

# GECS104

## Basic Engine Controller Key Start

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### 1 INTRODUCTION

The GECS104 provides manual start for engine-driven applications. Automatic fault protections include low oil pressure, high temperature, alternator shutdown and emergency stop notification.

To use the GECS104 in manual mode, a 50 A rated key switch is provided to energize the starter. All functions are indicated by 8 LED lamps. Electrical connection is via a 1/4 inch blade terminal.

The GECS104 provides the following output indicators:

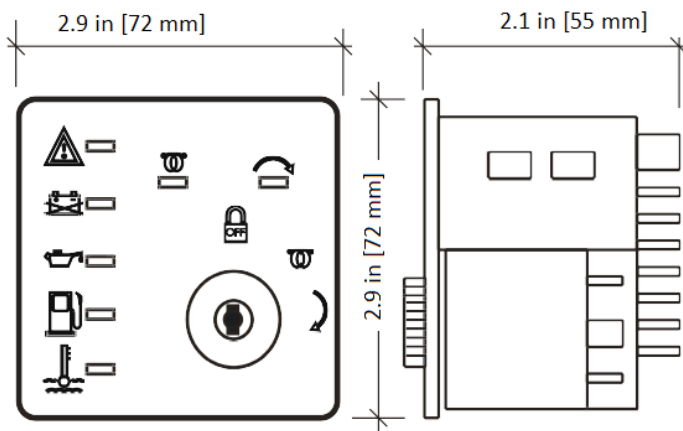
- Start
- Stop
- Preheat
- Alarm
- Fuel Solenoid
- Temperature
- Fuel Level
- Emergency-switch



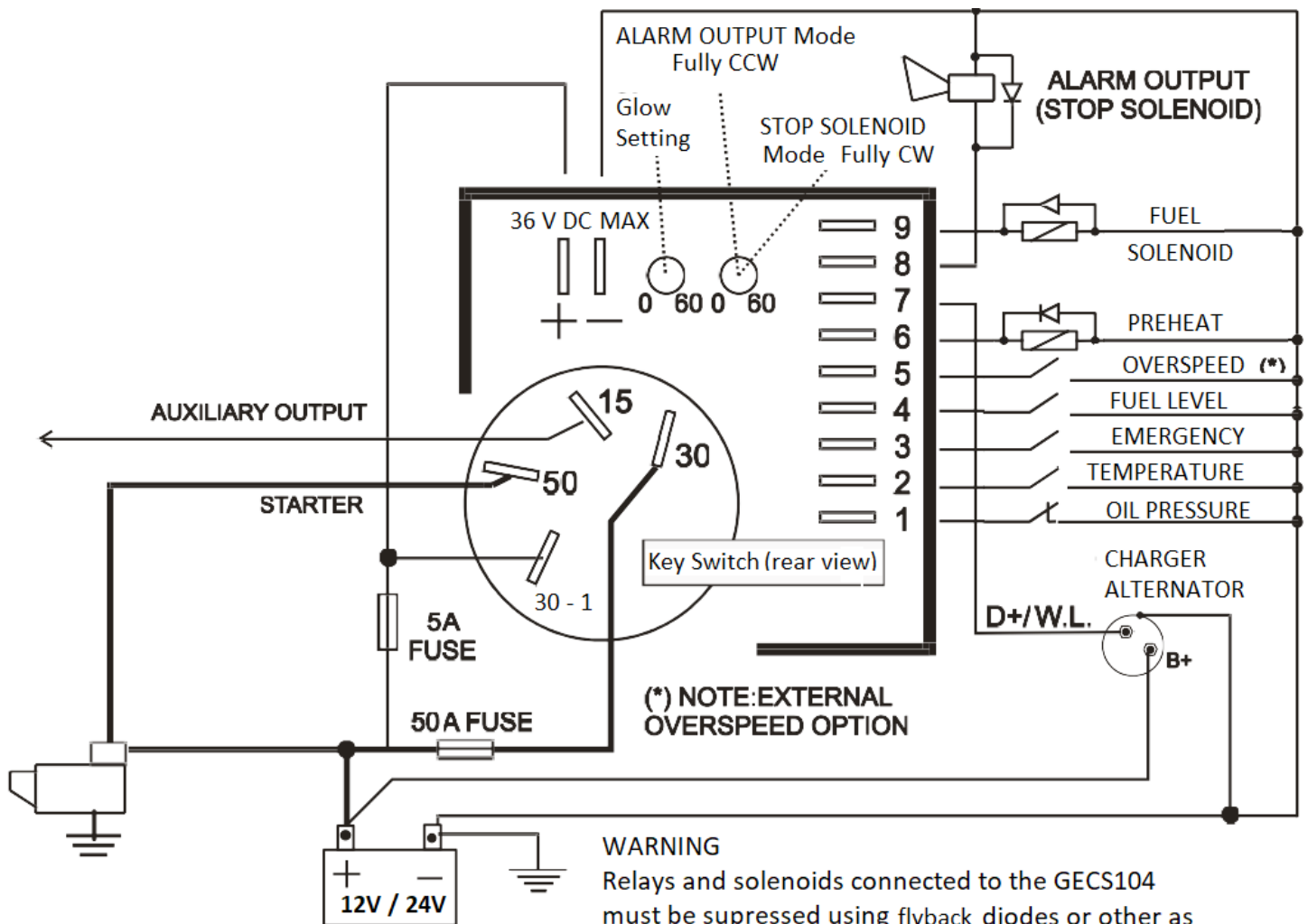
### 2 SPECIFICATIONS

DC SUPPLY VOLTAGE		
DC Supply, Battery		5 V up to 36 V DC
Static Output		200 mA DC
Key Switch Rating		30 A (30 s) 80 A (1 s)
ENVIRONMENTAL		
Weight		300 g
Dimensions		2.9 x 2.8 x 2.2 in [72 x 72 x 55 mm]
Operating Temperature		-22 to 158 °F [-30 to +70 °C]
Operating Humidity, Non Condensing		95 %

### 3 DIMENSIONS AND WIRING



Recommended cutout 2.67 x 2.67 in [68 x 68 mm]





High voltage may be present inside the GECS104. To avoid electric-shock hazard do not remove the protective cover of the panel. Do not disconnect the grounding connection. The GECS104 can start the engine at anytime. Do not work on equipment which is controlled by the GECS104. When servicing the engine, disconnect the battery and battery charger. We recommend placing warning signs on the equipment using the GECS104.

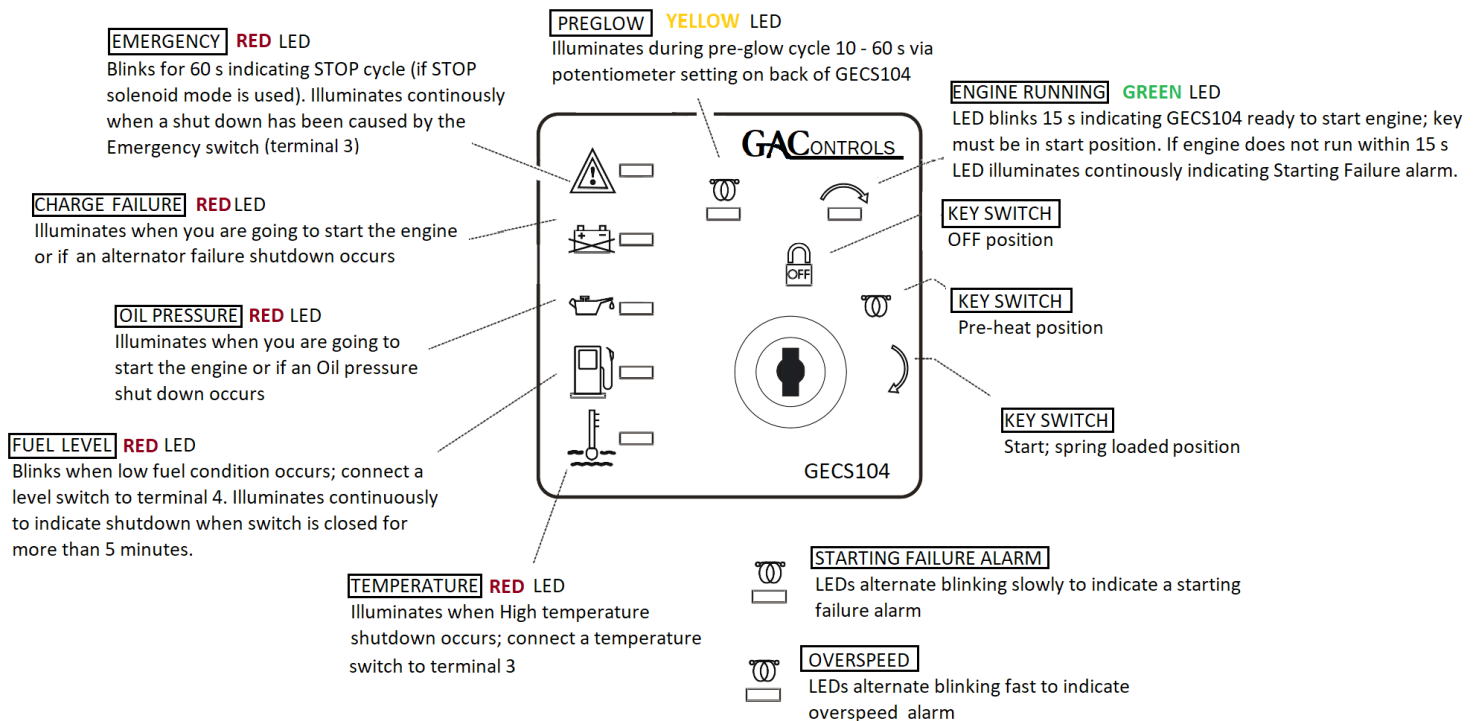
### MANUAL MODE SETUP

1. Turn the KEY SWITCH clockwise to PREHEAT position until all LEDs illuminate.
2. Wait until the only OIL PRESSURE and CHARGER FAILURE LEDs remain illuminated. If the PREHEAT timer is set, the yellow LED PREHEAT will illuminate according to the setting of the potentiometer; adjustable on the back from 10 up to 60 seconds.
3. As soon as the green ENGINE RUNNING LED starts blinking, turn the KEY SWITCH clockwise (CW) up to the spring-loaded momentary position. Hold this position until the engine starts. The ENGINE RUNNING LED will blink for a period of about 15 seconds. If the engine does not start within this period, the STARTING FAILURE ALARM LED will illuminate.
4. To stop the engine, turn the KEY SWITCH fully counter clockwise (CCW) to the OFF position.

### STOPPING THE ENGINE USING A FUEL SOLENOID

To stop the engine, use a FUEL SOLENOID (energized) connected to the output 9 using a pilot (driver) relay.

- If you use a STOP SOLENOID (energized to stop) turn the potentiometer on the back fully clockwise and connect the STOP SOLENOID to output 8 using a pilot (driver) relay as indicated in the wiring diagram. The GECS104 will provide a 60-second stop cycle for output 8.
- When you use the output 8 to drive a STOP SOLENOID, the ALARM function output will no longer be available.



This document is subject to change without notice.

Caution: None of GAC products are flight certified controls including this item.