

Single Genset Controllers, SGC 120/121



SGC 120

Main features

- **Auto, manual and remote start/stop** modes for operation
- **Island** application support
- **Automatic Mains Failure (AMF)** application support
- **9 inputs**, configurable
 - 3 resistive
 - 1 analogue (4 to 20 mA)
 - 5 digital
- **6 digital outputs**, configurable
- **Deep Sleep Mode** extends the battery life by suspending the normal functions of the controller when DG is off
- **Modbus** over RS-485
- **Controls** start relay, fuel relay, stop relay, alarm horn and more
- **Manually configurable** from the controller front buttons or from a PC using DEIF Smart Connect utility software
- **Multi-profile** (10) function in a single controller
- Supports the **battery charging alternator I/O** interface
- **Magnetic Pickup Unit (MPU)** interface for engine speed measurement
- **Backlit full graphics LCD** with power saving feature for extended battery lifetime
- **Monitors 1-phase/3-phase** voltage, frequency, load current, and power factor for generator and mains
- **Monitors engine safety parameters** like lube oil pressure, engine temperature, fuel level and more
- **Auto exercise mode** (2 events) to start and stop the genset for a preconfigured time
- **Event log** for 100 events with real time clock (RTC) stamps and engine running hours information
- **Counters** for engine starts, running hours, kWh, kVAh, and more
- **Multiple level passwords** to protect against unauthorised changes to the configuration from the display
- **CANbus** for engine communication with support for Stage 5/ Tier 4 Final (SGC 120 only)
- **Built-in electronic governing** function with the help of a rotary actuator (SGC 121 only)

General description

The SGC 120/121 controllers are modern genset controllers with a user-friendly interface and full graphics LCD.

They include voltage and frequency measurement for mains and gensets, and electrical load measurement (true RMS).

Configurable analogue and digital inputs/outputs are provided for various features.

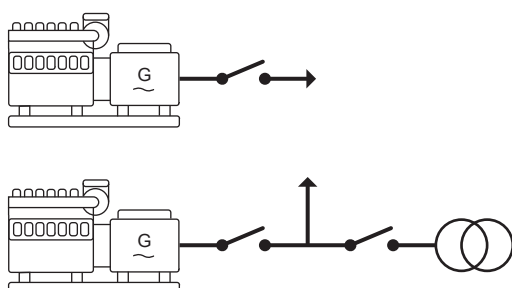
RS-485 and CAN port is available for remote communication.

Start and stop gensets remotely using the Remote start/stop function.

Deep sleep mode is a useful feature that extends the battery lifetime by suspending the normal controller functions of when the genset is off.

Configure parameters from a PC using DEIF Smart Connect utility software. Connect to the PC through the controller's USB Type B port.

In addition, the SGC 121 controller also includes an integrated electronic governing function.



Power supply

- Nominal voltage: 12/24 V DC
- Operating range: 8 to 28 V DC
- Power transients in compliance with ISO 7637-2

Operating conditions

- Operation: -20 to 65 °C
- Storage: -30 to 75 °C
- In compliance with IEC 60068-2-1, 2

Environment

- Vibration: 2G in X,Y and Z axes, in compliance with IEC 60068-2-6
- Shock: 15 g for 11 ms, in compliance with IEC 60068-2-27
- Humidity: 0 to 95 % RH, in compliance with IEC 60068-2-78
- Protection degree: IP65 for front face with gasket, in compliance with IEC 60529
- EMI/EMC: In compliance with IEC 61000-6-2, 4

Approvals

- CE approved:
 - Comply to the EU Low Voltage Directive: EN 61010-1 Safety requirements for electrical equipment for measurement, control, and laboratory use - Part 1: General requirements
 - Comply to the EU EMC directive EN 61000-6-2, 4

Technical specifications

Maximum standby current:

- 124 mA, 12 V DC
- 123 mA, 24 V DC

Crank-start dropout survival period

- 50 ms for a drop from 12/24 V DC

Charging alternator interface

- 0.25 A, 12/24 V DC
- Diagnostic voltage measurement

Digital outputs

- 6 x 0.50 A outputs, configurable for pre-heat, horn and more

Digital inputs

- 5 switch-to-ground inputs, configurable for lube oil, temp, fuel level and more

Analogue inputs

- 3 resistive inputs, configurable for various sources
 - 2 x 10 to 1000 Ω
 - 1 x 10 to 5000 Ω
- 1 analogue input (4 to 20 mA)

Mains/genset voltage measurement

- 32 to 300 V AC RMS, 5 to 75 Hz for Ph to N

Load current measurement

- Nominal: -/5 A for current transformer (CT) secondary

Magnetic pickup measurement

- 0.2 to 45 V RMS, 10 to 10 kHz

CANbus for engine interface (SGC 120 only)

- Baud rate: 250 kbps
- Packet size: 8 bytes
- Termination resistor of 120 Ω, internally mounted

E-governor module interface (SGC 121 only)

- Output for rotary actuator
- 2.5 V ± 2 V input for target speed bias
- 2.5 V for zero bias

Dimensions

- External dimensions: 139 mm x 114 mm x 38.3 mm
- Mounting panel cut: 118 mm x 93 mm

For more information, please contact:

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