GSC300 Auto Start Engine Controller

Installation Guidelines and Wiring Diagram

DYNAGEN control solutions you can trust

Important Note

The GSC300 no longer contains a program switch. You must have a GSC300 programmer to change any settings on the GSC300.

Factory Default Settings

Crank Disconnect: 22Hz

Over-speed: 69Hz

Crank Tries: 3

Low Battery: 10.9VDC

Delay to Start: 0s

Preheat Time: 10s

Oil Bypass Time: 10s

Crank Time: 10s

Cool-down Time: 6.4s

Warm-up: Disabled

Rest Time: 4s

Extra Relay: Preheat

Restart on False Start: Enable

Mid-heat/Post-heat: Disabled

Fuel During Crank Rest: On

Oil Pressure Input: Normally open switch

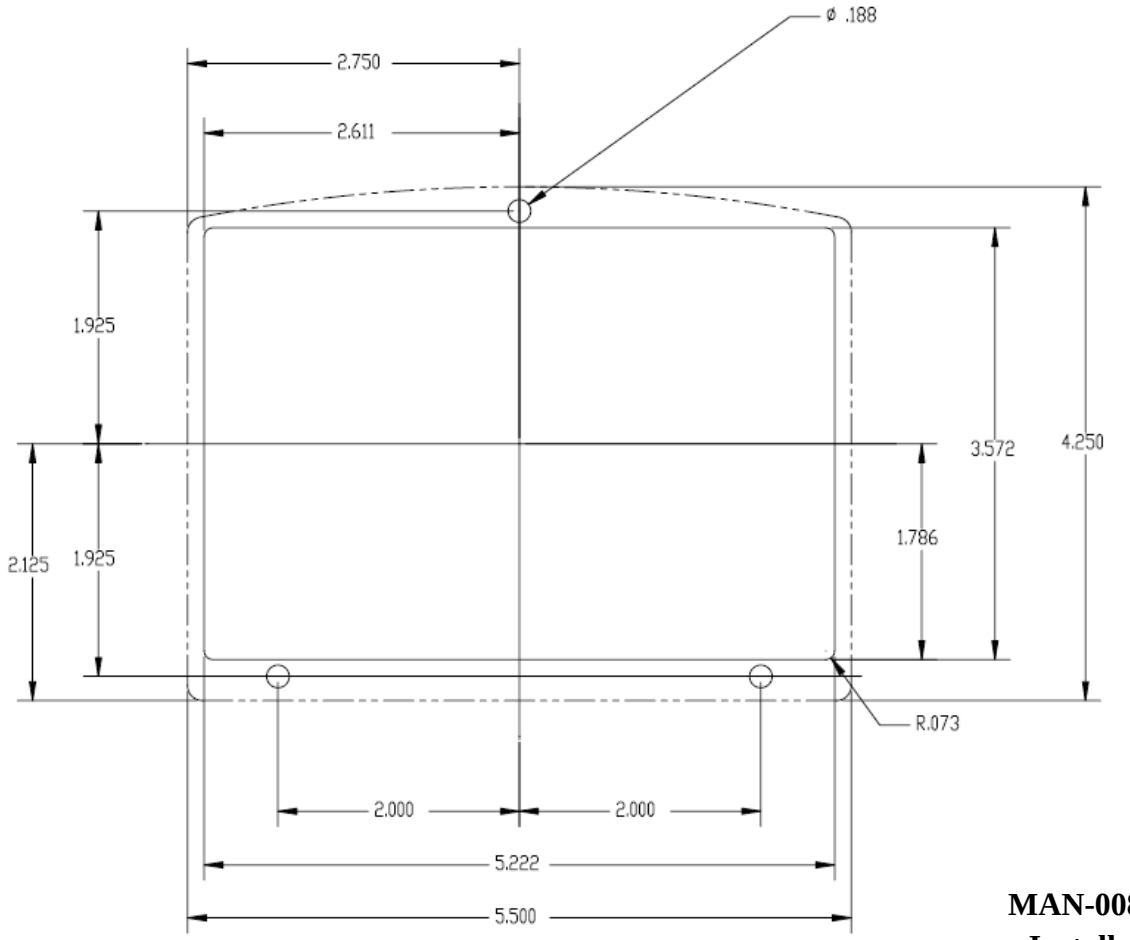
Engine Temperature Input: Normally open switch

Fuel Level Input: Normally open switch

Mounting Guidelines

The GSC300 is suitable for use on a flat surface of Type 1 enclosure. The maximum torque for the three mounting screws is 7in-lbs.

The mounting dimensions are given below.



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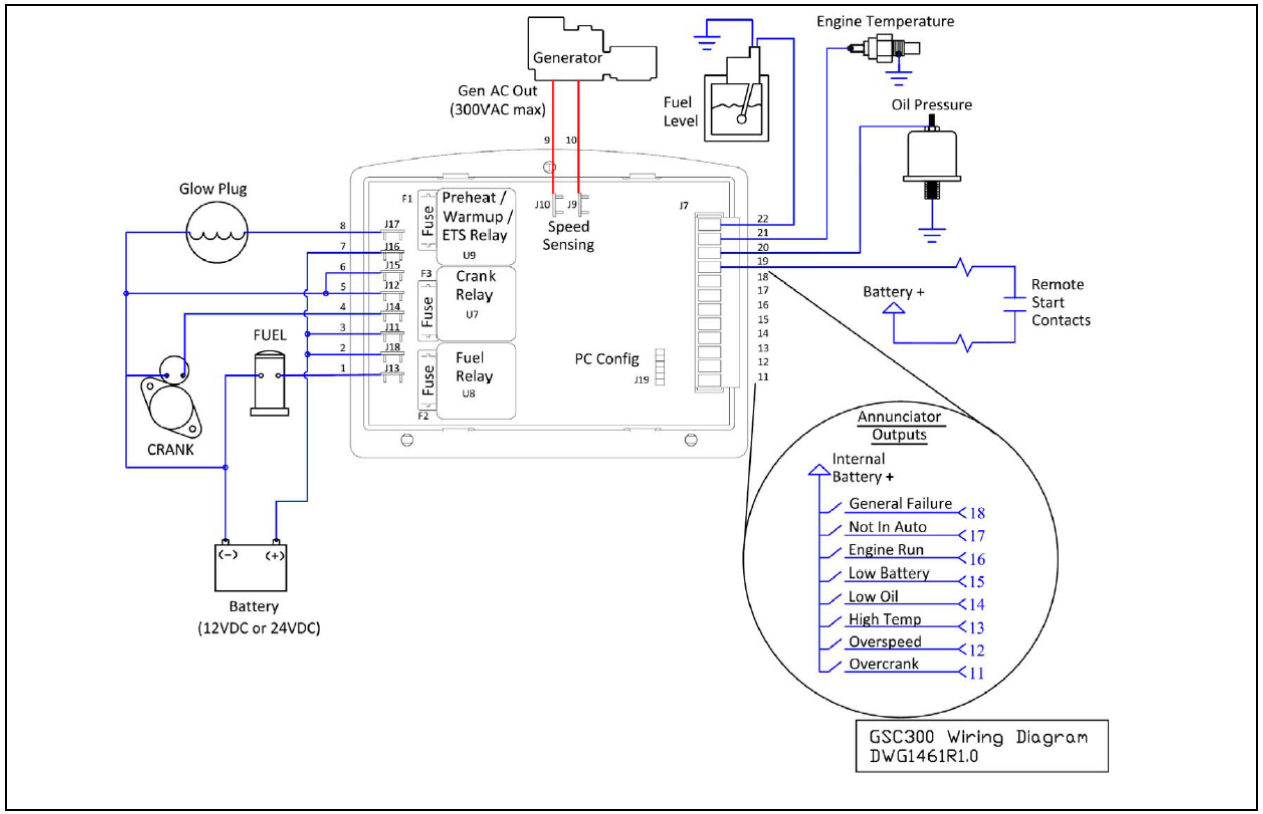
1. WARNING: Relay outputs are rated for maximum 30A at 12V. If relays are being used at 24V maximum rating is 20A.

2. DO NOT use wire smaller than 18 AWG as smaller wire has a tendency to crack and break over time.

3. IMPORTANT: The connections supplying DC power to the GSC300 panel should preferably run directly from the battery posts with no splices or other connections. Avoid using chassis (aluminum or iron engine parts), as return conductor for battery negative voltage. Copper wiring is recommended. Failure to follow the above may result in erratic operation due to large voltage drops across wiring connections. A small fuse should be placed at the battery terminal to provide 12 volts to the Remote Start Contacts to ensure that a short along this line will not cause any damage.

4. DO NOT exceed the maximum rated current and voltage on each of the controller outputs. DO NOT exceed 12V/30A or 24V/20A each for the Fuel Output, Crank Output or Preheat Output. DO NOT exceed 300mA (single output on only, refer to user manual for more details), for the General Fault Output or Annunciation Outputs. The annunciation outputs have overcurrent protection, when triggered will turn the output off. Power to the controller must be removed to reset this protection.



5. The relays are rated for resistive ratings. When driving such loads as starter solenoids you must ensure proper de-rating of the relays. Consult factory for further details.

6. Engine Sensor type MUST be selected and programmed properly to GSC300 (switch or sender type). Failure to do so may result in the controller not shutting down on true engine failure (Low oil pressure or high engine temperature).

7. When installing engine sensors (oil pressure, engine temperature, fuel level) **ensure the switches are connected to ground circuit through the engine sensor.** Damage will occur to controller unit if the sensor input terminals (Terminal #'s 20, 21 and 22) are connected to +Battery.

8. **When using engine sensors that are the resistive type the proper manufacturer of the sender MUST be selected during programming.** Failure to select the correct manufacturer type will cause inaccurate readings as well as failure to protect the engine during a fault condition.

9. To verify the operation of engine controller outputs, measure voltage (i.e. meter in volts) when outputs should be ON.

10. To verify the operation of the Preheat Output, measure the resistance between the Preheat terminals when the Preheat Output is ON, it should read a closed circuit (i.e. zero ohms). When the output is OFF there should be an open circuit between the terminals (very high resistance).

11. Speed sensing input terminals (Terminal #'s 9 and 10) do not have polarity sensitivity therefore the AC generator output leads can be connected in any polarity configuration to the controller speed sensing terminals. **Do not exceed 300VAC on speed sensing input terminals.**

12. Do NOT connect +Battery to any of the outputs. This will damage the GSC300 if power is removed.

For terminal descriptions, up-to-date manuals and other information please see the GSC300 section of the DynaGen Technologies Inc. website at:

www.dynagen.ca/support

CAUTION

Never work on the engine while it is powered. This controller does not generate a warning signal prior to automatic engine start. Warning signs should be placed on engine equipment indicating this important safety measure.