

DSEG8660 Mains (Utility) Controller

Part Number: G8660-01



Description

The G8660 is a ATS / Mains (Utility) controller with integral heater designed to work with the G8600 that is configured for use as a multi-set controller. The G8660 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.

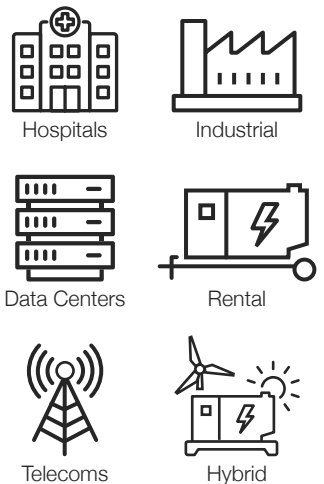
Key Features

- Ability to configure multiple bus segments
- Spinning reserve
- Load demand schemes
- Advanced multi set communications link (AMSC)
- Advanced PLC functionality including multi-purpose PIDs
- Phase locking
- Virtual inputs
- On-screen mimic
- Multiple application support
- Multi-level pin protected front panel editor
- Integral LCD display heater
- Enhanced high-resolution 240 x 128 pixel display
- Load sharing & VAR sharing
- Virtual shared inputs, outputs, states and instrumentation values via AMSC
- Touch screen panel PC support (G80XX)
- Zero sequence voltage protection
- Integral gasket (IP65 protection)

Features

- Base load (kW export) control
- Positive & negative kVar export control
- Mains (utility) decoupling protection
- Multiple language support
- 3-phase mains (utility) sensing
- 3-phase bus sensing
- Mains (utility) failure detection
- Mains (utility) current & power monitoring
- Configurable timers
- Integrated SNMP
- Data logging
- PC configuration
- DSENet® (Expansion support)
- Flexible I/O (inputs/outputs)
- Automatic and front panel breaker control
- Power-save mode

Key Applications



Product Documentation

Title	Part No.
DSEG8600 Installation Instructions	053-256
DSEG8600 Operator Manual	057-323
DSEG8600 Configuration Suite PC Manual	057-322

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DSEG8660

Mains (Utility) Controller

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. LEDs and 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
Real Time Clock	Yes
Voltage Measurement	
Measurement Inputs	Three phase mains (utility) / Three phase bus
Measurement Range	15 V to 415 V (Ph-N) / 255 V - 720 V (Ph to Ph)
Accuracy	±1% (±4.15 V Ph to N) / ±1% (±7.2 V Ph to Ph)
Frequency Range	3.5 Hz to 75 Hz
Input Impedance	450 KΩ Ph to Ph
Current Measurement	
Measurement Inputs	Three phase mains (utility) / Single phase bus or load
Measurement Range	0 to 1 A, 0 to 5 A
Max Allowed Continuous Current	5 A
Accuracy	±1% (±0.01 A or ±0.05 A)
Input Impedance	0.02 Ω
Inputs	
Digital	12 digital inputs (A to L) switched to negative
Outputs	
Volt-Free Contact	2 volt-free contacts (C & D) 8 A at 250 V AC
Auxiliary	8 digital outputs (E to L) 2 A DC at supply voltage
Communications	
RS485	2 x fully isolated
Ethernet	10/100 Ethernet Port
USB A	1 x storage device
USB B	1 x non isolated host / programming
CAN	3 x fully isolated
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 mm x 182.6 mm x 45.2 mm / 9.77" x 7.19" x 1.78"
Panel Cut-Out (W x H)	220 mm x 160 mm / 8.66" x 6.3"
Maximum Panel Thickness	8 mm / 0.31"

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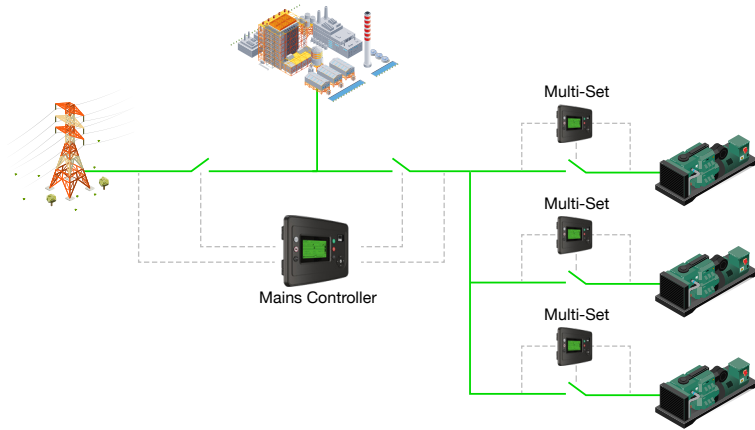
Related Products		
Controllers		
G8600	Parallel Genset Controller with Integral Heater	G8600-01
G8680	Bus Tie Controller	G8680-01
G8900	7" Colour Parallel Genset Controller	G8900-01
Remote Displays		
G8015	15" Panel PC with DSE SCADA	G8015-01
G8021	21" Panel PC with DSE SCADA	G8021-01
Expansion Devices		
G0123	Analogue Load Share Lines Interface	G0123-01
DSE2130	DSENet® Input Expansion Module	2130-01
DSE2131	DSENet® Ratiometric Input Expansion Module	2131-01
DSE2133	DSENet® RTD/Thermocouple Input Expansion Module	2133-01
DSE2152	DSENet® Analogue Output Expansion Module	2152-01
DSE2157	DSENet® Output Expansion Module	2157-01
DSE2548	DSENet® LED Output Expansion Module	2548-01
Remote Communications		
DSE890 MKII	DSEWebNet® Gateway	0890-04

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% 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	

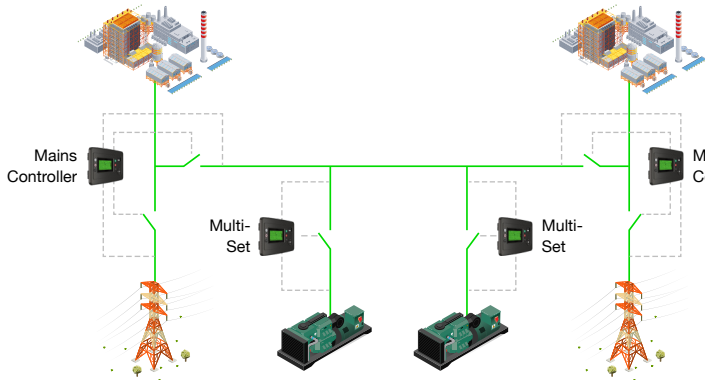
DSEG8660
Mains (Utility) Controller

Typical Applications

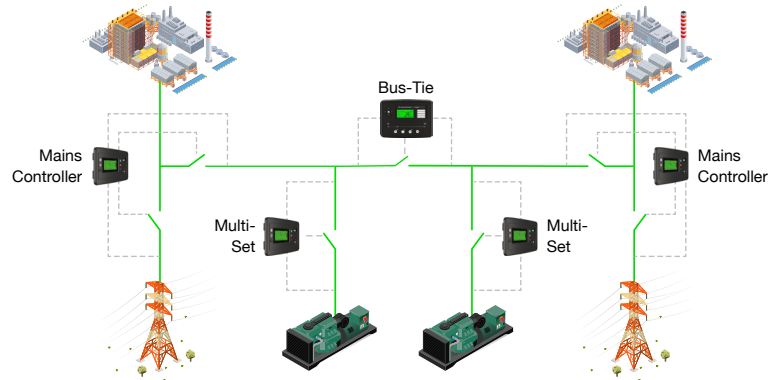
Mains (Utility) Controller



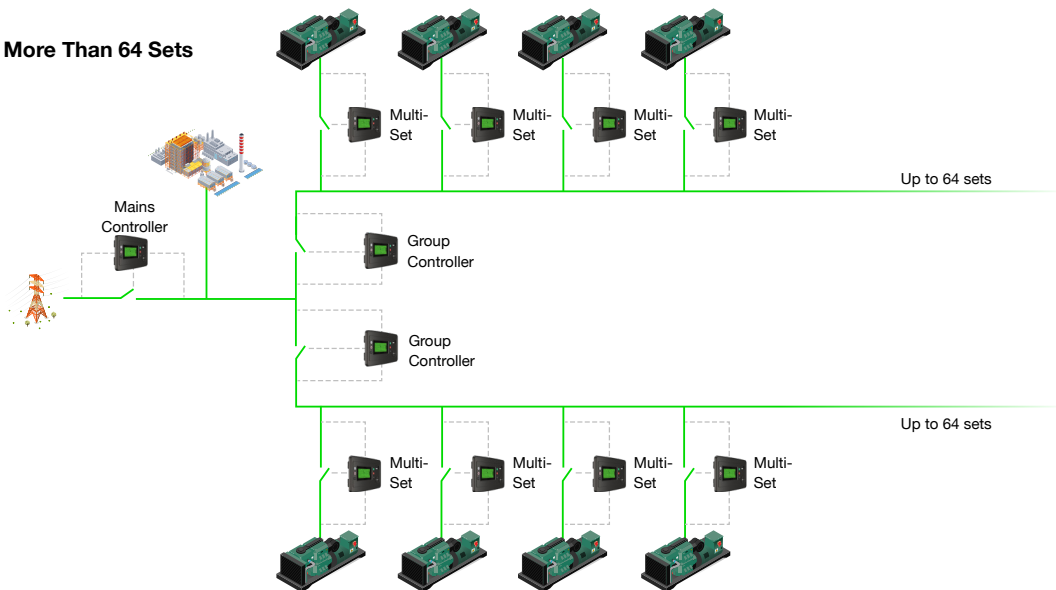
Multi-Mains (Utility)



Multi-Mains (Utility) with Bus-Tie



More Than 64 Sets



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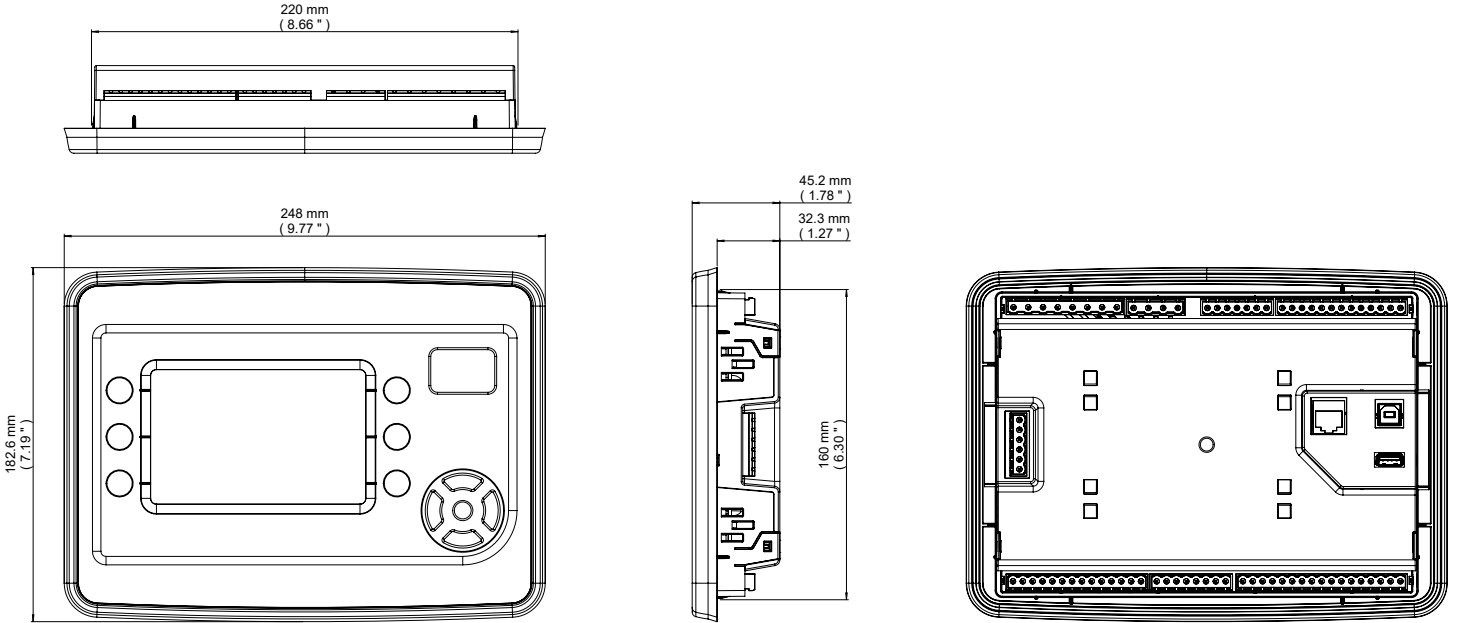
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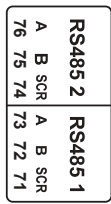
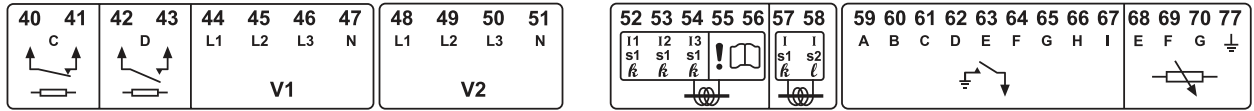
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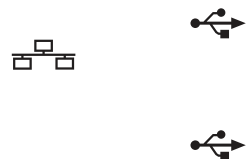
Technical Drawing



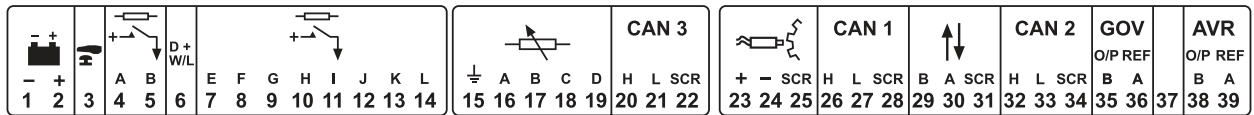
Connection Diagram



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, 8 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



OTHER Made in UK
020-1083-01,4



Refer to PIN out description charts for connection information.

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PIN Out Description

Mains (Utility) Controller	
PIN	DESCRIPTION
1 to 2	DC Power 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 Current Sensing
59 to 67	Digital Inputs
68 to 70 & 77	Not Applicable
71 to 76	2 x RS485