Technical Data Sheet for Medium Voltage Cable

(11-10)

Bundled cable consisting of three phase cores, each one with aluminium round solid conductor, XLPE insulated, copper wire screen, polyethylene oversheath

3x(1x300) mm² 6.35/11 (12) KV BS 7870-4.10

CABLEL®

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General Description:

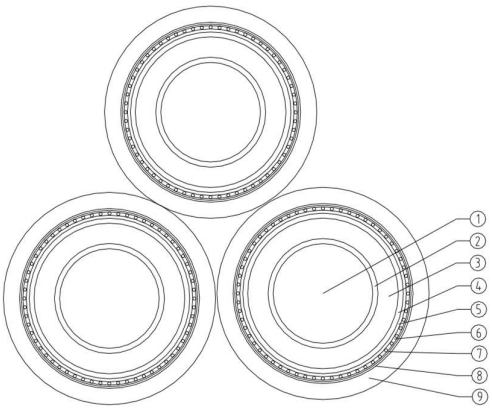
Cable code:	75060607816632
Standard specification:	BS 7870-4.10
Type of cable:	XLPE/CWS/MDPE
Rated voltage Uo/U (Umax):	6.35/11 (12) KV
Number of cores x Nominal cross-section:	3x(1x300) mm²
Approximate cable overall diameter:	79 mm
Approximate cable overall weight:	5.2 kg/m
Nominal drum length (Tolerance):	300 m (± 5%) (approximate dimensions in meters: 2.2 x 1.2)

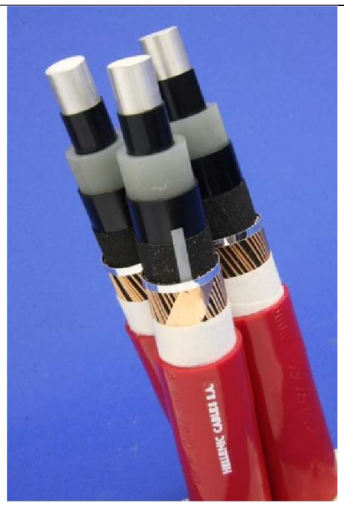
Oversheath marking by embossing in two lines as follows:

- CABLEL 2010* ELECTRIC CABLE 11000 V BS 7870-4.10
  ELECTRIC CABLE 11000 V BS 7870-4.10 1x300 AL

** Year of manufacture*

Cable Structure:





1 - Conductor:
Aluminium round solid class 1 IEC 60228 of nominal cross-section equal to 300 sq.mm

2 - Conductor non-metallic extruded screen: Extruded semiconducting compound

3 - Insulation:
XLPE according to BS 7870-4.10 of 3.4 mm nominal thickness

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

- Core identification with plastic strips applied longitudinally under metallic screen: BROWN - BLACK - GREY

5 - Semiconductive waterblocking tape applied helically with overlap

6, 7 - Metallic screen:
Copper wires helically applied over each individual core and wrapped with a copper tape of 0.1 mm nominal thickness laid in open helix. Nominal cross section (sq.mm): 35

8 - Waterblocking tape applied helically with overlap

9 - Sheath:
MDPE according to BS 7870-4.10 of 2.1 mm nominal thickness. Sheath colour: RED

Notes:

There is no meter marking on the oversheath of cables. Meter marking on one of the three cables could be provided if required (As the cables are bundled, the meter marking does not correspond to the real length of the triplex system of cables).

Long term type test report according to VDE 0276/620 is available for similar cables

Y.Σ.:	557/2010	Design & Development Department	
T.M.K.:	258/2010	Detailed by:	K. Tastavridis
Date – Revision:	21/05/2010 – 0	Checked by:	D. Tsiavos
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:	0.100	Ω/km
Calculated conductor AC resistance at maximum operating temperature: *Cables in trefoil touching formation*	0.130	Ω/km
Calculated inductive reactance: *Cables in trefoil touching formation*	0.107	Ω/km
Calculated phase capacitance:	0.492	μF/km

Calculated charging current: *Based on the calculated phase capacitance and operating phase-to-ground voltage*		0.98	mA/m/phase
Zero sequence impedance: *Return through copper wire screen only, resistance calculated at maximum operation temperature*		0.762 +j·0.044	Ω/km
Continuous current currying capacity of cables laid directly in ground - *Soil thermal resistivity: 1.2 K.m/W* - *Depth of laying: 0.6 m* - *Ground temperature: 15°C* - *Load factor: 1.0 - One circuit* Continuous current currying capacity of cables laid in air (not exposed in sunlight) - *Air temperature: 25°C* - *Load factor: 1.0* - *One circuit*			
A	- *Trefoil touching formation in ground* - *Metallic sheaths solidly-bonded (At both ends)*		
	Current:	476 (463 at 0.8m depth)	A, for each phase
B	- *Trefoil touching formation in air* - *Metallic sheaths solidly-bonded (At both ends)*		
	Current:	551 touching wall and 585 at 0.5d from wall	A, for each phase
Installation Data:			
Maximum pulling force with pulling eye:		9 (for each conductor)	kN
Minimum installation temperature:		0	°C
Minimum bending radius during installation directly in ground:		20 x cable system diameter	m
Minimum bending radius adjacent to joints or termination with former:		15 x cable system diameter	m