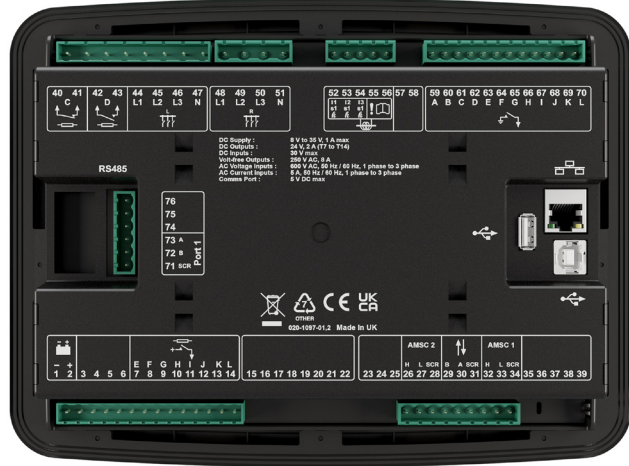


DSEG8680 Bus-Tie Controller

Part Number: G8680-01



Description

The G8680 controls a generator bus-tie breaker. It automatically manages the synchronising of the 2 buses using the AMSC (advanced multi-set communications) link and has a built-in check sync function. The controller has been designed to work with the DSEG8600 when configured as a single-set / multi-set or mains (utility) controller and with the dedicated G8660 mains (utility) controller.

Key Features

- Comprehensive synchronising functionality
- Close on to dead-bus
- Load ramping
- CT support (4)
- 12 configurable inputs
- 10 configurable outputs (2 volt-free)
- Advanced PLC functionality including multi-purpose PIDs
- RS485 communications
- Ethernet communications
- Modbus RTU & TCP support
- User configurable MODBUS pages
- Remote SCADA monitoring
- Virtual shared inputs, outputs, states and instrumentation values via AMSC

Features

- DSENet® expansion
- Data logging
- DSE configuration suite software
- Front-panel editing
- 4-line LCD text display
- LED / LCD alarm indication
- Configurable languages
- Customisable status screens
- Configurable event log (250)
- Backed-up real time clock
- IP65 (with gasket)

Key Applications



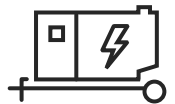
Hospitals



Industrial



Data Centers



Rental



Telecoms



Hybrid



Product Documentation

Title	Part No.
DSEG8680 Installation Instructions	053-254
DSEG8680 Operator Manual	057-327
DSEG8680 Configuration Suite PC Manual	057-326

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DSEG8680

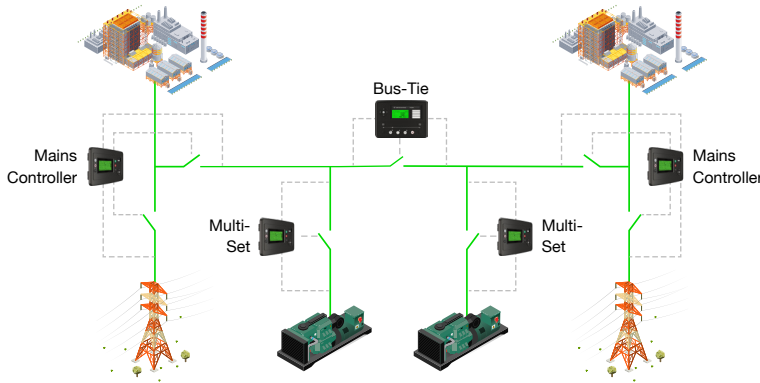
Bus-Tie Controller

Specifications	
DC Supply	
Continuous Voltage Rating	8 V to 35 V DC continuous
Maximum Operating Current	460 mA at 12 V, 245 mA at 24 V
Maximum Standby Current	375 mA at 12 V, 200 mA at 24 V
Real Time Clock	Yes
Bus 1 / Bus 2	
Voltage Range	3 ph + N
Frequency Range	3.5 Hz to 75 Hz
Current Measurement	
Measurement Inputs	Three-phase current sensing
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
Communications	
RS485	Fully isolated
Ethernet	10/100 Ethernet Port
USB A	1 x storage device
USB B	1 x non isolated host / programming
CAN	2 x fully isolated
Temperature	
Operating Temperature	-30° C to +70° C / -22° F to +158° F
Storage Temperature	-40° C to +80° C / -40° F to +176° 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"

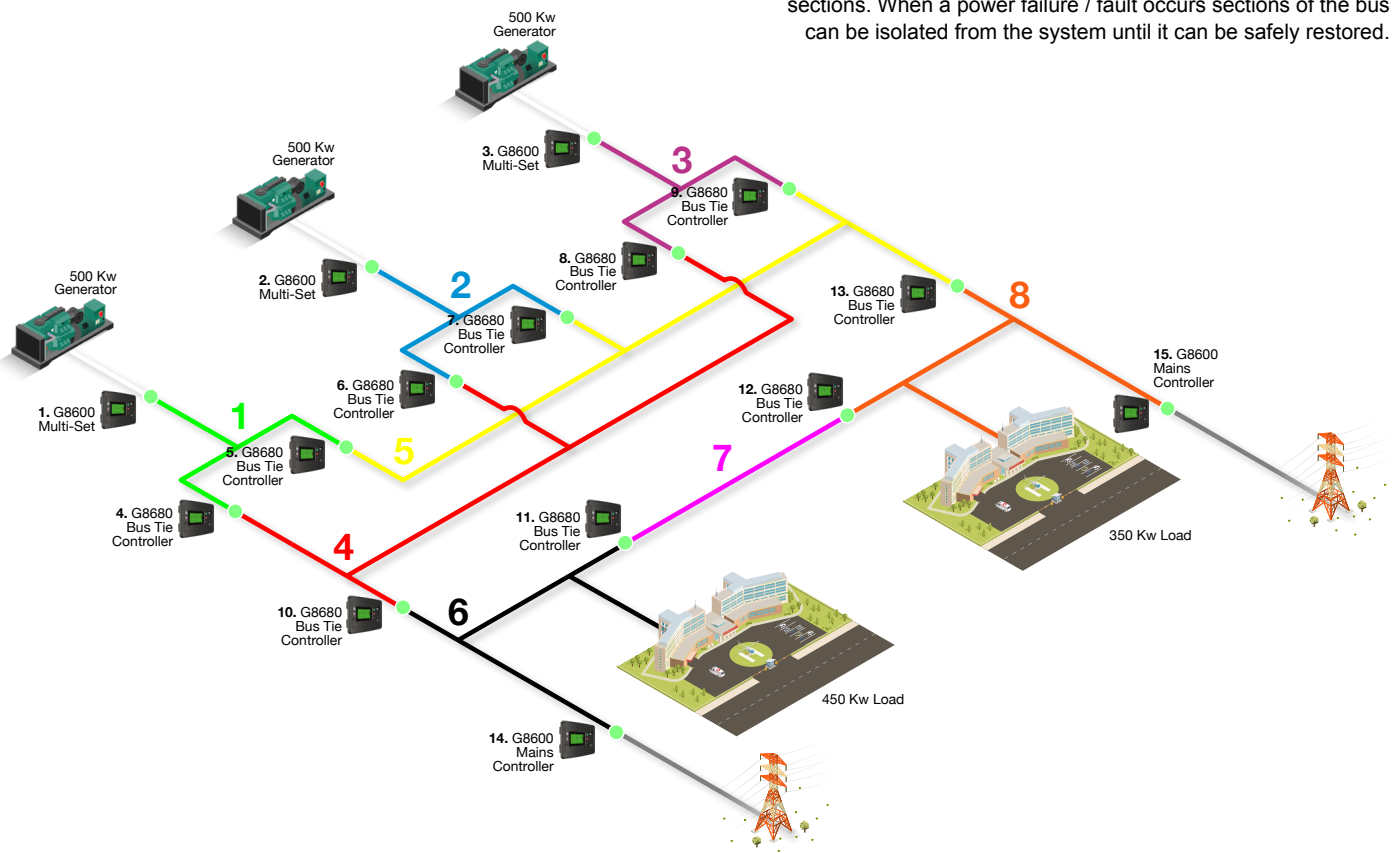
DSEG8680
Bus-Tie Controller

Typical Applications

Multi-Mains (Utility) with Bus-Tie



The G-Series offers bus sectioning functionality. This high-level feature allows certain parts of a bus to be separated into multiple sections. When a power failure / fault occurs sections of the bus can be isolated from the system until it can be safely restored.



DSEG8680

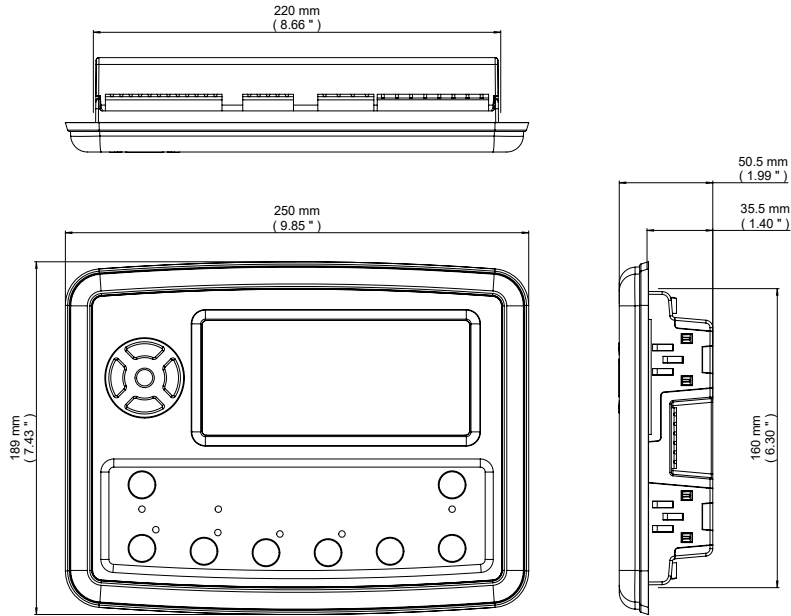
Bus-Tie Controller

Related Products		
Controllers		
G8600	Parallel Genset Controller with Integral Heater	G8600-01
G8660	ATS / Mains (Utility) Controller	G8660-01
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

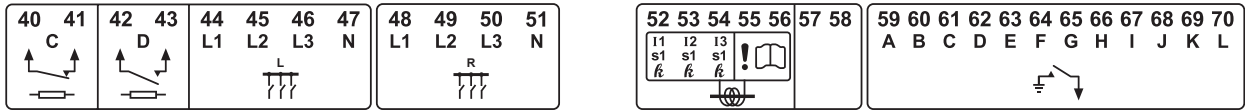
Environmental Testing Standards	
Electro-Magnetic Compatibility	
BS EN 61000-6-2	EMC Generic Immunity Standard for the Industrial Environment
BS EN 61000-6-4	EMC Generic Emission Standard for the Industrial Environment
Electrical Safety	
BS EN 61010	Safety of Information Technology Equipment, including 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	
BS EN 60529	IP65 - Front of module when installed into the control panel (Integrated gasket)

DSEG8680
Bus-Tie Controller

Technical Drawing

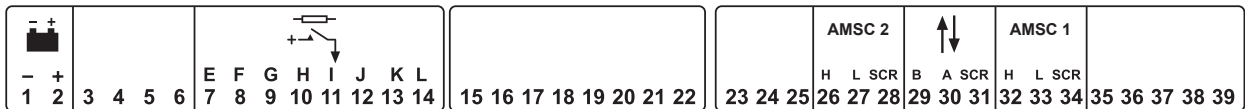
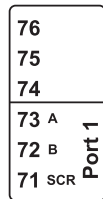


Connection Diagram



RS485

DC Supply : 8 V to 35 V, 1 A max
 DC Outputs : 24 V, 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
 Comms Port : 5 V DC max



Refer to PIN out description charts for connection information.

DSEG8680
Bus-Tie Controller

PIN Out Description

Bus-Tie Controller	
PIN	DESCRIPTION
1 to 2	DC Supply
3	Not Applicable
4	Not Applicable
5	Not Applicable
6	Not Applicable
7 to 14	User Configurable Outputs
15 to 22	Not Applicable
23 to 25	Not Applicable
26 to 28	Redundant AMSC
29 to 31	DSENet®
32 to 34	AMSC
35 to 39	Not Applicable
40 to 41	Normally Closed Volt Free Output
42 to 43	Normally Open Volt Free Output
44 to 47	Left Bus Voltage Sensing
48 to 51	Right Bus Voltage Sensing
52 to 56	Left Bus Current Sensing
57 to 58	Not Applicable
59 to 70	Digital Inputs
71 to 73	RS485