

# NA2XS(FL)H 12/20 (24)kV Cable



## APPLICATION

Medium voltage power cables with additional waterblocking properties 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 $U_0/U$ (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: EN 50396

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)

### Longitudinal Waterblocking

Semi-conductive swellable tape

### Screen

Copper Wires and copper tape

### Longitudinal Waterblocking

Swellable Tapes

### Radial Waterblocking

Al/PET (Aluminium/Polyester) tape tightly bonded to sheath

### Outer Sheath

LSZH (Low Smoke Zero Halogen)

### Sheath Colour

● Black

## DIMENSIONS

NO. OF CORE	NOMINAL CROSS SECTIONAL AREA		NOMINAL Conductor DIAMETER	NUMBER WIRES CONDUCTOR	NOMINAL THCKNESS SEMI-CON. LAYER		NOMINAL INSULATION THICKNESS	MINIMUM INSULATION THICKNESS	NOMINAL DIAMETER OVER INSULATION
	Conductor	Screen			INNER	OUTER			
			mm	mm	mm	mm	mm	mm	mm
1	50	16	8.2	7 x 2.90	0.5	0.4	5.5	4.85	20.4
1	70	16	9.7	19 x 2.18	0.5	0.4	5.5	4.85	21.9
1	95	16	11.4	19 x 2.55	0.5	0.4	5.5	4.85	23.6
1	120	16	12.65	19 x 2.90	0.5	0.4	5.5	4.85	24.9
1	150	25	14.4	19 x 3.16	0.5	0.4	5.5	4.85	26.6
1	185	25	15.75	37 x 2.55	0.5	0.4	5.5	4.85	28.4
1	240	25	18.2	37 x 2.90	0.5	0.4	5.5	4.85	30.9
1	300	25	20.5	61 x 2.55	0.5	0.4	5.5	4.85	33.2
1	400	35	23	61 x 2.90	0.5	0.4	5.5	4.85	35.7
1	500	35	26	61 x 3.20	0.5	0.4	5.5	4.85	38.7
1	630	35	0.2	61 x 3.65	0.5	0.4	5.5	4.85	42.9

NOMINAL CROSS SECTIONAL AREA	NUMBER WIRES SCREEN	DIAMETER TAPE SCREEN	NOMINAL SHEATH THICKNESS	MINIMUM SHEATH THICKNESS	NOMINAL OVERALL DIAMTER	NOMINAL WEIGHT	MAXIMUM SIDEWALL PRESSURE	MAXIMUM PULLING TENSION
mm <sup>2</sup>	mm	mm	mm	mm	mm	kg/km	N/cm <sup>2</sup>	N
50	44 x 0.66	1x0.1x10	1.8	1.24	27	800	284	1500
70	44 x 0.66	1x0.1x10	1.9	1.32	29	900	362	2100
95	44 x 0.66	1x0.1x10	1.9	1.32	31	1100	448	2850
120	44 x 0.66	1x0.1x10	2	1.4	32	1200	538	3600
150	71 x 0.66	1x0.1x10	2	1.4	34	1400	620	4500
185	71 x 0.66	1x0.1x10	2.1	1.48	36	1600	715	5550
240	71 x 0.66	1x0.1x10	2.1	1.48	38	1800	854	7200
300	71 x 0.66	1x0.1x10	2.2	1.56	41	2000	976	9000
400	60 x 0.85	1x0.1x15	2.3	1.64	44	2500	1194	12000
500	60 x 0.85	1x0.1x15	2.4	1.72	47	3000	1370	15000
630	60 x 0.85	1x0.1x15	2.5	1.8	51	3500	1552	18900

## ELECTRICAL CHARACTERISTICS

NOMINAL CROSS SECTIONAL AREA mm <sup>2</sup>	CONDUCTOR	CONDUCTOR	CONDUCTOR	CURRENT CARRYING CAPACITY (A)		REACTANCE	CHARGING ADMITTANCE	CAPACITANCE	S.C.C CONDUCTOR 1SEC kA	S.C.C SCREEN 1SEC kA	CONDUCTOR LOSSES IN THE GROUND
	DC RESISTANCE AT 20°C Ω/km	DC RESISTANCE AT 75°C Ω/km	AC RESISTANCE BY MAX TEMP. Ω/km	In Ground 20°C	In Air 30°C	ohms/km	A/km	uF/km			
50	0.641	1.32	0.258	195		217	0.19	0.4	0.15	4.7	3.2
70	0.443	0.917	0.57	237		270	0.19	0.38	0.17	6.58	3.2
95	0.32	0.662	0.412	282		328	0.18	0.36	0.19	8.93	3.2
120	0.258	0.524	0.328	320		378	0.18	0.35	0.2	11.28	3.2
150	0.203	0.426	0.268	353		425	0.17	0.33	0.22	14.1	5
185	0.164	0.339	0.213	396		485	0.17	0.33	0.24	17.39	5
240	0.125	0.258	0.16	457		573	0.16	0.31	0.27	22.56	5
300	0.1	0.207	0.132	511		652	0.16	0.3	0.29	28.2	5
400	0.0778	0.161	0.103	566		740	0.16	0.29	0.32	37.6	7.1
500	0.0605	0.125	0.081	630		838	0.15	0.28	0.35	47	7.1
630	0.0469	0.0972	0.064	860		1080	0.15	0.27	0.4	59.22	7.1

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

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