

# DSEPOWER<sup>®</sup> SHARING WITH SIMPLICITY.



## DSE5560

AUTO TRANSFER SWITCH & MAINS CONTROL MODULE



The DSE5560 is an Automatic Transfer Switch and Mains Control Module, designed to automatically synchronise multiple DSE5510s with single or multiple mains (utility) supplies.

The module instructs the DSE5510s to make precise changes to the generating set outputs. This makes the module suitable for many applications including peak lopping, peak shaving and no break return.

The module has the ability to monitor the mains (utility) supply and start and stop the generating sets (being controlled by a DSE5510) upon removal or detection of the mains (utility) supply. The modules operational status is indicated on the LCD display and the front panel LEDs.

### FEATURES

- Multiple language options
- Back-lit 4-line text LCD display
- Configurable timers
- Configurable inputs (9)
- Configurable outputs (5)
- Automatic hours run balancing
- Peak lopping control for DSE5510 controlled generator bus
- Peak shaving
- No break return
- PIN protected programming
- Full remote control and telemetry
- Mains (utility) fail monitoring
- Load demand scheme
- Multiple mains (utility) monitoring
- System lock input
- Load switching control push-button inputs
- Engine history event log
- LED indicators
- PC configurable

### BENEFITS

- On-site module configuration
- Remote module configuration via PC software
- In-built diagnostics removes the requirement for service equipment
- Transfers between mains and generator
- Remote control and monitoring of the module using comprehensive DSE PC software
- License free PC software

### OPERATION

The module is operated using the front STOP/RESET, MANUAL, AUTO, TEST and START push buttons.

The first four of these push buttons include LED indicators. Additional push buttons provide LCD page display scroll, lamp test, mute and load switching functionality.

### SPECIFICATION

#### DC SUPPLY

8V to 35V continuous

#### CRANKING DROPOUTS

Able to survive 0V for 50mS, providing supply was at least 10V before dropout and supply recovers to 5V. This is achieved without the need for internal batteries

#### MAXIMUM OPERATING CURRENT

460mA at 12V. 245mA at 24V

#### MAXIMUM STANDBY CURRENT

375mA at 12V. 200mA at 24V

#### GENERATOR BUS INPUT RANGE

15V(L-N) to 333V AC (L-N) absolute maximum

#### MAINS (UTILITY) CT BURDEN

0.5VA

#### GENERATOR BUS INPUT FREQUENCY

50Hz - 60Hz at rated engine speed  
(Minimum: 15V AC L-N)

#### MAINS SENSING INPUT RANGE

15V(L-N) to 333V AC (L-N) absolute maximum

#### MAINS SENSING INPUT FREQUENCY

50Hz - 60Hz (Minimum: 15V AC L-N)

#### AUXILIARY RELAY OUTPUTS

5A DC at supply voltage

#### GENERATOR BUS LOADING RELAY OUTPUT

8A AC 250V – normally open

#### MAINS LOADING RELAY OUTPUT

8A AC 250V – normally closed

#### DIMENSIONS

240mm x 172mm x 57mm  
9.4" x 6.8" x 2.2"

#### PANEL CUTOUT

220mm x 160mm  
8.7" x 6.3"

## ENVIRONMENTAL TESTING STANDARDS

### ELECTRO MAGNETIC CAPABILITY

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

### 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 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

## INSTRUMENTATION

The DSE5560 module provides advanced metering functionality, displaying the information on the LCD display. The information can be accessed using the scroll push button located next to the LCD display.

Bus Volts (L1-N, L2-N, L3-N)  
Bus Volts (L1-L2, L2-L3, L3-L1)  
Bus Hz  
Bus kW % of full capacity  
Bus Phase Sequence  
Load Amps, pf  
Load kW, kVA, kVAr  
Mains (utility) Volts (L1-N, L2-N, L3-N)  
Mains (utility) Volts (L1-L2, L2-L3, L3-L1)  
Mains (utility) Hz  
Mains (utility) Amps  
Mains (utility) kW  
Mains (utility) Kw % of full capacity  
Mains (utility) kVA  
Mains (utility) pf  
Mains (utility) kVAr  
Mains (utility) kVAh % of full capacity  
Mains (utility) kWh  
Mains (utility) kVAh  
Mains (utility) kVAh  
Mains (utility) Phase Sequence  
Synchroscope  
System Battery Voltage

## EVENT LOG

The module includes a comprehensive event log that shows the 25 most recent alarm conditions and the date and time that they occurred. This function assists the user when fault finding and maintaining a generating set.

## EXPANSION MODULES

DSE157 Relay Input Expansion Module  
DSE545 & DSE548 Remote Annunciation Expansion Module  
DSE130 Input Expansion Module

## COMMUNICATIONS

The DSE5560 includes a number of different communication capabilities.

### Remote Communications

When the module detects an alarm condition, it dials out to a PC notifying the user of the exact alarm condition (modem required).

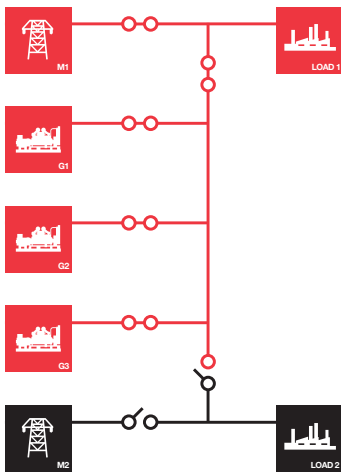
### Building Management

The module has been designed to be integrated into new and existing building management systems.

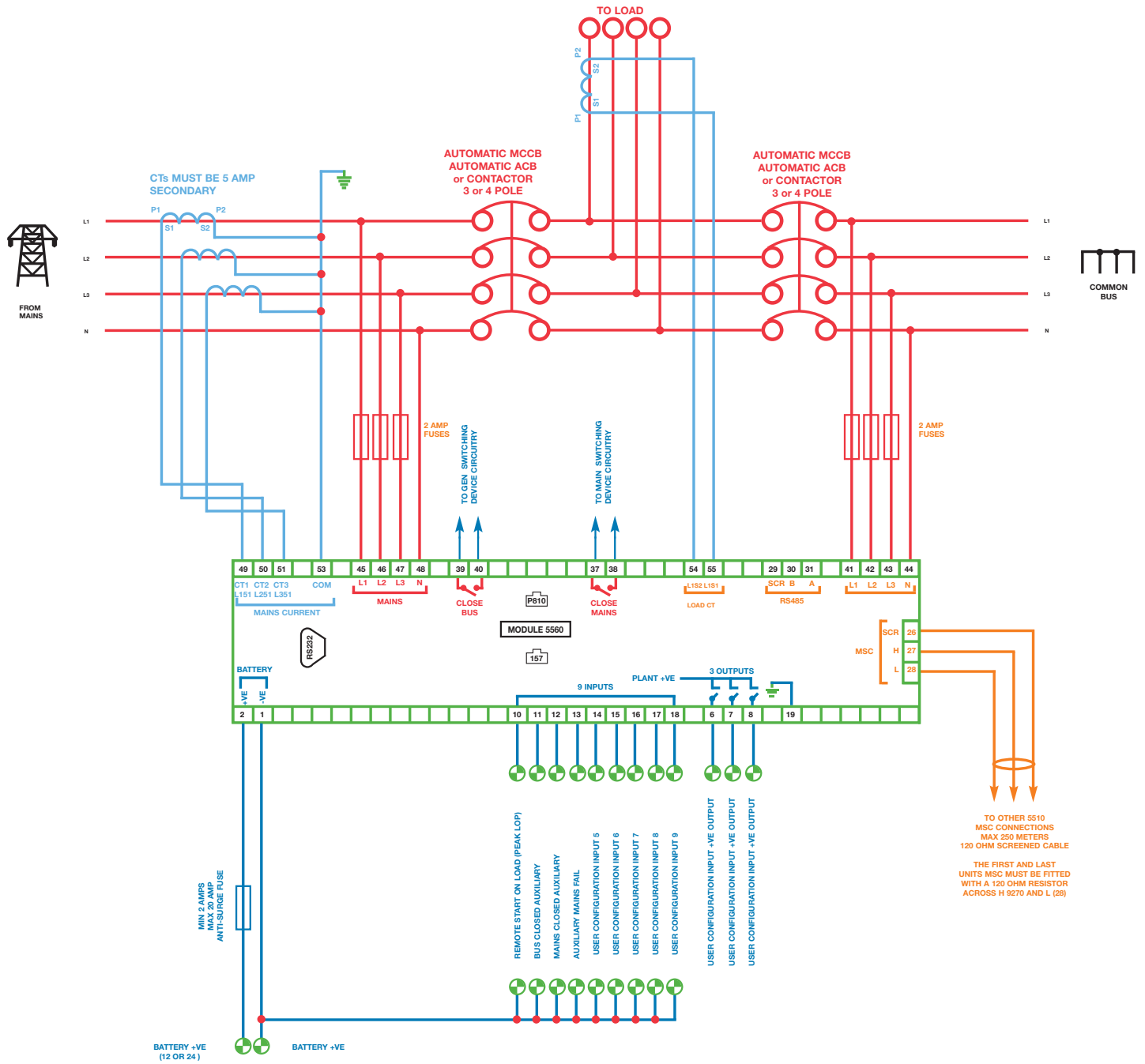
### PC Software

The module has the ability to be controlled, configured and monitored from a remote PC, using the DSE810 interface.

## TYPICAL LOAD SHARE APPLICATION



# DSE5560



## RELATED MATERIALS

TITLE	PART NO'S
DSE5560 Manual	057-017
DSE5510 Data Sheet	055-039
DSE5510 Manual	057-015
Guide to Synchronising and Load Sharing	057-045/6

TITLE	PART NO'S
55xx Software Manual	057-007
CAN & DSE Wiring Guide	057-004
Load Share Design and Commissioning	057-047

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