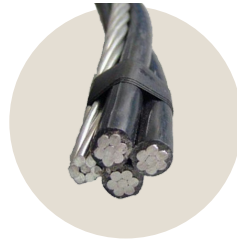


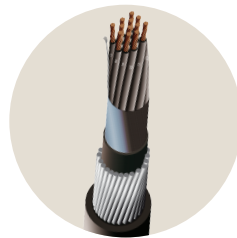
OUR PRODUCT RANGE



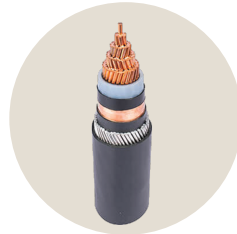
LT/HT Aerial Bunched Cables



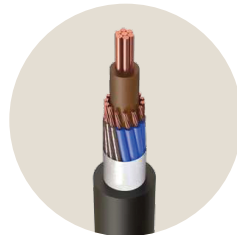
LT Power Cables



LT Copper Control Cables



HT Single Core XLPE Cables



Concentric Cables

Medium Voltage Covered Conductors
FOR LOSS REDUCTION...



MVCC CATALOGUE

www.pnscables.com



PNS Wires & Cables

An ISO 9001:2015 Certified Organization

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Medium Voltage Covered Conductors

Medium Voltage Covered Conductors are developed to improve the reliability of the distribution of electricity. Covered conductors consist of a conductor insulated by a covering made of insulating material(s) as protection against accidental contacts with other covered conductors and with grounded parts such as tree branches etc. MVCCs are produced in voltage rating between 6.6 KV to 33 KV. The applicable standards for MVCC are IEC: 61089/ IS: 398 Part-II/ BS EN: 50182/50397



Construction of MVCC

1. Conductor:

Longitudinally water tight stranded all aluminum alloy (AAAC) or aluminum conductor steel reinforced (ACSR)

2. Strand & Shield:

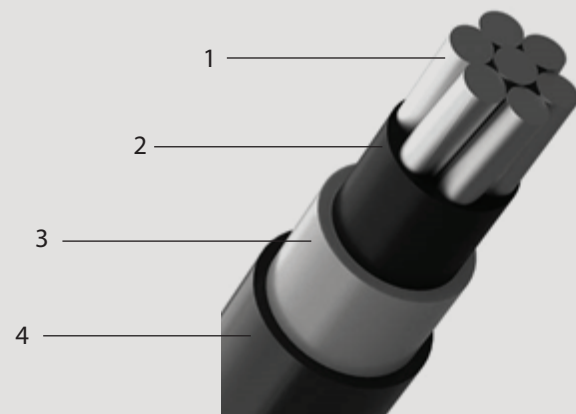
Semi conducting cross linked polymer

3. Inner Insulation:

Low density track resistant cross linked polyethylene (HDTRXLPE)

4. Outer Insulation:

High density track resistant cross linked polyethylene (HDTRXLPE)



Why Anti Tracking Properties are Required?

Without anti-tracking property XLPE/HDPE covered conductor fails at very short span of time. At PNS, anti-tracking jacketing has been specially designed to meet the outdoor conditions and performance requirements of 13.8 KV to 34.5 KV distribution networks. The material has an excellent resistance to arc, corrosion inhibitor, fungicide activity, oil resistance, and weather conditions like humidity, pollution, presence of salt in atmosphere etc. There is a special test method we have been carrying out for the anti-tracking in SS EN 50397-1.

Hassle free Installation

The easiest way to install covered conductors by maintaining pole to pole space between 50-70 meters. Standard poles of bare conductor can be used for covered conductors as the weight of covered conductors is only about 10-12 per cent higher than bare conductor due to insulation.



Applications of Covered Conductors

Covered conductors are the best economical solutions where ever the safety of human and wildlife is been challenged or compromised by bare conductors. It gives maintenance free overhead line reliability, security, safety and an uninterrupted power supply. The uses of covered conductor which is similar like SAC (Space Arial Bunch Cables) are seen in South Korea, Japan, Iran, Myanmar, some parts of Australia and growing demand in India.

1. MVCC is extensively used in voltage up gradation projects ranging between 6.6 KV to 33 KV
2. The outer jackets of MVCC being UV resistant, it can be used in high UV radiation areas
3. MVCC fulfills the demands in extreme cold environment with heavy snow and ice load
4. Ideal and safer solution for installations over river, lake, railway road crossings, slums, congested residential areas and in polluted areas
5. It can function smoothly with conductor temperature up to 80° C and in corrosive and highly polluted area.

Advantages of Covered Conductors

1. No interruptions by contact of over grown tree branches, it helps reduce power shut downs
2. No faults due to momentary clashing of phase conductors during wind & stormy conditions
3. Reduced tower installation & overhead cost by shortening of tower distance
4. Covered conductors are a cheaper alternative to underground and ABC cables
5. It has excellent features to reduce power interruptions and outage.
6. It protects big birds like peacocks and flamingos etc. Ideal choice for installation in forest areas, bird sanctuaries, difficult terrain in densely populated areas.

For Trade Enquiry: ☎ 98362 47799 / 93313 4779

TECHNICAL CHART

TECHNICAL PARAMETERS FOR 6.35/11KV RATING XLPE COVERED CONDUCTORS (AB CABLES) AS PER SS EN 50397-1-2021								
WATER BLOCKED ALUMINIUM ALLOY 1120 CONDUCTORS								
Physical Data								
Sl. No.	Product Code	Area (mm ²)	Type	No. of Strands	Approx. Overall Diameter of Stranded Conductor (mm)	Average Insulation Thickness (mm)	Nominal Diameter of Finished Cable (mm)	Linear Mass (Kg/KM)
1	CCSX 55	55	AAAC	7/3.15	9.45	2.6	12.10	255
2	CCSX 80	80	AAAC	7/3.81	11.43	2.6	14.10	340
3	CCSX 99	99	AAAC	7/4.24	12.72	2.6	15.40	402
4	CCSX 120	120	AAAC	19/2.83	14.15	2.6	16.80	469

Performance Data									
Sr. No.	Product Code	Area (mm ²)	Calculated Max. DC Resistance at 20°C (Ω/KM)	Approx. Calculated Breaking Load (kN)	Inductive Reactance at 50 Hz (Ω/KM)	Continuous Current Rating (A)			Modulus of Elasticity
						Still Air	1 m/s Wind	2 m/s Wind	
1	CCSX 55	55	0.621	16.03	0.3556	115	190	215	65
2	CCSX 80	80	0.425	23.41	0.3394	170	280	310	65
3	CCSX 99	99	0.339	29.26	0.3394	190	320	360	65
4	CCSX 120	120	0.293	32.64	0.3238	230	370	420	65

Note:

Continuous current ratings are based on an ambient temperature of 40°C, maximum conductor temperature of 80°C and solar radiation intensity of 1000 w/m2
Current ratings are based on initial and final conductor temperature of 80°C and 210°C respectively