HIGH VOLTAGE SINGLE CONDUCTOR CABLE
150 kV XLP 2000 kcmil Cu HDPE SC IEC 60840

General Cable

A Brand of Prysmian Group

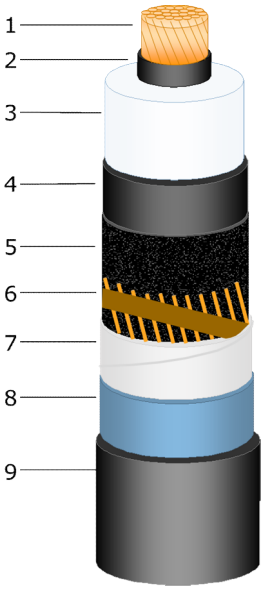
Cable description

The high voltage single conductor cables are made up of blocked compact soft copper conductor, with semiconductive shield over conductor, cross-linked polyethylene (XLP) insulation, extruded shield over insulation, semiconducting water-blocking tape, wire-based metal shield copper with copper tape applied in an open helix, semiconducting water-blocking tape, overlapped and sealed aluminum tape, and black high-density polyethylene (HDPE) jacket with a semiconductive layer.

Cable design

Code: E223FK592.0KFBNE

CONSTRUCTION	Nominal thickness mm	Nominal diameter mm
1. CONDUCTOR:	-	39.00
Class B soft copper compact round conductor, blocked from the longitudinal pass of water by blocking wires. Nominal cross section: 1010 mm².		
2. EXTRUDED THERMOSET SEMI-CONDUCTING STRESS CONTROL LAYER OVER CONDUCTOR:	1.60	43.10
Thermoset extruded semiconductor compound.		
3. INSULATION:	15.00	73.10
Cross-linked polyethylene (XLP), extruded in a true triple extrusion process.		
4. SEMICONDUCTOR SCREEN OVER INSULATION:	1.60	76.30
Thermostable extruded semiconductor compound, with adequate adhesion to insulation.		
5. SEMICONDUCTIVE WATER-BLOCKING TAPE:	0.3	76.90
Helically applied under the electrostatic screen, avoiding the longitudinal penetration of moisture.		
6. METALLIC SCREEN:	1.83	81.41
Helically applied soft bare copper wires with against spiral of copper tape. Formed by 30 copper wires of 1,829 mm		
7. SEMICONDUCTIVE WATER-BLOCKING TAPE:	0.3	82.60
Helically applied on the electrostatic screen, avoiding the longitudinal penetration of moisture.		
8. ALUMINUM TAPE:	0.20	83.22
Longitudinal aluminum tape overlapped and adhered to the jacket.		
9. JACKET:	5.00	93.72
Extruded black high density polyethylene (HDPE) jacket.		



Specifications and special features:

IEC-60840 Power cables with extruded insulation and their accessories for rated voltages above 30 kV (Um = 36 kV) Up to 150 kV (Um = 170 kV) - Test methods and requirements.

CFE E0000-17 CABLES DE POTENCIA PARA 69 kV A 138 kV CON AISLAMIENTO DE XLP.

NMX-J-142/2-ANCE-2011 CONDUCTORES - CABLES DE ENERGÍA CON PANTALLA METÁLICA, AISLADOS CON POLIETILENO DE CADENA CRUZADA O A BASE DE ETILENO - PROPILENO PARA TENSIONES DE 69 kV HASTA 115 kV - ESPECIFICACIONES Y MÉTODOS DE PRUEBA.

Maximum admissible temperature in the conductor in permanent service: 90°C
Maximum admissible temperature in the conductor in the short-circuit regimen 250°C

Packing

In non-returnable wooden or metallic reels according to the length of the sections. Tolerance on the length of ± 5%.

Applications

•Used in energy sub-transmission networks.
• Trenches.
•Underground ducts.
•Directly buried.
•Galleries.

Technical information

		units
Electrical resistance of the conductor at 20°C d.c.:	0.0174	Ω/km
Nominal capacity:	0.2416	µF/km
Maximum voltage between phases, Um:	170	kV
Impulse voltage, Up:	750	kV
Maximum short-circuit current in the conductor during 0.25 s:	289	kA
Maximum short-circuit current in the metallic screen (Cu wires + Al tape) during 0.25 s:	33.0	kA
Maximum pulling effort:	6000	kg
Approximate weight:	15 204	kg/km
Bending radius:		
• During the installation:	2.82	m
• Permanent:	1.88	m

Values indicated here are approximate and according to tolerances of manufacturing standards, for which they may vary.