



DSEG8900 7" Colour Parallel Genset Controller

Part Number: G8900-01



Overview

The **DSEG8900** is a 7" colour parallel genset controller designed for complex paralleling applications. The G8900 can be configured to provide single-set and multi-set paralleling on a single site and provides a wide range of high-end features for multiple application environments.

Key Features

- Bus sectioning support
- Spinning reserve & capacity
- Load demand schemes
- Advanced multi-set communications link (AMSC)
- Advanced PLC functionality including multi-purpose PIDs
- Phase locking
- Virtual inputs
- Multiple application support
- Multi-level pin protected front panel editor
- Integral LCD display heater
- 7" high-resolution colour display
- Single or multiple generator applications
- Latest ECU / ECM support
- Load sharing kW & kvar (multi-set, single set and mains (utility) or base load)
- Virtual shared inputs, outputs and data via AMSC
- Touch screen panel PC support (G8015)
- Zero sequence voltage protection
- Integral gasket (IP65 protection)
- Built-in governor & AVR control
- DSE digital AVR support
- Dead bus synchronising
- Mains (utility) decoupling protection
- Multiple language support
- 3-phase generator sensing & protection
- 3-phase mains (utility) sensing/failure detection
- 3-phase bus sensing
- Integrated SNMP
- Data logging
- DSENet® (expansion support)
- Flexible I/O (inputs/outputs)
- Power-save mode

Product Documentation

- 053-258 – DSEG8900 Installation Instructions
- 057-343 – DSEG8900 Operator Manual
- 057-340 – DSEG8900 Configuration Suite PC Manual



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Specifications	
DC Supply	
Continuous Voltage Rating	5 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	985 mA at 12 V, 500 mA at 24 V
Maximum Standby Current	725 mA at 12 V, 370 mA at 24 V
Charge Fail Excitation Range	0 V to 35 V
Real Time Clock	Yes
Voltage Measurement	
Measurement Inputs	Three-phase generator, Three-phase mains (utility)
Measurement Range	15 V to 415 V (Ph to N) / 25 V to 720 V (Ph to Ph)
Accuracy	±1 % (±4.15 V Ph to N) / ±2 % (±14.4 V Ph to Ph)
Frequency Range	3.5 Hz to 75 Hz
Input Impedance	300 kΩ (Ph to N)
Current Measurement	
Measurement Inputs	Three phase bus or load / Single phase mains (utility)
Measurement Range	0 A to 1 A, 0 A to 5 A
Max Allowed Continuous Current	5 A
Accuracy	±1% (±0.01 A or ±0.05 A)
Input Impedance	0.02 Ω
Inputs	
Analogue	Input A configurable: 0 Ω to 3 kΩ, 0 mA to 20 mA, 0 V to 10 V Inputs B to D configurable: 0 Ω to 5 kΩ, 0 mA to 20 mA, 0 V to 10 V Inputs E to G configurable: 0 Ω to 5 kΩ, 0 mA to 20 mA, 0 V to 10 V, 0 V to 32 V
Analogue (configured as digital)	A to G active low/high
Digital	A to I active low/high
Resolution	±1 % of full-scale
Accuracy	±1 % of full-scale (V, A, or Ω)
Outputs	
Analogue	Governor / AVR configurable -10 V to 10 V, 0 mA to 20 mA
Digital	Fuel output 15 A, Start output 15 A
Auxiliary	8 digital outputs (E to L) 2 A DC at supply voltage
Gain Voltage	0 V to 10 V, 0 V to 20 V mA configurable
Offset Voltage	0 V to 10 V, 0 V to 20 V mA configurable

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Specifications	
Magnetic Pick-Up	
Voltage Input Range	0.5 V to 70 V RMS
Frequency Input Range	1 Hz to 10 KHz
Frequency Measurement Tolerance	Better than 0.1 %
Communications	
RS485	Fully isolated \pm 1 kV
Ethernet	10/100 Ethernet Port
USB A	Data Storage
USB B	Programming Port
CAN	4 x fully isolated. CAN port 4 useable as a redundant AMSC link only.
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)	305 mm x 161 mm x 45.2mm / 12" x 6.34" x 1.77"
Panel Cut-Out (W x H)	282 mm x 136 mm / 11.1" x 5.35"
Maximum Panel Thickness	8 mm / 0.31"

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Related Products		
Controllers		
DSEG8600	Parallel Genset Controller with Integral Heater	G8600-01
DSEG8660	Mains (Utility) Controller	G8660-01
DSEG8680	Bus Tie Controller	G8680-01
Remote Displays		
DSEG8015	15" Panel PC with DSE SCADA	G8015-01
Expansion Devices		
DSEG0123	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

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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	
BS EN 60529	IP65 - Front of module when installed into a control panel (Integrated Gasket)

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Multi-Set Controller	
Pin	Description
1 to 2	DC Supply
3	Emergency Stop
4	Fuel
5	Start
6	Charge Alternator
7 to 14	User Configurable Outputs
15 to 19	Analogue Inputs
20 to 22	Redundant AMSC
23 to 25	Magnetic Pick-Up
26 to 28	Engine ECU/ECM
29 to 31	DSENet®
32 to 34	AMSC Link
35 to 36	Governor Control
37	Not Applicable
38 to 39	AVR Control
40 to 41	Normally Closed Volt Free Output
42 to 43	Normally Open Volt Free Output
44 to 47	Generator Voltage Sensing
48 to 51	Bus Voltage Sensing
52 to 56	Generator Current Sensing
57 to 58	Not Applicable
59 to 67	Digital Inputs
68 to 70 & 77	Analogue Inputs
71 to 76	2 x RS485
78 to 80	Not Applicable

Single-Set Controller	
Pin	Description
1 to 2	DC Supply
3	Emergency Stop
4	Fuel
5	Start
6	Charge Alternator
7 to 14	User Configurable Outputs
15 to 19	Analogue Inputs
20 to 22	Not Applicable
23 to 25	Magnetic Pick-Up
26 to 28	Engine ECU/ECM
29 to 31	DSENet®
32 to 34	Not Applicable
35 to 36	Governor Control
37	Not Applicable
38 to 39	AVR Control
40 to 41	Normally Closed Volt Free Output
42 to 43	Normally Open Volt Free Output
44 to 47	Generator Voltage Sensing
48 to 51	Mains (Utility) Voltage Sensing
52 to 56	Generator Current Sensing
57 to 58	Mains (Utility) Current Sensing
59 to 67	Digital Inputs
68 to 70 & 77	Analogue Inputs
71 to 76	2 x RS485
78 to 80	Not Applicable

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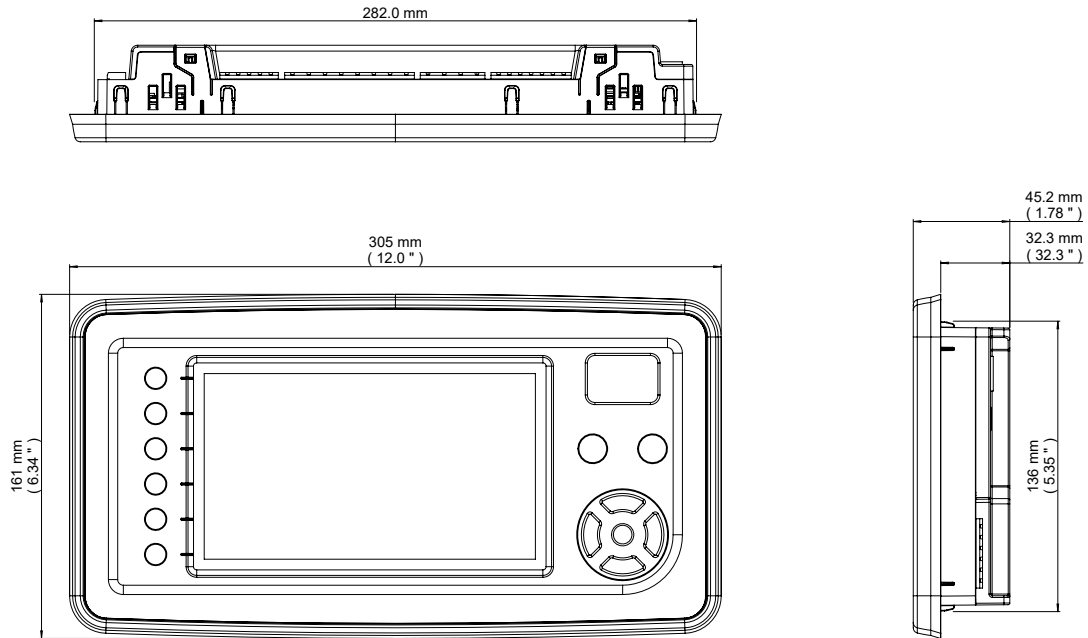
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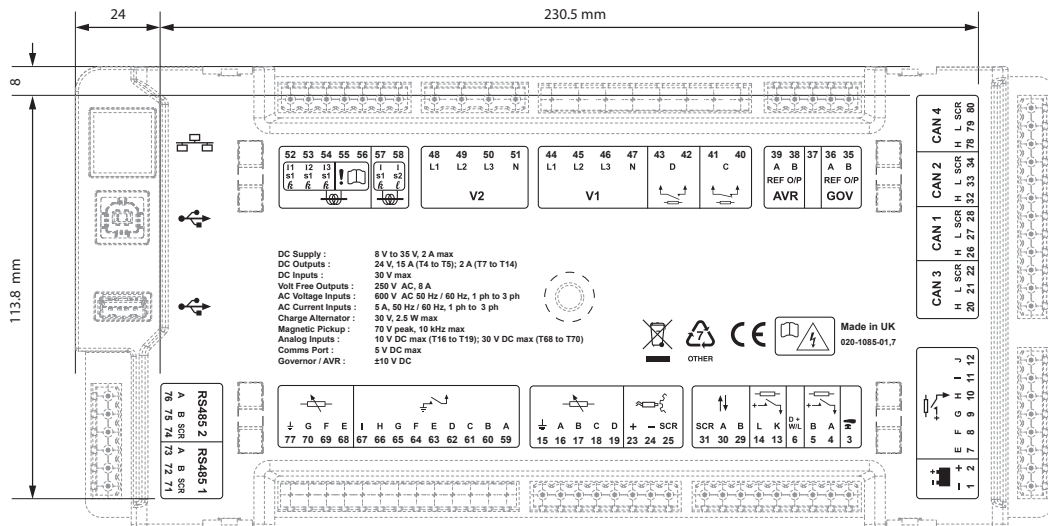
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Technical Drawing



Connection Diagram



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

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