



1. COMPACTED COPPER CONDUCTOR
2. CONDUCTOR SEMI-CON
3. XLPE INSULATION
4. INSULATION SEMI-CON
5. COPPER TAPE SCREEN
6. FR PVC INNER SHEATH
7. ALUMINIUM WIRE ARMOUR
8. FR PVC OUTER SHEATH

NEELKANTH CABLES LIMITED

DATA SHEET

SINGLE CORE XLPE ARMoured REDUCED FLAME PROPAGATION (FR) MEDIUM VOLTAGE CABLE

Single Core Cable Description : Copper Conductor,Semi-conducting conductor Screen,XLPE Insulated,Semi-conducting Insulation screen, Metallic screen over Individual Core,FR- PVC Inner Sheathed, Aluminium Wire Armoured, Overall FR-PVC Outer Sheathed,Medium Voltage Cable.

Make NEELKANTH CABLES LIMITED
 Reference Standard As per SANS:1339:2017
 Voltage Rating (U_o / U) 12.7/22 kV
 Maximum Operating Voltage (Um) 24 kV
 Operating Temperature 90°C
 Max. Temp. During Short Circuit 250°C

Range of Product Single Core 50 Sq.mm up to 1000 Sq.mm

Application

These Medium Voltage Single Core Cables are Designed for Electricity Power Distribution ,Suitable for Installation in Power Supply Stations,Commercial ,Industrial and Urban Residential Networks,Indoors and in Cable Ducts,Outdoors,Undergrounds and as well as for Installation on Cable Trays for industries, Switchboards and the power Stations.

Construction

Conductor Annealed Plain Copper Compacted Round Stranded Conductors to carry Current and withstand Pulling Stresses During Cable Laying.
 Conductors Complying with SANS 1411-1 Class-2

Inner Semi-Conducting Screen Extruded Layer of Semi-Conducting Screen over Conductor to Smooth the Electric Field at the Conductor and Firmly Bonded to the Insulation to exclude all air voids ,and Prevent Concentration of electric field of the interface between the Insulation and the Inner Semi-Conductor. Semi-Conducting Compound Complying with SANS 1339

Insulation The Insulation of XLPE (Cross-Linked Polyethylene)Rated Voltage, Lightning Overvoltage,Switching Overvoltage, and Withstand the Various Voltage Field Stress During the Cable Service Life.as per SANS 1411-4

Core Semi-Conducting Screen Extruded Layer of Semi-Conducting Screen over the Insulation . The Screen is Tightly Fitted to the Insulation to Exclude all air Voids,Prevent Concentration of electric field of the interface between the Insulation and the Semi-Conductor. Semi-Conducting Compound Complying with SANS 1339

Metallic Screen The Metallic Screen Shall Consist of either Copper Tapes or a Concentric layer of Copper Wires .The Metallic Layer may be applied over the Individual Cores .Metallic Screen Provide no Electric Field outer side the Cable,An Active Conductor for the Capacitive and Zero-Sequence short-circuit current,and Contribution to Mechanical Protection. as per SANS 1339

Filler (Optional) PVC or Polypropylene yarn

Inner Sheath/Bedding The Inner-sheath Comprises a layer of Extruded as per Requirement PVC Applied Under the Armour,Inner-sheath Compound Complying with SANS 1411-2

Armour The Armour Consists of Round Aluminium Wire for Single Core Cable, Applied over the Inner-sheath.Armour Material Complying with SANS 1411-6

Outer Sheath The Over all Outer-sheath Comprises a layer of Extruded as per Requirement PVC and Applied Over the Armour to Insulate the Mettalic Screen From the Surrounding Medium,to Protect the Mettalic Screen From Corrosion,to Reduce the contribution of cables to Fire Propagation,and Contribute to Mechanical Protection. Outer sheath Compound Complying with SANS 1411-2.
 Colour: Black with Red Stripe or as per Requirement

Technical Characteristic

Voltage Grade 12.7/22 kV
 Test Voltage 44 kV for 5 Minute (3.5 U_o r.m.s)
 Temperature Rating -15°C to +90°C
 Partial Discharge SANS 6291
 Resistivity of Semi-conducting Screen SANS 6284-2
 Flame Retardent SANS 60332 Part-3-24
 Minimum Installation Bending Radius 15(D+d)
 D= Nominal Diameter of the Cable,
 d=Nominal Diameter of the Conductor

Marking & Packing

Marking over the sheath NEELKANTH CABLES , CABLE SIZE, 12.7/22 kV CU/XLPE/CTS/PVC-FR/AWA/PVC-FR ELECTRIC CABLE , YEAR OF MANUFACTURING
 Sequential Length Marking Shall be provided on outer sheath at every one Meter
 Cable Length Multiple of 250/500 or as per Requirement
 Type of Drum Wooden Drum Fully Packed with Lagging

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