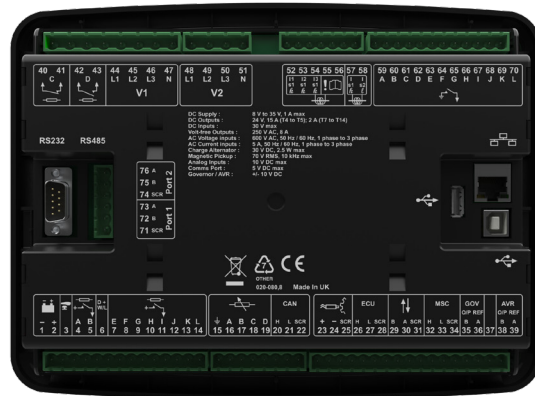


DSE8660 MKII Auto Transfer Switch & Mains (Utility) Control Module

Part Number: 8660-02



Overview

The DSE8660 MKII is an easy-to-use single or multi-mains (utility) controller with automatic transfer switch capability. Designed to synchronise a single or multiple DSE8610 MKIIs 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 sync with the mains (utility) supply 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 to allow 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 DSE86XX MKII series is ideal for a wide variety of demanding load share applications.

Key Features

- Slip sync and dead bus synchronising control
- Multi-set communication (MSC) link with optional redundancy
- 3-phase mains (utility) and bus sensing with protection
- Latest ECU / ECM support for a wide range of engine manufacturers
- Customisable shared data via MSC link
- Advanced PLC functionality including multi-purpose PIDs
- Flexible inputs and outputs
- DSENet® expansion support
- PC configuration using DSE Configuration Suite
- Multiple language support
- 4-line high-resolution display
- Manual front panel and automatic control modes
- Rubber sealing gasket (IP65 protection)
- Integrated RS232 and RS485 ports providing Modbus RTU support
- Integrated Ethernet port providing Modbus TCP and SNMP v2.0 support
- Data logging of up to 20 parameters

Product Approvals

- + CE
- + UL Listed: Standard - UL 6200:2019

Product Documentation

053-184 – DSE8660 MKII Installation Instructions

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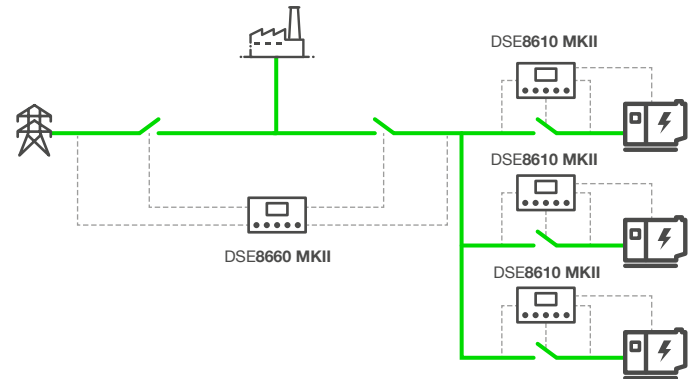
DSE8660 MKII Auto Transfer Switch & Mains (Utility) Control Module

Part Number: 8660-02

Multi-Set Controller Key Features

- Multiple generator synchronising and droop / isochronous load sharing control
- Advanced load demand schemes including automatic start / stop on
- Load change, genset optimisation and balancing of engine hours
- Multiple mains (utility) and generator synchronising ATS with short / long-term parallel control
- Mains (utility) failure detection including mains (utility) decoupling detection*
- Based load and peak lopping / shaving control*

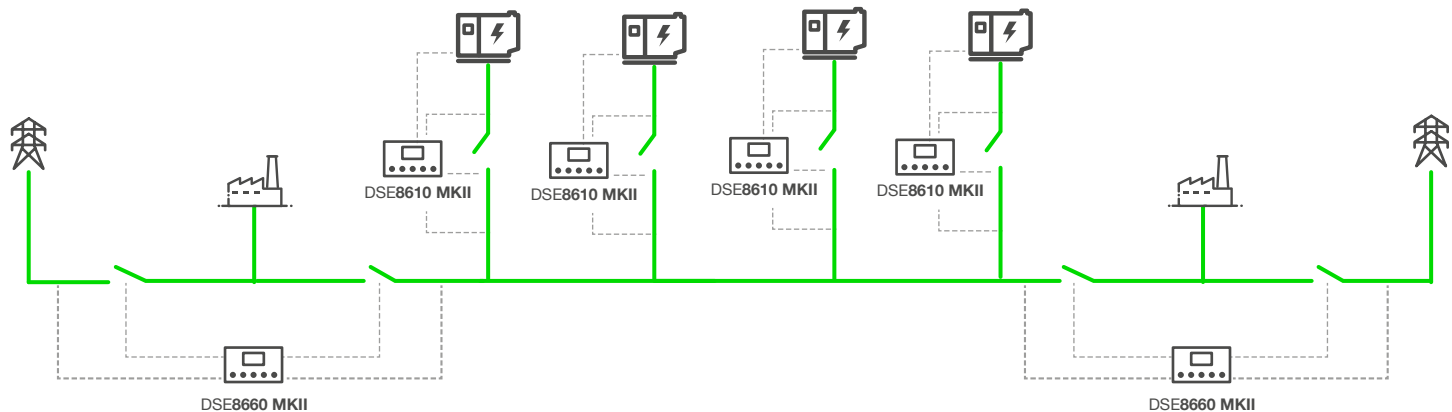
Typical Applications



Multi-Mains (Utility) Key Features

- Multiple generator synchronising and droop / isochronous load sharing control
- Advanced load demand schemes including automatic start / stop on
- Load change, genset optimisation and balancing of engine hours
- Multiple mains (utility) and generator synchronising ATS with short / long-term parallel control*

Typical Applications



*When used with DSE8610 MKII Controllers

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DSE8660 MKII Auto Transfer Switch & Mains (Utility) Control Module

Part Number: 8660-02

Specifications	
DC Supply	
Continuous Voltage Rating	5 V to 35 V DC continuous
Cranking Dropouts	Able to survive 0 V for 50 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. 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
Voltage Measurement	
Number	1: Mains (Utility) 2: Bus
Measurement Inputs	3 Phase + Neutral Mains (Utility) and Bus
Voltage Range	15 V to 415 V _{AC} Phase to Neutral 25 V to 719 V _{AC} Phase to Phase
Frequency Range	3.5 Hz to 75 Hz
Current Transformer Measurement	
Number	2 (Mains (Utility) Current), (Bus Load)
Measurement Inputs	3 Phase + Neutral Mains (Utility) and Bus
Current Range	0 A to 1 A 0 A to 5 A
Digital Inputs	
Number	12
Type	Negative Switching Digital Input
Closed Voltage Threshold	Less than 2.1 V
Open Voltage Threshold	Greater than 6.6 V
Digital Outputs	
Number	8
Type	1 Normally Open Volt-Free Contacts 1 Normally Closed Volt-Free Contacts 6 Positive Switching DC Output
Volt-Free Contact Output Rating	5 A _{DC} resistive at 30 V _{DC} 8 A _{AC} resistive at 250 V _{AC}
Positive DC Output Rating	Output A to B (Fuel and Start): 15 A _{DC} at emergency stop input supply voltage Output E to J: 2 A _{DC} resistive at module supply voltage

Product Documentation

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Part Number: 8660-02

Specifications	
Communications	
USB A	1 Data Storage Port
USB B	1 Programming Port
DSENet®	1 Expansion Port
RS485	2 Fully Isolated RS485 Ports*
RS232	1 Modbus RTU Port
Ethernet	1 10/100 Ethernet Port
CAN	3 Fully Isolated CAN Ports ECU – Engine ECU/ECM MSC – MSC Link CAN – Redundant MSC Link
Temperature	
Operating Temperature	-30 °C to +70 °C / -22 °F to +158 °F
Storage Temperature	-40 °C to +85 °C / -40 °F to +185 °F
Dimensions	
Overall (W x H x D)	245 mm x 184 mm x 51 mm / 9.65 " x 7.24 " x 2.00 "
Mounting	
Type	Panel Fascia Mounting
Panel Cut-Out (W x H)	220 mm x 160 mm / 8.66 " x 6.30 "
Maximum Panel Thickness	8 mm / 0.31 "

*Second RS485 port available in future update

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DSE8660 MKII Auto Transfer Switch & Mains (Utility) Control Module

Part Number: 8660-02

Related Products		
DSEGenset®		
DSE8610 MKII	Synchronising & Load Sharing Auto Start Control Module	8610-02
DSE8003 MKII	7" Graphical Colour Multi-Set Remote Overview Display	8003-02
DSENet®		
DSE2548	DSENet® LED Output Expansion Module	2548-01
DSE2157	DSENet® Output Expansion Module	2157-01
DSE2152	DSENet® Analogue Output Expansion Module	2152-01
DSE2133	DSENet® RTD/Thermocouple Input Expansion Module	2133-01
DSE2131	DSENet® Ratiometric Input Expansion Module	2131-01
DSE2130	DSENet® Input Expansion Module	2130-01
DSEWebNet®		
DSE890 MKII	DSEWebNet® Gateway	0890-04
DSE891 MKII	DSEWebNet® / IoT Gateway - Ethernet Only	0891-04
DSEComms		
DSE124	CANbus Extender	0124-01

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Part Number: 8660-02

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 61010	Safety requirements for electrical equipment for measurement, control and laboratory use
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 G _n
Humidity	
BS EN 60068-2-30	Db Damp Heat Cyclic 20/55 °C at 95% Relative Humidity 48 Hours
BS EN 60068-2-78	Cab Damp Heat Static 40 °C at 93% Relative Humidity 48 Hours
Shock	
BS EN 60068-2-27	Three shocks in each of three major axes 15 G _n in 11 ms
Degrees of Protection Provided by Enclosures	
BS EN 60529	IP65 - From the front of the module when installed into a control panel with supplied gasket

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Part Number: 8660-02

Mains (Utility) Controller	
Pin	Description
1 to 2	DC Power Supply
3 to 6	Not Applicable
7 to 12	Digital Outputs
13 to 19	Not Applicable
20 to 22	CAN
23 to 28	Not Applicable
29 to 31	DSENet®
32 to 34	MSC
35 to 39	Not Applicable
40 to 41	Normally Closed Volt Free Output
42 to 43	Normally Open Volt Free Output
44 to 47	Mains (Utility) Voltage Sensing
48 to 51	Bus Voltage Sensing
52 to 56	Mains (Utility) Current Sensing
57 to 58	Bus / Load Current
59 to 70	Digital inputs
71 to 73	RS485 port 1
74 to 76	RS485 port 2

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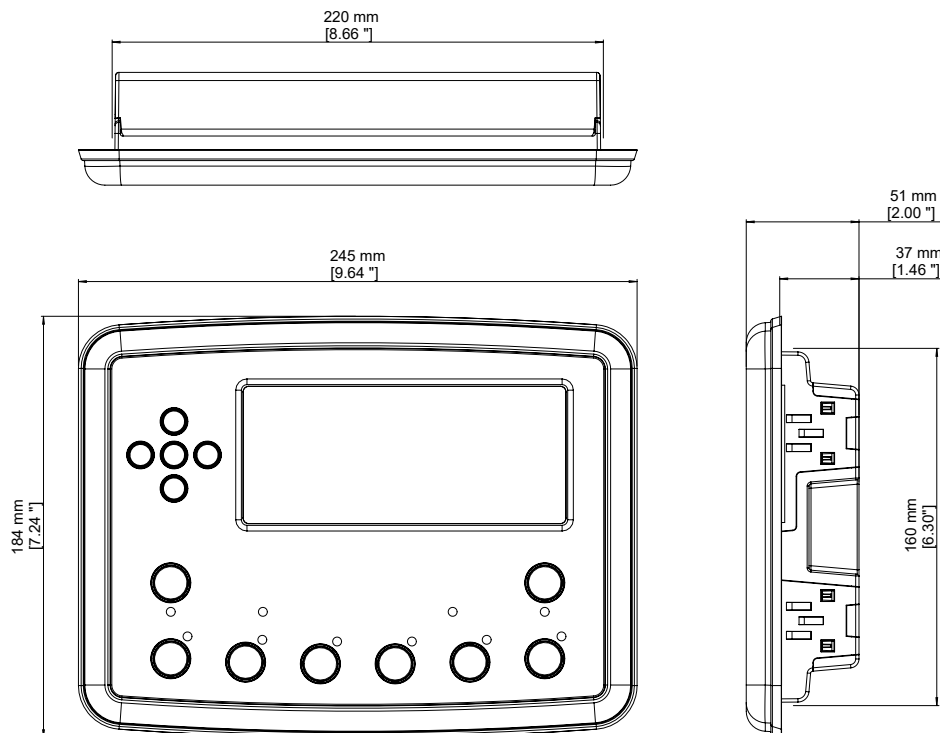
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DSE8660 MKII Auto Transfer Switch & Mains (Utility) Control Module

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Technical Drawing



Connection Label

