

# DSE8680

## SYNCHRONISING GENERATOR BUS-TIE CONTROL MODULE

### FEATURES



The DSE8680 module is designed to control a generator bus-tie breaker. The module manages the synchronising and check-sync across the breaker automatically, via the DSE MSC (Multi-set Communications) Link, when opening or closing the bus-tie breaker.

With all communication ports capable of being active at the same time, the DSE8680 is ideal for a wide variety of demanding load share applications.

The DSE8680 module has been designed to work with the DSE8x10 and DSE8x60 Load Share control modules which support up to sixteen DSE8680s with no DSE8x60 or up to two DSE8680s with one to fourteen DSE8x60s. This provides a standalone, fully integrated solution, without the need for PLC.

### 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  
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  
5Hz to 8Hz @ +/-7.5mm, 8Hz to 500Hz @ 2gn

#### HUMIDITY

BS EN 60068-2-30  
Db Damp Heat Cyclic 20/55°C @ 95% RH  
48 Hours  
BS EN 60068-2-78  
Cab Damp Heat Static 40°C @ 93% RH  
48 Hours

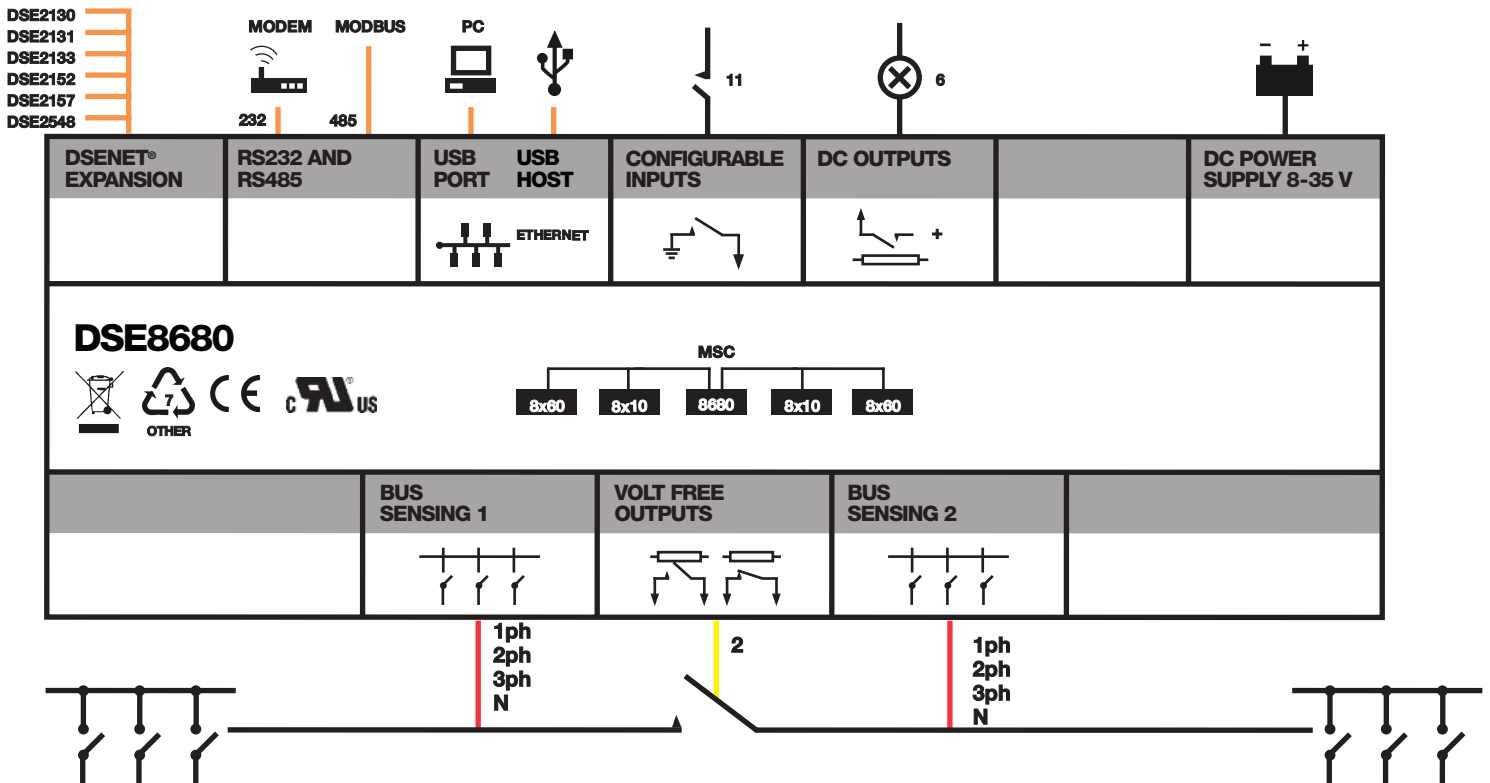
#### SHOCK

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

#### DEGREES OF PROTECTION PROVIDED BY ENCLOSURES

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

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



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### KEY FEATURES

- Comprehensive synchronising & loadshare capabilities
- Connects to two DSE MSC links, one for 'bus 1' and another for 'bus 2'
- Advanced integral PLC editor
- 11 Configurable inputs
- 8 Configurable outputs
- DSENet® expansion compatibility
- User configurable RS232, RS485 and Ethernet communications
- Remote SCADA monitoring via various DSE software applications
- MODBUS RTU & TCP support
- User configurable MODBUS pages
- Advanced SMS control and fault messaging (additional GSM modem required)
- Easy access diagnostic pages including modem diagnostic pages
- Data logging and trending
- Front panel editing with PIN protection
- Fully configurable using DSE Configuration Suite PC software via USB
- 4 Line back-lit LCD text display
- LED and LCD alarm indication
- Configurable display languages
- Customisable status screens
- Configurable event log (250)
- Backed up real time clock
- Real-time clock provides accurate event logging
- Ethernet communications, provides advanced remote monitoring at low cost
- Can be integrated into building management systems (BMS)
- Increased input and output expansion capability via DSENet®
- Licence-free PC software
- IP65 rating (with supplied gasket) offers increased resistance to water ingress
- PLC editor allows user configurable functions to meet specific application requirements

### KEY BENEFITS

- Automatic control of the DSE MSC link when the breaker is opened/closed for synchronising
- Instrumentation shows the status and measurements of both buses
- Built-in RS232, RS485 & Ethernet can be used at the same time
- High number of inputs and outputs
- Worldwide Language Support
- Compatible in load share systems containing DSE5500, DSE7500 and DSE8600 series. Contact DSE for further details.
- 132 x 64 pixel ratio display for clarity

### SPECIFICATION

#### DC SUPPLY

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

**MAXIMUM OPERATING CURRENT**  
150 mA at 12 V, 80 mA at 24 V

**MAXIMUM STANDBY CURRENT**  
50 mA at 12 V, 30 mA at 24 V

#### BUS 1 AND BUS 2

**VOLTAGE RANGE**  
15 V to 333 V AC (L-N)

**FREQUENCY RANGE**  
3.5 Hz to 75 Hz

#### OUTPUTS

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

**AUXILIARY OUTPUTS E,F,G,H,I & J**  
2 A DC at supply voltage

#### DIMENSIONS

**OVERALL**  
240 mm x 181 mm x 42 mm  
9.4" x 6.8" x 1.6"

#### PANEL CUTOUT

220 mm x 160 mm  
8.7" x 6.3"

#### MAXIMUM PANEL THICKNESS

8 mm  
0.3"

#### OPERATING TEMPERATURE RANGE

-30 °C to +70 °C

#### STORAGE TEMPERATURE RANGE

-40 °C to +85 °C

### RELATED MATERIALS

TITLE	PART NO'S	TITLE	PART NO'S
DSE8680 Installation Instructions	053-082	DSE8610 Data Sheet	055-083
DSE8680 Operator Manual	057-130	DSE8660 Data Sheet	055-086
DSE8680 Configuration Suite PC Software Manual	057-131	DSE8700 Series Data Sheet	055-090
		DSE8810 Data Sheet	055-116
		DSE8860 Data Sheet	055-139

### DEEP SEA ELECTRONICS PLC UK

Highfield House, Hunmanby Industrial Estate, Hunmanby YO14 0PH  
**TELEPHONE** +44 (0) 1723 890099 **FACSIMILE** +44 (0) 1723 893303  
**EMAIL** sales@deepseapl.com **WEBSITE** www.deepseapl.com

### DEEP SEA ELECTRONICS INC USA

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