



## HGM8151

HGM8151 genset parallel controller is especially designed for extremely high/low temperature environment (-40~+70) °C. The controllers can operate reliability in extreme temperature conditions with the help of VFD display or LCD and the components that resist extreme temperature. Controller has strong ability of anti-electromagnetic interference, can be used under complex electromagnetic interference environment. It is easy to maintain and upgrade due to the plug-in terminal. All display information is Chinese (also can be set as English or other languages)

Product Code : 6010066

Power Supply : DC (8~35)V

Case Dimensions : 242\*186\*53(mm)

Panel Cutout : 214\*160(mm)  
Operating Temp. : (-40~+70)°C  
Weight : 0.85kg

## COMPLETE DESCRIPTION

**HGM8151** genset parallel controller is especially designed for extremely high/low temperature environment (-40~+70) °C. The controllers can operate reliability in extreme temperature conditions with the help of VFD display or LCD and the components that resist extreme temperature. Controller has strong ability of anti-electromagnetic interference, can be used under complex electromagnetic interference environment. It is easy to maintain and upgrade due to the plug-in terminal. All display information is Chinese (also can be set as English or other languages)

**HGM8151** controller is designed for manual/auto parallel system generators with similar or different capacity. Additionally, it is suitable for single unit constant power output and mains paralleling. It allows automatic start/stop, parallel running, data measurement, alarm protection as well as remote control, remote measurement and remote communication function. Utilizing the GOV (Engine Speed Governor) and AVR (Automatic Voltage Regulator) control function, the controller is able to synchronize and share load automatically; it can be used to parallel with other HGM8151 controller.

**HGM8151** controller also monitors the engine, indicating the operational status and fault conditions accurately. When abnormal condition occurs, it splits bus and shuts down the genset, simultaneously the exact failure mode information is indicated by the LCD display on the front panel. SAE J1939 interface enables the controller to communicate with various ECU (ENGINE CONTROL UNIT) which fitted with J1939 interface.

The powerful 32-bit Microprocessor contained within the module allows for precision parameters measuring, fixed value adjustment, time setting and set value adjusting and etc..Majority parameters can be configured from front panel, and all parameters can be configured by USB interface to adjust and by RS485 or ETHERNET to adjust and monitor via PC. It can be widely used in all types of automatic gen-set control system with compact structure, advanced circuits, simple connections and high reliability.

## **PERFORMANCE AND CHARACTERISTICS**

1. With ARM-based 32-bit SCM, high integration of hardware and more reliable.
2. Graphics dot-matrix VFD with large screen, multilingual interface (including English, Chinese or other languages) which can be chosen at the site, making commissioning convenient for factory personnel.
3. Improved LCD wear-resistance and scratch resistance due to hard screen acrylic.
4. Silicon panel and pushbuttons for better operation in high/low temperature environment.
5. RS485 communication port enables remote control, remote measuring, and remote communication via ModBus protocol.

6. ETHERNET communication port enables ETHERNET monitoring. (controller must be with ETHERNET port)
7. Equipped with SMS (Short Message Service) function. When genset is alarming, controller can send short messages via SMS automatically to max. 5 telephone numbers. Besides, generator status can be controlled and checked using SMS.
8. Fitted with CANBUS port and can communicate with J1939 genset. Not only can monitor frequently-used data (such as water temperature, oil pressure, engine speed, fuel consumption and so on) of genset, but also control start, stop, raising speed and speed droop via CAN BUS port. (need controller with CAN BUS port)
9. Suitable for 3-phase 4-wire, 3-phase 3-wire, single phase 2-wire, and 2-phase 3-wire systems with voltage 120/240V and frequency 50/60Hz.
10. Collects and shows 3-phase voltage, current, power parameter and frequency of Bus/mains.
11. For Bus, controller has loss of phase and phase sequence wrong detection functions; For generator, controller has over voltage, under voltage, over frequency, under frequency, over current, over power, reverse power, loss of phase, phase sequence wrong detection functions.
12. 3 fixed analog sensors (temperature, oil pressure and liquid level).
13. 2 configurable sensors can be set as sensor of temperature, oil pressure or fuel level.
14. Precision measure and display parameters about Engine,
15. Protection: automatic start/stop of the gen-set, ATS(Auto Transfer Switch) control with perfect fault indication and protection function.
16. All output ports are relay output.
17. Parameter setting: parameters can be modified and stored in internal FLASH memory and cannot be lost even in case of power outage; most of them can be adjusted using front panel of the controller and all of them can be modified using PC via USB, RS485 or ETHERNET ports.
18. Sensor curves are user-defined and multiple sensor curves (temperature, pressure and oil pressure) can be used directly.
19. Multiple crank disconnect conditions (rotate speed, oil pressure, generator frequency) are optional.
20. Widely power supply range DC(8~35)V, suitable to different starting battery voltage environment.
21. Event log, real-time clock, scheduled start & stop generator (can be set as start genset once a day/week/month whether with load or not).
22. Can be used as indicator (only indicate and alarm, relay without action).
23. With maintenance function. Actions (warning, trip and stop, shutdown) can be set when maintenance time out.
24. All parameters used digital adjustment, instead of conventional analog modulation with normal potentiometer, more reliability and stability.
25. IP55 waterproofness level can be achieved with the help of rubber-ring gasket between shell and control panel.
26. Metal fixing clips enable perfect in high temperature environment.
27. Modular design, self-extinguishing ABS plastic shell, pluggable terminal, built-in mounting , compact structure with easy installation.
28. Accumulative total run time and total electric energy of A and B. Users can reset it as 0 and re-accumulative the value which make convenience to users to count the total value as their wish.

## PARAMETER LIST

Function Item	Parameter
Display	VFD
Operation Panel	Rubber
Language	Chinese & English
Digital Input	8
Relay Output	8
Analogue Input	5
AC System	1P2W/2P3W/3P3W/3P4W
Alternator Voltage	(15~360)V(ph-N)
Alternator Frequency	50/60Hz
kW/Amp Detecting & Display	●
Monitor Interface	RS485
Programmable Interface	USB/RS485
CANBUS(1939)	●
RTC & Event Log	●
Scheduled Start Genset	●
Maintenance	●
ULP	●
SMS	●
Ethernet	●
DC Supply	DC(8~35)V
Case Dimensions(mm)	242*186*53
Panel Cutout(mm)	214*160

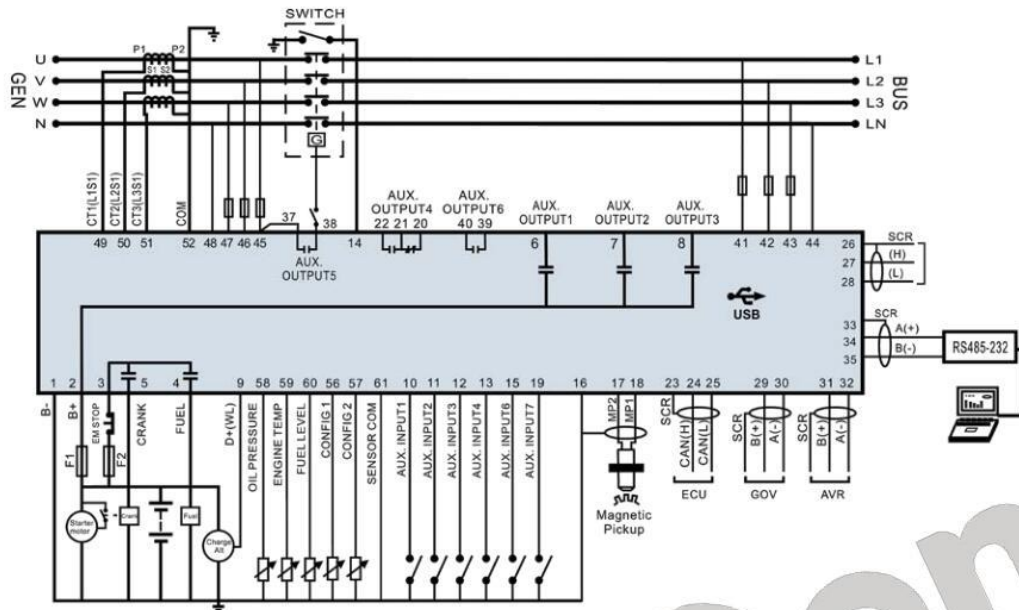
**Function Item**

**Parameter**

Operating Temp.

(-40~+70)°C

**HGM8151 Typical Application**



HGM8151 3P4W Typical Diagram

**▲Note:** Fuse F1: min. 2A; max. 20A. Fuse F2: max. 32A. Users should select suitable fuse depend on practical application.