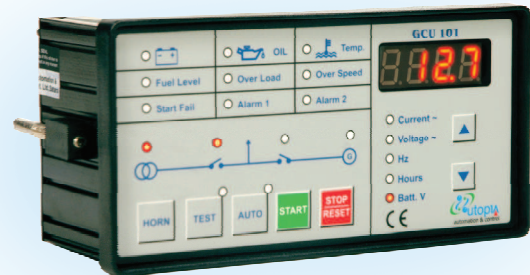


General Description-

GCU 101 is a 1-Phase/3-Phase automatic/manual generator controller module. It controls start and stop function of the engine, monitors the generator operations in both automatic & manual mode. It uses an advanced single chip microcomputer for sophisticated automation for generator plant, it is designed by taking great care related with electromagnetic interfaces for trouble free operation in harsh electrical environment.

If the mains fails due to over or under voltage or loss of mains, GCU 101 initiates an automatic genset start cycle following complete AMF function sequence including load transfer to the generator by switching the generator and mains contactors. It is possible to select up to 5 start attempts with both crank and rest period adjustable. After engine warm up period has expired the generator supply is connected. After main supply returns and it gets restore the load will automatically transfer back to the mains and genset will stop after cooling down time. During all cycles, generator is fully protected against all types of given fault conditions. All alarms occurring at abnormal genset conditions are computed and displayed either by LED or by four-digit display and if necessary the genset is get stopped. The manual mode is selected by means of push button switches. The generator start & stop functions are carried out by means of push button switches & contactor change over is performed by internal logic automatically. Values of Voltage, Current frequency to initiate genset start cycle and timer settings of preheat, cooling down time etc. are free programmable. The GCU 101 has 43 powerful programmable parameters to fit the program flow to customer needs.



Features-

- Microprocessor based design
- 8 digital inputs, 9 relay outputs
- Automatic, Manual, Test, Periodic test operating modes
- Display Parameters AC Voltage, AC Current
- Frequency, Hours, Battery Voltage, Charge Voltage
- Configurable solid state outputs
- Configurable timer setting
- Solid state fuel and crank outputs
- External remote start inputs
- LED alarm indications
- Start/Stop delay timer
- Warm up / Cooling down timer
- Energized to stop timer
- Single / Three Phase Mains Sensing
- Load contactor control solid state output
- Preheat, glow plug timer
- Over & Under speed shutdown
- Automatic crank disconnection
- Serial communication option
- Inhibit mode operation
- Electronic charge Lamp
- Charge voltage display
- Periodic Auto Start and Stop

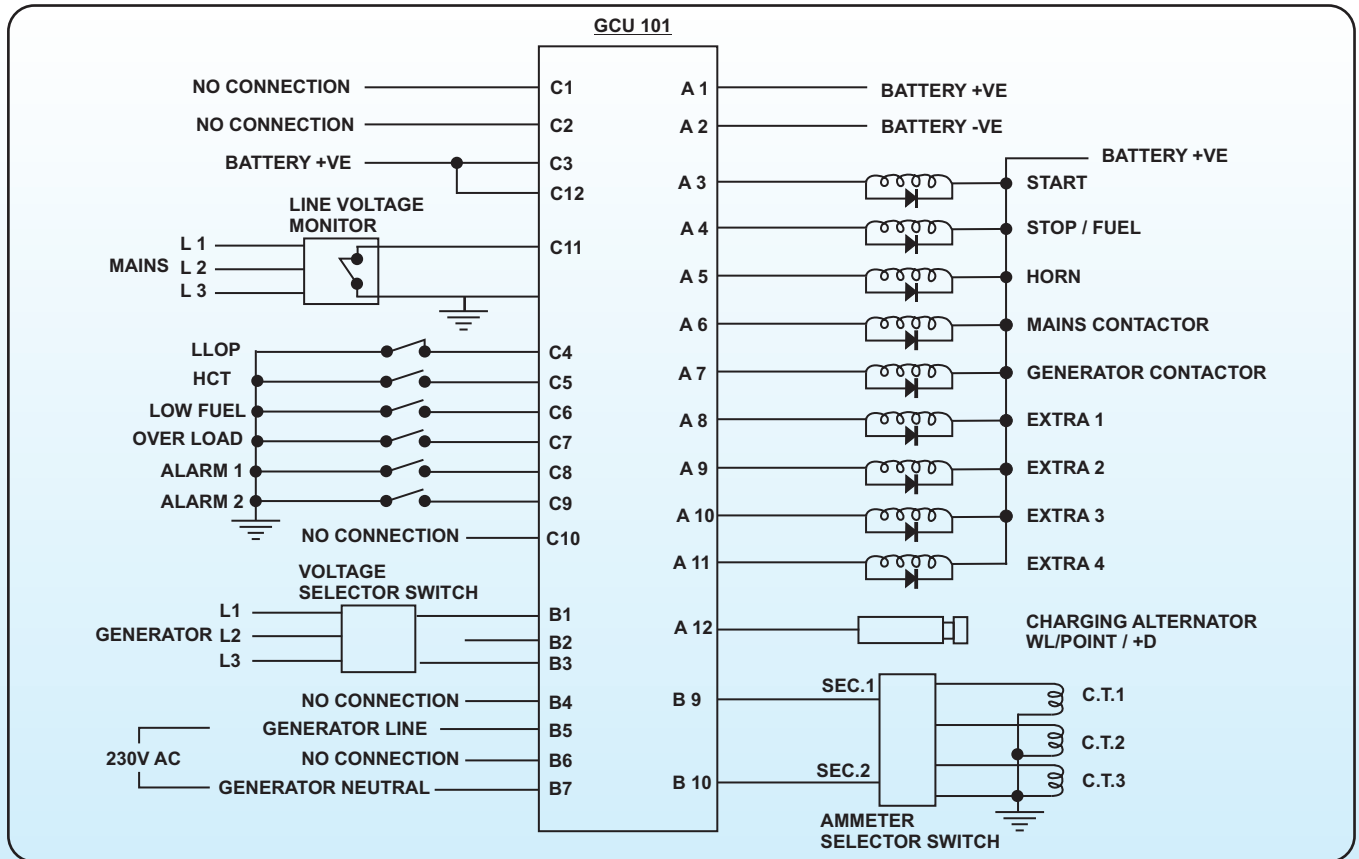
Control and Fault inputs with front Panel Visual Indications :

- | | | |
|-------------------------------------|------------------------------|---------------------------|
| ■ Mains Supply On | ■ Low Oil Pressure | ■ Generator Fail to Start |
| ■ Mains Contactor On | ■ High Engine Temperature | ■ Alarm- 1 |
| ■ Generator Supply On | ■ Generator Over Speed Fault | ■ Alarm- 2 |
| ■ Generator Contactor On | ■ Low Fuel Level | |
| ■ Battery Low Voltage / Charge Fail | ■ Generator Over Load Fault | |

Features-

- **DC Supply** : 8 to 35 V DC, Continuous Reverse Polarity Protected
- **Cranking Dropouts** : Able to survive 0V for 50mS, Providing Supply Voltage was at least 10 V Before drop out and supply recovers to 5V This is achieved without need of internal Batteries.
- **Maximum Current** : Operating 75 mA, Standby 10mA
- **Alternator I/P Range** : 75 (Ph-N) to 300(Ph-N) +20%
- **Alternator I/P Frequency**: 50-60 Hz at rated engine speed, Crank disconnect from 20V AC Ph-N
- **Solid State outputs** : Short Circuit Protected transistor open collector, Maximum Sink current 500mA
- **Charge Fail** : 12V = 8V CF, 24V=16V CF
- **Operating Temp. Range** : -30 to 70 degree C
- **Enclosure**: Din Standard- 192mmX96mmX60mm Cutout dimensions-186mm X 91mm

3 Phase Connection Diagram-



1 Phase Connection Diagram-

