

DSEATS[®] TRANSFERRING WITH EFFICIENCY



DSE333

AUTO TRANSFER SWITCH CONTROL



DSE160
SELF-SEEKING POWER SUPPLY



The DSE333 is an Automatic Transfer Switch Controller for genset applications. The module will monitor the voltage and frequency of the incoming AC mains (utility) supply (supports many topologies) and in the event of a failure will issue a start command to the generator control system.

Once the generator is available and producing an output within limits, the DSE333 will control the transfer device and switch the load from the mains (utility) to the generating set.

Once the mains (utility) supply returns to within limits, the module will command a return to the mains (utility) supply and shut down the generator after a cooling run. Various timing sequences are available to prevent nuisance starting on minor supply breaks.

The DSE333 includes a clear back-lit LCD 4-line text display, showing system status and warnings. Red and Green LEDs also indicate operation status.

The module includes configurable digital inputs and outputs and is programmable by PC using the user-friendly DSE Configuration Suite Software. Limited programming is also available via the module's front panel.

FEATURES

- Volt free relays
- Supports many topologies
- Automatic switch over to generator
- Check sync feature
- Real-time clock
- Ten configurable inputs
- Five configurable outputs
- Event log showing most recent 10 events
- Configurable timers
- Automatic shutdown or warning when fault conditions are detected
- PC programming
- Front panel programming
- LED indicators
- Text LCD display
- External mains (utility) or genset failure inputs
- Auto start inhibit
- Load inhibit
- Manual restore to mains (utility)
- Optional current monitoring

BENEFITS

- Provides automatic mains (utility) monitoring and controls switch over to generator supply
- Real-time clock provides accurate event information
- User-friendly set-up and button layout
- Will work with external synchroniser for seamless return to mains (utility)

OPERATION

System information is available instantly on the LCD display by using the scroll push buttons next to the screen.

SELF-SEEKING POWER SUPPLY

A self-seeking power supply is available for this product when a DC supply is not available. Kits are available and can be ordered separately.

Features include:

- 12 & 24V options
 - LED indication
 - Can be used as AC/DC power supply
 - 1A DC output
- Please see product information on the DSE160 Self-Seeking Power Supply.

SPECIFICATION

PLANT SUPPLY REQUIREMENTS

SUPPLY VOLTAGE

8-35V continuous

CRANKING DROPOUTS

Able to survive 0V for 50mS providing the supply was at least 10V before the dropout and recovers to 5 volts afterwards.

MAX OPERATING SUPPLY CURRENT

292mA at 12V, 167mA at 24V

MAX STANDBY CURRENT

101mA at 12V, 66mA at 24V

GENERATOR AND MAINS (UTILITY) VOLTAGE INPUT

MEASUREMENT METHOD
True RMS up to 11th harmonic

AC SYSTEMS SUPPORTED

2 Phase, 3 Wire L1-L2
2 Phase, 3 Wire L1-L3
3 Phase, 3 Wire
3 Phase, 4 Wire
3 Phase, 4 Wire Delta
Single Phase, 2 Wire

PHASE TO NEUTRAL VOLTAGE RANGE

15V to 333VAC absolute maximum
110V to 277V nominal

PHASE TO PHASE VOLTAGE RANGE

25V to 576VAC

COMMON MODE OFFSET

100VAC from neutral to plant ground

RESOLUTION

1VAC phase to neutral
2VAC phase to phase

ACCURACY

±1% of full scale phase to neutral (Excluding VT error)
±2% of full scale phase to phase (Excluding VT error)

VT SCALING

Support for VT's with primary voltage up to 40kV

FREQUENCY

3.5Hz to 75Hz

FREQUENCY RESOLUTION

0.1Hz

FREQUENCY ACCURACY

±0.2Hz

CHECK SYNC

1Hz 25°

PHASE LAG MEASUREMENT

With respect to mains voltage on L1 only

PHASE LAG RESOLUTION

3.6 degrees at 50Hz

PHASE LAG ACCURACY

±3.6 degrees at 50Hz

DIMENSIONS

OVERALL

216mm x 158mm x 42mm
8.5" x 6.2" x 1.6"

PANEL CUT-OUT

182mm x 137mm
7.2" x 5.4"

MAXIMUM PANEL THICKNESS

8mm (0.3")

DEEP SEA ELECTRONICS PLC

Highfield House
Hunmanby Industrial Estate
Hunmanby, North Yorkshire
YO14 0PH England

TELEPHONE

+44 (0)1723 890099

FACSIMILE

+44 (0)1723 893303

EMAIL

sales@deepseapl.com

WEBSITE

www.deepseapl.com

Registered in England & Wales No.01319649

VAT No.316923457

DEEP SEA ELECTRONICS INC

3230 Williams Avenue
Rockford
IL 61101-2668 USA

TELEPHONE

+1 (815) 316 8706

FACSIMILE

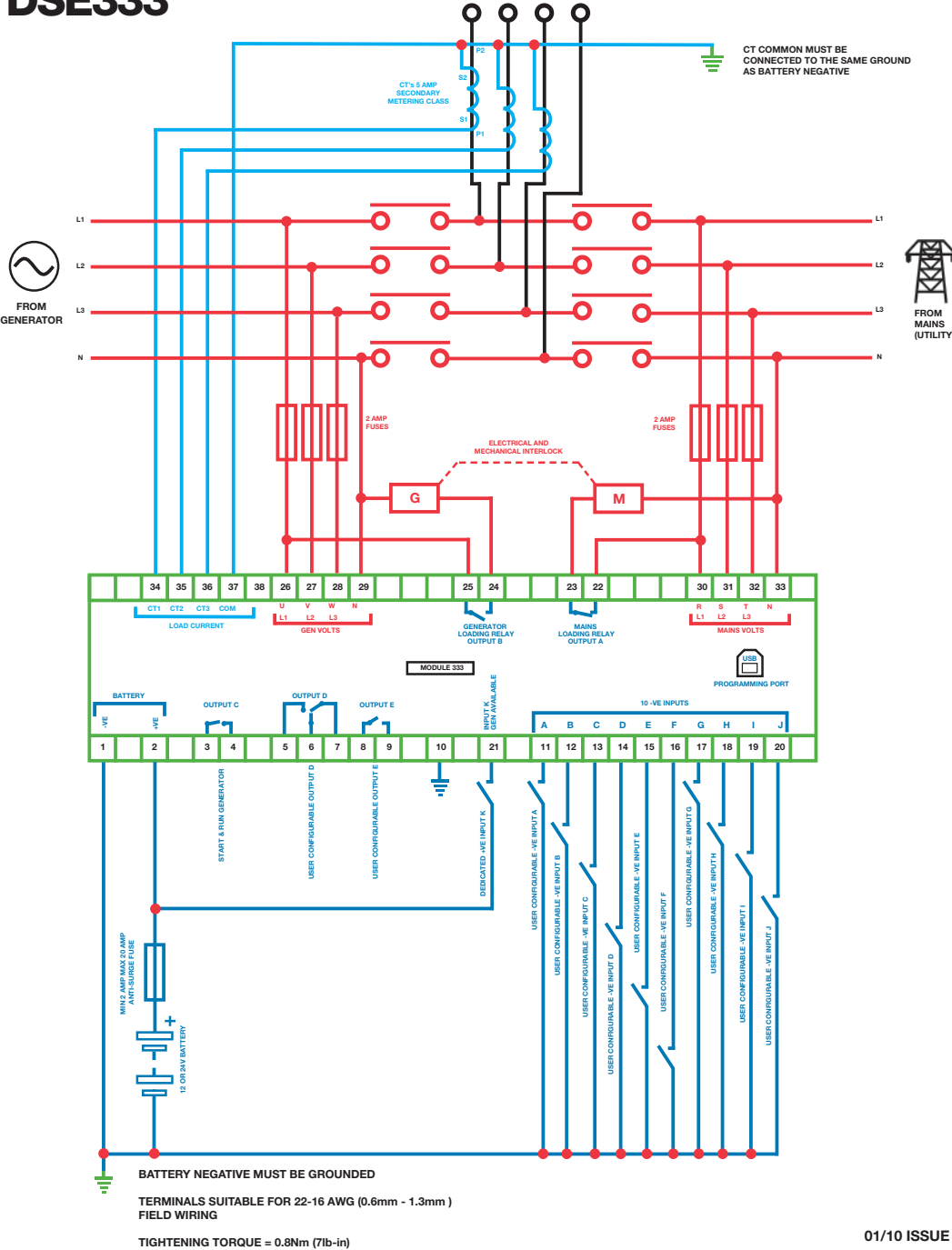
+1 (815) 316 8708

EMAIL

sales@deepseausa.com

WEBSITE

www.deepseausa.com

**DSE333**

01/10 ISSUE 1

RELATED MATERIALS

TITLE
Operators Manual
Configuration Suite Manual
DSE160 Manual
DSE160 Self-Seeking Power Supply Data Sheet
Installation Instructions

PART NO'S

057-118
057-106
057-108
055-076
053-066

DEEP SEA ELECTRONICS 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.

This data sheet is printed on 9lives 55 Silk, which is produced with 55% recycled fibre from both pre and post-consumer sources, together with 45% virgin ECF fibre.

SPECIFICATION**LOAD CURRENT INPUT**

PHASES MONITORED
1 to 3 (depending upon topology setting)

MEASUREMENT METHOD
True RMS up to 11th harmonic

NOMINAL CT SECONDARY RATING
5A

MAXIMUM CONTINUOUS CURRENT
5A

OVERLOAD MEASUREMENT
15A for 100ms

BURDEN
0.5VA

COMMON MODE OFFSET
±2V peak - plant ground to CT common terminal

RESOLUTION
25mA

ACCURACY
±1% of Nominal (5A) excluding CT error

2 DEDICATED DIGITAL OUTPUTS - A & B GENERATOR AND MAINS (UTILITY)

CURRENT RATING
8A AC resistive

VOLTAGE RATING
250V AC

CONFIGURABLE RELAY OUTPUT C

CURRENT RATING
8A DC resistive

VOLTAGE RATING
35V DC resistive (UL rating 30V)

CONFIGURABLE RELAY OUTPUT D&E

CURRENT RATING
8A

VOLTAGE RATING
250V

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 60068-2-2
Test Ab to +70°C 60068-2-2 Hot
Test Ab to -30°C 60068-2-1 Cold

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

HUMIDITY
BS 2011 part 2.1 60068-2-30
Test Cb Ob Cyclic
93% RH @ 40°C for 48 hours

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

