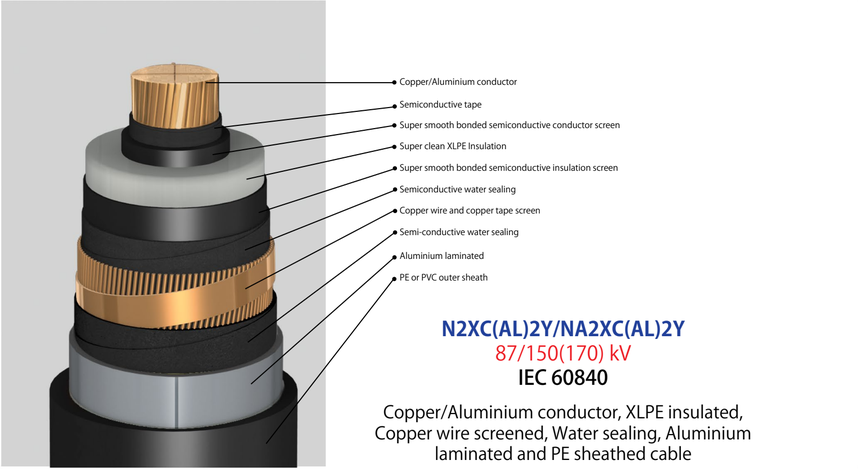


N2XC(AL)2Y/NA2XC(AL)2Y

87/150(170) kV

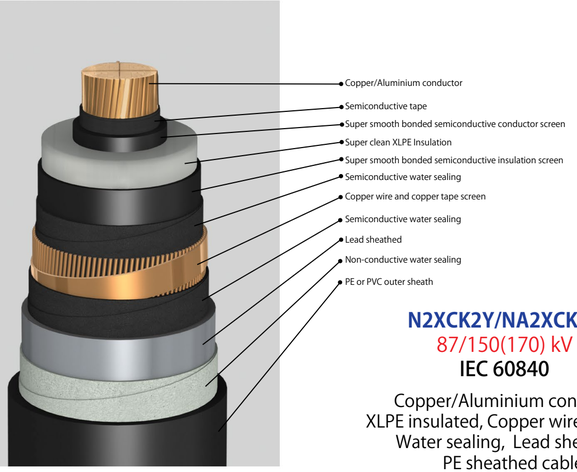
IEC 60840

Copper/Aluminium conductor, XLPE insulated, Copper wire screened, Water sealing, Aluminium laminated and PE sheathed cable

DIMENSIONAL AND ELECTRICAL DATA — 1 CORE

Nominal Cross-sectional area		mm²	300	400	500	630	800	1000	1200
Conductor shape		-	Round Compacted (cm)				Milliken Segmental (rs)		
Conductor diameter (approx)		mm	20,9	23,4	26,3	31,5	35,2	39,3	43,1
Nominal conductor shielding thickness		mm	1,2	1,2	1,2	1,2	1,2	1,2	1,2
Nominal insulation thickness		mm	19	19	19	19	19	19	19
insulation diameter (approx)		mm	64	67	70	75	79	83	87
Nominal insulation shielding Thickness		mm	1,0	1,0	1,0	1,0	1,0	1,0	1,0
Nominal outer sheath thickness		mm	4,5	4,5	4,5	4,5	4,5	4,5	4,5
overall cable diameter (approx)		mm	86	88	91	97	100	104	108
Cable net weight (approx)	Cu	kg/km	9.540	10.530	11.630	13.600	15.480	17.780	19.900
	Al		7.640	8.120	8.640	9.350	10.120	11.200	12.170
Max.DC conductor resistance at 20°C	Cu	Ω/km	0,0601	0,0470	0,0366	0,0283	0,0221	0,0176	0,0151
	Al		0,100	0,0778	0,0605	0,0469	0,0367	0,0291	0,0247
Max. capacitance per phase		µF/km	0,149	0,158	0,169	0,189	0,203	0,218	0,232
Inductance per phase, Flat formation (0 0 0)		mH/km	0,655	0,638	0,621	0,596	0,582	0,568	0,556
Max. short circuit current of conductor	Cu	kA/sec	43,41	57,79	72,16	90,83	115,23	143,93	172,62
	Al		28,67	38,14	47,60	59,90	75,96	94,85	113,73
Maximum current carrying capacity in Ground at 30°C, Flat formation (0 0 0)	Cu	A	566	641	726	825	921	1.010	1.071
	Al		442	505	577	658	745	834	900
AC test Voltage		kV/30 min	218						

Note : This is only general information. For other specific requirement, please contact our marketing.



N2XCK2Y/NA2XCK2Y

87/150(170) kV

IEC 60840

Copper/Aluminium conductor, XLPE insulated, Copper wire screened, Water sealing, Lead sheathed, PE sheathed cable

DIMENSIONAL AND ELECTRICAL DATA — 1 CORE

Nominal Cross-sectional area		mm²	300	400	500	630	800	1000	1200
Conductor shape		-	Round Compacted (cm)				Milliken Segmental (rs)		
Conductor diameter (approx)		mm	20,9	23,4	26,3	31,5	35,2	39,3	43,1
Nominal conductor shielding thickness		mm	1,2	1,2	1,2	1,2	1,2	1,2	1,2
Nominal insulation thickness		mm	19	19	19	19	19	19	19
insulation diameter (approx)		mm	64	67	70	75	79	83	87
Nominal insulation shielding Thickness		mm	1,0	1,0	1,0	1,0	1,0	1,0	1,0
Nominal outer sheath thickness		mm	4,5	4,5	4,5	4,5	4,5	4,5	4,5
overall cable diameter (approx)		mm	91	93	96	101	105	110	113
Cable net weight (approx)	Cu	kg/km	15.710	16.880	18.250	20.600	22.830	25.810	28.260
	Al		13.770	14.460	15.270	16.240	17.370	19.240	20.540
Max.DC conductor resistance at 20°C	Cu	Ω/km	0,0601	0,0470	0,0366	0,0283	0,0221	0,0176	0,0151
	Al		0,100	0,0778	0,0605	0,0469	0,0367	0,0291	0,0247
Max. capacitance per phase		µF/km	0,149	0,158	0,169	0,189	0,203	0,218	0,232
Inductance per phase, Flat formation (0 0 0)		mH/km	0,666	0,648	0,631	0,606	0,591	0,578	0,566
Max. short circuit current of conductor	Cu	kA/sec	43,41	57,79	72,16	90,83	115,23	143,93	172,62
	Al		28,67	38,14	47,60	59,90	75,96	94,85	113,73
Maximum current carrying capacity in Ground at 30°C, Flat formation (0 0 0)	Cu	A	572	650	738	841	941	1.037	1.104
	Al		446	511	584	667	756	851	920
AC test Voltage		kV/30 min	218						

Note : This is only general information. For other specific requirement, please contact our marketing.

PT SUPREME CABLE
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Tangerang 15138

PT SUPREME CABLE
MANUFACTURING & COMMERCE Tbk.
(PT SUCACO Tbk.)

Cert. No. : ID16/03504 — Cert. No. :ID05/66527 Cert. No. : ID21/05663

Product Catalogue
HIGH VOLTAGE

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INTRODUCTION

To meet the demands of high voltage transmission, which recently is showing remarkable development, we have modern facilities for the production of high voltage power cable and have established a complete high voltage laboratory staffed with engineers and technicians of the qualified skill and knowlegde.

Supported by these high quality techniques, the first 150 kV Supreme Cable for a commercial power lines has been produced at 1996. We have support and supply 150 kV Supreme Cable for Suralaya Power Plant Project - West Java - in 2005. Not only populer domestically, our products of high voltage 132 kV single core 1,000 mm^2 has also exported to Japan - in 2005. And now 2009 we are producing more than 120 km totally lengths of 150 kV single core 1,000 mm^2 Supreme Cable for Areva T & D Indonesia as main contractor and PT. PLN (Persero) as user.

PRODUCTION TECHNOLOGY

SUCACO has been effort to reduce impurity level during production of high voltage power cable.
The most important measures that we have been taken are as follows :

- Control and Reduction of dust levels in our production plant and insulation compound storage.
- Provision of a closed system from receipt of the compounds untill insulation extrusion.
- Removal of metallic impurities in the compounds, by means of metal detector.
- Establishment of methods for the detection, identification and measurement of impurities in the cable insulation.

• Triple simultanneously extrusion.

Our process technology provides a triple layer simultaneously extrusion that semiconductive (conductor and insulation shield) layers and the insulation are formed simultaneously inside a single cross-head. This has the advantages that it can prevent the moistures and impurities to enter interface between the two shield layers and insulation. We also use bonded super smooth semiconductive and super clean insulation compounds to ensure the realibility of our products.

• Gas curing process.

The extruded cable core is cured in a circulating inert gas environment, provides the following features.

- Enchanced and stable breakdown strength.
- Elimination of micro voids, moisture content in the insulation and give a higher impulse breakdown stress.
- Uniform insulation structure.

• Degassing room.

High voltage cables need to be degassed before the completion of cable manufacturing. The purpose of degassing is to remove decomposition products from the cable insulation. Residual
flammable gases would present a fire hazard during cable installation or operation.

QUALITY CONTROL

Quality from beginning to finished is an essential part of Supreme Cable manufacturing philosophy. This is ensured by a combination of certified quality control throughout the production process and the use of raw material from approved suppliers only. This places Supreme Cable in a fine position in competition and secures flexibility to adapt rapidly to changing market requirements.

TESTING FACILITIES

Testing of cables comprises routine and special tests performed in our factory as well as test on site after completion of the installation. These tests are performed in compliance with customer standards and various national and international standards such as IEC 60804, AS 1429-2 and others. Type tests and long term tests have been made on components and also for qualification of complete cable systems.

• Shielding room

In this room, our 150 kV XPLE cables are subjected to full a real discharge test with high sensitivity and accuracy

• Impulse DC generator

We have a 1,200 kV DC impulse generator and it is entirely capable of performing impulse voltage testing for our 150 kV XLPE cables. The basic impulse level (BIL) of 750 kV is applied to 150 kV cable for testing of for testing 150 kV XLPE cable. In voltage measurement, a spherical gap with diameter of 600 mm is used.

• AC testing transformer

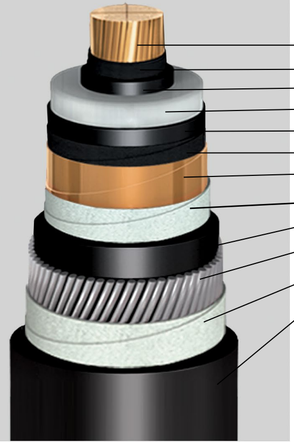
This 300 kV AC transformer, a series resonant type, have the following distinctive features :

- Small power consumption.
- Undistorted waveform of its output and generation of perfect sinus waves.
- Small short circuit current that will not damage of tested cable specimen.
- Absence of abnormal voltage due to high frequency.

• Partial disharge detector

Our hypotronics digital partial discharge detector offer the high accuracy and flexiblity of digital technology plus the real-time display and easy operation of an analog instrument.

The operator has complete central over the pulse display which can be set either an ellipse, straight line, sine wave or sine loop. Calibration of an impulse voltage measuring system by reference measurement. Nowadays, controls and measuring devices such as partial discharge meter, capacitance meter and dissipation factor meter can be integrated into one single computerized system only.



N2XSR2Y/NA2XSR2Y
87/150(170) kV
IEC 60840

Copper/Aluminium conductor, XLPE insulated, Copper tape screened, Water sealing, Aluminium wire and PE sheathed cable

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insulation diameter (approx)		mm	64	67	70	75	79	83	87
Nominal insulation shielding Thickness		mm	1,0	1,0	1,0	1,0	1,0	1,0	1,0
Nominal outer sheath thickness		mm	4,5	4,5	4,5	4,5	4,5	4,5	4,5
overall cable diameter (approx)		mm	98	101	104	109	113	117	121
Cable net weight (approx)	Cu	kg/km	9.980	11.410	12.690	14.830	16.900	19.300	21.560
	Al		8.040	9.000	9.700	10.520	11.510	12.720	11.830
Max.DC conductor resistance at 20°C	Cu	Ω/km	0,0601	0,0470	0,0366	0,0283	0,0221	0,0176	0,0151
	Al		0,100	0,0778	0,0605	0,0469	0,0367	0,0291	0,0247
Max. capacitance per phase		µF/km	0,149	0,158	0,169	0,189	0,203	0,218	0,232
Inductance per phase, Flat formation (0 0 0)		mH/km	0,681	0,665	0,647	0,621	0,605	0,591	0,579
Max. short circuit current of conductor	Cu	kA/sec	43,41	57,79	72,16	90,83	115,23	143,93	172,62
	Al		28,67	38,14	47,60	59,90	75,96	94,85	113,73
Maximum current carrying capacity in Ground at 30°C, Flat formation (0 0 0)	Cu	A	576	655	746	854	958	1.061	1.130
	Al		447	512	587	672	765	862	933
AC test Voltage		kV/30 min	218						

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