PRODUCT SPECIFICATION

EPM88251

LXHIOE(cbe) 1x"S"/35 19/33kV

Medium voltage power cable

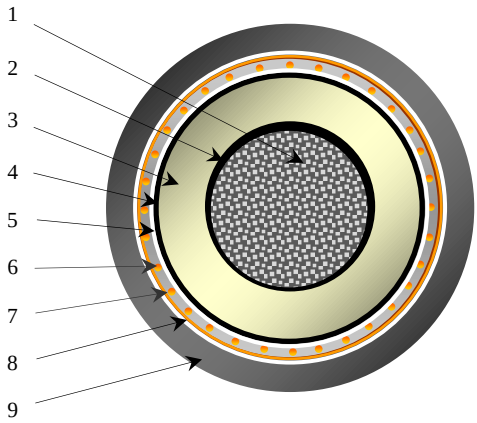
Single core cable

Aluminium conductor, waterblocked

XLPE insulation, triple extrusion

Copper wires and tape metallic screen, waterblocked

MDPE outer sheath



Schematic cross section drawing

Standards

BS EN 60228
BS 7870-4.10
Halogen free – IEC 60754-1
Low corrosivity – IEC 60754-2

Rated voltage

$U_0/U(U_m)$ – 19/33(36) kV

Outer sheath colour

BLACK

Marking

Over the outer sheath, according to BS 7870-4.10, clause 4.5.

1 – Circular stranded compacted aluminum conductor, class 2, according to BS EN 60228.
Waterblocked conductor by means of swellable yarns and/or tapes.

2 – Semi-conducting compound conductor screen.

3 – Cross-linked polyethylene (XLPE) insulation.

4 – Semi-conducting compound insulation screen, **fully bonded**.

5 – Semi-conductive water blocking tape, helically applied.

6 – Copper wires metallic screen, helically applied.

7 – Equalizing copper tape applied in an open counter helix.

8 – Water blocking tape, helically applied.

9 – MDPE outer sheath, type DMP 5.

PRODUCT SPECIFICATION

EPM88251

Technical characteristics

	95	120	150	185
Conductor diameter (mm)	11,2	12,5	14,0	15,5
Minimum conductor screen thickness (mm)	0,3	0,3	0,3	0,3
Nominal insulation thickness (mm)	8,0	8,0	8,0	8,0
Nominal diameter over insulation (mm) [1]	28,4	29,7	31,2	32,7
Minimum insulation screen thickness (mm)	0,3	0,3	0,3	0,3
Nominal outer sheath thickness (mm)	2,1	2,1	2,2	2,2
Approximated outer diameter of cable - D (mm)	37	39	40	42
Approximated final weight (kg/km)	1400	1510	1660	1810
Max. conductor resistance, d.c. @ 20ºC (Ω/km)	0,320	0,253	0,206	0,164
Conductor resistance, a.c. @ 90ºC (Ω/km)	0,411	0,325	0,265	0,211
Inductance - trefoil (mH/km)	0,43	0,41	0,40	0,39
Capacitance (µF/km)	0,17	0,18	0,19	0,21
Rated current, trefoil, installed in air, 30ºC (A)	280	324	368	424
Rated current, trefoil, directly buried, 20ºC, 0,8m, 1,5K.m/W (A)	221	252	281	317
Max. short-circuit current, in conductor, during 1s (Ti=90ºC; Tf=250ºC) (kA)	8,9	11,3	14,1	17,4
Max. short-circuit current, in metallic screen, during 1s (Ti=80ºC; Tf=180ºC) (kA)	4,8	4,8	4,8	4,8
Minimum bending radius - installation (mm)	20 x D	20 x D	20 x D	20 x D
Minimum bending radius - permanent (mm)	15 x D	15 x D	15 x D	15 x D
Maximum pulling force, pulling head (daN)	285	360	450	555

	240	300	400	500
Conductor diameter (mm)	17,9	20,0	23,1	26,9
Minimum conductor screen thickness (mm)	0,3	0,3	0,3	0,3
Nominal insulation thickness (mm)	8,0	8,0	8,0	8,0
Nominal diameter over insulation (mm) [1]	35,1	37,2	40,3	45,2
Minimum insulation screen thickness (mm)	0,3	0,3	0,3	0,3
Nominal outer sheath thickness (mm)	2,3	2,4	2,5	2,6
Approximated outer diameter of cable - D (mm)	44	47	50	55
Approximated final weight (kg/km)	2060	2300	2660	3160
Max. conductor resistance, d.c. @ 20ºC (Ω/km)	0,125	0,100	0,0778	0,0605
Conductor resistance, a.c. @ 90ºC (Ω/km)	0,161	0,130	0,102	0,080
Inductance - trefoil (mH/km)	0,37	0,35	0,34	0,33
Capacitance (µF/km)	0,23	0,25	0,27	0,32
Rated current, trefoil, installed in air, 30ºC (A)	502	577	673	800
Rated current, trefoil, directly buried, 20ºC, 0,8m, 1,5K.m/W (A)	367	414	470	536
Max. short-circuit current, in conductor, during 1s (Ti=90ºC; Tf=250ºC) (kA)	22,6	28,3	37,7	47,2
Max. short-circuit current, in metallic screen, during 1s (Ti=80ºC; Tf=180ºC) (kA)	4,8	4,8	4,8	4,8
Minimum bending radius - installation (mm)	20 x D	20 x D	20 x D	20 x D
Minimum bending radius - permanent (mm)	15 x D	15 x D	15 x D	15 x D
Maximum pulling force, pulling head (daN)	720	900	1200	1500

[1] Does not include insulation screen (4 in the schematic drawing)

PRODUCT SPECIFICATION

EPM88251

	630	**800**	**1000**
Conductor diameter (mm)	29,1	34,0	38,5
Minimum conductor screen thickness (mm)	0,3	0,3	0,3
Nominal insulation thickness (mm)	8,0	8,0	8,0
Nominal diameter over insulation (mm) [1]	47,4	52,3	56,8
Minimum insulation screen thickness (mm)	0,3	0,3	0,3
Nominal outer sheath thickness (mm)	2,7	2,8	3,0
Approximated outer diameter of cable - D (mm)	57	62	67
Approximated final weight (kg/km)	3620	4360	5260
Max. conductor resistance, d.c. @ 20ºC (Ω/km)	0,0469	0,0367	0,0291
Conductor resistance, a.c. @ 90ºC (Ω/km)	0,063	0,051	0,042
Inductance - trefoil (mH/km)	0,32	0,31	0,30
Capacitance (µF/km)	0,34	0,38	0,42
Rated current, trefoil, installed in air, 30ºC (A)	920	1067	1212
Rated current, trefoil, directly buried, 20ºC, 0,8m, 1,5K.m/W (A)	606	679	753
Max. short-circuit current, in conductor, during 1s (Ti=90ºC; Tf=250ºC) (kA)	59,5	75,5	94,4
Max. short-circuit current, in metallic screen, during 1s (Ti=80ºC; Tf=180ºC) (kA)	4,8	4,8	4,8
Minimum bending radius - installation (mm)	20 x D	20 x D	20 x D
Minimum bending radius - permanent (mm)	15 x D	15 x D	15 x D
Maximum pulling force, pulling head (daN)	1890	2400	3000