

DATA SHEET:

ACCC® ULS AMARILLO
ACCC®-ULS 398/71/251 (785 kcmil)*

CTC GLOBAL

For questions, please contact CTC Application Engineering Department: applicationsupport@ctcglobal.com

Metric and US Units are considered separate

Aluminum Specification	Metric		US Units	
Nominal Aluminum Cross-sectional Area***	397.6	mm ²	784.7	kcmil
Aluminum Conductivity/Type	63%	% IACS	1350-O	
Aluminum Nominal Weight**	1096.7	kg/km	737.1	lb/kft
Coefficient of Thermal Expansion	23.0	x10 ⁻⁶ /°C	12.8	x10 ⁻⁶ /°F
Aluminum Heat Capacity	1026.1	W-s/m-C	173.8	W-s/ft-F
ACCC® Core Specification (CTC Part Number 210-007)	Metric		US Units	
Nominal Cross-sectional Area of Core	71.30	mm ²	0.1100	in ²
Nominal Diameter of Composite Core	9.53	mm	0.375	in.
Core Nominal Weight	128.3	kg/km	85.8	lb/kft
Rated Strength of Core - 375 ksi (2586 MPa)	183.3	kN	41.2	kips
Coefficient of Thermal Expansion	0.75	x10 ⁻⁶ /°C	0.417	x10 ⁻⁶ /°F
Modulus of Elasticity	146.0	GPa	21.17	Msi
Core Heat Capacity	104.3	W-s/m-°C	17.7	W-s/ft-°F
ACCC® Conductor Specification	Metric		US Units	
Overall Diameter of Conductor ¹	25.14	mm	0.990	in.
Nominal Cross-sectional Area of the Conductor	468.9	mm ²	0.726	in ²
Ultimate Tensile Strength of Conductor ²	205.5	kN	46.2	kips
Conductor Nominal Weight**	1225.0	kg/km	822.9	lb/kft
Coefficient of Linear Expansion Above Thermal Kneepoint	0.75	x10 ⁻⁶ /°C	0.417	x10 ⁻⁶ /°F
Coefficient of Linear Expansion Below Thermal Kneepoint	16.0	x10 ⁻⁶ /°C	8.90	x10 ⁻⁶ /°F
Final Modulus of Elasticity Above Thermal Kneepoint	146.0	GPa	21.17	Msi
Final Modulus of Elasticity Below Thermal Kneepoint	70.3	GPa	10.2	Msi
Maximum Allowable Operating Temperature at Surface ³	180	°C	356	°F
Electrical Specification	Metric		US Units	
Nominal DC Resistivity at 20°C	0.0702	ohm/km	0.1131	ohm/mile
Temperature Coefficient of Resistance	0.00416	/°C	0.00215	/°F
Frequency	60	Hz	60	Hz
AC Nominal Resistance at 25°C	0.0725	ohm/km	0.1168	ohm/mile
AC Nominal Resistance at 75°C	0.0870	ohm/km	0.1400	ohm/mile
AC Nominal Resistance at 180°C	0.1174	ohm/km	0.1890	ohm/mile
AC Current Rating at Given Temperatures ⁴		1499	@ 180C & 60 Hz	
		1579	@ 200C & 60 Hz	
GMR (estimated)	10.34	mm	0.0339	ft.
Inductive Reactance	0.255	ohm/km	0.4105	ohm/mile
Capacitive Reactance	0.152	Mohm-km	0.0946	Mohm-mile

ACCC®-ULS is produced using 1350-O (fully annealed) aluminum.

- 1) Minimum hub diameter of the conductor reel must meet the requirements of CTC F-750-032.
 - 2) Strength at ambient temperature. Based on 96% of the 1350-O minimum tensile strength (8500 psi/58.6 Mpa) and 100% of the composite core minimum tensile strength (375 ksi/2586 Mpa).
 - 3) Maximum operating temperature of ACCC®-ULS is 180°C and a maximum emergency temperature of 200°C (10,000 hours over the life of the conductor).
 - 4) Conditions: 2 ft/s (0.6 m/s) wind, 0 ft (0 m) Elevation, 0.5 Emis. 0.5 absorp., 25°C Ambient temp., 96 W/sq. ft (1033 W/sq. m) sun radiation
- *ASTM name designation: mm² nominal aluminum area/mm² nominal core area/mm nominal diameterx10 (nominal kcmil aluminum)
- **ACCC® Conductors are required to exhibit lay lengths (ratios) that conform to ASTM B 857 or EN 50540.
- ***Different configurations among conductor manufacturers may result in slight variations within the parameters of indicated values for a given size in accordance with the stated specification.

F-730-624-NC

www.ctcglobal.com

Date Produced:

9/16/2019