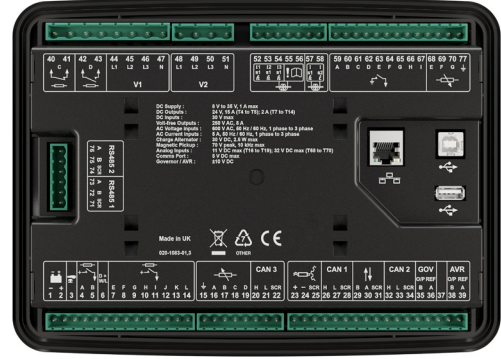




DSEG8660 Mains (Utility) Controller

Part Number: G8660-01



The DSEG8660 is an ATS / Mains (Utility) controller with integral heater designed to work with the DSEG8600 that is configured for use as a multi-set controller. The DSEG8660 allows multiple generators to synchronise with a mains (utility) supply and controls switching power between generator and mains (utility) sources, without loss of supply to the load.

Key Features

- Flexible bus segments
- Slip sync and sync (phase) lock synchronising control
- Advanced multi-set communication (AMSC) link with optional redundancy
- Shared virtual inputs, outputs and data via AMSC
- Advanced PLC functionality including multi-purpose PIDs
- Flexible inputs and outputs
- DSENet® expansion support
- PC configuration using DSE Configuration Suite
- Multiple language support
- Enhanced 6-line high-resolution heated display (240 px x 128 px) with on screen application diagrams
- Integrated gasket (IP65 protection)
- 2 integrated RS485 ports providing Modbus RTU support
- Integrated Ethernet port providing Modbus TCP and SNMP v2C support
- Data logging of up to 20 parameters
- Multi-level PIN protected front panel editor
- Manual front panel and automatic control modes

Product Documentation

- 053-253 – DSEG8660 Installation Instructions
- 057-324 – DSEG8660 Operator Manual
- 057-325 – DSEG8660 Configuration Suite PC Manual



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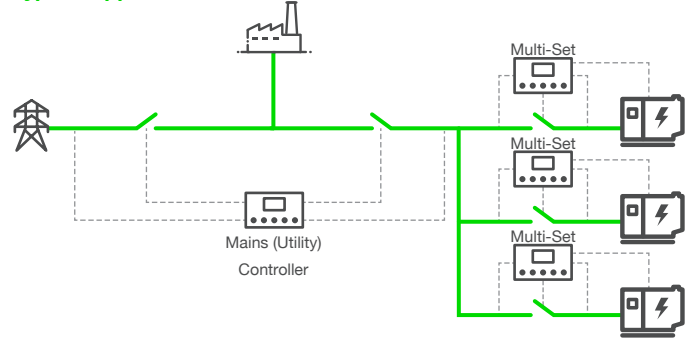
DSEG8660 Mains (Utility) Controller

Part Number: G8660-01

Mains (Utility) Controller Key Features

- Multiple mains (utility) and bus synchronising ATS with short / long-term parallel control*
- 3 phase mains (utility) and bus sensing with protection
- Mains (utility) failure detection including mains (utility) decoupling detection
- Base Load and peak lopping / shaving control*
- Mains (utility) and bus positive, negative and zero voltage sequence alarms

Typical Applications



*When used with multi-set controllers

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DSEG8660 Mains (Utility) Controller

Part Number: G8660-01

Specifications	
DC Supply	
Continuous Voltage Rating	8 V to 35 V DC 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. Backlight will not be maintained during cranking.
Maximum Operating Current	700 mA at 12 V, 350 mA at 24 V
Maximum Standby Current	350 mA at 12 V, 190 mA at 24 V
Voltage Measurement	
Number	2
Measurement Inputs	3 Phase + Neutral Mains (Utility) and Bus
Voltage Range	15 V to 415 V Phase to Neutral 25 V to 719 V Phase to Phase
Frequency Range	3.5 Hz to 75 Hz
Current Transformer Measurement	
Number	4
Measurement Inputs	3 Phase Mains (Utility) Current + Single Phase Bus/Load Current
Current Range	0 A to 1 A 0 A to 5 A
Digital Inputs	
Number	9
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 Contact 1 Normally Closed Volt-Free Contact 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 E to L: 2 A _{DC} at module supply voltage

Product Documentation

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DSEG8660 Mains (Utility) Controller

Part Number: G8660-01

Specifications	
Communications	
USB A	1 Data Storage Port
USB B	1 Programming Port
DSENet®	1 Expansion Port
RS485	2 Fully Isolated RS485 Ports
Ethernet	1 10/100 Ethernet Port
CAN	3 Fully Isolated CAN Ports CAN 1 – Not Used CAN 2 – AMSC CAN 3 – Redundant AMSC
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)	248.0 mm x 182.6 mm x 45.2 mm / 9.77 " x 7.19 " x 1.78 "
Mounting	
Type	Panel Fascia Mounting
Panel Cut-Out (W x H)	220 mm x 160 mm / 8.66 " x 6.3 "
Maximum Panel Thickness	8 mm / 0.31"

Product Documentation

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DSEG8660 Mains (Utility) Controller

Part Number: G8660-01

Related Products		
DSEgenset®		
DSEG8900	7" Colour Parallel Genset Controller	G8900-01
DSEG8680	Bus Tie Controller	G8680-01
DSEG8600	Parallel Genset Controller with Integral Heater	G8600-01
DSEG8015	15" Panel PC with DSE SCADA	G8015-01
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
Remote Monitoring Control		
DSE SCADA	G8 Series SCADA	037-060

Product Documentation

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DSEG8660 Mains (Utility) Controller

Part Number: G8660-01

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 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% 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 Gn 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 (Integrated Gasket)

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DSEG8660 Mains (Utility) Controller

Part Number: G8660-01

Mains (Utility) Controller	
Pin	Description
1 to 2	DC Supply
3	Not Applicable
4 to 5	Not Applicable
6	Not Applicable
7 to 12	Digital Outputs
13 to 14	Not Applicable
15 to 19	Not Applicable
20 to 22	Redundant AMSC Link
23 to 25	Not Applicable
26 to 28	Not Applicable
29 to 31	DSENet®
32 to 34	AMSC Link
35 to 36	Not Applicable
37	Not Applicable
38 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 Sensing
59 to 67	Digital Inputs
68 to 70 & 77	Not Applicable
71 to 76	2 x RS485

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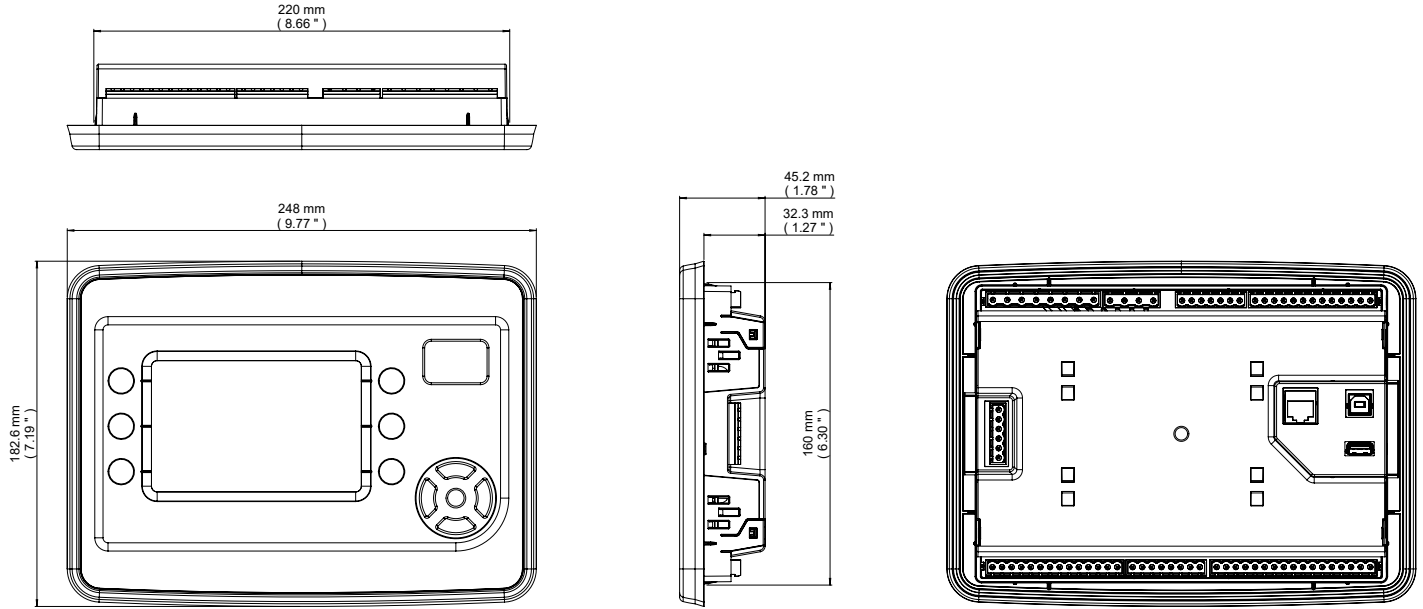
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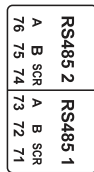
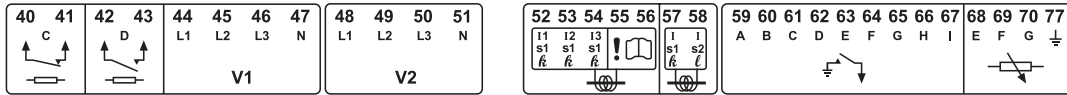
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Part Number: G8660-01

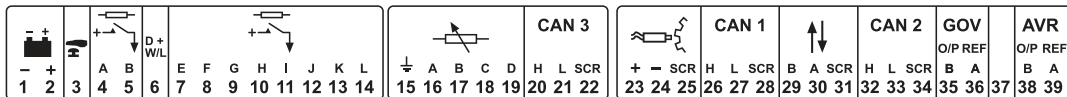
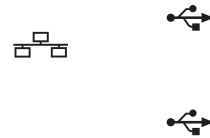
Technical Drawing



Connection Label



DC Supply : 8 V to 35 V, 1 A max
 DC Outputs : 24 V, 15 A (T4 to T5); 2 A (T7 to T14)
 DC Inputs : 30 V max
 Volt-free Outputs : 250 V AC, 3 A
 AC Voltage inputs : 600 V AC, 50 Hz / 60 Hz, 1 phase to 3 phase
 AC Current inputs : 5 A, 50 Hz / 60 Hz, 1 phase to 3 phase
 Charge Alternator : 30 V DC, 2.5 W max
 Magnetic Pickup : 70 V peak, 10 kHz max
 Analog Inputs : 11 V DC max (T16 to T19); 32 V DC max (T68 to T70)
 Comms Port : 5 V DC max
 Governor / AVR : ±10 V DC



Refer to PIN out description charts for connection information on the operating mode controller is configured for.

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