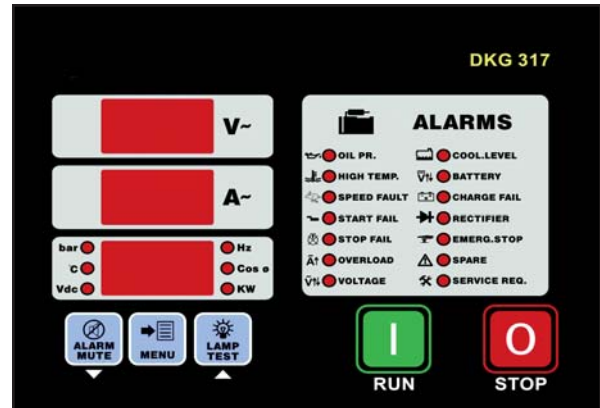


FEATURES

- ❑ Both manual and remote starting and stopping
- ❑ Engine control
- ❑ Generator protection
- ❑ Built-in alarms and warnings
- ❑ 3 phase genset voltage inputs
- ❑ 3 phase genset CT inputs
- ❑ Engine oil pressure measurement
- ❑ Engine coolant temperature measurement
- ❑ Genset active power measurement
- ❑ Genset power factor measurement
- ❑ Periodic maintenance request indicator
- ❑ Hours Run counter
- ❑ Event logging
- ❑ Statistical counters
- ❑ Operation password capability
- ❑ Field adjustable parameters
- ❑ RS-232 serial port
- ❑ Free remote monitoring software (Windows-based)
 - local, LAN, IP and modem connection
 - monitoring, download of parameters
- ❑ LED displays
- ❑ Configurable analog inputs: 2
- ❑ Configurable digital inputs: 7
- ❑ Configurable relay outputs: 2
- ❑ Total relay outputs: 4
- ❑ I/O expansion capability
- ❑ Remote Start operation available
- ❑ Survives cranking dropouts
- ❑ Sealed front panel
- ❑ Plug-in connection system for easy replacement
- ❑ Small dimensions (6.5" W x 4.9" H x 1.89" D)
- ❑ Low cost



DESCRIPTION

The DKG-317 is a comprehensive generator control unit designed to start and stop the generating set both manually and remotely. The manual control is made using the pushbuttons on the front panel. The remote control is made via the REMOTE START input signal.

In RUN position, DKG-317 controls the automatic starting and stopping of the generating set. Once the generator is running, it monitors internal protections and external fault inputs. If a fault condition occurs, the unit shuts down the engine automatically and indicates the failure source with the corresponding red LED lamp.

The operation of the unit is controlled with front panel pushbuttons. The RUN and STOP pushbuttons select the operating mode. Other buttons select the display parameter scroll, alarm mute and lamp test functions.

If the STOP button is pressed or the REMOTE START signal is removed, the engine will be stopped.

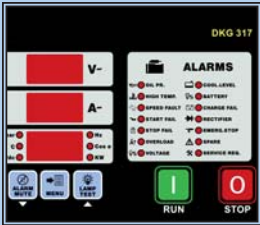
The DKG-317 provides a comprehensive set of digitally adjustable timers, threshold levels, input and output configurations and operating sequences. The unauthorized access to program parameters is prevented by the program lock input. All programs may be modified via front panel pushbuttons, and do not require an external unit.

The fault conditions are considered in 2 categories as Warnings and Alarms. Measured values have separate programmable limits for warning and alarm conditions.

The service request indicator lamp turns on at the expiration of either engine hours or time limits.

It is possible to monitor the operation of the system locally or remotely with the WINDOWS-based PC utility program.

The unit is designed for front panel mounting. It is fitted into the cut-out with the steel spring removed. Connections are made with 2 part plug and socket connectors.



PC&S products are manufactured under a total quality system that provides total engineering integrity. Products have been engineered to satisfy specifications, performance, reliability and life cycle to exacting standards.

PC&S strives to meet customer requirements and exceed expectations. We do this through monitoring and measuring our process and product, customer satisfaction, internal auditing, analysis of production data, continual improvement including corrective and preventative action. Our quality management systems are certified in accordance with ISO 9001:2000 standards.

MEASUREMENTS

- Generator Volts:
L1-N, L2-N, L3-N, L1-L2, L2-L3, L3-L1
- Generator Amps: L1, L2, L3
- Generator total KW
- Generator pf
- Generator Frequency
- Engine RPM
- Battery Voltage
- Engine Coolant Temperature
- Engine Oil Pressure

EVENT LOGGING

The DKG-317 records the last 12 events. Recorded events are:

- Alarms and warnings
- Generator run / stop information

Event records are only displayed on the PC screen.

DIGITAL INPUTS

The unit has 7 configurable digital inputs. Each input has the following programmable parameters:

- Alarm type: Shutdown/Warning/No Alarm
- Alarm polling: On engine running / Always / On Mains OK
- Latching / Non-latching operation
- Contact type: N/O; N/C
- Switching: BAT + / BAT -

STATISTICS

The following incremental counters provide statistics about past performance of the generating set:

- Engine Hours Run
- Engine Hours to Service
- Time to Service
- Number of Engine Cranks
- Number of Genset Runs

ANALOG INPUTS

Engine analog inputs are provided for coolant temperature and oil pressure. Analog inputs connect to resistive sender units to provide precise and adjustment protection. The inputs have programmable sensor characteristics so that they are suitable for any type and any brand of sensors.

RELAY OUTPUTS

The unit provides 4 relay outputs and 2 of them have programmable functions, selectable from a list. In addition to genset control signals, any function or alarm condition may be output as a relay output. Using two Relay Expansion Modules, the number of relays may be increased up to 20 with 16 of them being volt-free contacts.

TELEMETRY AND REMOTE PROGRAMMING

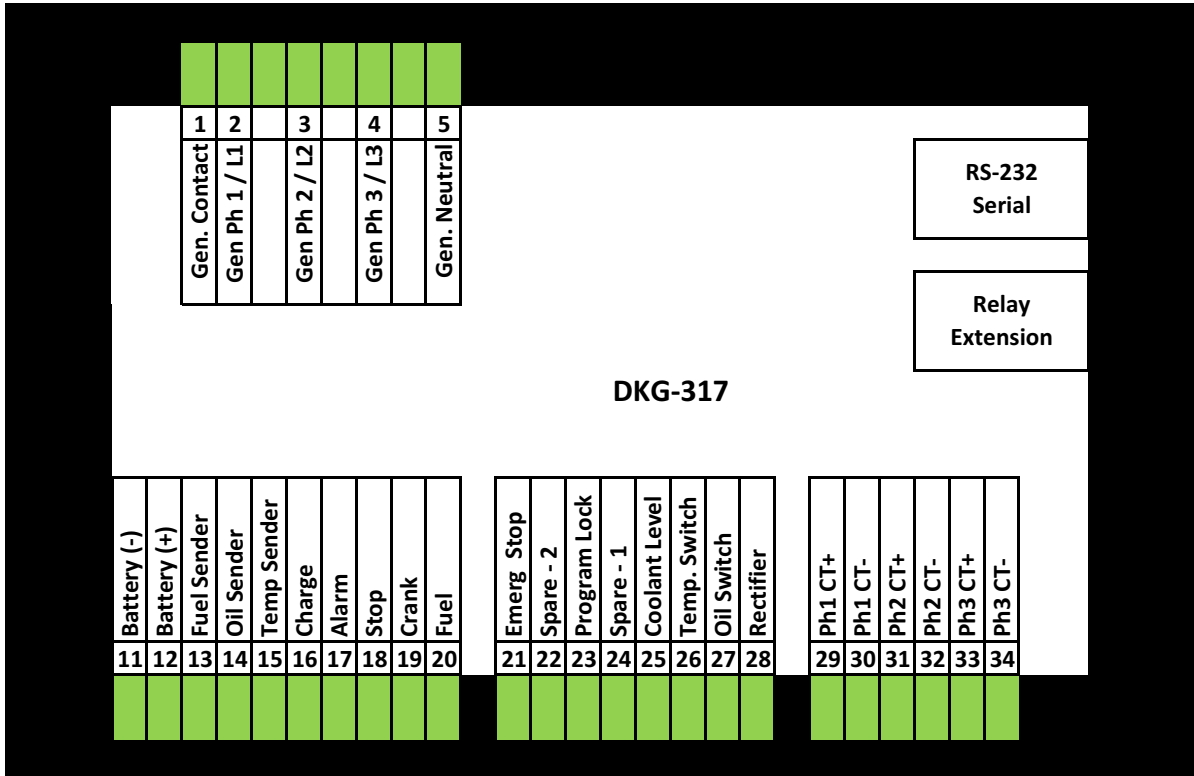
The DKG-317 module provides the user with large telemetry facilities via its standard RS-232 serial port. The unit can be either connected to a PC, PLC or a GSM or PSTN modem. The unit supports both RAINBOW and MODBUS communication protocols. The standard PC software offers local, Local Area Network (LAN), internet and modem operation capabilities, as well as modem networking features.

The Windows-compatible, PC program is used for the following purposes:

- Parameter upload / download
- Remote monitoring
- Diagnostics and analysis

The PC software detects automatically new versions over the internet. A menu system will guide the user if he desires to download the new version.

TERMINAL CONNECTIONS



1	Generator Contactor
2	Ph 1 (Generator L1)
3	Ph 2 (Generator L2)
4	Ph 3 (Generator L3)
5	Neutral (Generator)

6	not in use
7	not in use
8	not in use
9	not in use
10	not in use

11	Battery -
12	Battery +
13	Fuel Sender
14	Oil Sender
15	Temp Sender
16	Charge Excite/Fail
17	Common Alarm
18	Stop
19	Crank
20	Fuel

21	Emergency Stop
22	Spare - 2
23	Program Lock
24	Spare - 1
25	Coolant Level
26	Temperature Switch
27	Oil Pressure Switch
28	Rectifier (Bat. charger fail)

29	Ph 1 CT +
30	Ph 1 CT -
31	Ph 2 CT +
32	Ph 2 CT -
33	Ph 3 CT +
34	Ph 3 CT -

TECHNICAL SPECIFICATIONS

Alternator Voltage	15 - 300V,AC (L-N)	Serial Port	RS-232, 2400 bauds, no parity, 1 bit stop
Alternator Frequency	0 - 100Hz	Operating Temperature	-4°F to +158°F (-20°C to +70°C)
DC Supply Range	9.0 to 33.0V,DC	Storage Temperature	-22°F to +176°F (-30°C to +80°C)
Cranking Dropouts	Survives 0V for 100ms	Maximum Humidity	95% non-condensing
Typical Operating Current	100mA,DC	IP Protection	IP65 from front panel. IP30 from rear
Maximum Operating Current	300mA,DC (relay outputs open)	Dimensions	6.50" W x 4.92" H x 1.89" D
Relay Outputs	10A / 28V	Panel Cut-out Dimensions	5.94" W x 4.37" H minimum
Charge Excitation Current	54mA@12V,DC	Weight	0.68 lbs. (310 g. approx.)
Analog Input Range	0-5000 ohms	Case Material	High-temperature, self-extinguishing ABS/PC (UL94-V0, 100°C / 230°F)

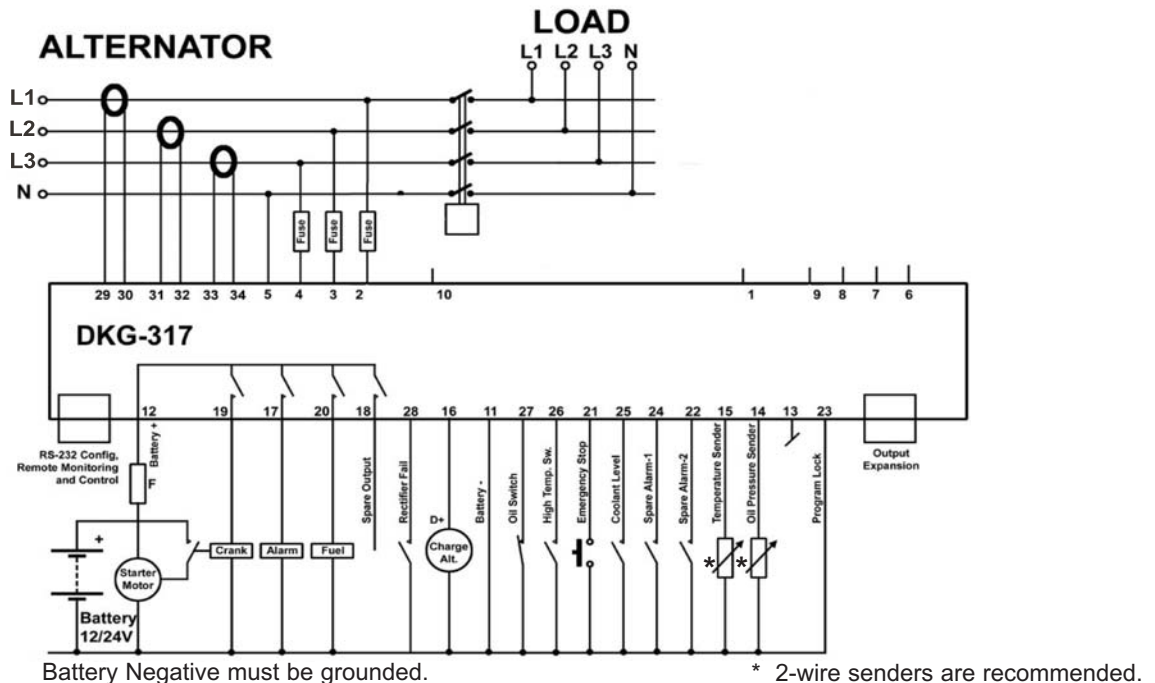
COMPATIBILITY / CONFORMITY

EU Directives Conformity
 2006 / 95 / EC (low voltage)
 2004 / 108 / EC (electro-magnetic compatibility)

Norms of Reference:
 EN 61010 (safety requirements)
 EN 61326 (EMC requirements)



TYPICAL CONNECTIONS



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