



# DEEP SEA ELECTRONICS

## DSEA109 INSTALLATION INSTRUCTIONS

053-245  
ISSUE 1

The DSEA109 is an Automatic Voltage Regulator (AVR) designed to control alternator excitation voltage to produce the desired alternator output. Adjustment is made using potentiometers. Alternatively more comprehensive configuration is available using DSE Configuration Suite PC Software and the DSE815 interface. Additionally this provides live diagnostic facilities.

**NOTE:** For the full specifications and mounting details, refer to DSE Publication: 057-295 DSEA109 Operator Manual, available from [www.deepseaelectronics.com](http://www.deepseaelectronics.com).

**WARNING!** LIVE PARTS exist within the AVR. When powered avoid contact with components and terminals. Terminals remain live for up to 70 seconds after shutdown. Do not touch during this time. Only qualified personnel, having full understanding of the application must install the product.

**NOTE:** A suitably located and easily reached switch or circuit breaker must be fitted and clearly marked as the disconnecting device for the AVR.

### POTENTIOMETER ADJUSTMENT

It is possible to disable the potentiometer using the DSE Configuration Suite PC Software and DSE815 Configuration Interface. This allows the system designer to restrict end user adjustment should this be required.

### DIP SWITCH ADJUSTMENT

DIP switches are used to select the operating range of the AVR.

Function	DIP Switch 1
Stability Configuration 1	Off
Stability Configuration 2	On

Function	DIP Switches 2, 3 & 4 Functionality		
	DIP Switch 2	DIP Switch 3	DIP Switch 4
Main Configuration	Off	Off	Off
Alternative Configuration 1	Off	Off	On
Alternative Configuration 2	Off	On	Off
Alternative Configuration 3	Off	On	On
Alternative Configuration 4	On	Off	Off
Alternative Configuration 5	On	Off	On

### LED STATUS

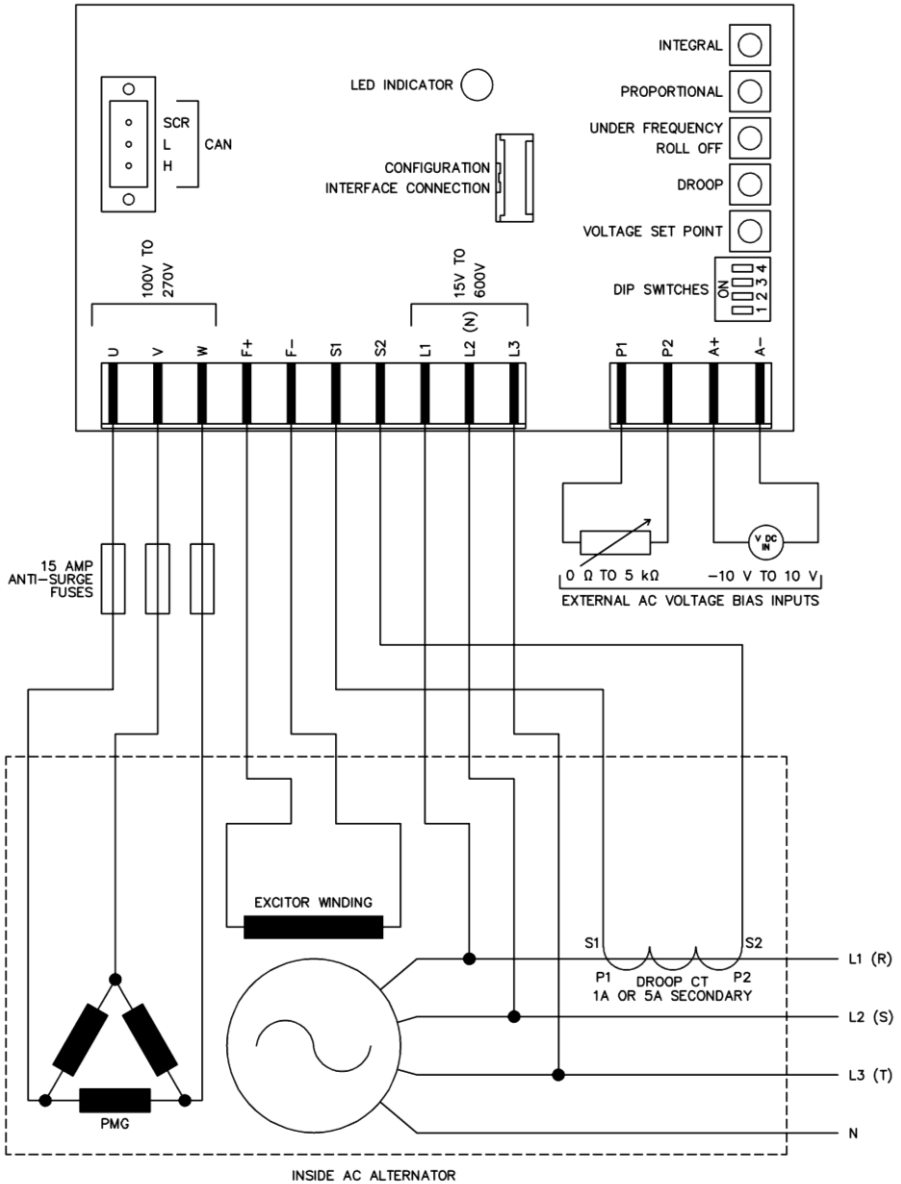
An LED shows operating status of the AVR.

LED State	Description
Off	Running, or stationary but powered by USB.
Rapid Continuous Flashing	Configuration file lost.
Single Flash	Start-up fail tripped.
Two Flashes	Over excite tripped.
Three Flashes	Loss of feedback tripped.
Four Flashes	Under frequency trip.
Five Flashes	Potentiometer fault.
Steady	Running but Under Frequency Roll Off active.

### DIMENSIONS

Parameter	Description
Overall Size	180 mm x 145 mm x 61 mm (7.0 " x 5.7 " x 2.4 ")
Mounting Type	Screw Mounting to Chassis.
Mounting Holes	Suitable for M5 bolts/screws. Outside diameter 5.5 mm (0.2 ")
Mounting Hole Centres	150 mm x 120 mm (5.9 " x 4.7 ")
Mounting Orientation	Mount with potentiometers at the top.
Maximum Ambient Operating Temperature	-40 °C to 70 °C (-40 °F to 150 °F)

**TYPICAL WIRING DIAGRAM**



<p><b>Deep Sea Electronics Ltd.</b>                  Tel: +44 (0)1723 890099                  Email: support@deepseaelectronics.com                  Web: www.deepseaelectronics.com</p>	<p><b>Deep Sea Electronics Inc.</b>                  Tel: +1 (815) 316-8706                  Email: usasupport@deepseaelectronics.com                  Web: www.deepseausa.com</p>
--	--