ENERGYA POWER CABLES-ELSEWEDY HELAL

Technical Department

Technical Offer For Triplex Cables IN Princable of IEC 60502-2 & NFC 33-226

Twisted cable 12 / 20 (24) KV with compacted circular stranded Plain Aluminum conductor , Extruded by semi conducting layer as conductor screen, XLPE insulated, Extruded by semi conducting layer as insulation screen (Stripabble type) Screened by AL FOIL , and extruded by colored Medium Density Poly Ethylene (MDPE) as an outer sheath

General Information:

Short Description: AL /XLPE/ MDPE

Voltage: 12 / 20 (24) KV

Conductor: Stranded Aluminum Conductor according to IEC 60228 Class 2

Inner Semi Conductor: Extruded Inner Semi Conductor (Bonded Type)

Insulation / Temperature: Cross Linked Polyethylene according to IEC 60502-2 / 90°C

Outer Semi Conductor: Extruded Outer Semi Conductor (Stripabble Type)

Semi Conductive Water Blocking Tape : Applied

Screening Type : AL FOIL

Phases are Identified by tapes

Drawing Description

1 Aluminium Conductor
2 Inner Semi Conductor
3 XLPE Insulation
4 Outer Semi Conductor
5 Semi Conductive water blocking Tape 6 AL foil
7 MDPE Sheath

Sheathing Material / Color: MDPE / BLACK

Packing:

-Cable shall be supplied in lengths as indicated in technical schedule on wooden or steel reels up to the manufacturer.
-Both ends of the cable shall be sealed to prevent the ingress of moisture during transportation and storage.
-Each reel shall be marked with type, size and length of Cable, and weight.

Cable Marking:

ENERGYA POWER CABLES-ELSEWEDY HELAL No. Core X Size MM2 12/20 KV AL/XLPE/MDPE 2021 Meter Marking

NoTE:

-This information shall be written on metallic tag nailed properly to the flange.

Tests:

Routine tests generally to IEC 60502-2 are performed on the cables and test certificate will be supplied on request.
Electrical Resistance of the conductors shall be tested on IEC 60228.
Voltage Test: No breakdown of The insulation shall occur, The applied Voltage and duration will be as Per IEC 60502-2

Electrical Data:

Maximum conductor operating temperature: 90 °C

Maximum screen operating temperature: 80 °C

Maximum conductor temperature during S.C: 250 °C

Maximum Screen temperature during S.C: 160 °C

Laying conditions at trefoil formation are as below:

-Soil thermal resistivity 100 °C.Cm/Watt
-Burial depth 0.5 m
-Ground temperature 20 °C
-Air temperature 30 °C
-Frequency 50 Hz

Specifications:

No. of Cores	Size (mm2)	Approximate Outer Diameter (mm)± 4mm	Approximate Cable Weight (Kg/Km)± 5%	Minimum Bending Radius (mm)	Cutting Length (MT) ± 10 %	Packing Type	Flange Diameter (mm)	Drum outer Width (mm)	min thickness of sheathing (mm)	Ins ulation Thic knes s (Nominal) (mm)	Inner S.C Thickness (Nominal) (mm)	Outer S.C Thickness (Nominal) (mm)
3 X 1 X 240		77.1	4278	1300	400	WOODEN DRUM	2350	1600	1.56	4.5	0.6	0.7

-Electrical Data:

Size (MM2)	Maximum Conductor DC Resistance at 20 °C (Ω/Km)	Conductor AC Resistance at Max. Operating Temp. and 50Hz (Ω/Km)	Capacitance (mF/Km)	Charging Current (A/Km)	Dielectric Losses (W/Km)	Reactance at 50 Hz (ohm/km)	Screen S.C.C 1 sec (KA)	Conductor S.C.C for 1 sec (KA)	Current Rating Laid in ground A	Current Rating Laid in free air A
3 X 1 X 240	0.125	0.161	0.321	1.21	58.08	0.153	2	22.488	465	509

-The above data is approximate and subjected to manufacturing tolerance.

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