

# N2XSH 12/20 (24)kV Cable



## APPLICATION

Medium voltage power cables for distribution networks and generation units. LSZH outer sheathing makes the cable suitable for internal installation as well as directly in ground, outdoors, and in cable ducts. UV Resistant.

## CHARACTERISTICS

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

12/20 (24)kV

### Test Voltage

42kV AC 50Hz (5 mins)

### Temperature Rating

-20°C to +60°C

Permissible Conductor Operating Temperature: +90°C

Permissible Short Circuit Temperature up to 5 sec: 250°C

### Minimum Bending Radius

15 x overall diameter

## STANDARDS

IEC 60502-2, EN 60228

Low Smoke Zero Halogen to: IEC 60754-1/2, IEC 61034-2

Flame Retardant: IEC 60332-3-24 Cat C, 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 Copper

### Conductor Screen

Semi-conductive material

### Insulation

XLPE (Cross-Linked Polyethylene)

### Insulation Screen

Semi-conductive material (bonded)

### Screen

Copper wires and copper tape

### Outer Sheath

LSZH (Low Smoke Zero Halogen)

### Sheath Colour

● Black

## DIMENSIONS

NO.OF CORES	NOMINAL CROSS SECTIONAL AREA mm <sup>2</sup>	NOMINAL SCREEN CROSS SECTIONAL AREA mm <sup>2</sup>	NOMINAL CONDUCTOR DIAMETER mm	NUMBER WIRES CONDUCTOR mm	NOMINAL INSULATION THICKNESS mm	NOMINAL DIAMETER OVER INSULATION mm	MINIMUM INSULATION THICKNESS mm	NOM. THICKNESS SEMI-CON. LAYER INNER mm	NOM. THICKNESS SEMI-CON. LAYER OUTER mm
1	50	16	8.1	10 x 2.62	5.50	20.3	4.85	0.50	0.40
1	70	16	9.7	14 x 2.62	5.50	21.9	4.85	0.50	0.40
1	95	16	11.4	19 x 2.62	5.50	23.6	4.85	0.50	0.40
1	120	16	12.7	19 x 2.97	5.50	24.9	4.85	0.50	0.40
1	150	25	14.5	19 x 3.20	5.50	26.7	4.85	0.50	0.40
1	185	25	15.9	27 x 2.62	5.50	28.1	4.85	0.50	0.40
1	240	25	18.6	48 x 2.62	5.50	30.8	4.85	0.50	0.40
1	300	25	20.7	61 x 2.62	5.50	32.9	4.85	0.50	0.40
1	400	35	23.5	61 x 2.97	5.50	35.7	4.85	0.50	0.40
1	500	35	26.5	61 x 3.29	5.50	38.7	4.85	0.50	0.40
1	630	35	30.2	61 x 3.80	5.50	42.9	4.85	0.50	0.40

NOMINAL CROSS SECTIONAL AREA mm <sup>2</sup>	NUMBER WIRES SCREEN mm	NOMINAL SHEATH THICKNESS mm	MINIMUM SHEATH THICKNESS mm	NOMINAL OVERALL DIAMETER mm	NOMINAL WEIGHT kg/km	MAXIMUM SIDEWALL N/cm <sup>2</sup>	MAXIMUM PULLING TENSION N	DIAMETER TAPE SCREEN mm
50	44 x 0.66	1.80	1.240	26	1000	489	2500	1x0.1x10
70	44 x 0.66	1.90	1.320	28	1200	619	3500	1x0.1x10
95	44 x 0.66	1.90	1.320	30	1500	785	4750	1x0.1x10
120	44 x 0.66	2.00	1.400	31	1800	915	6000	1x0.1x10
150	71 x 0.66	2.00	1.400	33	2250	1053	7500	1x0.1x10
185	71 x 0.66	2.10	1.480	35	2500	1236	9250	1x0.1x10
240	71 x 0.66	2.10	1.480	38	3250	1413	12000	1x0.1x10
300	71 x 0.66	2.20	1.560	40	3750	1647	15000	1x0.1x10
400	60 x 0.85	2.30	1.640	43	4750	2005	20000	1x0.1x15
500	60 x 0.85	2.40	1.720	48	5750	2299	25000	1x0.1x15
630	60 x 0.85	2.50	1.800	51	7000	2586	31500	1x0.1x15

## ELECTRICAL CHARACTERISTICS

NOMINAL CROSS SECTIONAL AREA mm <sup>2</sup>	CONDUCTOR DC RESISTANCE AT 20oC ohms/km	CONDUCTOR DC RESISTANCE AT 75oC ohms/km	CONDUCTOR OR AC RESISTANCE BY MAX TEMP ohms/km	CURRENT CARRYING CAPACITY (A) In Ground 20oC	CURRENT CARRYING CAPACITY (A) In Air 30oC	REACTANCE ohms/km	CHARGING ADMITTANCE A/km	S.C.C CONDUCTOR OR 1SEC kA	S.C.C SCREEN 1SEC kA	CONDUCTOR LOSSES IN THE GROUND kW/km	CAPACITANCE uF/km
50	0.387	0.801	0.497	250.0	279.0	0.19	0.40	7.15	3.20	31.10	0.15
70	0.268	0.555	0.344	304.0	347.0	0.18	0.37	10.10	3.20	31.80	0.17
95	0.193	0.399	0.248	361.0	420.0	0.18	0.36	13.59	3.20	32.30	0.19
120	0.153	0.316	0.196	407.0	483.0	0.17	0.34	17.16	3.20	32.50	0.20
150	0.124	0.160	0.256	445.0	540.0	0.17	0.33	21.45	5.00	31.70	0.22
185	0.0991	0.205	0.128	498.0	614.0	0.17	0.32	26.46	5.00	31.70	0.24
240	0.0754	0.156	0.0980	569.0	718.0	0.16	0.31	34.32	5.00	31.70	0.27
300	0.0601	0.124	0.0800	633.0	813.0	0.16	0.30	42.90	5.00	32.10	0.29
400	0.0470	0.0974	0.0640	686.0	904.0	0.16	0.29	57.20	7.10	30.10	0.32
500	0.0366	0.0758	0.0510	756.0	1011.0	0.15	0.28	71.50	7.10	29.10	0.36
630	0.0283	0.0420	0.0586	850.0	1030.0	0.15	0.27	90.09	7.10	30.30	0.40

Derating factor (ground): 1 (Soil thermal resistivity: 1km/W, Depth 0.8m, Flat formation - touching)

Derating factor (air): 1 (Flat formation - touching)