HELLENIC CABLES S.A.

HELLENIC CABLE INDUSTRY S.A

Technical data sheet for XLPE insulated cable

Single core cable with aluminium round compacted conductor, XLPE insulation, aluminium wire screen, polyethylene oversheath

General Description:		
Cable code:	FC_0146_0006 (750146016561*)	
Standard Specification:	IEC:60502-2	
Type of cable:	AL/XLPE/AWS/HDPE	
Rated voltage Uo/U (Umax):	19/33 (36) kV	
Number of cores x Nominal cross section:	1x150 sq. mm	
Approximate cable overall diameter:	41 mm	
Approximate cable overall weight:	1.6 kg/m	
Nominal drum length (Tolerance):	1400 m (+/-5)%	

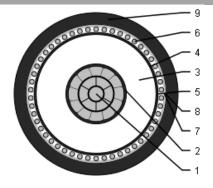
<u>Marking:</u>

Oversheath marking by indenting as follows:

• CABLEL 0317 2019* ELECTRIC CABLE 19/33 KV IEC 60502-2 AL/XLPE/AWS/HDPE 1x150RM/58AL *Year of manufacture

Meter marking at one-meter intervals by indenting on oversheath (from zero on each drum)

Cable Structure:



1 Conductor:

Aluminium round stranded compacted class 2 IEC 60228 of nominal cross-section equal to 150 sq.mm longitudinally waterblocked by waterblocking yarns and waterblocking tapes between conductor inner strands

- 2 Conductor Non-Metallic Extruded Screen: Extruded semiconducting compound
- 3 Insulation: XLPE according to IEC 60502-2 of 8.0 mm nominal thickness.
- 4 Core Non-Metallic Extruded Screen: Extruded semiconducting compound bonded to Insulation
- 5 Semiconductive waterblocking tape applied helically with overlap
- Metallic screen: Aluminum Wire Screen helically applied Nominal cross section of aluminium (sq. mm): 58
- 7 Semiconductive waterblocking tape applied helically with overlap
- 8 Radial watertightness:

AL/PE laminated tape of 0.15 mm approximate thickness bonded to oversheath, longitudinally applied with overlap.

9 Sheath:

HDPE type ST7 according to IEC 60502-2 of 3.0 mm minimum average thickness with UV additive. Sheath colour: Black

Y/S: 081/19	Cable Engineer	Cable Engineering Department	
Т.М.К.: 013/19	Issued by:	G. Stavrianoudakis	
Date - Revision: 28/02/2019-1	Reviewed by:	P. Kolios, K. Tastavridis	
Client: RARIK-ICELAND	Approved by:	G. Georgallis	





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Longitudinal water tightness of conductor and metallic screen are tested according to IEC 6		
 Aluminium wire screen resistance is equivalent to copper 35 sq.mm resistance, according to 	o IEC 60228.	
<u>Electrical Data:</u>		
Frequency:	50	Hz
Maximum conductor's temperature at continuous operation:	90	°C
Maximum conductor DC resistance at 20°C:	0.206	Ω/km
Calculated conductor AC resistance at maximum operating temperature:	0.264	Ω/kn
Calculated inductance:	0.41	mH/k
Nominal phase capacitance:		
Calculated considering nominal insulation thickness	0.19	μF/kr
Calculated reactance:	0.13	Ω/km
Maximum permissible short-circuit current of the conductor for 1 second duration:	14.1	kA
Continuous current carrying capacity of cables – trefoil touching formation:		
Directly buried in ground		
Installation conditions:		
- 1 circuit		
- Load factor: 1.0	281	A
- Ground temperature: 20oC		
- Ground thermal resistivity: 1.5 K.m/W		
-Thermal resistivity of earthenware ducts: 1.2 K.m/W		
- Depth of laying: 0.8 m		
- Metallic sheaths are bonded at both ends		
In a buried duct		
Installation conditions:		
- 1 circuit		
- Load factor: 1.0	267	A
- Ground temperature: 20oC	207	A
- Ground thermal resistivity: 1.5 K.m/W		
-Thermal resistivity of earthenware ducts: 1.2 K.m/W		
- Depth of laying: 0.8 m		
- Metallic sheaths are bonded at both ends		
• In air		
Installation conditions:		
- 1 circuit		
- load factor: 1.0	368	А
- Ambient air temperature: 30°C	500	A
- No solar radiation considered		
- Metallic sheaths are bonded at both ends		
		<u> </u>
Installation Data:		
Minimum bending radius during installation directly in ground:	850	mm

Y/S:	081/19	Cable Engineering Department	
T.M.K.:	013/19	Issued by:	G. Stavrianoudakis
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