Technical Data for XLPE Insulated Cables

Four-core cable with aluminium sector shaped solid conductors, XLPE insulation, concentric copper conductor, PVC oversheath

General Description:

Cable code:	75152309826131
Standard specification:	BS 7870-3.40
Type of cable:	XLPE/NE(WAVEFORM)/PVC
Rated voltage Uo/U (Umax):	0.6/1 (1.2) kV
Number of cores x Nominal cross-section:	4x95 mm²
Approximate cable overall diameter:	36 mm
Approximate cable overall weight:	2.3 kg/m
Nominal drum length (Tolerance):	250 m (± 0%) Approx. external drum dimensions (height x width, m): 1.60 x 1.10 Approx. drum gross weight: 900 kg

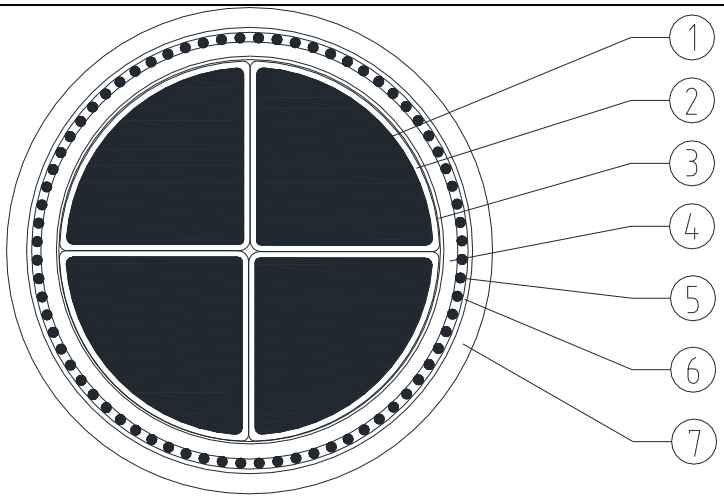
Oversheath marking by embossing in two lines as follows:

●CABLEL 0317 2016* ELECTRIC CABLE 600/1000V BS 7870-3.40 Batch No
ELECTRIC CABLE 600/1000V BS 7870-3.40 4x95 AL

** Year of manufacture*

Meter marking at one-meter intervals by ink on oversheath

Cable structure:



1 - Conductor:
Aluminium sector shaped solid class 1 (maximum DC resistance according BS EN 60228, geometrical shape according to BS 3988) of nominal cross-section equal to 95 sq.mm.

2 - Insulation:
XLPE type DIX3 according to BS 7870-1 of 1.1 mm minimum average thickness.
Core identification (skin colouration): Blue - Brown - Black - Grey

3 - Binding tape.

4 - Extruded rubber filling compound.

5 - Concentric conductor:
Copper wires concentrically applied over core with a waveform lay with a structure of approximate 30x1.58mm.

6 - Binding tape.

7 - Sheath:
PVC type DMV 23 according to BS 7870-1 of 2.2 mm minimum average thickness with UV additive.
Sheath colour: Black

Notes:

- The cables are fully tested according to BS 7870-3.40.

Υ.Σ.:	2318/2015	Cable Engineering Department	
Τ.Μ.Κ.:	578/2015	Issued by:	M. Papagiannis
Date – Revision:	18/08/2017 – 1	Reviewed by:	P. Kolios - K. Tastavridis
Client – Destination country:	UK	Approved by:	G. Georgallis

Electrical Data:

Frequency:	50	Hz
Maximum conductor's temperature at continuous operation:	90	°C
Maximum conductor DC resistance at 20°C:	0.320	Ω/km
Calculated conductor AC resistance at maximum operating temperature:	0.42	Ω/km
Maximum DC resistance of concentric conductor at 20°C:	0.320	Ω/km
Calculated inductive reactance:	0.070	Ω/km
Calculated phase capacitance:	$0.847 \cdot 10^{6}$	pF/km
Calculated charging current: *Based on the calculated phase capacitance and operating phase-to-ground voltage*	0.16	mA/m/phase
Zero sequence impedance: *Return through metallic sheath only, resistance calculated at 20°C*	1.279+j·0.089	Ω/km

Continuous current carrying capacity of cables:

A	- *Cable laid directly in ground* - *Soil thermal resistivity: 1.2 K.m/W* - *Depth of laying (top of the cables): 0.45 m* - *Ground temperature: 15 °C,* - *Load factor: 1.0* - *One cable*		
	Current:	237	A, for each phase
B	- *Cable laid directly in ground* - *Soil thermal resistivity: 0.9 K.m/W* - *Depth of laying (top of the cables): 0.45 m* - *Ground temperature: 15 °C,* - *Load factor: 1.0* - *One cable*		
	Current:	260	A, for each phase
C	- *Cable in single way PE duct of 150mm internal diameter* - *Soil thermal resistivity: 1.2 K.m/W* - *Depth of laying (top of the cables): 0.45 m* - *Ground temperature: 15 °C,* - *Load factor: 1.0* - *One cable*		
	Current:	197	A, for each phase
D	- *Cable in single way PE duct of 150mm internal diameter* - *Soil thermal resistivity: 0.9 K.m/W* - *Depth of laying (top of the cables): 0.45 m* - *Ground temperature: 15 °C,* - *Load factor: 1.0* - *One cable*		
	Current:	204	A, for each phase
E	- *Cable laid in air (not exposed in sunlight)* - *Air temperature: 25 °C* - *Load factor: 1.0* - *One cable*		
	Current:	227	A, for each phase

Maximum pulling force with pulling head attached on one conductor:	290	kgF
Maximum pulling force with pulling stocking:	1160	kgF
Minimum dynamic bending radius during installation directly in ground:	300	mm
Minimum static bending radius adjacent to joints or termination with former:	300	mm

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