

# DSE8660 MKII

## AUTO TRANSFER SWITCH & MAINS (UTILITY) CONTROL MODULE



### KEY FEATURES

- Mains (utility) failure detection
- Mains (utility) power monitoring (kW, kV Ar, kV A and pf)
- Peak lopping & shaving functionality
- Mains (utility) kW export protection
- Comprehensive synchronising and loadsharing capabilities
- Base load (kW export) functionality
- Positive & negative kVAR export control
- Mains (utility) decoupling protection
- Mains (utility) and Bus Positive, Negative and Zero Sequence voltage alarms
- Mains (utility) and Bus Neutral Voltage Displacement (NVD) alarms
- Mains (utility) and Bus voltage asymmetry alarm
- Advanced integral PLC editor
- User configurable RS232, RS485 & Ethernet communications
- MODBUS RTU & TCP support
- User configurable MODBUS pages
- Advanced SMS control and

- fault messaging (additional GSM modem required)
- DSENet® expansion
- Data logging and trending
- 4-Line back-lit LCD text display
- Multiple display languages
- Five-key menu navigation
- Front panel editing with PIN protection
- Customisable status screens
- Configurable inputs (12)
- Configurable outputs (8)
- Configurable timers and alarms
- Multiple entry scheduler
- Configurable event log (250)
- Easy access diagnostic pages
- LED and LCD alarm indication
- USB connectivity
- Backed up real time clock
- Fully configurable via DSE Configuration Suite PC Software

### KEY BENEFITS

- A single flexible solution for multiple applications
- Compatible with DSE5510, DSE7510 & DSE8x10 series of modules
- 132 x 64 pixel ratio display for clarity
- Real-time clock provides accurate event logging

- Ethernet communication provides built in advanced remote monitoring.
- Can be integrated into building management systems (BMS) and programmable logic control (PLC)
- Increased input and output expansion capability via DSENet®
- Licence-free PC software
- IP65 rating (with supplied gasket) offers increased resistance to water ingress
- Advanced Internal PLC editor allows user configurable functions to meet specific application requirements.

### EXPANSION DEVICES

- DSE124 CAN/MSX Extender
- DSE2130 Input Expansion Module
- DSE2131 Ratiometric Input Expansion Module
- DSE2133 RTD & Thermocouple Expansion Module
- DSE2152 Analogue Output Expansion Module
- DSE2157 Output Expansion Module
- DSE2548 LED Expansion Module

### SPECIFICATIONS

#### DC SUPPLY

**CONTINUOUS VOLTAGE RATING**  
5 V to 35 V Continuous

#### CRANKING DROPOUTS

Able to survive 0 V for 100 mS, providing supply was at least 10 V before dropout and supply recovers to 5 V. This is achieved without the need for internal batteries. LEDs and backlight will not be maintained during cranking.

#### MAXIMUM OPERATING CURRENT

530 mA at 12 V, 280 mA at 24 V

#### MAXIMUM STANDBY CURRENT

320 mA at 12 V, 160 mA at 24 V

#### MAINS (UTILITY) & BUS VOLTAGE RANGE

15 V to 415 V AC (Ph to N)  
26 V to 719 V AC (Ph to Ph)

#### FREQUENCY RANGE

3.5 Hz to 75 Hz

#### INPUTS

**DIGITAL INPUTS A TO L**  
Negative Switching

#### OUTPUTS

**OUTPUTS C & D**  
8 A at 250 V AC (Volt free)

#### AUXILIARY OUTPUTS E TO J

2 A DC at supply voltage

#### DIMENSIONS

**OVERALL**  
245 mm x 184 mm x 51 mm  
9.6" x 7.2" x 2.0"

#### PANEL CUT-OUT

220 mm x 160 mm  
8.7" x 6.3"

#### MAXIMUM PANEL THICKNESS

8 mm  
0.3"

#### STORAGE TEMPERATURE RANGE

-40 °C to +85 °C  
-40 °F to +185 °F

#### OPERATING TEMPERATURE RANGE

-30 °C to +70 °C  
-22 °F to +158 °F

-40 °C to +70 °C (for heated display variant)  
-40 °F to +158 °F (for heated display variant)

### RELATED MATERIALS

#### TITLE

DSE8660 MKII Installation Instructions  
DSE8660 MKII Operators Manual  
DSE8660 MKII PC Configuration Suite Manual  
DSE8610 MKII Data Sheet

#### PART NO.

053-184  
057-259  
057-257  
055-204

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# DSE8660 MKII

## AUTO TRANSFER SWITCH & MAINS (UTILITY) CONTROL MODULE

The DSE8660 MKII is an easy-touse single or multi-mains (utility) controller with automatic transfer switch capability. Designed to synchronise single or multiple DSE8610 MKII and DSE8680 controllers with single or multiple mains (utility) supplies, the DSE8660 MKII will automatically control the change over from mains (utility) to generator supply or run generators in synchronisation with the mains (utility) to provide no-break, peak lopping and peak shaving power solutions.

The module can indicate operational status and fault conditions on the LCD screen (multiple languages available), by illuminated LED, audible sounder and SMS messaging. Comprehensive communications

are also available via RS232, RS485 & Ethernet for remote PC control and monitoring, and integration into building management systems. The comprehensive event log will record up to 250 events to facilitate maintenance. An extensive number of fixed and flexible monitoring and protection features are included. Easy alteration of the sequences, timers and alarms can be made using the DSE PC Configuration Suite Software. Selected configuration is also available via the module's front panel.

With all communication ports capable of being active at the same time, the DSE8xxx MKII Series is ideal for a wide variety of demanding load share applications.

### KEY LOAD SHARE FEATURES (WITH DSE8610 MKII):

- Peak lopping/shaving
- Sequential set start
- Manual voltage/frequency adjustment
- R.O.C.O.F. and vector shift protection
- Generator load demand
- Automatic hours run balancing
- Mains (Utility) decoupling
- Mains (Utility) decoupling test mode
- Bus failure detection
- Volts and frequency matching.
- kW & kvar load sharing

### 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

#### DEGREES OF PROTECTION PROVIDED BY ENCLOSURES

BS EN 60529  
IP65 - Front of module when installed into the control panel with the optional sealing gasket.

## COMPREHENSIVE FEATURE LIST TO SUIT A WIDE VARIETY OF GEN-SET APPLICATIONS

