	1.69	0.48	0.61	5.2	1.67	0.036

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
50/16	0.43	0.73	0.62	0.136	0.229	0.194	0.833	0.853	0.845
70/25	0.41	0.7	0.6	0.13	0.221	0.188	0.583	0.61	0.599
95/35	0.39	0.67	0.58	0.123	0.212	0.181	0.429	0.462	0.449
120/50	0.38	0.66	0.56	0.119	0.206	0.177	0.346	0.385	0.370
150/50	0.36	0.630	0.55	0.114	0.199	0.172	0.288	0.331	0.316
185/50	0.35	0.61	0.54	0.11	0.193	0.169	0.238	0.286	0.270
240/50	0.34	0.59	0.52	0.106	0.187	0.164	0.193	0.247	0.230
300/50	0.33	0.58	0.51	0.103	0.181	0.161	0.165	0.222	0.206
400/50	0.31	0.55	0.50	0.099	0.174	0.157	0.142	0.201	0.187
500/50	0.31	0.54	0.49	0.096	0.169	0.154	0.125	0.187	0.174
630/50	0.30	0.52	0.48	0.093	0.163	0.151	0.113	0.174	0.164
800/50	0.29	0.5	0.47	0.091	0.157	0.149	0.104	0.165	0.158
1000/50	0.28	0.48	0.46	0.088	0.151	0.146	0.098	0.157	0.152

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>	MAXIMM SHORT CIRCUIT CAPACITY CONDUCTOR R kA/sec	MAXIMM SHORT CIRCUIT CAPACITY METALLIC SCREEN REEN 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				
50/16	4.7	3.7	228	227	214	214	235	234	198	198
70/25	6.6	6.6	280	276	262	261	291	288	245	245
95/35	9	7.1	337	329	315	314	357	349	299	298
120/50	11.3	9.8	384	369	360	357	411	396	344	342
150/50	14.2	9.8	433	412	406	402	469	449	393	389
185/50	17.5	9.8	493	462	460	455	540	511	451	446
240/50	22.7	9.8	574	527	536	527	639	594	533	525
300/50	28.4	9.8	651	586	607	595	736	673	612	601
400/50	37.8	9.8	751	658	700	683	865	774	717	702
500/50	47.3	9.8	861	734	801	778	1009	880	836	813
630/50	59.5	9.8	990	818	917	884	1184	1003	976	944
800/50	75.6	9.8	1128	899	1037	992	1373	1126	1125	1080
1000/50	94.5	9.8	1276	983	1163	1103	1591	1265	1290	1228

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