

KDE DIRECT UAS UVC ELECTRONIC SPEED CONTROLLER SERIES TECHNOLOGY REVIEW

INDUSTRY-LEADING PERFORMANCE

The KDE Direct UAS UVC Series Electronic Speed Controllers (ESC) are optimized for commercial and industrial-level UAS and Multi-Rotor applications; incorporating futureproof technologies (such as CANbus multiplex network serial-bus controls and telemetry) and advanced motor control algorithms for optimal flight performance. The ESCs are specifically tuned to the KDE Direct UAS Multi-Rotor Brushless Motors for peak performance and plug-and-play compatibility up to 14S LiHV (63.0V Max) input power for unprecedented thrust generation and peak efficiency output.



ENVIRONMENTAL PROTECTION

High-temperature (200°C/392°F), silicon-wire power leads and 24K gold-plated bullet connectors provided for easy, hassle-free installation. Power and motor exit leads are protected via rubberized-polymer grommets and epoxy, sealing the critical internal electronics from weather (rain and snow), dust and debris, and vibration for safe operation in the most-demanding applications (**Ingress Protection Rating certified to IP66**).

MARKET-LEADING TECHNOLOGIES

The new UAS UVC series brings to life the next-generation of technology; including an all-Aluminum 6061-T6 case for extremely cool-running temperatures and rugged-construction, allowing the ESCs to be used in the full-range of demanding environments and industrial applications without detrimental effects. Additional hardware onboard, such as real-time and 32-bit MCU fast-logic current and voltage monitoring, are just a few of the new innovations and features for safe and reliable operation.

- **Regenerative Braking (S.R).** – active braking during motor deceleration phase, providing instantaneous response to the flight controller commands and matched-control speed to acceleration profiles (less “float” during flight).
- **Real-Time System Monitoring** – internal hardware and specialized algorithms continually monitor voltage, current, temperature, throttle signal integrity, and a host of other critical parameters for safe and reliable operation.

INDUSTRIAL-QUALITY COMPONENTS

All UAS UVC Electronic Speed Controllers use the highest-grade, extremely-low resistance (1.9 mΩ) UHV MOSFETs (80V-rated) for industry-leading performance and maximum efficiency. 10,000+ hour, long-life and low-ESR Aluminum Electrolytic Capacitors are used for high-durability, while an Active Anti-Spark internal circuit prevents initial power-on sparks and voltage shocks.