



Feature

XLPE insulated twisted cables are applied for installation, indoors, outdoors, and underground.

CONSTRUCTION

Conductor

Stranded compacted circular copper or aluminium conductors.

All internal interstices of the conductor filled with water blocking compound which is specified to prevent ingress of water through conductor during storage, handling, installation and operating of the cable, if request.

Conductor Screen

Extruded Semi-conducting compound. Minimum thickness 0.5 mm and the maximum volume resistivity of 5000 ohm-cm at 20°C and 25000 ohm-cm at 90°C.

Insulation

Extruded XLPE with high degree of cross-linking, free from contaminants, air voids and heat resistant by dry cured process.

The nominal thickness as shown in table 1.

Table 1. Insulation Thickness

Nominal Cross Section (mm ²)	Insulation thickness at nominal voltage				
	3.6/6 kV (mm)	6/10 kV (mm)	8.7/15 kV (mm)	12/20 kV (mm)	18/30 kV (mm)
35	2.5	3.4	4.5	-	-
50	2.5	3.4	4.5	5.5	-
70	2.5	3.4	4.5	5.5	8.0
95	2.5	3.4	4.5	5.5	8.0
120	2.5	3.4	4.5	5.5	8.0
150	2.5	3.4	4.5	5.5	8.0
185	2.5	3.4	4.5	5.5	8.0
240	2.6	3.4	4.5	5.5	8.0
300	2.8	3.4	4.5	5.5	8.0
400	3.0	3.4	4.5	5.5	8.0

Type : NF2XSY
NFA2XSY

Nominal Voltage : 3.6/6 (7.2) kV
6/10 (12) kV
8.7/15 (17.5) kV
12/20 (24) kV
18/30 (36) kV

Specification : SPLN 43-5
(Other specifications are available upon request)

Insulation Screen

Extruded Semi-conducting compound. Minimum thickness 0.5 mm and the maximum volume resistivity of 5000 ohm-cm at 20°C and 25000 ohm-cm at 90°C

The screen is tightly fitted to the insulation to exclude all air voids and can be easily hand strippers on site.

Conducting Water Blocking Layer

Semi-conductive water blocking tape provided over the insulation screen which will swell up under the influence of moisture or water.

Metallic Screen

Copper wires applied over the conducting water blocking layer, minimum total cross section of metallic screen layer as shown in table 2, copper tape with minimum thickness 0.1mm and maximum 0.3mm applied over copper wires.

**UNDERGROUND TWISTED CABLE COPPER OR ALUMINIUM
CONDUCTOR, XLPE INSULATED, COPPER WIRES SCREENED,
AND PVC SHEATHED**



Table 2. Minimum Total Cross Section of Metallic Screen.

Nominal Cross Section of Cable (mm ²)	Minimum Cross Section of Metallic Screen (mm ²)
Up to 120	16
120 - 300	25
400 - 500	35

Water Blocking Layer

Non-conductive water blocking tape provided over the metallic screen which will swell up under the influence of moisture or water

Outer Sheath

Extruded red PVC, suitable for exposure to sun-light or other local atmospheric environments and for the operating temperature of the cable.

GENERAL ELECTRICAL CHARACTERISTIC

Nominal Cross Section Area	mm ²		35	50	70	90	120	150	185	240	300	400
Max. D.C. Conductor Resistance at 20 °C	ohm/km	Cu	0.521	0.387	0.268	0.193	0.153	0.124	0.099	0.075	0.060	0.047
		Al	0.868	0.641	0.443	0.320	0.253	0.206	0.164	0.125	0.100	0.078
Short Circuit Current at 1 sec.	kA	Cu	5.0	7.2	10.1	13.6	17.2	21.5	26.5	34.3	42.9	57.2
		Al	3.3	4.7	6.6	8.9	11.3	14.1	17.4	22.6	28.2	37.6



**UNDERGROUND TWISTED CABLE COPPER OR ALUMINIUM
CONDUCTOR, XLPE INSULATED, COPPER WIRES SCREENED,
AND PVC SHEATHED**



TYPE OF CABLE
NOMINAL VOLTAGE
SPECIFICATION

: NF2XSY AND NFA2XSY
: 12/20 kV
: SPLN 43-5

PHYSICAL PROPERTIES

Nominal Cross-Sectional Area	mm ²	3x35	3x50	3x70	3x95	3x120	3x150	3x185	3x240
Approx. Conductor Diameter	mm	7.0	8.3	10.1	11.7	13.2	14.5	16.2	18.6
Outer Sheath Thickness (Phase)	mm	1.8	1.9	1.9	2.0	2.0	2.1	2.1	2.2
Approx. Overall Diameter	mm	58	62	65	69	72	76	80	85
Approx. Cable Weight (kg/km)	Cu	3,111	3,680	4,297	5,205	6,101	7,401	8,373	10,386
	Al	2,465	2,788	3,067	3,442	3,782	4,779	4,933	5,783
Bending Radius	cm	88	92	98	104	109	114	119	128
Standard Packing	Length	m	500	500	500	500	500	500	500
	Packing	Wooden Drum							

ELECTRICAL PROPERTIES

Nominal Cross-Sectional Area	mm ²	3x35	3x50	3x70	3x95	3x120	3x150	3x185	3x240
Current Carrying Capacity at 30°C	A								
		Cu	136	161	197	234	265	295	334
		Al	106	125	152	182	207	261	303
Capacitance	µF/km	0.16	0.18	0.20	0.22	0.24	0.26	0.28	0.31
Inductance	mH/km	0.443	0.426	0.399	0.390	0.366	0.356	0.344	0.331