



LAM100 Load Anticipation / Load Pulse Module

1 INTRODUCTION

The LAM100 Load Anticipation Module is an accessory to an electronic governing system that is used to improve the load transient performance of a generator set.

The LAM100 senses the line current of a generator, through a current transformer, and signals the speed control unit to increase or decrease fuel to the engine.

The transient performance of all engine / generators can be improved with this module. The direct measurement of electrical load and the high gain signaling of the actuator drive electronics result in reduced load transients. Improvements of 20 - 40% are possible depending on the characteristics of the engine / generator.

A SENSITIVITY adjustment varies the amplitude of the signal to the speed control unit. Several outputs, with various time constants and energy levels, are also available to optimize engine performance.

2 SPECIFICATIONS

Input	AC from a 5 amp current transformer with a minimum 1.25 VA rating (internal 0.25 ohm burden resistor)
Amplitude Adjustment	0 to 100%
Time Constants	Selectable
Temperature Range	-40°C to +85°C (-40°F to +185°F)

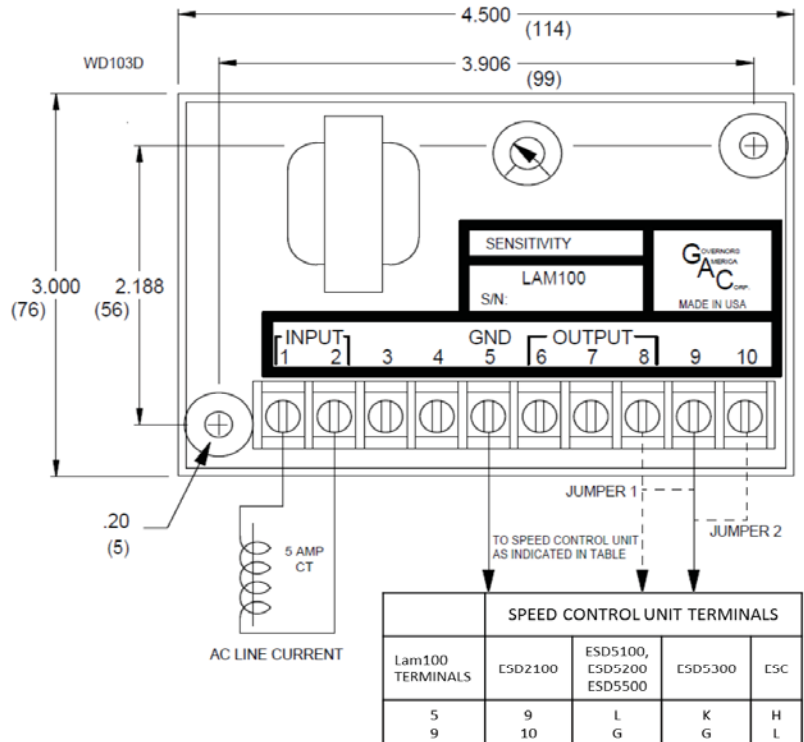
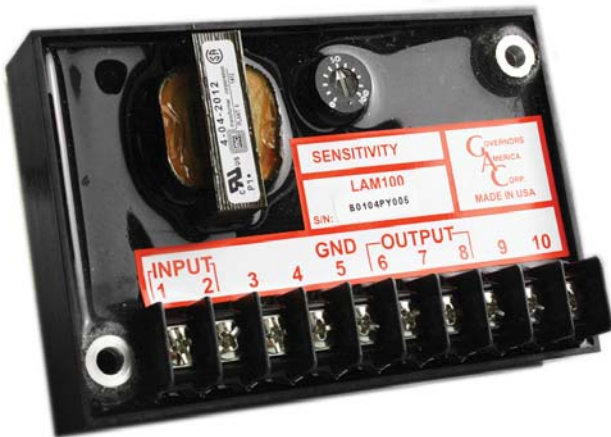
3 WIRING

Connect Terminals 1 and 2 to the current transformer.

Connect Terminals 5 and 9 to the speed control unit according to Table 1 and the wiring diagram.

4 WIRING AND OUTLINE DIAGRAM

Dimension Units
(xx.x) ----- (mm)
xx.X ----- in



5 ADJUSTMENTS

Operate the engine at maximum load. Turn the SENSITIVITY adjustment CW until instability or droop occurs. Turn the SENSITIVITY approximately 15° CCW.

If instrumentation is available to measure the transient load response, the system can be further optimized by selecting one of the other outputs or a combination of outputs.

The first suggested change is to select OUTPUT Terminal 7 or 6. With an ESC application, this will increase the time constant and amplitude by 50% and 100% respectively.

The next suggested change is to move the connection from Terminal 9 to Terminal 8. This increases the time constant by 100%. Or, connect Jumper 1 between Terminals 8 & 9 to increase the time constant by 300%. Jumper 2 between Terminals 9 & 10 increases the time constant by 500%. With both Jumpers 1 & 2 in place, the time constant is increased by 800%.

Due to the wide variation in the dynamics of engine generator systems, experimentation is required to optimize the installation.

Contact Governors America Corp. or one of our distributors if further assistance is required.

CAUTION

Current transformers develop dangerously high voltage when open circuited during operation.

DO NOT DISCONNECT Terminals 1 and 2 while operating.