

HT-GC-250

Single applications

- NEW AUTO-START and AMF (Automatic Mains Failure) controller for single gensets
- 3 Phase mains (utility) sensing
- 3 Phase generator sensing
- 3 x CTs Inputs
- True RMS measurements: kW, kVA, kVAr, pf, kWh (phase & total)
- 4 Configurable Digital Inputs
- 3 Analogue Inputs + 1 Extra Analogue Input (instead of a digital Input) + 1 for D+
- 4 Configurable Digital Output + 2 Digital Output 10A
- Interface for MPU and J1939 engines as standard
- USB serial port for configuration and FW update
- Large LCD display 128x64 with LED backlight and ICONES
- Compact dimensions: 144(W) x108(H)x40(D)mm (34mm)
- IP65 as protection degree with gasket always included as standard
- Periodical test
- Real Time clock
- Data recording: 64 Events log (64 slow trend and 42 fast trend)
- Remote start and stop
- Built in alarm sounder
- Free configuration software BOARD PRG



A.M.F. Single Genset controller

HT-GC-250 is the newest controller made for single stand-by gensets.

The same controller can be also used for AUTO START applications.

Despite the compact dimensions, HT-GC-250 includes the main engine and alternator protections like the engine speed, oil pressure, coolant temperature, frequency, voltage, current, power and fuel level.

The same controller can be used for electronic engines with CAN interface J1939 protocol and MPU engines (non-electronic) as well.

Configuring the Inputs, Outputs and protections, HT-GC-250 can be easily adapted to suit a wide range of applications.

HT-GC-250 offers a wide, graphic and powerful resolution display 128x64 pixel providing ICONS for alarms/warning advices and for signalling the status of the engine, controller and data logs as well.

All parameters can be easily configured through USB using the free software tool (BoardPrg), which can be downloaded thorough Huegli Tech website. It is also possible to set them directly through HT-GC-250 keyboard.

Technical Specification

Measures

Mains Voltage:

L1-N, L2-N, L3-N, L1-L2, L2-L3, L3-L1

True RMS measure

Max 300Vac CAT III (L-N)

Max 520Vac CAT III (L-L)

Generator Voltages:

L1-N, L2-N, L3-N, L1-L2, L2-L3, L3-L1

True RMS measure

Max 300Vac CAT III (L-N)

Max 520Vac CAT III (L-L)

Generator Currents:

L1, L2, L3

True RMS measure.

Rated current: 5A

Generator and Mains Frequency meter:

Resolution = 0.1 Hz.

Accuracy = ± 50 ppm, ± 35 ppm/ $^{\circ}$ C (typical)

Battery Voltmeter:

Resolution = 0.1V

Oil Pressure Gauge:

VDO 0-10 Bar, VDO 0-5 Bar, Veglia 0-8 Bar

(Settable curve based on sensors available)

Water or Oil Thermometer:

VDO, Veglia, BERU

(Settable curve based on sensors available)

Fuel Level:

VDO, Veglia

(Settable curve based on sensors available)

Engine revolution counter:

By frequency detection.

D+ for the measure of the voltage alternator battery charger

Power and power factor measures are available as total measures and for each single phase too.

Maximum power and current reached values, are registered with date and time.

Additional measures available based on the Isolated and Auto-supplied CAN J1939.

Protections

A set of high efficiency LEDs are used for signalling the current status of the Generator Set and for the visualization of alarm occurred. By means of ICONES it is possible to realize the type of the alarm/shutdown.

Engine protections:

Fuel reserve

Min./Max. fuel level

Min./Max. battery voltage

Min./Max. oil pressure

Min./Max. water temperature

Max. Power (32P)

Closing of mains contactor or genset contactor failed

Engine over crank

Over speed from generator frequency

Belt breakage

Operating conditions not reached

Emergency Stop

Generator protections:

Underfrequency (81U)

Overfrequency (81O)

Undervoltage (27)

Overvoltage (59)

Time dependent overcurrent (51)

Instantaneous overcurrent (50, 50V)

Phase sequence (47)

Current and Voltage unbalance (46/47)

Mains protections:

Min./Max. mains voltage (27/59)

Min./Max. mains frequency (81U/81O)

Mains failure

Inputs, outputs and aux. functions

Inputs, outputs and aux. functions

N. 4 Configurable digital Inputs

N. 3 Analogue Inputs + N.1 Additional digital Input, which can be used as analogue + N.1 Analogue Input for D+ (if not used in this way, they can be used as not isolated digital Inputs)

N. 4 Configurable digital voltage source Outputs

N. 2 High power digital voltage source Outputs (10A) for fuel solenoid and engine start.

Built tin alarm sounder

Engine diagnostic code

Real Time Clock with internal rechargeable Lithium battery

Periodical test

AND/OR Configurable logics

Additional Technical Data

Operating temperature: -30° C to 70° C

Storage temperature: -30° C to 80° C

Dimensions: 141(L)x113(H)x39(P)mm - Weight: 200g

Cut-Out dimensions: 118x92mm

Protection degree: IP65 (with complimentary gasket).

Human interface: Immediate and Intuitive solution using Symbols

-  Min. voltage generator
-  Max. generator frequency
-  Over speed
-  Min. fuel level
-  High water temperature
-  Low battery voltage
-  Failure Engine CANBUS

The display of HT-GC-250 offers a full set of info, providing clear symbols and code concerning the alarm occurred.

In case of multiple alarms, the display offers a clear notification of all the failures with the related symbol and code.

When an ECU engine is connected, the description of the alarm is available as well.

Connections

GENERATOR VOLTAGE

- T30 = L1
- T32 = L2
- T34 = L3
- T36 = N

CURRENT INPUTS C.T. 1+3

- T38 = C.T. 1
- T39 = C.T. 2
- T40 = C.T. 3
- T41 = COM 1.2.3

SUPPLY

- T01 = GND
- T02 = +BATTERY

ENGINE COMMANDS

- T03 = START
- T04 = FUEL

POSITIVE DIGITAL OUTPUTS 1..4

- T05 = OUT 1
- T06 = OUT 2
- T07 = OUT 3
- T08 = OUT 4
- T09 = D+

ANALOGUE INPUTS

- T15 = WATER TEMPERATURE
- T14 = OIL PRESSURE
- T13 = FUEL LEVEL
- T12 = ANALOGUE REFERENCE

MAINS VOLTAGE

- T28 = N
- T26 = L3
- T24 = L2
- T22 = L1

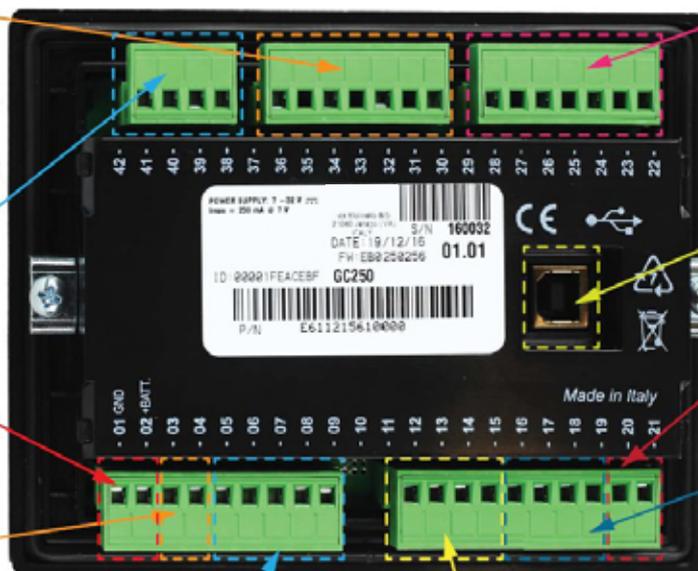
USB FUNCTION

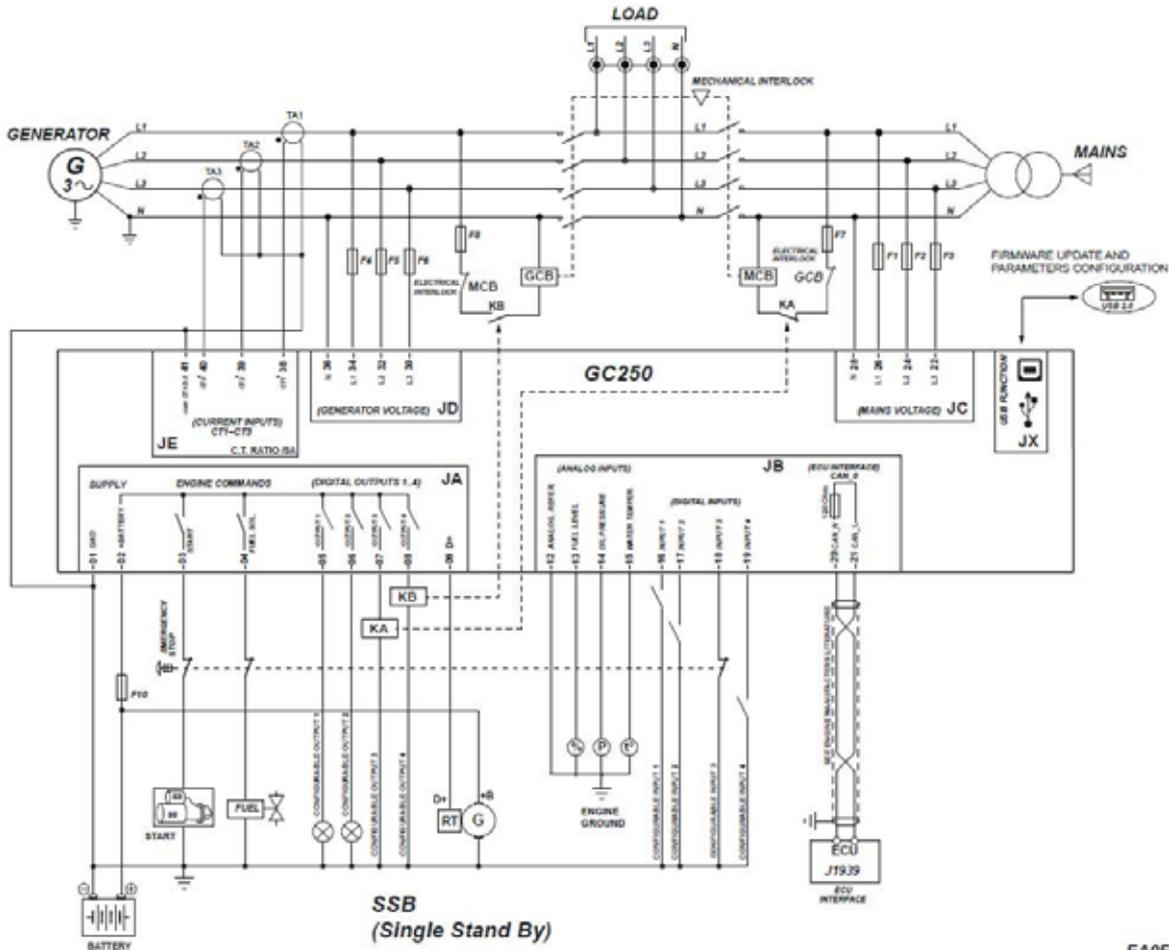
ECU INTERFACE (SAE J1939)

- T21 = CAN_L
- T20 = CAN_H

DIGITAL INPUTS

- T19 = INPUT 4
- T18 = INPUT 3
- T17 = INPUT 2
- T16 = INPUT 1





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