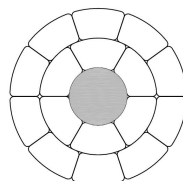


# DATA SHEET: LISBON



Version 2, 21/01/'09

Conductor Type		LF ACCC 325				
Code Name		LISBON				
Conductor values:						
Nominal aluminium equivalent area	mm²	329				
Nominal Cross-sectional area of aluminium	mm²	318,7				
Nominal Cross-sectional area of Core	mm²	39,7				
Number, diameter and type of Core	#, mm	1	7,11	R	CC	
Number, (eq.) diameter and type of wire in layer 1	#, mm	6	5,04	T	Al	
Number, (eq.) diameter and type of wire in layer 2	#, mm	10	5,03	T	Al	
Minimum filling factor of the aluminium cross section	%	93				
Lay ratio of inner layer(s)		10-16				
Lay ratio of outer layer		10-14				
Overall diameter	mm	21,78				
Diameter of Core	mm	7,11				
Diameter tolerance of Core	mm	± 0,06				
Rated Tensile Strength of Conductor (RTS as per ASTM B 857) *	kN	103,7				
Extreme Load Safety Strength of Conductor (with 40% of the aluminium strength) **	kN	93,2				
Rated Tensile Strength of Core	kN	85,8				
Nominal Mass per unit length - Total	kg/km	956,6				
Nominal Mass per unit length - Aluminium	kg/km	880,6				
Nominal Mass per unit length - Core	kg/km	76,0				
DC resistance at 20 °C (nominal)	Ohm/km	0,0878				
DC resistance at 20 °C (maximum)	Ohm/km	0,0896				
DC current rating at maximum continuous surface operating temperature *** (calculated with maximum DC resistance at 20°C)	A, °C	1273	175			
Maximum allowable continuous operating temperature (surface)	°C	175				
Maximum allowable continuous operating temperature (core)	°C	180				
Coefficient of linear expansion above thermal kneepoint	/ K	0,00000161				
Coefficient of linear expansion below thermal kneepoint	/ K	0,0000186				
Modulus of elasticity above thermal kneepoint	GPa	118,6				
Modulus of elasticity below thermal kneepoint	GPa	63,5				
Individual wires:						
Resistivity of aluminium at 20 °C (maximum)	nohmm	27,35				
Minimum tensile strength, aluminium wire	MPa	58,6				

Standard applied for conductor manufacturer: EN50182

\* Note ASTM calculates aluminium strength at 96% of the minimum Tensile Strength of the aluminium wire

\*\* This safety strength is recommended where sustained loads of over 80% of the RTS are expected for prolonged periods. For further information, please see the ACCC Conductor Technical Note TN-750-001.

\*\*\* Conditions: Wind : 0,6m/s; emissivity= abs. Coef. = 0,5; sun radiation : 1000W/m<sup>2</sup>; Ambient temperature: 25 °C