

# DSEATS® TRANSFERRING WITH EFFICIENCY



## DSE332

AUTO TRANSFER SWITCH CONTROL

## NEW RELEASE



The DSE332 is an Automatic Transfer Switch Controller for single set 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 DSE332 will control the transfer devices 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 DSE332 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

- Supports many topologies
- Automatic switchover 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
- Protected Solid State Outputs (PSS)
- 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)

### DSE160 SELF-SEEKING POWER SUPPLY



### BENEFITS

- Provides automatic mains (utility) monitoring and controls switchover 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. This must 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

#### MINIMUM SUPPLY VOLTAGE

8V continuous, 5V for up to 1 minute

#### 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 VOLTAGE

35V continuous

#### MAX SURVIVAL SUPPLY VOLTAGE

60V for 1 minute

#### 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")

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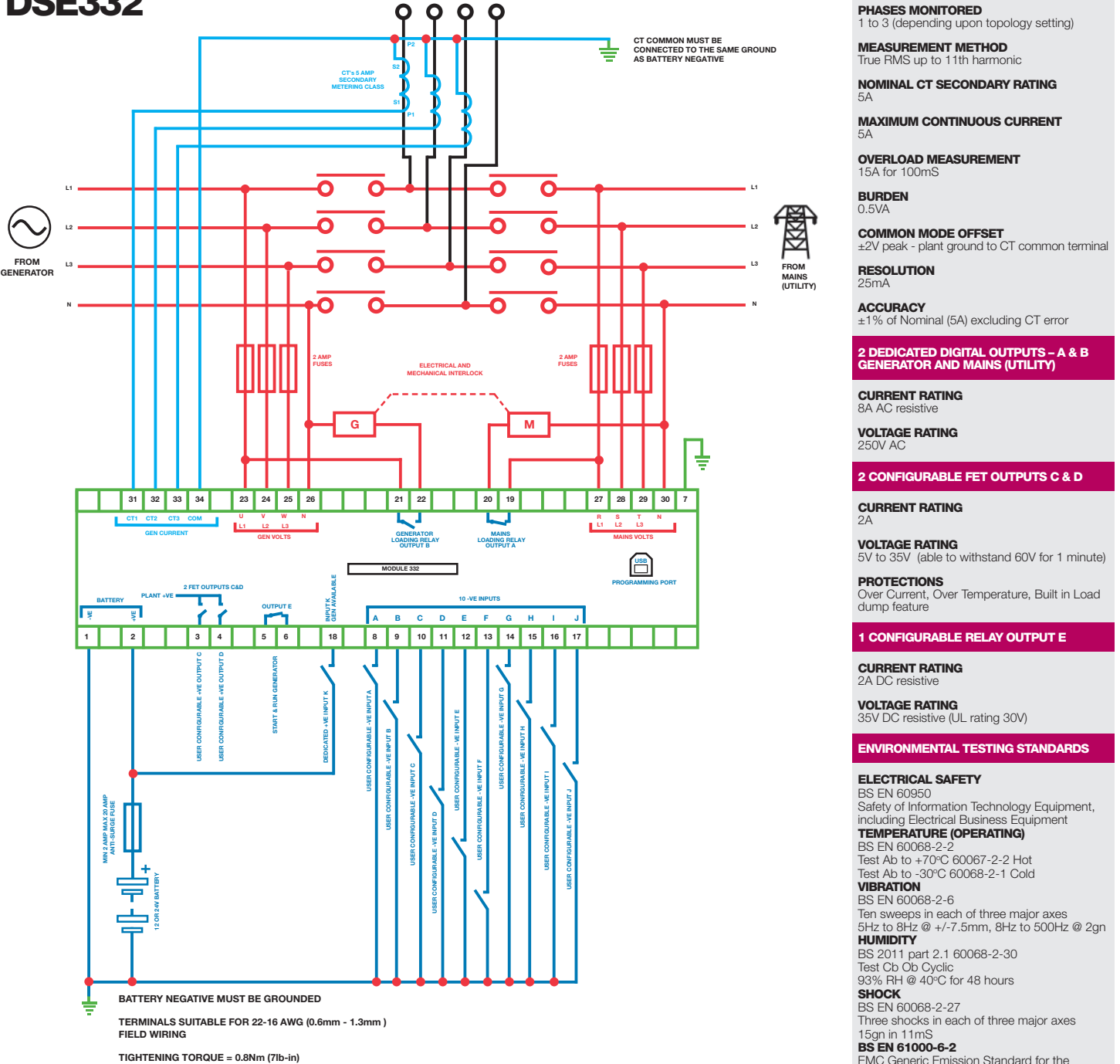
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**DSE332**



**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

**2 CONFIGURABLE FET OUTPUTS C & D**

- CURRENT RATING**  
2A
- VOLTAGE RATING**  
5V to 35V (able to withstand 60V for 1 minute)

**PROTECTIONS**  
Over Current, Over Temperature, Built in Load dump feature

**1 CONFIGURABLE RELAY OUTPUT E**

- CURRENT RATING**  
2A DC resistive
- VOLTAGE RATING**  
35V DC resistive (UL rating 30V)

**ENVIRONMENTAL TESTING STANDARDS**

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

**TEMPERATURE (OPERATING)**  
BS EN 60068-2-2  
Test Ab to +70°C 60067-2-2 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

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

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

**RELATED MATERIALS**

TITLE	PART NO'S
Operators Manual	057-097
Configuration Suite Manual	057-106
DSE160 Self-Seeking Power Supply Data Sheet	055-076

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