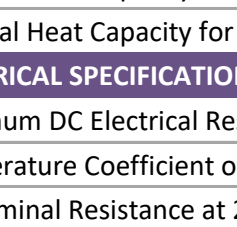
TECHNICAL DATA SHEET	Ultra Low Sag (ULS)	**ECRC® ULS 530 - 71** Epsilon Advanced Conductors	EPSILON CABLE

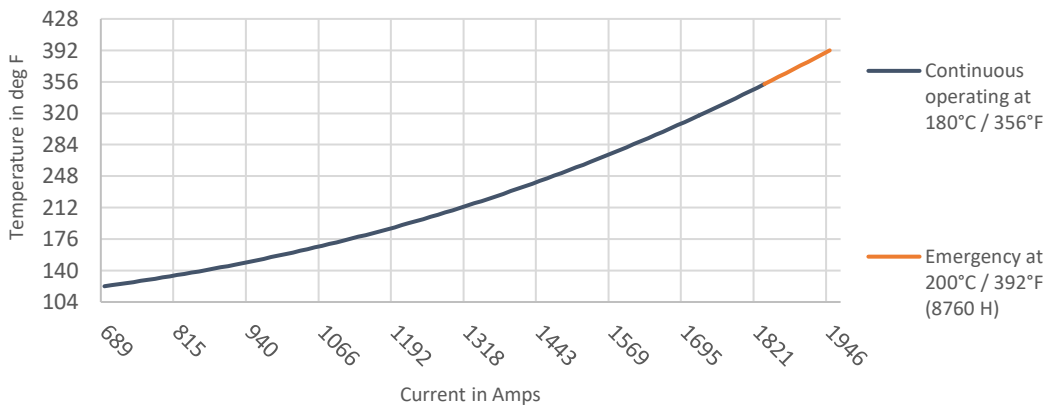
International size	**DUBLIN**
ASTM Size	**DRAKE**
Technical designation	ECRC® 530-AL0/71-X1



Governing Units: Metric to US Customary (Unit conversion)

STRANDING CONFIGURATION		Metric		US Customary	
	*No. & Diameter of the core*		1 x 9.53 mm	1 x 0.375	in.
	Aluminium layers construction / Height	22 TW x	4.66 mm	0.183	in.
	1st layer composition and Øeq	8 x	5.63 mm	0.222	in.
	2nd layer composition and Øeq	14 x	5.44 mm	0.214	in.
	Lay Direction of outer layer		Right Hand (Z)		

CONDUCTOR PROPERTIES				
Cross Sectional Area - Annealed Aluminum (1350-O at 63%IACS)	524.8	mm^2	1035.7	kcmil
Cross Sectional Area - Composite Core	71.3	mm^2	0.1106	$in.^2$
Total Area of Conductor Cross Section	596.1	mm^2	0.9240	$in.^2$
Nominal equivalent Aluminum Area (1350-H19 at 61%IACS)	542.0	mm^2	1069.7	kcmil
Overall Diameter of Conductor	28.17	mm	1.109	in.
Mass per unit length - Annealed Aluminum	1,451.0	kg/km	975.0	lb/kft
Mass per unit length - Core	131.2	kg/km	88.2	lb/kft
Mass per unit length - Conductor	1,582.2	kg/km	1,063.2	lb/kft
Ultimate Tensile Strength of Conductor	216.0	kN	48.6	kips
Core Rated Tensile Strength	184.5	kN	41.5	kips
Coefficient of Linear Expansion Above Thermal Kneepoint	0.75	10^{-6} K^{-1}	0.417	10^{-6} F^{-1}
Coefficient of Linear Expansion Below Thermal Kneepoint	17.10	10^{-6} K^{-1}	9.50	10^{-6} F^{-1}
Final Modulus of Elasticity Above Thermal Kneepoint	146	GPa	21.18	Msi
Final Modulus of Elasticity Below Thermal Kneepoint	66	GPa	9.56	Msi
THERMAL SPECIFICATIONS				
Maximum Continuous Operating Temperature[2] (surface temperature)	180	°C	356	°F
Maximum Emergency Temperature / 8760 Hours[2] (surface temperature)	200	°C	392	°F
Thermal Heat Capacity for Annealed Aluminum Layers	1,385.7	W-s/m-°C	234.5	W-s/ft-°F
Thermal Heat Capacity for Composite Core	105.0	W-s/m-°C	17.8	W-s/ft-°F
ELECTRICAL SPECIFICATIONS				
Maximum DC Electrical Resistance at 20°C / 68°F *(1370-O at 63%IACS)*	0.0533	ohm/km	0.0858	ohm/mile
Temperature Coefficient of Resistance	4.03	10^{-3} K^{-1}	2.089	10^{-3} F^{-1}
AC Nominal Resistance at 25°C / 77°F (surface temperature)	0.0565	ohm/km	0.0909	ohm/mile
AC Nominal Resistance at 75°C / 167°F (surface temperature)	0.0669	ohm/km	0.1077	ohm/mile
AC Nominal Resistance at 180°C / 356°F (surface temperature)	0.0890	ohm/km	0.1432	ohm/mile
AC Nominal Resistance at 200°C / 392°F (surface temperature)	0.0932	ohm/km	0.1501	ohm/mile
AC Current Rating at 180°C / 356°F (surface temperature) [1]	1,841 A			
AC Current Rating at 200°C / 392°F (surface temperature) [1]	1,946 A			



Geometric Mean Radius (GMR)	
11.46 mm	0.0376 ft.
Inductive Reactance Ø0.3m (Ø0.98ft) radius	
0.206 Ω.km-1	0.3315 ohm/mile
Capacitive Reactance Ø0.3m (Ø0.98ft) radius	
0.176 MΩ.km	0.1094 Mohm-mile

(1) Ampacity calculations based on IEEE Standard 738-2012, according to the following data:

25 °C / 77 °F ambient temperature, 0.61 m/s (2 ft/s) wind velocity with an angle of 90 °,

1000 W/m² (92.9 W/ft²) solar radiation, 0.5 solar absorption coefficient,

0.6 emissivity coefficient, Resistance AC at 60 Hz current frequency.

(2) Temperatures defined according to ASTM B987.

Reference standards for core properties: ASTM B987.

Reference standards for electrical specifications: IEC 62219.

Reference standards for stranding parameters: ASTM B857-14/IEC 62219.

Depending on conductor manufacturer rated specifications may slightly change.

Revision 00

Ref. Document ST25-00061

Date 14-Aug-2025

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