

DSEA106 MKII

AUXILIARY/SHUNT POWERED DIGITAL AVR



KEY FEATURES

- Soft start ramping
- Under Frequency Roll Off (UFRO) protection with optional instantaneous step
- Loss of voltage sensing protection
- Over excitation protection
- Remote voltage adjustment potentiometer open-circuit protection using -10 V to 10 V signal and 5 k Ω .
- DIP switch selection for 2 voltage, 2 frequency and 4 stability ranges.
- Potentiometer adjustment for voltage set points, droop, UFRO, proportional and integral gain.
- LED indication for fault and operating status
- Configurable via DSE Configuration Suite PC Software connected via the DSE815 Configuration Interface.
- Chassis mountable potted enclosure
- Spade terminals for easy connection

KEY BENEFITS

- Digital electronics ensures a smooth, stable, regulated AC output voltage from the alternator.
- Configurable to suit a wide range of alternators with auxiliary winding or shunt power supplies.
- Suitable for generator synchronising and load sharing applications with connections for a quadrature droop CT and remote voltage adjustment.
- Compatible with all DSE synchronising and load sharing controllers.
- Licence-free PC software
- Comprehensive PC configuration using the DSE Configuration Suite PC Software and the DSE815 Configuration Interface.
- Simple to use with onboard set up using a combination of DIP switches and potentiometers.

RELATED MATERIALS

TITLE

DSEA106 MKII Installation Instructions
DSEA106 MKII Operator Manual
DSEA106 MKII Configuration Suite PC Software Manual
DSE815 Datasheet

PART NO.

053-226
057-269
057-271
055-225

SPECIFICATION

POWER SUPPLY VOLTAGE RANGE

100 V AC to 300 V AC (Ph to N/Ph)

FREQUENCY RANGE

40 Hz to 180 Hz

ALTERNATOR OUTPUT SENSING VOLTAGE RANGE

15 V AC to 600 V AC (Ph to N/Ph)

FREQUENCY RANGE

40 Hz to 65 Hz

EXCITATION OUTPUT EXCITATOR FIELD WINDING IMPEDANCE

5 Ω to 50 Ω

CONTINUOUS VOLTAGE RATING 0 V DC to 100 V DC

CONTINUOUS CURRENT RATING 0 A DC to 7 A DC

MAXIMUM CURRENT RATING

15 A DC for 10 seconds

QUADRATURE DROOP CT MAXIMUM SECONDARY CURRENT

5 A AC

BURDEN

0.25 VA

ACCURACY

1%

REMOTE VOLTAGE ADJUSTMENT POTENTIOMETER

5 k Ω

VOLTAGE INPUT

-10 V DC to 10 V DC

DIMENSIONS

OVERALL

179 mm x 108 mm x 61 mm
7.1" x 4.3" x 2.4"

STORAGE TEMPERATURE RANGE

-40 °C to +85 °C
-40 °F to +185 °F

OPERATING TEMPERATURE RANGE

-40 °C to +70 °C
-40 °F to +158 °F

DEEP SEA ELECTRONICS PLC UK

Highfield House, Hunmanby Industrial Estate, Hunmanby YO14 0PH
TELEPHONE +44 (0) 1723 890099 **FACSIMILE** +44 (0) 1723 893303
EMAIL sales@deepseapl.com **WEBSITE** www.deepseapl.com

Deep Sea Electronics Plc maintains a policy of continuous development and reserves the right to change the details shown on this data sheet without prior notice. The contents are intended for guidance only.

DEEP SEA ELECTRONICS INC USA

3230 Williams Avenue, Rockford, IL 61101-2668 USA
TELEPHONE +1 (815) 316 8706 **FACSIMILE** +1 (815) 316 8708
EMAIL sales@deepseausa.com **WEBSITE** www.deepseausa.com

Registered in England & Wales No.01319649
VAT No.316923457

DSEA106 MKII

AUXILIARY/SHUNT POWERED DIGITAL AVR

The DSEA106 MKII Digital Automatic Voltage Regulator (AVR) is designed to regulate the output voltage of an AC alternator. The DSEA106 MKII is supplied by either a stator auxiliary winding or a shunt system taking power from the output windings.

The DSEA106 MKII eliminates the complexities involved with analogue AVR designs. Analogue AVR designs can be over sensitive to changes in temperature which affects stability whereas the DSEA106 MKII AVR maintains a smooth, stable regulated AC output voltage regardless of the electrical load connected.

The DSEA106 MKII is simple to install and set up using either the DSE Configuration Suite PC Software and the DSE815 configuration interface or five onboard potentiometers and 4 DIP switches, combined with a status LED providing a simple user interface.

The DSEA106 MKII Digital AVR has numerous advanced features such as soft start ramping, connection for a quadrature droop CT and the ability to perform remote voltage adjustment, making it perfect for synchronising and load sharing applications.

The DSEA106 MKII Digital AVR is an ideal option for both OEM and retro-fit solutions.

ENVIRONMENTAL TESTING STANDARDS

ELECTRO-MAGNETIC COMPATIBILITY

BS EN 61000-6-2
EMC Generic Immunity Standard for the Industrial Environment
BS EN 61000-6-4
EMC Generic Emission Standard for the Industrial Environment

ELECTRICAL SAFETY

BS EN 60950
Safety of Information Technology Equipment, including Electrical Business Equipment

TEMPERATURE

BS EN 60068-2-1
Ab/Ae Cold Test -30 °C
BS EN 60068-2-2
Bb/Be Dry Heat +70 °C

VIBRATION

BS EN 60068-2-6
Ten sweeps in each of three major axes
5 Hz to 8 Hz at +/-7.5 mm,
8 Hz to 500 Hz at 2 gn

HUMIDITY

BS EN 60068-2-30
Db Damp Heat Cyclic 20/55 °C at 95% RH 48 Hours
BS EN 60068-2-78
Cab Damp Heat Static 40 °C at 93% RH 48 Hours

SHOCK

BS EN 60068-2-27
Three shocks in each of three major axes
15 gn in 11 ms

COMPREHENSIVE FEATURE LIST TO SUIT A WIDE VARIETY OF ALTERNATOR MANUFACTURERS

