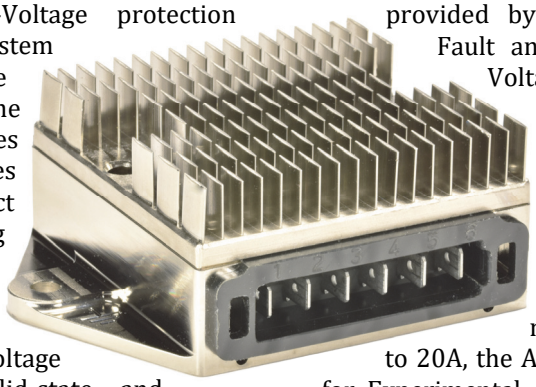
AVC1

Quick Facts

Advanced Voltage Control is Here

The AVC1 Advanced Voltage Controller brings permanent magnet Alternators into the digital age. Featuring a MOSFET-based regulator design with microprocessor-controlled Over-Voltage protection and Charging System Fault/Low-Voltage warning output, the AVC1 combines three capabilities in a single compact enclosure, making possible a clean, space-efficient installation.

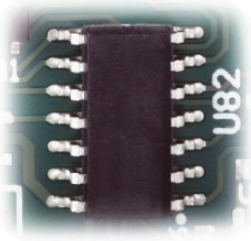


First, AVC1 voltage regulation is solid-state, and purpose-designed for aviation, with field-adjustable charging voltage to ensure compatibility with a variety of battery types (i.e. "flooded," SLA/VRSLA, or LiFePO). Second, Over-Voltage protection is provided by our all-new Dynamic OV Protection circuitry — a B&C exclusive — that intelligently safeguards your aircraft electrical system. And third, warning indication is provided by our Charging System Fault and user-selectable Low-Voltage warning output — another B&C exclusive — compatible with LED or incandescent warning lights or with EFIS displays.

Intended for single-phase permanent magnet Alternators rated up to 20A, the AVC1 is an superb choice for Experimental and LSA aircraft. Three installation kits are available, ranging from a basic kit with high-quality wire terminals (suitable for retrofit from the stock Ducati regulator), to a color-coded wire harness kit ideal for first-time installations.

Intelligence in Action

B&C has been making Voltage Regulators with integrated Over-Voltage (OV) protection for nearly 30 years. In that time, we've come to understand a few things about OV events — knowledge that we've applied to the core design the AVC1.



Experience teaches that not every OV event is the same. Each event can have its own unique features in terms of duration and magnitude. Thus, while some OV excursions are sustained and unmistakable (the result of regulator failure), others are transient and elusive (such as a fleeting "spike" from another source). While the root causes and levels of hazard are different, the outward manifestations can be deceptively similar. As a result, OV protection with a degree of intelligence is needed – a key capability of the AVC1 that we call Dynamic OV protection.

Dynamic OV protection uses a range of stepped voltage and duration limits to enable the AVC1 to distinguish between a transient OV event (low risk) and a sustained OV event (high risk). As a result, annoying "nuisance trips" that increase pilot workload are minimized — but OV protection that safeguards pilot, passengers, and aircraft systems remains uncompromised.

Intelligence in action — just one of many reasons why we call the AVC1 an *Advanced* Voltage Controller.

Features

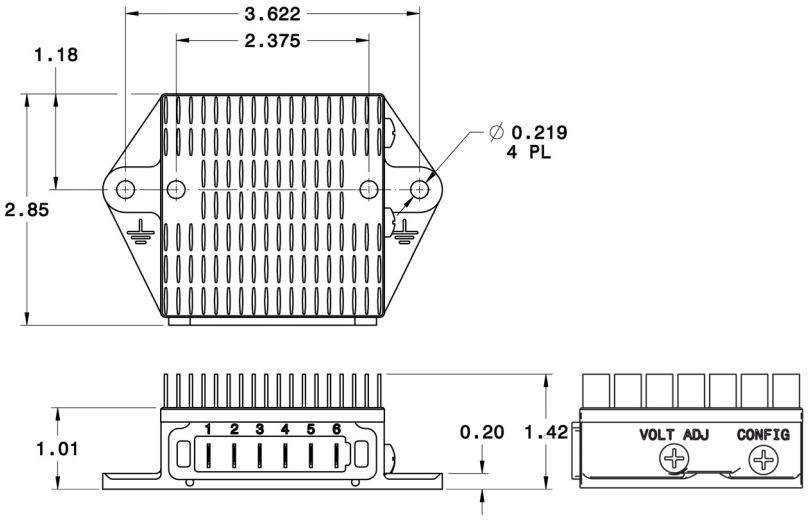
- Plug-and-Play Regulator for Rotax 912 & 914 ULS
- Designed for PM Alternators rated up to 20A
- Dynamic Over-Voltage (OV) Protection circuitry
- Charging-System Fault (CSF) warning output
- User-selectable Low-Voltage (LV) warning output
- Field-Adjustable Charging Voltage
- Billet Aluminum mounting enclosure with heatsink
- Electroless Nickel plating (for corrosion protection)
- Weight: 8 ounces

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Pricing

XB100-1 AVC1 Advanced Voltage Controller, 14v (Homebuilt)	$295
XB101-1 AVC1 Advanced Voltage Controller, 28v (Homebuilt)	$295
FK514-1 Installation Kit, AVC1	$5
FK514-2 Installation Kit, AVC1	$15
FK514-3 Installation Kit, AVC1	$29

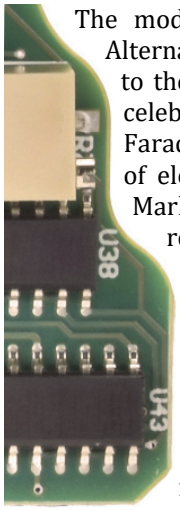
AVC1 DIMENSIONS & WIRING



EXPLANATION OF TERMINALS	
1	AC Input
2	AC Input
3	DC Output (+)
4	DC Output (+)
5	Warning Output
6	Control Input
CASE	Ground

This part is not STC'd or PMA'd and is sold for amateur-built aircraft only.

MR. FARADAY MEETS THE DIGITAL AGE



The modern permanent magnet Alternator traces its origin back to the venerable "dynamo" of celebrated physicist Michael Faraday, and his exploration of electromagnetic induction. Marked by simplicity and robustness, the dynamo has found wide application in industrial, agricultural, and automotive power generation. Unsurprisingly, General Aviation has discovered uses for Mr. Faraday's invention as well, where it has taken flight – literally – as a durable, lightweight power source for aircraft electrical systems.

Yet for all their virtues, permanent magnet alternators in aviation have long lacked a sophisticated, one-box solution that integrated alternator control with protection and indication features. That all changes, however, with the AVC1.

The warning output capabilities of the AVC1 are just one example. Purpose-designed to meet aviation-specific needs, both Charging-System Fault (CSF) and Low-Voltage (LV) warning output are controlled with an advanced microprocessor, with annunciation possible via a user-supplied LED or incandescent warning indicator; or disabled altogether to permit warning via an EFIS display. LV warning output may also be configured to provide notification at different voltage thresholds appropriate to different battery types (i.e. lead acid vs. LiFePO). This ensures that you are kept well-informed of the status of your charging system; thus providing essential awareness that enhances your safety of flight.

Think of it as old-tech meeting new-tech for a uniquely useful partnership.

Mr. Faraday, meet the AVC1 ... and welcome to the Digital Age.

APPLICATION NOTES: KITS FOR RETROFIT & NEW INSTALLATIONS

Three different AVC1 Field Kits are available, ranging from a basic wire terminal kit to a deluxe wiring harness to facilitate installations in a wide variety of aircraft.

FK514-1 provides high-quality wire terminals to ensure trouble-free service when retaining an existing regulator harness. **FK514-2** supplies pre-made color-coded wire assemblies for new or retrofit installations – and **FK514-3** adds a mating plug to these assemblies for true plug-and-play convenience.



FK514-2 Field Kit

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