

COMPLETE SOLUTION FOR NEXT-GENERATION AIRCRAFT

RayFlite power cables are specifically engineered for:

- Hybrid electric propulsion systems
- Battery and hydrogen fuel cell technologies
- UAV power distribution
- High-voltage aerospace applications

Target Markets

- Commercial aerospace
- Unmanned aerial vehicles

Applications

- Military and commercial air hybrid electric power, e.g. hydrogen fuel cell, hybrid battery technology



RayFlite HIGH VOLTAGE POWER CABLES

ENGINEERED FOR NEXT-GENERATION
AEROSPACE APPLICATIONS

Powering the Future of Aerospace

TE Connectivity's (TE) RayFlite power cables represent a breakthrough in high voltage power distribution technology. Flexible, highly conductive and insulated for application at altitude, RayFlite power cables are specifically designed for the evolving needs of battery powered and hybrid electric aircraft applications.

KEY FEATURES AND BENEFITS

Specifically designed for high-voltage, high-altitude applications by engineers that understand the dynamics of power, safety, and propulsion

Superior Flexibility

- Highly flexible conductor and insulation material
- 3x OD bend radius
- Easier installation in tight spaces, reducing assembly time

Altitude-Tested Performance

- Fully tested at high altitudes for partial discharge
- 1.5 kV AC PDIV at 40,000 ft
- 2 kV AC PDIV at 30,000 ft
- 4 kV AC PDIV at sea level

Optimized Design

- Modified ETFE insulation
- Extruded jacket
- High Strand Nickel coated copper conductor
- Operating temperature rating: 170°C
- Voltage breakdown > 30 kV

System Compatibility

- Complete connectorized system with TE's new 987 connectors
- Fully tested for partial discharge inception voltage (PDIV) in complete assembly
- Quantified performance values for total system reliability



987 Series High Power Connector

RayFlite High Voltage Power Cables

Engineered for Next-Generation Aerospace Applications

Why Choose RayFlite Power Cables?

TE's RayFlite power cables have been fully tested and validated in our specialized high voltage lab in Swindon, UK. Our cables are bespoke designs specifically engineered for aerospace applications.

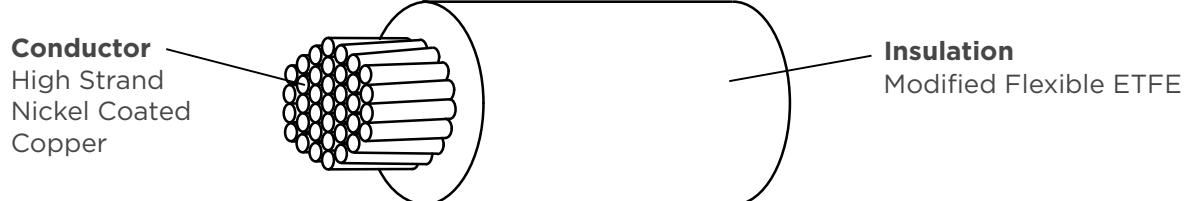
The RayFlite Range - RFHVE Series

This is just the beginning. RayFlite RFHVE series power cables are the first of a range of partial discharge free cables. Talk to TE Connectivity about our other high voltage cable designs with optimised weight, flexibility and increased temperature rating, manufactured with TE proprietary materials.

Data for cable at 162 mbar and 170°C, 5X mandrel

Cable	PDIV*	PDEV
RFHVE-0418-00-9	1650 V	1300 V

***Partial Discharge Inception Voltage** is dependent on several factors including altitude, ambient temperature and how the cable is installed. The data chart shows typical partial discharge data (PDIV and PDEV) for cable tested at 43,000 feet and 170°C, whilst wrapped around a 5X diameter mandrel.



Construction Details

Part Description	Conductor				Finished Cable				
	Wire Size (AWG)	Conductor Stranding No x AWG	Max. Diameter (mm)	Maximum DC Resistance @ 20°C (Ohms/km)	Min. Wall Thickness (mm)	Outer Diameter (mm)			Max. Weight (kg/km)
Lower Spec Limit	Nom.	Upper Spec Limit							
RFHVE-0418-8-*	8	1078 x 38	4.57	2.33	3.10	11.55	11.90	12.26	256
RFHVE-0418-6-*	6	1764 x 38	5.61	1.57	3.10	12.59	12.97	13.36	331
RFHVE-0418-4-*	4	1666 x 36	7.37	1.05	3.10	14.35	14.78	15.22	445
RFHVE-0418-2-*	2	2646 x 36	8.81	0.62	3.10	15.79	16.26	16.75	603
RFHVE-0418-0-*	0	4256 x 36	10.92	0.43	3.10	17.90	18.44	18.99	836
RFHVE-0418-00-*	00	5320 x 36	12.10	0.33	3.10	19.08	19.65	20.24	995

The ** in the part number shall be replaced by a standard color code designator in accordance with Mil Std 681. e.g. RFHVE-0418-8-9, White Insulation. Standard Color: White Insulation. Other colors available upon request.

Partner with TE Connectivity

With decades of experience in critical aerospace applications, TE Connectivity delivers innovative solutions that meet the evolving needs of the aerospace industry. Contact us today to learn how RayFlite power cables can support your next-generation aircraft design.

For more information or to request samples, contact your TE Connectivity representative today.

te.com/rayflite

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