

ALUMINIUM POWER CABLES

# Why Choose Sahra Kablo?

- Reliability
- 45 years experience
- Only Aluminum Cable
- Custom design products
- Wide product range
- Short lead time
- Capability of producing flexible solutions
- Modern production facility
- High product quality
- Always Aiming to be the best, not the biggest
- Well-Versed Team



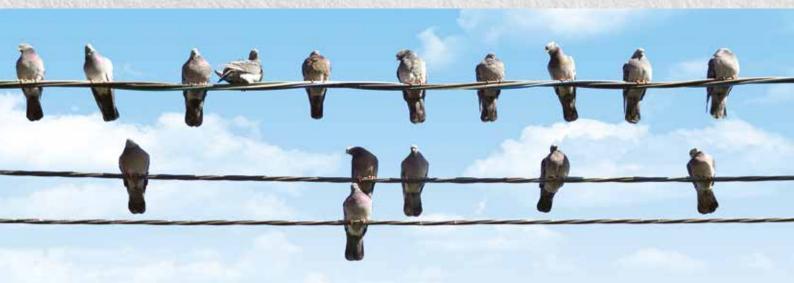


# Advantages of Aluminium Cables

- Lightweight
- Cost Saving
- Steady Quotation
- Efficient recycling
- Easy to install
- Easy maintenance
- Higher Flexibility
- No more problem in connection
- High corrosion resistance
- Youngest and most common metal in the earth surface



# AERIAL BUNDLED CABLES



#### **Application**

- Better choice because of flexibility for rerouting as demanded by changes in urban development plan
- In hilly terrains where cost of erection of overhead lines or underground cable becomes very high
- As replacement of bare lines where high degree of stability of supply voltage is of importance
- · As reinforcement of existing system without increasing voltage with limited budget
- Between Power cables and Overhead conductors
- Instead of bare conductors at low voltage networks
- In developing urban complex
- For temporary supplies
- · In theft prone areas

#### **Advantages**

- Lower voltage drop, higher current carrying capacitances vis-à-vis better voltage regulation and low inductance leading to low impedance of lines
- Insulation prevents corrosion of the conductor and danger risk of touching live conductor
- · Perfect for installation, erection and stringing in rural distribution in difficult terrains
- Longer spans and longer distance lines are possible with better system stability
- Can stand in close proximity to trees and will not generate sparks if touched
- · Possible faults are eleminated due to destruction of trees
- Electricity theft is made harder and more obvious to detect
- Lightweight and cheaper than power cables
- Much safer than bare Conductors





## NFA 2X / BAXB



#### **Construction**

- Aluminium Compacted Conductor
- Black XLPE Insulation
- Longitudinal Ridges- Public Lighting
- Insulated Alloy / Almelec Porter
- Paper Separation (Optional)

## **AsXSn**



#### **Construction**

- Aluminium Compacted Conductor
- Black XLPE Insulation
- Longitudinal Ridges
- Self Supporting Porter

## **AXKA**



#### **Construction**

- Aluminium Compacted Conductor
- Black XLPE Insulation
- Longitudinal Ridges- Public Lighting
- Bare Alloy Porter

## **AMKA**



- Aluminium Compacted Conductor
- Black HDPE Insulation
- Longitudinal Ridges
- Bare Alloy Porter



## **TWISTED CABLE**



#### **Construction**

- Aluminium Compacted Conductor
- Black XLPE Insulation
- Longitudinal Ridges
- Public Lighting
- Insulated Alloy / Almelec Porter

## **TWISTED CABLE**



#### **Construction**

- Aluminium Compacted Conductor
- Black XLPE / HDPE Insulation
- Longitudinal Colour Strip
- Self Supporting Porter

## **AER**



#### **Construction**

- Aluminium Compacted Conductor
- Black HDPE Insulation
- Longitudinal Ridges
- Public Lighting
- Bare Alloy Porter

## **ARE4RX**



- Aluminium Compacted Conductor
- Black XLPE Insulation
- Grey XLPE Sheath
- Self Supporting Porter



## СИП1 - СИП2



#### **Construction**

- Aluminium Compacted Conductor
- СИП 1 Black LDPE Insulation
- СИП 2 Black XLPE Insulation
- Longitudinal Ridges
- Bare Alloy or ACSR Porter

## СИП1А - СИП2А



#### **Construction**

- Aluminium Compacted Conductor
- СИП 1A Black LDPE Insulation
- СИП 2A Black XLPE Insulation
- Longitudinal Ridges
- Insulated Alloy or ACSR Porter

## СИП4 - СИП5



#### **Construction**

- Aluminium Compacted Conductor
- СИП 4 Black LDPE Insulation
- СИП 5 Black XLPE Insulation
- Longitudinal Ridges
- Self Supporting Porter

## **E-A2Y / E-XA2Y**



- Aluminium Compacted Conductor
- XLPE Insulation
- Longitudinal Ridges
- Public Lighting
- Self Supporting Porter



## **Aerial Concentric Cable**



#### **Construction**

- Stranded Conductor
- XLPE Insulation/Inner Sheath
- Alloyed Concentric Armour
- XLPE/HDPE Sheath

## **Aerial Concentric 2C Comm**



#### **Construction**

- Stranded Conductor
- XLPE Insulation/Inner Sheath
- Alloyed Concentric Armour
- 2C Communication Cable
- XLPE/HDPE Sheath

## СИП3

6 / 10 kV 12 / 20 kV



#### **Construction**

- Watertight Compacted AAAC
- XLPE Insulation

## СИП3

6 / 10 kV 12 / 20 kV



- Watertight Compacted ACSR
- XLPE Insulation



## **BLL-T / BLX-T**

6 / 10 kV 12 / 20 kV



#### **Construction**

- Watertight Compacted AAAC or ACSR
- Inner Semi Conductive Layer
- XLPE Insulation
- BLL-T HDPE Green Outer Sheath
- BLX-T Black XLPE Outer Sheath

## PAS-W / AAsXSn

6 / 10 kV 12 / 20 kV



#### Construction

- Watertight Compacted AAAC
- XLPE Insulation

## **MV 1 Core Aerial Cable**

6 / 10 kV 12 / 20 kV



#### Construction

- Watertight Compacted ACSR
- Inner Semi Conductive Layer
- XLPE Insulation
- PVC or HDPE Outer Sheath

## **MV Aerial Bundled Cable**

6 / 10 kV 12 / 20 kV



- Watertight Aluminium Compacted Conductor
- Inner Semi Conductive Layer
- XLPE Insulation
- Outer Semi Conductive Layer
- Copper Screening
- Black HDPE Outer Sheath
- Insulated Galvanised Steel Porter



## ALUMINIUM UNDERGROUND CABLES

#### **Application**

- Unarmoured cables are used preferably for installation indoors, in cable ducts and in industrial plants or switching stations underground installation with additional protection where mechanical damage is unexpected
- Armoured Cables can be used where mechanical damaged is expected

#### **Conductor**



RE - Solid Round



RM - Stranded Round



SE - Solid Sector Shaped



SM - Stranded Sector Shaped

#### Insulation

- PVC
- XLPE
- PE
- HFFR
- MICA TAPE

#### Filler

- PE
- PVC
- Rubber
- HFFR

#### **Screening**

- Round Copper Wire & Copper Binding Tape
- · Wave Form Round Copper Wire & Copper Binding Tape

#### **Armouring**

- · Galvanized Round Steel Wire
- Galvanized Flat Steel Wire
- · Galvanized Double Steel Tape
- Aluminium Wire (for One Core)

#### **Outer Sheath**

- PVC
- HDPE
- HFFR / LSOH
- HF FE 180 / E 90





## NAYY - NA2XY RE / RM



#### **Construction**

- Aluminium Round Compacted Conductor
- PVC or XLPE Insulation
- Filler
- PVC Outer Sheath

## **NAYY - NA2XY SM**



#### **Construction**

- Aluminium Sector Shape Compacted Conductor
- PVC or XLPE Insulation
- Filler
- PVC Outer Sheath

## **NAYY - NA2XY SE**



#### **Construction**

- Aluminium Sector Shape Solid Conductor
- PVC or XLPE Insulation
- Filler
- PVC Outer Sheath

## NAY2Y - NA2X2Y



- Aluminium Conductor (RM-RE-SE-SM)
- PVC or XLPE Insulation
- Filler
- HDPE Outer Sheath



## **NAYBY - NA2XBY**



#### **Construction**

- Aluminium Conductor (RM-RE-SE-SM)
- PVC or XLPE Insulation
- Inner Sheath
- Galvanized Double Steel Tape
- PVC Outer Sheath

#### NAYBY - NA2XBY



#### **Construction**

- Aluminium Conductor (RM-RE-SE-SM)
- PVC or XLPE Insulation
- Inner Sheath
- Galvanized Double Steel Tape
- PVC Outer Sheath

## **NAYRY - NA2XRY**



#### **Construction**

- Aluminium Conductor (RM-RE-SE-SM)
- PVC or XLPE Insulation
- Inner Sheath
- Galvanized Round Steel Wire
- PVC Outer Sheath

## **NAYFGbY - NA2XFGbY**



- Aluminium Conductor (RM-RE-SE-SM)
- PVC or XLPE Insulation
- Inner Sheath
- Galvanized Flat Steel Wire
- Galvanized Steel Binding Tape
- PVC Outer Sheath



## **NAYCY - NA2XCY**



#### **Construction**

- Aluminium Conductor (RM-RE-SE-SM)
- PVC or XLPE Insulation
- Inner Sheath
- Copper Concentric Screen
- Copper Binding Tape
- PVC Outer Sheath

## NAYCWY - NA2XCWY V-VMvKhsas



#### Construction

- Aluminium Conductor (RM-RE-SE-SM)
- PVC or XLPE Insulation
- Inner Sheath
- Wave Form Copper Wire
- Copper Binding Tape
- Pilot Wires (Optional)
- PVC Outer Sheath

## AKKJ - AMCMK V-VMvKhsas



#### Construction

- Aluminium Conductor (RM-RE-SE-SM)
- PVC Insulation
- Inner Sheath or Lapped Tape
- Copper Concentric Screen
- Copper Binding Tape
- Pilot Wires (Optional)
- PVC Outer Sheath

## **AXQJ - AXCMK**



- Aluminium Conductor (RM-RE-SE-SM)
- XLPE Insulation
- HF Inner Sheath
- Copper Concentric Screen
- Copper Binding Tape
- HFFR Outer Sheath



## **NA2XH**



#### **Construction**

- Aluminium Conductor (RM-RE-SE-SM)
- XLPE Insulation
- HF Filler
- Halogen Free Outer Sheath

## **NA2XRH**



## Construction

- Aluminium Conductor (RM-RE-SE-SM)
- XLPE Insulation
- HF Inner Sheath
- Galvanized Round Steel Wire
- Halogen Free Outer Sheath

## **NA2XH FE 180 / E 90**



#### **Construction**

- Aluminium Conductor (RM-RE-SE-SM)
- MICA Tape
- XLPE Insulation
- HF Filler
- HF FE 180 / E90 Outer Sheath

## **NA2XY-FR**



- Aluminium Conductor (RM-RE-SE-SM)
- XLPE Insulation
- Filler
- PVC-FR Outer Sheath



## **AL/XLPE/SWA/PVC**



#### **Construction**

- SE-Solid Sector Shaped
- XLPE Insulation
- Galvanized Round Steel Wire
- PVC Outer Sheath

## **Solar Cable**



#### Construction

- Aluminium Conductor
- XLPE Insulation
- Longitudinal AL Tape
- Rubber or HDPE Sheath

## **NAYY With Pilot Wire**



#### **Construction**

- Aluminium Conductor (RM-RE-SE-SM)
- PVC or XLPE Insulation
- Filler
- Insulated Pilot Wire
- PVC or HDPE Outer Sheath

## **AYBY / LVAV / SAVBT**



- Aluminium Conductor (RM-RE-SE-SM)
- PVC Insulation
- Inner Sheath
- Galvanized Double Steel Tape
- PVC Outer Sheath
- SAVBT Grey PVC Outer Sheath



## **U-1000 AR2V - EAXVB**



#### **Construction**

- Aluminium Conductor (RM-RE-SE-SM)
- XLPE Insulation
- Filler
- PVC Outer Sheath

## **H1XDV-AS - LXAV**



#### **Construction**

- Aluminium Conductor (RM-RE-SE-SM)
- XLPE Insulation
- Inner Sheath
- Galvanized Double Steel Tape
- PVC Outer Sheath

## **SZAMKAM**



#### **Construction**

- Aluminium Conductor (RM-RE-SE-SM)
- PVC Insulation
- Inner Sheath or Lapped Tape
- Aluminium Double Tape
- PVC Outer Sheath

## **Irrigation Cable**



- 3 Core (RM-RE-SE-SM)
- PVC or XLPE Insulation
- Filler
- Watertight Sheath



## AVVG - SAVT - AYKY E-AYY - YAKY - (N)AYY



#### **Construction**

- Aluminium Conductor (RM-RE-SE-SM)
- PVC Insulation
- Binding Tape or Filler
- Black PVC Outer Sheath
- SAVT Grey PVC Outer Sheath

## AVVG - SAVT - AYKY E-AYY - YAKY - (N)AYY



#### Construction

- Aluminium Conductor (RM-RE-SE-SM)
- PVC Insulation
- Binding Tape or Filler
- PVC Outer Sheath

## AXMK - YAKXS - N1XV AXPK - XP 00-A



#### Construction

- Aluminium Conductor (RM-RE-SE-SM)
- XLPE Insulation
- Binding Tape or Filler
- PVC Outer Sheath

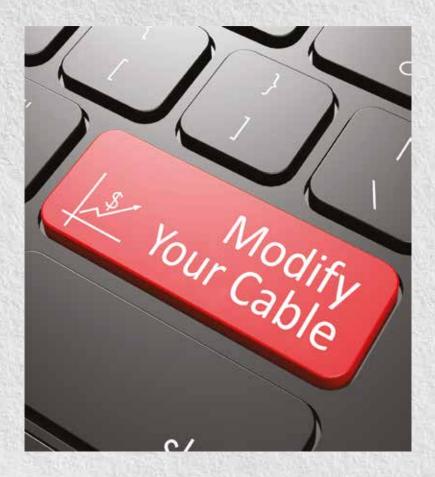
## N1XE - XAKXS - E-AY2Y



- Aluminium Conductor (RM-RE-SE-SM)
- N1XE XAKXS XLPE Insulation
- E-AY2Y PVC Insulation
- Binding Tape or Filler
- HDPE Outer Sheath



## ALUMINIUM FLEXIBLE CABLE



## **Application**

This Aluminium Flexible Cable is designed for

- ▶ Photovoltaic / Solar Systems
- ▶ Wind Turbine Generators
- ▶ Heat and Power Plants
- ▶ Railway Vehicles
- ▶ Automobiles
- ▶ Transformer Stations
- ▶ Switching Stations / Control Panels
- ▶ Where Limitation in torsion angle, hard radius curves and cycles
- ▶ In Fixed and Flexing Installation

#### Remark

This Cable is a "Custom Design Cable".

Any demand can be tailored.

## **Motion Types**







Rolling



Benning



Fatigue



Continuous



## H07BQ-AF / S07BQ-AF



#### Construction

- Flexibel Aluminium Conductor
- Annealing of Wires (Optional)
- Seperator Film / Tape (Optional)
- El 6 EPR Insulation
- TPE-U PUR Sheath

## H07RN-AF / 07RN-AF



#### Construction

- Flexibel Aluminium Conductor
- Annealing of Wires (Optional)
- Seperator Film / Tape (Optional)
- El 4 EPR Insulation
- EM 2 or PCP Sheath

## **H07BN4-AF / 07BN4-AF**



#### Construction

- Flexibel Aluminium Conductor
- Annealing of Wires (Optional)
- Seperator Film / Tape (Optional)
- El 7 EPR Insulation
- EM 7 or CSP Sheath

## **Solar Cable**



- Flexibel Aluminium Conductor
- Annealing of Wires (Optional)
- Seperator Film / Tape (Optional)
- XLHFFR Insulation
- XLHFFR Sheath



## **Wind Turbine Cable**



#### Construction

- Flexibel Aluminium Conductor
- Annealing of Wires (Optional)
- Seperator Film / Tape (Optional)
- EPDM Insulation
- Galvanized Steel Wire Shielding
- CSP Sheath

## **Extension Leads / PVC**



#### Construction

- Flexibel Aluminium Conductor
- Annealing of Wires (Optional)
- Seperator Film / Tape (Optional)
- PVC Insulation
- PVC Sheath

## **Extension Leads / CSP**



#### Construction

- Flexibel Aluminium Conductor
- Annealing of Wires (Optional)
- Seperator Film / Tape (Optional)
- EPR Insulation
- CSP Sheath

## **Automotive Battery Cable**



- Flexibel Aluminium Conductor
- Annealing of Wires (Optional)
- Seperator Film / Tape (Optional)
- Custom Formula Insulation
- Custom Formula Sheath



## **Multi Core Cables**



#### Construction

- Flexibel Aluminium Conductor
- Annealing of Wires (Optional)
- Seperator Film / Tape (Optional)
- Custom Formula Insulation
- Custom Formula Sheath

## **Multi Core Cables**



#### Construction

- Flexibel Aluminium Conductor
- Annealing of Wires (Optional)
- Seperator Film / Tape (Optional)
- XLPO Insulation
- TMPU or Custom Formula Sheath

## **Aluminium Welding Cable**



#### Construction

- Flexibel Aluminium Conductor
- Annealing of Wires (Optional)
- Seperator Film / Tape (Optional)
- EM 5 Sheath

## **Railway Cables**



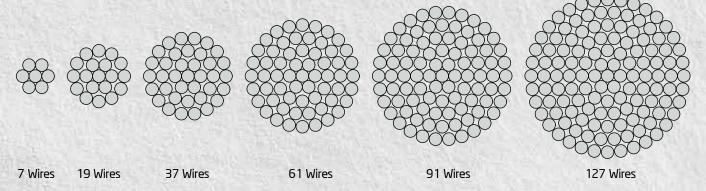
- Flexibel Aluminium Conductor
- Annealing of Wires (Optional)
- Seperator Film / Tape (Optional)
- CSP Sheath



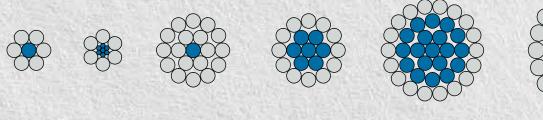
## ALUMINIUM OVERHEAD CONDUCTORS







#### **AACSR - ACSR Construction**



1 St + 6 Al

7 St + 6 Al 1 St + 18 Al

7 St + 12 Al

19 St + 18 AI



19 St + 54 Al



## AAC - A - AL



#### **Construction**

- Round, Stranded Aluminium Wires

## **AAAC - ALMELEC**



## Construction

- Round, Stranded AlMgSi Wires

## **AACSR**



#### **Construction**

- Galvanized Steel Core
- Round, Stranded AlMgSi Wires

## **ACSR - AS - AC**



- Galvanized Steel Core
- Round, Stranded Aluminium Wires



## ALUMINIUM BUILDING CABLES

## "Today, Aluminum building wiring is safe and reliable"

The fact is that aluminum is just as safe and just as reliable as copper, and it actually provides certain advantages over copper. Since 1970s, with the development of improved Conductors and connectors, changes have made installing aluminum building wire as simple as installing copper.

#### **During Connection, Please Consider**

- 1. Interoperability of Accessories and Aluminium
- 2. Workmanship Quality
- 3. Physical Properties of Accessories
- 4. Thermal Expansion Differences
- 5. Creep and Voltage Drop Conditions
- A Thin protective layer of Oxide layer on Aluminium is broken during termination process
- 7. Material Grade of Conductor
- 8. Proper tightening (torquing) is essential to achieve a reliable connection
- 9. All electrical connections should be periodically inspected
- 10. A compatible Oxide Inhibitor is recommended
- 11. Enviromental Conditions

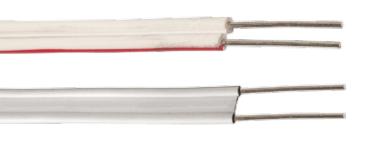
#### **During Connection, Please Avoid from**

- 1. Undesirable Accessories
- 2. Poor Workmanship
- 3. Imprudent termination
- 4. Improper tightening torque
- 5. Rapid conductor deformation due to creep
- 6. Excessive mechanical load and connector degradation
- 7. Do not re-torque the terminations as part of routine maintenance, if not loose
- 8. Over tightening can lead to damaged conductors and connection points





## **NAYIFY - APPV - CORDON**



#### **Construction**

- Aluminium Wire
- PVC Insulation
- Color Strip

#### **NAV**



## Construction

- Aluminium Conductor (RE-RM)
- HDPE or PVC Insulation

## **NAYM**



#### **Construction**

- Aluminium Wire
- PVC Insulation
- Filler
- PVC Outer Sheath

## **NIAYY**



- Aluminium Conductor (RE-RM)
- XLPE / HDPE / PVC Insulation
- PVC Outer Sheath



## CUSTOM DESIGN CABLES

## "You Desire, We Design"



Sahra Kablo, having an extensive range of manufacturing capability based on decades of experience, specializes in the design and production of custom design cables.

- Custom Design Cables can be tailored to your specific requirements
- · No two Customers' requirements are ever the same
- Custom Design Cables can be built to all manner of specifications
- We are applying our quality approach to cable manufacturing to produce a robust cable for the best possible cost
- We surely provide documentation of all the components including schematic drawings and data sheets provided to illustrate construction

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While You Are Reviewing This Catalog, We Probably Could Have Made Another Type of Aluminium Cables





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