

# NA2XS2Y 6/10 (12)kV Cable



## APPLICATION

Medium voltage power cables for distribution networks and generation units, suitable for external installation including in direct in ground and in buried cable ducts. UV Resistant.

## CHARACTERISTICS

**Voltage Rating**  $U_0/U$  ( $U_m$ )  
6/10 (12)kV

**Test Voltage**  
21kV 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, IEC 60228,  
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 material

**Insulation**  
XLPE (Cross-Linked Polyethylene)

**Insulation Screen**  
Semi-conductive material (bonded)

**Screen**  
Copper wires and copper tape

**Outer Sheath**  
MDPE (Medium Density Polyethylene)

**Sheath Colour**  
● Black

## DIMENSIONS

NO. OF CORE	NOMINAL CROSS SECTIONAL AREA mm <sup>2</sup>		NOMINAL CONDUCTOR DIAMETER	NUMBER WIRES CONDUCTOR	NOM. THICKNESS SEMI-CON. LAYER		NOMINAL INSULATION THICKNESS	MINIMUM INSULATION THICKNESS	NOMINAL DIAMETER OVER INSULATION
	Conductor	Screen	mm	mm	INNER mm	OUTER mm	mm	mm	mm
1	50	16	8.20	7*2.90	0.50	0.40	3.40	2.96	16.40
1	70	16	9.70	19*2.18	0.50	0.40	3.40	2.96	17.90
1	95	16	11.40	19*2.55	0.50	0.40	3.40	2.96	19.60
1	120	16	12.65	19*2.90	0.50	0.40	3.40	2.96	20.90
1	150	25	14.40	19*3.16	0.50	0.40	3.40	2.96	22.60
1	185	25	15.75	37*2.55	0.50	0.40	3.40	2.96	24.40
1	240	25	18.20	37*2.90	0.50	0.40	3.40	2.96	36.90
1	300	25	20.50	61*2.55	0.50	0.40	3.40	2.96	29.20
1	400	35	23.00	61*2.90	0.50	0.40	3.40	2.96	31.70
1	500	35	26.00	61*3.20	0.50	0.40	3.40	2.96	34.70
1	630	35	30.20	61*3.65	0.50	0.40	3.40	2.96	38.90

NOMINAL CROSS SECTIONAL AREA mm <sup>2</sup>	NUMBER WIRES SCREEN mm	DIAMETER TAPE SCREEN mm	NOMINAL SHEATH THICKNESS mm	MINIMUM SHEATH THICKNESS mm	NOMINAL OVERALL DIAMETER mm	NOMINAL WEIGHT kg/km	MAXIMUM SIDEWALL PRESSURE N/CM <sup>2</sup>	MAXIMUM PULLING TENSION N
50	44*0.66	1*0.1*10	1.80	1.24	23	550	331	1500
70	44*0.66	1*0.1*10	1.80	1.24	24	650	415	2100
95	44*0.66	1*0.1*10	1.80	1.24	26	750	522	2850
120	44*0.66	1*0.1*10	1.80	1.24	27	850	621	4500
150	71*0.66	1*0.1*10	1.90	1.32	29	1100	708	7500
185	71*0.66	1*0.1*10	1.90	1.32	31	1200	809	5550
240	71*0.66	1*0.1*10	2.00	1.40	33	1400	938	7200
300	71*0.66	1*0.1*10	2.10	1.48	36	1600	1081	9000
400	60*0.85	1*0.1*15	2.20	1.56	39	2000	1311	12000
500	60*0.85	1*0.1*15	2.30	1.64	42	2500	1471	15000
630	60*0.85	1*0.1*15	2.40	1.72	46	3000	1654	18900

## ELECTRICAL CHARACTERISTICS

NOMINAL CROSS SECTIONAL AREA mm <sup>2</sup>	CONDUCTOR DC RESISTANCE AT 20°C ohms/km	CONDUCTOR DC RESISTANCE AT 75°C ohms/km	CONDUCTOR AC RESISTANCE BY MAX TEMP ohms/km	CURRENT CARRYING CAPACITY (A)		REACTANCE ohms/km	CHARGING ADMITTANCE A/km	CAPACITANCE uF/km	S.C.C CONDUCTOR 1SEC kA	S.C.C SCREEN 1SEC kA	CONDUCTOR LOSSES IN THE GROUND kW/km
				In Ground 20°C	In Air 30°C						
50	0.641	1.32	0.825	194	215	0.18	0.35	0.22	4.70	3.2	31.0
70	0.443	0.917	0.570	236	269	0.17	0.33	0.24	6.58	3.2	31.7
95	0.32	0.662	0.412	281	327	0.17	0.32	0.28	8.93	3.2	32.5
120	0.258	0.524	0.328	318	377	0.16	0.31	0.30	11.28	3.2	33.2
150	0.203	0.426	0.268	350	424	0.16	0.30	0.33	14.10	5.0	32.8
185	0.165	0.339	0.213	393	485	0.16	0.29	0.36	17.39	5.0	32.9
240	0.125	0.258	0.1600	453	573	0.15	0.28	0.40	22.56	5.0	33.4
300	0.100	0.207	0.1320	507	652	0.15	0.28	0.45	28.20	5.0	33.9
400	0.0778	0.161	0.1030	559	741	0.15	0.27	0.49	37.60	7.1	32.2
500	0.0605	0.125	0.0810	622	838	0.15	0.26	0.54	47.00	7.1	31.3
630	0.0469	0.0972	0.0640	860	1080	0.15	0.25	0.62	59.22	7.1	47.3

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

## DIMENSIONS

NO. OF CORE	NOMINAL CROSS SECTIONAL AREA		NOMINAL CONDUCTOR DIAMETER mm	NUMBER WIRES CONDUCTOR <sup>tt</sup> mm	NOM. THICKNESS SEMI-CON. LAYER		NOMINAL INSULATION THICKNESS mm	MINIMUM INSULATION THICKNESS mm	NOMINAL DIAMETER OVER INSULATION mm
	Conductor	Screen			Inner	Outer			
1	50	16	8.1	10*2.62	0.50	0.40	3.40	2.96	16.3
1	70	16	9.7	14*2.62	0.50	0.40	3.40	2.96	17.9
1	95	16	11.4	19*2.62	0.50	0.40	3.40	2.96	19.6
1	120	16	12.7	19*2.97	0.50	0.40	3.40	2.96	20.9
1	150	25	14.5	19*3.20	0.50	0.40	3.40	2.96	22.7
1	185	25	15.9	27*2.62	0.50	0.40	3.40	2.96	24.1
1	240	25	18.6	48*2.62	0.50	0.40	3.40	2.96	26.8
1	300	25	20.7	61*2.62	0.50	0.40	3.40	2.96	28.9
1	400	35	23.5	61*2.97	0.50	0.40	3.40	2.96	31.7
1	500	35	26.5	61*3.29	0.50	0.40	3.40	2.96	34.7
1	630	35	30.2	61*3.80	0.50	0.40	3.40	2.96	38.9

NOMINAL CROSS SECTIONAL AREA mm <sup>2</sup>	NUMBER WIRES SCREEN mm	DIAMETER TAPE SCREEN mm	NOMINAL SHEATH THICKNESS mm	MINIMUM SHEATH THICKNESS mm	NOMINAL OVERALL DIAMETER mm	NOMINAL WEIGHT kg/km	MAXIMUM SIDEWALL PRESSURE N/cm <sup>2</sup>	MAXIMUM PULLING TENSION N
50	44*0.66	1*0.1*10	1.8	1.24	22	850	554	2500
70	44*0.66	1*0.1*10	1.8	1.24	24	1100	692	3500
95	44*0.66	1*0.1*10	1.8	1.24	26	1300	847	4750
120	44*0.66	1*0.1*10	1.8	1.24	27	1600	1008	6000
150	71*0.66	1*0.1*10	1.9	1.32	29	2000	1149	7500
185	71*0.66	1*0.1*10	1.9	1.32	30	2250	1344	9250
240	71*0.66	1*0.1*10	2.0	1.40	33	3000	1550	12000
300	71*0.66	1*0.1*10	2.1	1.48	36	3500	1764	15000
400	60*0.85	1*0.1*15	2.2	1.56	39	4500	2133	20000
500	60*0.85	1*0.1*15	2.3	1.64	42	5500	2443	25000
630	60*0.85	1*0.1*15	2.4	1.72	46	6750	2756	31500

NOMINAL CROSS SECTIONAL AREA mm <sup>2</sup>	CONDUCTOR DC RESISTANCE AT 20°C ohms/km	CONDUCTOR DC RESISTANCE AT 75°C ohms/km	CONDUCTOR AC RESISTANCE BY MAX TEMP ohms/km	CURRENT CARRYING CAPACITY ( A ) In Ground In Air		REACTANCE ohms/km	CHARGING ADMITTANCE A/km	CAPACITANCE uF/km	S.C.C CONDUCTOR 1SEC kA	S.C.C SCREEN 1SEC kA	CONDUCTOR LOSSES IN THE GROUND kW/km
				20°C	30°C						
50	0.387	0.801	0.497	249	277	0.18	0.36	0.21	7.15	3.2	30.8
70	0.268	0.555	0.344	303	345	0.17	0.34	0.24	10.1	3.2	31.6
95	0.193	0.399	0.248	358	418	0.16	0.31	0.3	13.59	3.2	32.0
120	0.153	0.316	0.196	404	481	0.16	0.31	0.3	17.16	3.2	32.0
150	0.124	0.160	0.256	441	537	0.16	0.30	0.33	21.45	5.0	31.1
185	0.0991	0.205	0.128	493	612	0.16	0.29	0.35	26.46	5.0	31.1
240	0.0754	0.156	0.0980	563	716	0.15	0.28	0.4	34.32	5.0	31.1
300	0.0601	0.124	0.0800	626	811	0.15	0.27	0.44	42.90	5.0	31.4
400	0.047	0.0974	0.0640	676	901	0.15	0.27	0.49	57.20	7.1	29.2
500	0.0366	0.0758	0.0510	743	1006	0.15	0.28	0.54	71.50	7.1	28.2
630	0.0283	0.042	0.0586	850	1030	0.14	0.25	0.62	90.09	7.1	30.3

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