

DKG-317 MANUAL AND REMOTE START UNIT

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.

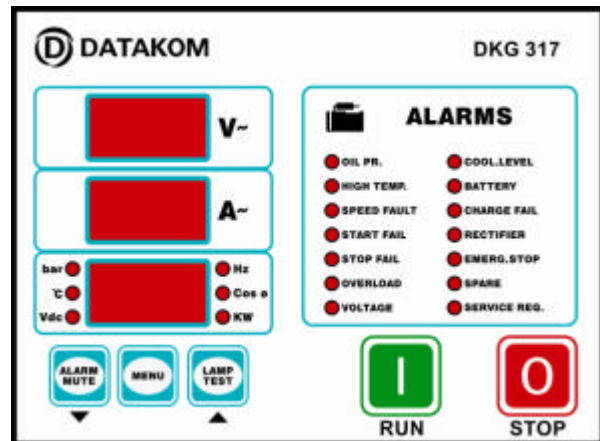
The unit is designed for front panel mounting. It is fitted into the cut-out with the steel spring removed. Connections are made with 2 part plug and socket connectors.

MEASUREMENTS

Generator Volts: U-N, V-N, W-N
 Generator Volts: U-V, V-W, W-U
 Generator Amps: U, V, W
 Generator total KW
 Generator pf
 Generator Frequency,
 Battery Voltage
 Engine Coolant Temperature
 Engine Oil Pressure

STATISTICS

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



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
 Field adjustable parameters
 RS-232 serial port
 Free MS-Windows Remote monitoring SW:
 -local, LAN, IP and modem connection
 -monitoring, download of parameters
 LED displays
 Configurable analogue 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
 Low cost
 Small dimensions, (155x115x48mm)**

EVENT LOGGING

The DKG-317 records last 12 events. Recorded events are:
 -alarms and warnings
 -generator on-run / stop information
 Event records are only displayed on the PC screen.

DIGITAL INPUTS

The unit has 7 configurable digital inputs. Each input has following programmable parameters:
 -alarm type: shutdown / warning / no alarm
 -alarm polling: on engine running / always
 -latching / non-latching operation,
 -contact type: NO / NC
 -switching: BAT+ / BAT-

ANALOG INPUTS

Engine analog inputs are provided for following functions:
 -Coolant temperature
 -Oil pressure

The analog inputs connect to resistive sender units to provide precise and adjustable 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, select table from a list. In addition to genset control signals any specific alarm information may be output as a relay contact. Using two DKG-705 Relay Expansion Modules, the number of relays may be increased up to 20, 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 or a modem for remote communication. The PC software offers local, Local Area Network (LAN), internet and modem operation capabilities. Note that the modem mode is also compatible with LAN and internet modes, so that the modem data may be served by PC for reuse in the LAN or internet.

The PC program is used for below purposes:
 -parameter upload/download
 -remote monitoring
 -diagnostics and analysis

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

TECHNICAL SPECIFICATIONS

- Alternator voltage:** 15-300 V-AC (Ph-N)
- Alternator frequency:** 0-100 Hz.
- DC Supply Range:** 9.0 to 33.0 V-DC
- Cranking dropouts:** survives 0V for 100ms.
- Typical Standby Current:** 150 mA-DC
- Maximum Operating Current:** 350 mA-DC (Relay outputs open)
- Relay Outputs:** 10 A / 28V
- Charge excitation current:** 36mA @ 12V-DC.
- Analog input range:** 0-5000 ohms.
- Serial port:** RS-232, 2400 bauds, no parity, 1 bit stop
- Operating temp.:** -20°C (-4°F) to 70 °C (158°F).
- Storage temp.:** -30°C (-22°F) to 80 °C (176°F).
- Maximum humidity:** 95% non-condensing.
- IP Protection:** IP65 from front panel, IP30 from the rear.
- Dimensions:** 155 x 115 x 48 mm (WxHxD)
- Panel Cut-out Dimensions:** 151x111 mm minimum.
- Mounting:** Front panel mounted with rear retaining steel spring.
- Weight:** 310 g (approx.)
- Case Material:** High Temperature ABS (UL94-V0, 110°C)

