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Member of CENERGY HOLDINGS

Technical data sheet for XLPE insulated cable

Single-core cables with copper round stranded compacted conductors, XLPE insulation, copper wire screen, polyethylene oversheath

General Description:	
Cable code:	FC_0337*
CPR Classification:	Fca
Standard Specification:	IEC 60502-2
Type of cable:	CU/XLPE/CWS/MDPE [2XS(FL)2Y]
Rated voltage Uo/U (Umax) / Rated frequancy:	12/20 (24) kV / 50Hz

Marking:

Over sheath marking by embossing or ink (Manufacturer's option) as follows:
HELLENIC CABLES 2022* ELECTRIC CABLE 12/20 KV IEC 60502-2 1x300**
* Year of manufacture
** Number of cores x Conductor's cross section
Meter marking at one-meter intervals by ink on over sheath
Internal code by ink (4 digits)

Cables' Structure:

1 Conductor:
Longitudinal water tight, annealed bare copper round stranded compacted class 2 IEC 60228

2 Semiconductive tape applied helically over conductors with cross-sections ≥ 400 mm^2 (Manufacturer's option)

3 Conductor non-metallic extruded screen:
Extruded semiconducting compound

4 Insulation:
XLPE according to IEC 60502-2
Nominal thicknesses are according to IEC 60502-2

5 Core non-metallic extruded screen:
Extruded semiconducting compound bonded to insulation

6 Semiconductive water blocking tape applied helically with overlap.

7 Metallic screen:
Copper wires helically applied over core and wrapped with a copper tape of 0.1 mm nominal thickness laid in open helix.
Nominal cross section of metallic screen including copper tape is according to IEC 60502-2

8 Semiconductive water blocking tape applied helically with overlap.

9 Radial watertightness:
AL/PE laminated tape of 0.15 mm approximate thickness bonded to over sheath, longitudinally applied with overlap.

10 Sheath:
HDPE type ST7 according to IEC 60502-2
Nominal thicknesses are according to IEC 60502-2
Sheath colour: Black (UV protected)

		Cable Engineering Department	
		Issued by:	A. Papargyriou
Date - Revision:	11/08/2022-0	Reviewed by:	P. Kolios, K. Tastavridis
Client:	-	Approved by:	G. Georgallis

Notes:

- Longitudinal water-tightness of the metallic screen, only, is tested according to IEC 60502-2, Annex F.
- Ambient working temperature: from -35°C to +35°C
- Installation temperature:-from -5°C to +35°C
- The highest working conductor temperature: +90°C
- Maximum permissible conductor temperature during short circuit: +250°C / 5s
- Minimum bending radius during installation: 15 x D
- Maximum pulling force: Sx50 N/mm2
- Maximum conductor DC resistance at 20 °C (according to EN 60228): 0.0366 Ω/km
- Continuous current rating in ground (trefoil touching formation, 1 circuit, load factor 0.7, ground temperature 20 °C, conductor temperature 90 °C, depth of laying 0.7 m, thermal resistivity of damp soil 1.0 Km/W, thermal resistivity of dried soil 2.5 Km/W): 760 A
- Continuous current rating in air (trefoil touching formation, 1 circuit, load factor 1.0, ambient air temperature 30 °C, conductor temperature 90 °C): 940 A
- Exploitation conditions: in a ground and in the air
- Installation altitude 1000m
- Life time: > 40 years
- Warranty time: 24 months

Cable design	*Cable description*	*Conductor cross-section (sq.mm)*	*Insulation nominal thick. (mm)*	*Metallic screen nom. cross-section (sq.mm)*	*Sheath nominal thick. (mm)*	*Approx. cable diameter (mm)*	*Approx. cable weight (kg/m)*
FC_0337_0125	*CU/XLPE/CWS/MDPE 1X50 RM 12/20 (24) kV IEC:60502-2*	*50*	*5,5*	*16*	*1,8*	*27,3*	*1,0*
FC_0337_0126	*CU/XLPE/CWS/MDPE 1X70 RM 12/20 (24) kV IEC:60502-2*	*70*	*5,5*	*16*	*1,9*	*29,0*	*1,2*
FC_0337_0127	*CU/XLPE/CWS/MDPE 1X95 RM 12/20 (24) kV IEC:60502-2*	*95*	*5,5*	*16*	*1,9*	*30,7*	*1,5*
FC_0337_0128	*CU/XLPE/CWS/MDPE 1X120 RM 12/20 (24) kV IEC:60502-2*	*120*	*5,5*	*16*	*2,0*	*32,4*	*1,8*
FC_0337_0129	*CU/XLPE/CWS/MDPE 1X150 RM 12/20 (24) kV IEC:60502-2*	*150*	*5,5*	*25*	*2,0*	*33,7*	*2,1*
FC_0337_0130	*CU/XLPE/CWS/MDPE 1X185 RM 12/20 (24) kV IEC:60502-2*	*185*	*5,5*	*25*	*2,1*	*35,7*	*2,5*
FC_0337_0131	*CU/XLPE/CWS/MDPE 1X240 RM 12/20 (24) kV IEC:60502-2*	*240*	*5,5*	*25*	*2,1*	*37,9*	*3,1*
FC_0337_0132	*CU/XLPE/CWS/MDPE 1X300 RM 12/20 (24) kV IEC:60502-2*	*300*	*5,5*	*25*	*2,2*	*40,2*	*3,7*
FC_0337_0133	*CU/XLPE/CWS/MDPE 1X400 RM 12/20 (24) kV IEC:60502-2*	*400*	*5,5*	*35*	*2,3*	*44,1*	*4,6*
FC_0337_0134	*CU/XLPE/CWS/MDPE 1X500 RM 12/20 (24) kV IEC:60502-2*	*500*	*5,5*	*35*	*2,4*	*47,2*	*5,6*
FC_0337_0135	*CU/XLPE/CWS/MDPE 1X630 RM 12/20 (24) kV IEC:60502-2*	*630*	*5,5*	*35*	*2,5*	*51,2*	*7,1*
FC_0337_0136	*CU/XLPE/CWS/MDPE 1X800 RM 12/20 (24) kV IEC:60502-2*	*800*	*5,5*	*35*	*2,7*	*55,9*	*8,8*
FC_0337_0137	*CU/XLPE/CWS/MDPE 1X1000 RM 12/20 (24) kV IEC:60502-2*	*1000*	*5,5*	*35*	*2,8*	*61,1*	*10,9*