ENGINE-GENERATOR CONTROLLER WITH INTEGRATED LOAD BANK CONTROL

The ECU-840 engine-generator controller provides reconfigurable control and diagnostic functions for today's engine-generator sets driven by advanced CANBUS enabled engine systems. Integrated features include 3-phase AC monitoring, automated load bank control, telematics support, and three special function relay outputs.

ECU®- 840

ONE VERSION FOR 12 AND 24 VDC

APPLICATIONS: CANBUS Engine-Generator Systems with Load Banks

FEATURES:

- Differential 3-phase AC voltage sensing with 4-wire connection
- Three independent current transformer sensing inputs
- Laptop-free configuration, diagnostics, and firm-ware update in the field
- Zero power consumption when off
- Hour Check input for one-touch hourmeter, battery voltage, and fuel level check
- Tactile feedback membrane switches
- Rugged and reliable
- Epoxy encapsulated
- Compatible with ECU-GAUGE integrated gauge panel for economical, user-friendly indication
- Integrated load bank control
- RS-232 and RS-485 communication interfaces

INTEGRATED CONTROL AND DIAGNOSTICS

The ECU-840 incorporates the second generation of ECU, Inc. AC bus measurement technology. As today's AC loads continue to increase their use of active and passive power electronics, the chance of encountering distorted AC waveforms has increased. Such distorted waveforms, as well as imbalanced loads, can cause estimates calculated assuming pure sinusoidal waveforms or balanced loads to diverge from true, direct measurements. Measurement strategies used in the ECU-840 for AC bus measurements make few assumptions about the composition of AC bus waveforms. Many key measurements are performed directly or without making balanced load or sinusoidal assumptions, yielding increased measurement fidelity even when AC bus voltage or current waveforms are distorted.

The ECU-840 includes engine specific software that tailors the ECU-840 to the specific engine system, including a fault code database that contains SPN.FMI, PGN, and internally sourced status, maintenance, pre-alarm, and shutdown messages. This database enables live, post-shutdown, and DM2 examination of active messages in natural language without the need for a fault code book, skilled technician, or special equipment.

The appearance of new pre-alarm messages or a shutdown message is annunciated both on the front panel of the ECU-840, and via the closure of the acknowledgeable alarm contact. Active messages can be viewed in the "Message Center" display on the home screen, as well as in a scrollable format in the "DM1 + Active Messages" utility. The decoded DM2 record from the ECM can be viewed via the "DM2" utility. For post-shutdown diagnostic purposes, the "Last Shutdown" utility provides a hourmeter time stamped log of messages active when the last shutdown occurred.

The RS-485 Modbus master connection enables robust communication with other devices, including the ECU-GAUGE panel, which displays essential data in a familiar mechanical gauge format. An RS-232 communications connection is also provided to enable direct communication with a telematics device or modem.

To address thermal performance concerns especially prevalent in diesel engines under light loads or operating in extremely cold climates, an automatic load bank control system has been integrated into the ECU-840. By using available data and with ECU, Inc. control software, multi-modal load bank control is achieved with no end-user interaction needed. A password protected on-board diagnostic utility for the load bank control is provided for service technicians.

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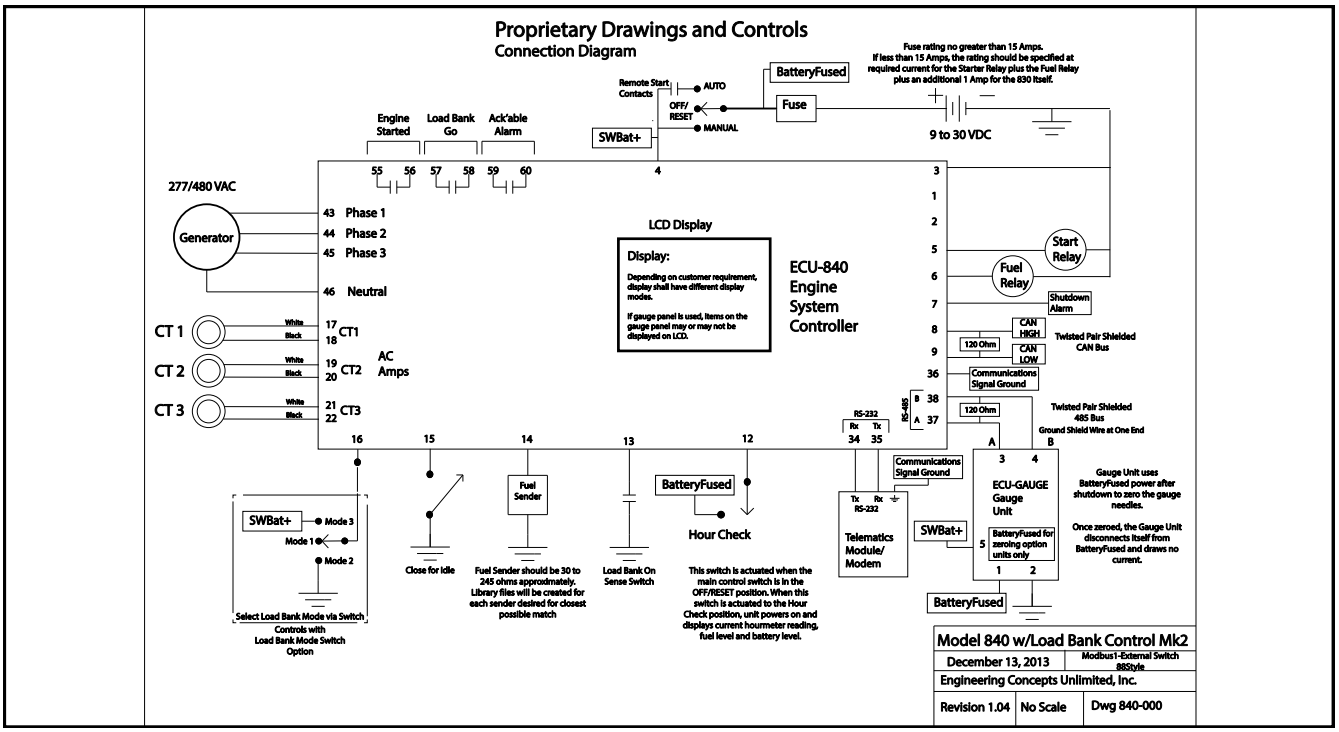
SAMPLE *ECU*®-840 APPLICATION:

EXTERNAL SWITCH TYPE PANEL CONFIGURATION



The above example shows the ECU-840 configured for standard operation. An ECU-GAUGE unit is shown connected to provide electro-mechanical gauge display of data collected by the ECU-840. Upon power off, the attached ECU-GAUGE unit moves its gauges to their zero positions then disconnects itself from battery power, resulting in a zero power standby.

Depending on final configuration some options, such as 50/60Hz selection, may be password protected.

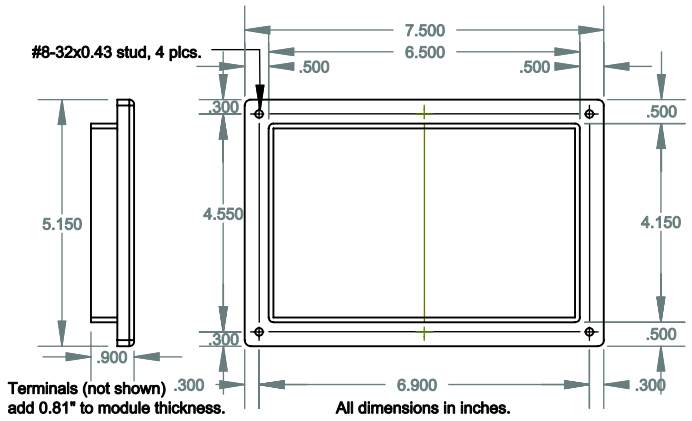
SPECIFICATIONS:

INPUT VOLTAGE:	9 TO 30	V_{DC}
OUTPUT RATING:	5	A MAX
OPERATIONAL TEMPERATURE:	-40 TO 85	°C (OPERATIONAL)
LCD (w/HEATER OPTION):	-40 TO 75	°C
AC VOLTAGE LINE-LINE:	80 TO 525	$V_{AC\ RMS}$
CT INPUT:	5	$A_{AC\ RMS}$ MAX

ECU® -840 TERMINAL OUT

Please see the above application for terminal output specification.

PHYSICAL DIMENSIONS



ORDERING INFORMATION:
ORDER BY SPECIFYING: *ECU*®-840