

EAM100

GAC to CUMMINS EFC

Interface Module

1 INTRODUCTION

EAM 100 is an electronic device that allows GAC Load Sharing Modules and Auto Synchronizers to operate with the Cummins EFC electronic speed controls P/N 3044196 and P/N 3037359. Sophisticated generator paralleling systems can be assembled with GAC high performance accessories to control EFC equipped Cummins engines.

The EAM100 module requires four connections to the EFC speed control. The positive lead from the battery supply, signal ground from Terminal 11 (not battery ground), the reference sensing, and an output to the speed control to adjust its speed setting. The EAM100 draws less than one microamp from the speed control, assuring no adverse effects on the system.

The other terminal block on the EAM 100 accepts connections from an external speed trim pot, GAC P/N TP501 or TP503, and from the GAC Load Sharing Module and Auto Synchronizer.



2 SPECIFICATIONS

POWER	
Input Impedance (Terminals A and D)	
Output Impedance (Terminals 16 and 27)	
Nominal Output Voltage (Terminals 16 and 27)	
Output Voltage Range (Terminals 16 and 27)	
Output Transfer Function	-0.5 Volts Out / Volt In
DC Supply Voltage Range (Terminals 1 and 11)	15 - 32 V DC
DC Supply Current (Terminals 1 and 11)	20 mA
PHYSICAL	
Temperature Range	-40° - 185 ° F [-40° to +85°C]
Dimensions	1.02 x 3.0 x 3.5 in [25.91 x 101.60 x 118.62]
Mounting	Vertical mounting preferred
Relative Humidly	up to 97%

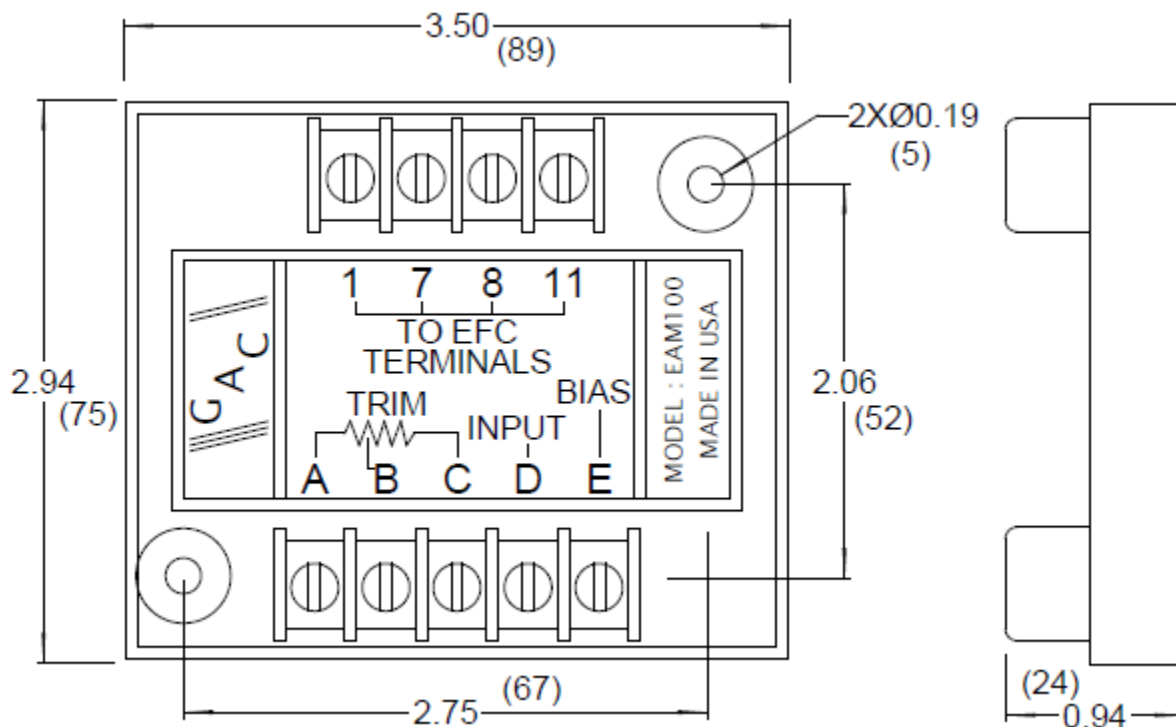
3 WIRING AND DIMENSIONS



An overspeed shutdown device, independent of the governor system, should be provided to prevent loss of engine control which may cause personal injury or equipment damage. A secondary shutoff device, such as a fuel solenoid, must be used.

Instructions on the operation of the GAC LSM100, LSM201 or LSM672 Load Sharing Modules, and the SYC6714 Synchro-nizer are found in publications PTI411 0, PTI4100, PTI4000, and PTI4030 respectively.

Terminal D of the EAM100 has the same sensitivity as Terminal R of the ESC63C Series speed control units, 104 hz/volt. Terminal B of the EAM100 has the same sensitivity as Terminal J of the ESC63C Series speed control units, 40 hz/volt.



The signal ground reference is Terminal 11 of the EAM100. All ground connections must be made at this terminal.

Terminal D of the EAM100 has the same sensitivity as Terminal R of the ESC63C Series speed control units, 104 hz/volt.

Terminal B of the EAM100 has the same sensitivity as Terminal J of the ESC63C Series speed control units, 40 hz/volt.

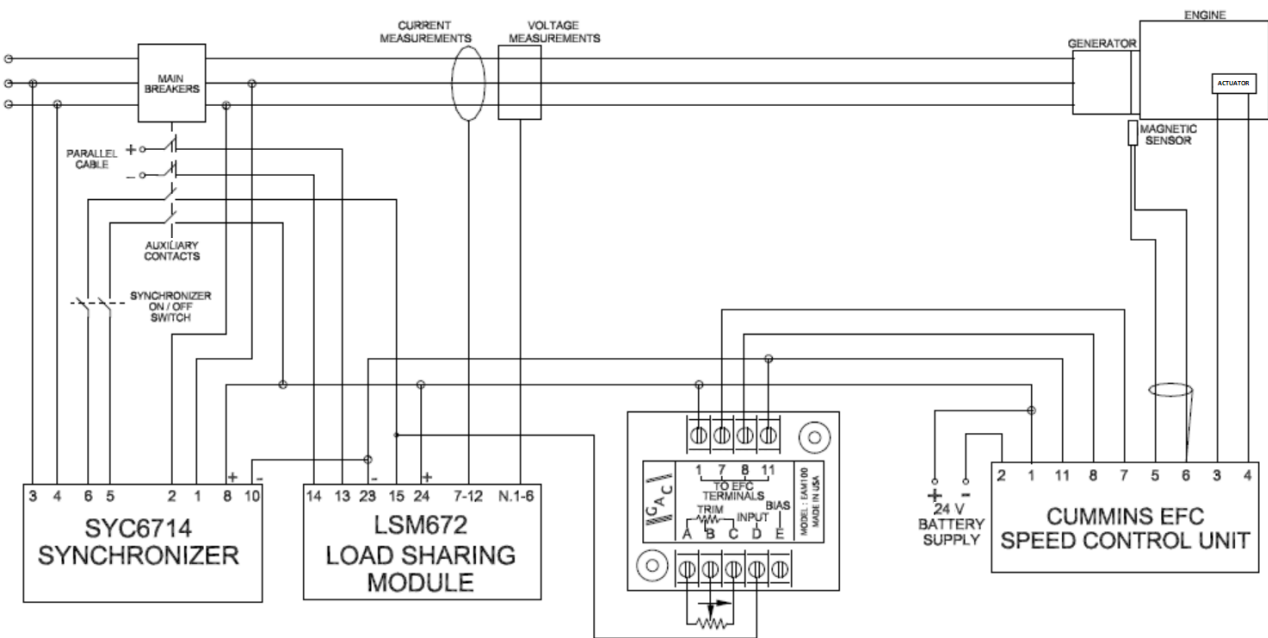
WIRING EXAMPLES

The wiring for typical generator paralleling systems is shown in Section 4. Examples of the following wiring are available:

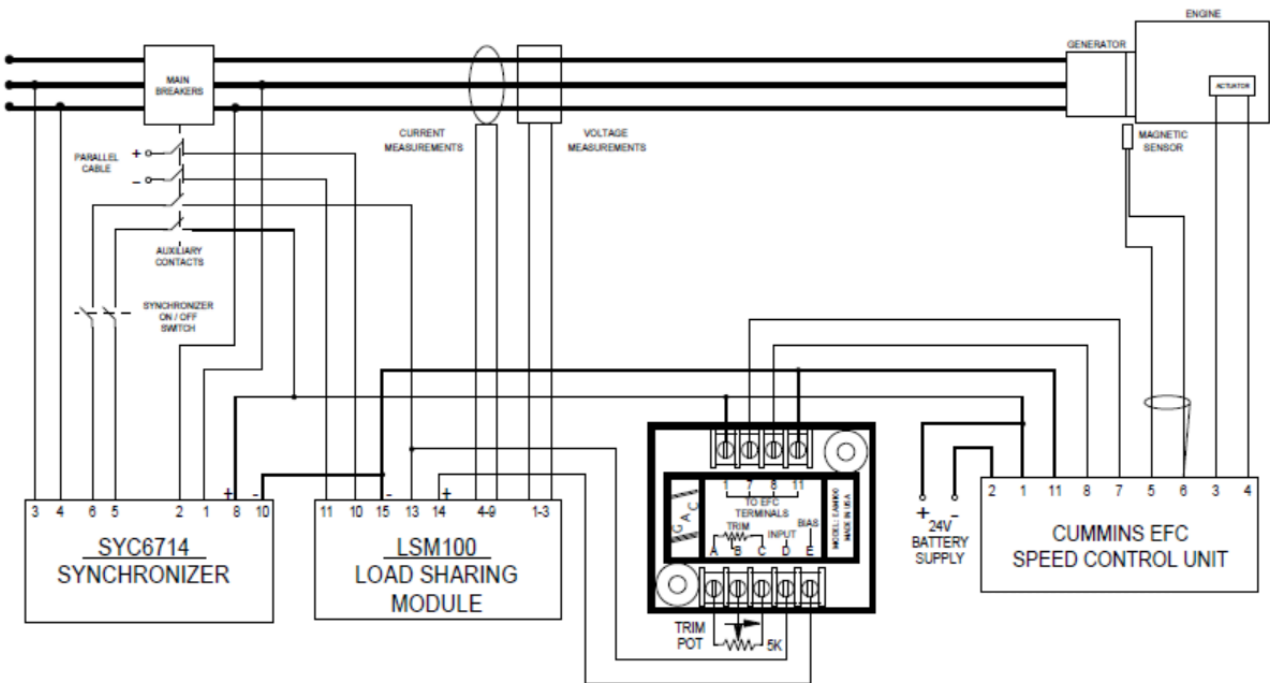
- EAM100 with LSM672 and SYC6714
- EAM100 with SYC6714 and LSM100
- EAM100 with SYC6714 and LSM201

Instructions on the operation of the GAC LSM100, LSM201 or LSM672 Load Sharing Modules. and the SYC6714 Synchro-nizer are available online at www.Governors-America.com.

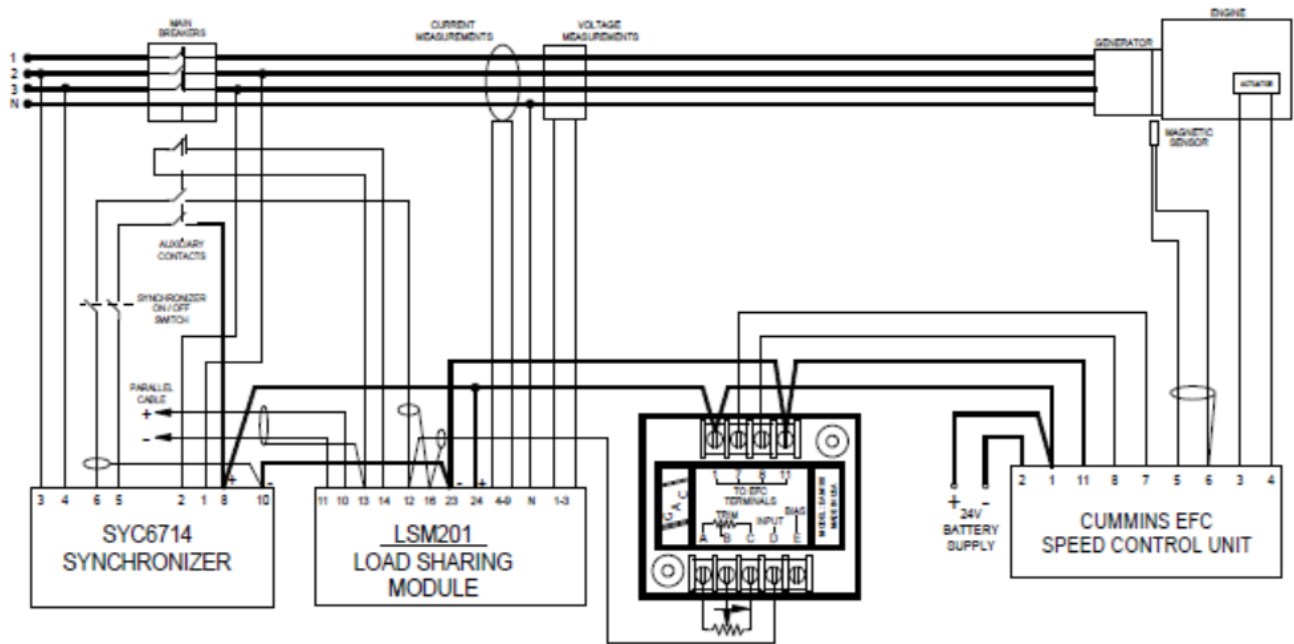
EAM100 with LSM672 and SYC6714



EAM100 with SYC6714 and LSM100



EAM100 with SYC6714 and LSM201



4 TROUBLESHOOTING

Once the units are installed:

1. Apply 24 V DC to Terminals 1 (+) and 11 (-).The voltage measured between Terminals E and 11 should be 10.0 ± 0.5 V DC.
2. Connect a 25K Ω resistor between Terminals 7 and E. Connect a speed trimpot to Terminals A,B and C as shown in Diagram 1. The voltage measured between Terminals C and 11 should be 7.5 ± 0.35 V DC.
3. Measure the voltage between Terminals 8 (+) and 11 (-) while adjusting the frequency trim pot from end to end. The voltage should change 0.2 V DC from 3.7 to 3.9 ± 0.1 V DC.
4. If the above measurements are correct, the EAM100 meets its specifications. See the troubleshooting documents for each of the other products for further testing.