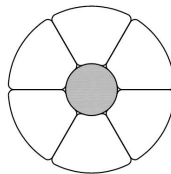


# DATA SHEET:

BERN

Version 1, 10/10/'08



Conductor Type		LF ACCC 165				
Code Name		BERN				
Conductor values:						
Nominal aluminium equivalent area	mm²	171				
Nominal Cross-sectional area of aluminium	mm²	165,1				
Nominal Cross-sectional area of Core	mm²	18,2				
Number, diameter and type of Core	#, mm	1	4,82	R	CC	
Number, (eq.) diameter and type of wire in layer 1	#, mm	6	5,92	T	Al	
Minimum filling factor of the aluminium cross section	%	93				
Lay ratio of aluminium		10-16				
Lay ratio of outer layer		10-14				
Overall diameter	mm	15,50				
Diameter of Core	mm	4,82				
Diameter tolerance of Core	mm	± 0,06				
Rated Tensile Strength of Conductor (RTS as per ASTM B 857) *	kN	53,3				
Extreme Load Safety Strength of Conductor (with 40% of the aluminium strength) **	kN	47,8				
Rated Tensile Strength of Core	kN	44,0				
Nominal Mass per unit length - Total	kg/km	488,1				
Nominal Mass per unit length - Aluminium	kg/km	453,4				
Nominal Mass per unit length - Core	kg/km	34,8				
DC resistance at 20 °C (nominal)	Ohm/km	0,1686				
DC resistance at 20 °C (maximum)	Ohm/km	0,1720				
DC current rating at maximum continuous surface operating temperature *** (calculated with maximum DC resistance at 20°C)	A, °C	835			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	0,0000190				
Modulus of elasticity above thermal kneepoint	N/mm²	118600				
Modulus of elasticity below thermal kneepoint	N/mm²	63117				
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 is with 96% aluminium strenght

\*\* 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 001.\*

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