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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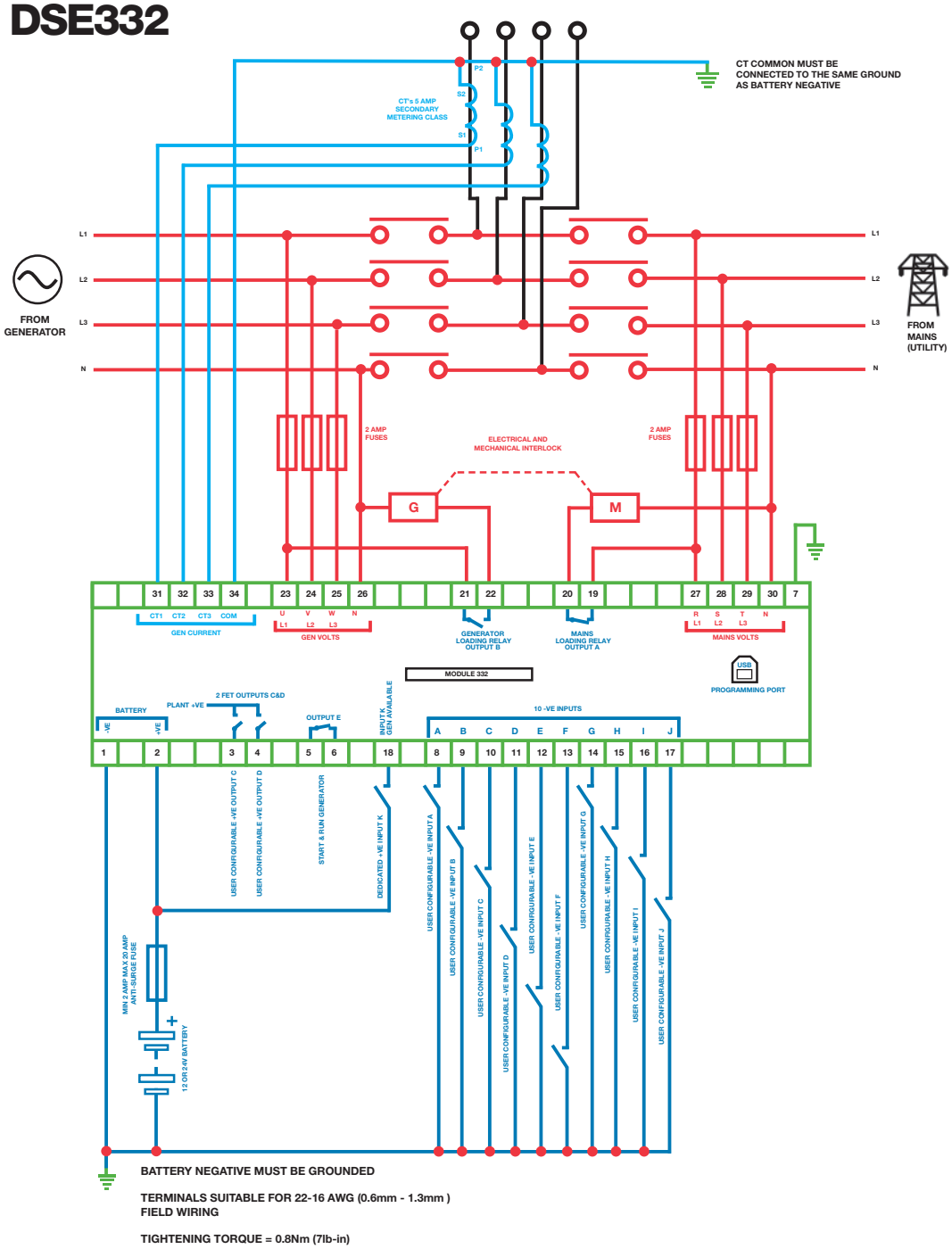
DSE332



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

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.

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