

## Description

GU304A is an engine safety unit, it is used for engine safety protection, displaying running status and parameters. The module is used key switch to start and stop engine. The module measures and displays multi-parameters for engine, if occur warning during engine running, LED on panel will display related warning, if occur failure, LED on panel will display related failure, closes fuel and outputs failure signal at the same time, engine stop. Its main characteristics as following:

- I The core adopts MPU.
- I Flexible configure running protection parameters by buttons and LED on panel.
- I Measure and display parameters for engine, such as battery voltage, oil pressure, coolant temperature, rpm and running hours.
- I The fuel type of engine can be set by procedure.
- I Inset kinds of oil pressure sensor and temperature sensor for user choice.
- I The controller adopted DIN72 standard enclosure, all connections are connected by pin-like and locked up terminal, easier and more convenient to install, connect, move and displace the device.

### The Descriptions of LED on Module Panel:



When module detects that engine running speed is reached the 90% of rating speed, LED on, means engine is running.



When module safety-on delay timer expired, module detects that oil pressure switch signal is active, LED on, means engine occur low oil pressure failure.



When module safety-on delay timer expired, module detects that water temp switch signal is active, LED on, means engine occur high coolant temperature failure.



When module safety-on delay timer expired, module detects that engine running speed is exceeds the 10% of rating speed, LED on, means engine occur overspeed failure.



When engine running, module detects that half fuel level switch signal is active, LED on, means the fuel level of fuel box on engine stay at half status.



When engine running, module detects that low fuel level switch signal is active, LED on, means the fuel level of fuel box on engine stay at low status.



When module safety-on delay timer expired, module detects that canopy temperature switch signal is active, LED on, means engine occur high canopy temperature alarm.



When module switch on plant supply, when module detects that emergency stop switch signal is active, LED on, means engine stay at emergency stop status, alarm relay no action.

**Parameters are detected and displayed by Module:**

- I Battery Voltage Vdc
- I Engine Running Hour Hour
- I Engine Coolant Temp °C (signal from engine T-sensor)
- I Engine Oil Pressure Kpa (signal from engine P-sensor)
- I Engine Running Speed RPM (signal from generator AC voltage)

All parameters are displayed by LED, LED indicates the related parameters. 4 digits single LED displays all parameters by auto cycle mode, one by one display.

**Shutdown Protection:**

(shutdown protection means when occur shutdown alarm, the related failure LED turn on, fuel output relay disconnected, engine stop, alarm relay making output, lockup failure status until controller power off)

- I Low oil pressure failure
- I High temperature failure
- I Overspeed failure

**Warning Protection:**

(warning protection means when occur warning alarm, the related failure LED turn on, engine continuous running, alarm relay making output, status will not be held, when alarm removed, related display and output will be cleared immediately)

- I Half fuel level
- I Low fuel level
- I Canopy high temperature
- I Fail to charge
- I Battery low voltage

**Configurable Operating Parameters:**

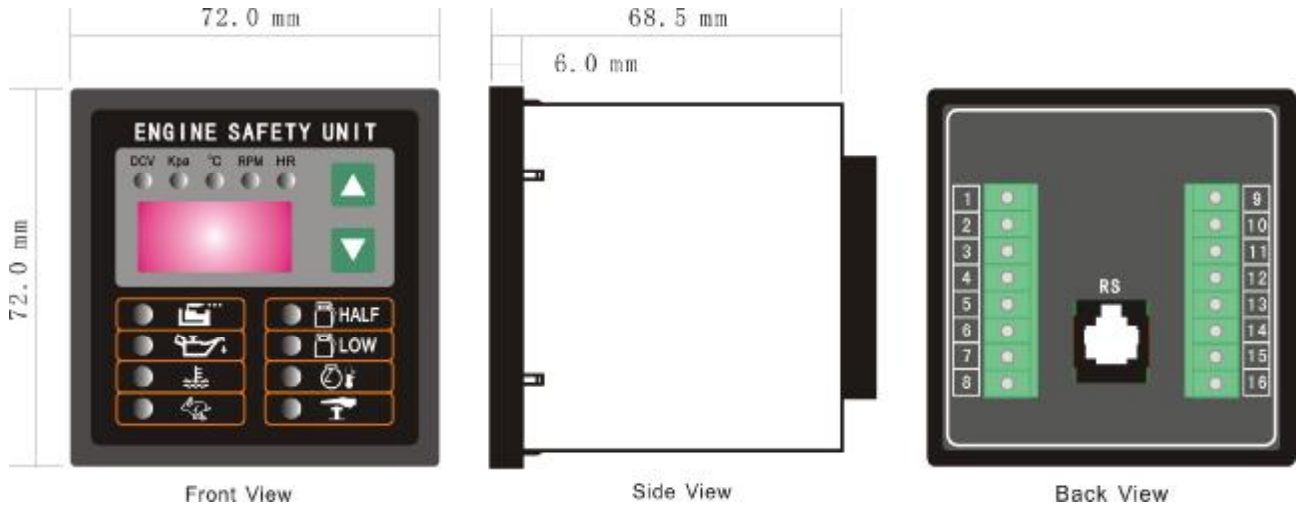
Fuel mode (0 NC/ 1 NO)  
 PICKUP sensor mode (0~1)  
 Tooth quantity (1~999)  
 Pair of poles (1~4)  
 P-Sensor mode (0~3)  
 T-Sensor mode (0~3)  
 Safety-on delay (0~600s)  
 Overspeed alarm (0~9999RPM) 9999 (not set)  
 High temperature alarm (70~160°C)  
 Low oil pressure alarm (50~300 Kpa)  
 Low battery alarm (1~25V) 0 (not set)

**Other Parameters:**

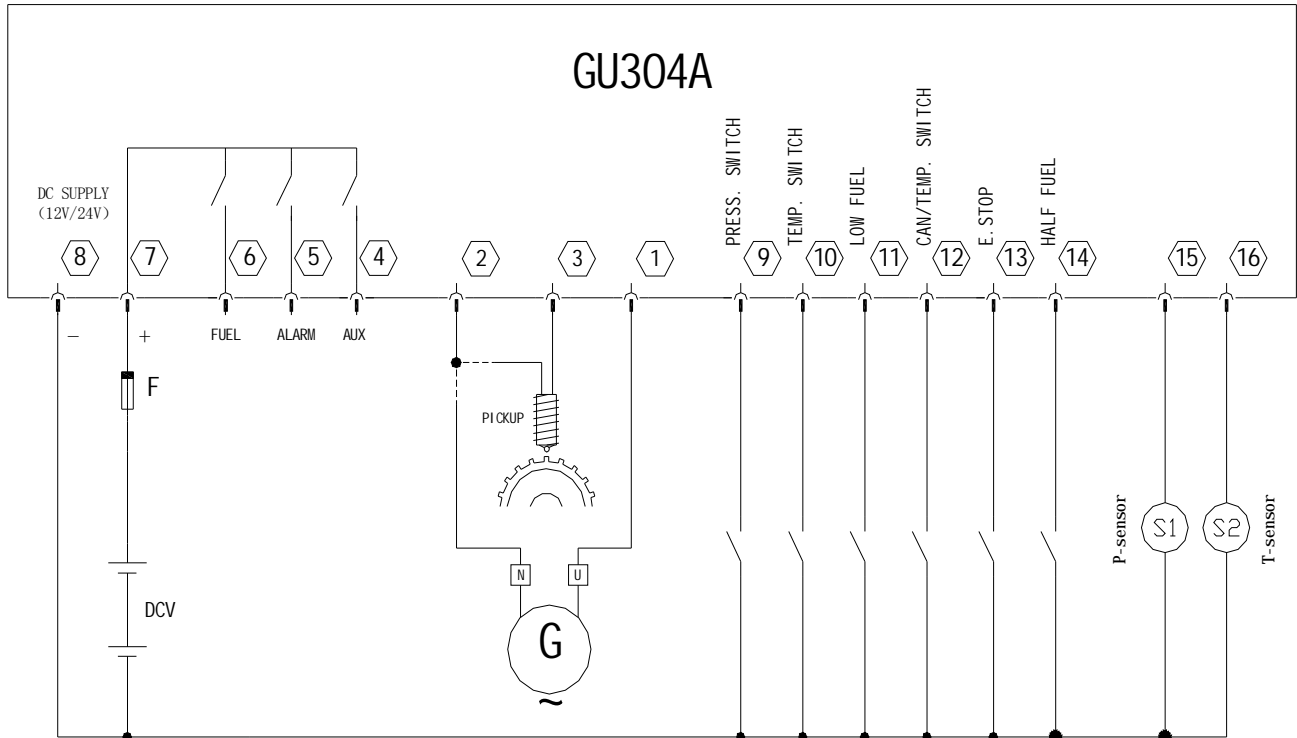
DC plant supply  
 Voltage range: 12V/24V (8-32V continued)  
 AC input frequency: 5-70HZ ( $50V \leq \text{voltage} \leq 300V$ )  
 PICKUP sensor input: Max.  $10000\text{Hz}$  ( $1V \leq \text{voltage} \leq 70V$ )  
 Relay output: 3A/30VDC  
 Running ambient temp -20 to 70°C  
 Storage ambient temp -40 to 80°C

Outline Dimensional Drawing:

Operation Panel	W72mm×H72mm
Install Hatch	W67mm×H67mm
Thickness	D82.5mm(unconnected)



Typical Wiring Diagram:



Version: 048A081216