

FlightPower®



VR-8LG Linear Regulator Instructions

VR-8LG Regulator is a linear regulator with built-in battery status LED gauge. It will convert the input voltage of a flight battery to a safe output voltage which conforms to the demand of an R/C model's on-board electronics. It has many advantages, such as adjustable voltage output, 8A current output, thermal protection, and no interference. It is purposely designed for high-performance model power systems. A new pin switch with flag is great for use in large models.

Technical Specifications

Environment temperature	-10 — +40°C
Relative humidity	≤ 95%
Atmospheric pressure	860 hPa — 1060 hPa
Input voltage	DC 6V — 8.4V Max 10V
Output voltage	DC 5V — 7.4V Adjustable
Output electrical current	DC 0 — 8A ($V_{in} - V_{out} \leq 1V$)
Regulating rate of power supply	0.5%
Regulating rate of load	0.5%
Overheat protection	IC.Tj: 90°C (194F) cut off
Ripple	≤ 10mv

The battery status monitor is located on the top left of the VR-8LG. Indication of input voltage: Red LED is illuminated when the input voltage is less than 6.5V; Yellow LED is illuminated when the input voltage is equal to or greater than 6.5V but less than 7V; Green LED is illuminated when the input voltage is equal to or greater than 7V.

Instructions for Use

There are three servo type connectors on the regulator for input and output. The power input includes a male Star® Plug and the power outputs are universal connectors (female). The short Futaba® connector (male) is a switch plug. The VR-8LG can be powered by a LiPo battery for maximum duration. To maximize the current of the VR-8LG, plug both output leads into one receiver. This will allow for 8-10A of current.

Note: If you don't use the regulator for 24 hours it is advisable to disconnect it from the battery because there is a 4mA quiescent current that could drain the battery below its minimum voltage after extended periods of time.

The VR-8LG regulator's output voltage can be adjusted manually. Using a small, flat-bladed screwdriver, rotate the dial near the battery connection. The adjustable range is 5.0–7.4V.

The included pin-type switch can act as on/off power control. Power is on when the pin is removed, and off when the pin is inserted.

Overheat Protection

To protect the VR-8LG and your aircraft, the unit has a built-in overheat protection. When the surface temperature of the regulator IC exceeds 90°C, the regulator will turn off the output current. When the regulator IC cools back down, the output will resume. The maximum power output of the regulator is 50W. At this level and below the regulator will work normally. If the power output is above 50W then the surface temperature of the regulator IC will exceed 90°C. This will trigger the overheat protection mode by cutting off the output automatically.

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