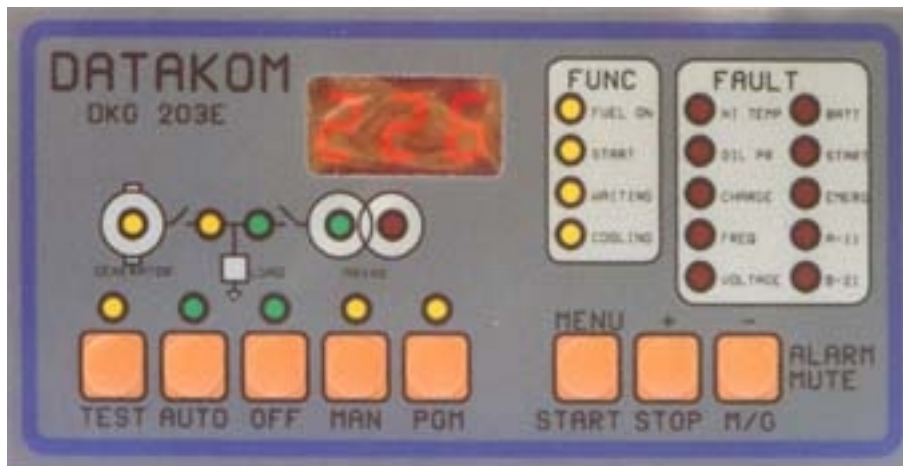




DKG-203 AUTOMATIC MAINS FAILURE UNIT



FEATURES

- Microprocessor controlled,*
- Automatic engine starting and stopping,*
- Automatic load transfer,*
- Automatic shutdown on fault condition,*
- Survive cranking dropouts,*
- R-S-T phases voltage limits checking,*
- Generator phase voltage limits checking,*
- Delayed overspeed and underspeed protection,*
- Battery high voltage protection,*
- Digitally adjustable low & high mains voltage limits,*
- Digitally adjustable low & high generator voltage limits,*
- Digitally adjustable underspeed & overspeed limits,*
- Digitally adjustable delay for speed protection,*
- Digitally adjustable battery high voltage limit,*
- Digitally adjustable timers,*
- Provision for energize to stop & preheat outputs,*
- Digital display of mains & generator voltages,*
- Digital display of generator frequency,*
- Digital display of battery voltage,*
- Program locking feature,*
- Dustproof, vibration proof,*
- Plug-in connection system, easy replacement,*
- Low failure rate,*

DESCRIPTION

The DATAKOM model DKG-203 automatic start unit is a microprocessor based digital unit offering all functions needed for automatic control of a genset.

The unit is housed in a metal chassis with polycarbonate front panel.

In automatic mode, the unit monitors 3 phases of the mains voltage and controls the automatic starting, stopping and load transfer of the generator. Once the generator is running the device monitors the internal protections and external fault inputs.

DKG-203 provides a full set of digitally adjustable timers and threshold levels. Also the relay configuration is programmable, enabling the control of different types of engines, including gasoline engines.

The unit has different models for 12 Volt and 24 Volt gensets.

MODES OF OPERATION

OFF: Mains contactor will be energized if AC mains are present.

MANUAL: Used to start the generator and transfer the load manually.

AUTOMATIC: The unit monitors the 3 phases of the mains and will start the generator and control the changeover of mains and generator contactors if a mains failure on any phase is detected.

TEST: The unit will start the generator without a mains failure; the load will not be transferred until a mains failure occurs. (Also called EMERGENCY BACKUP mode)

PROGRAM: Used to program timers and operational limits. Program modifications may be disabled by wiring the program lock input to the negative supply.

OUTPUTS

FUEL: Positive output relay used to control the fuel solenoid. (5 amps) Use an external power relay to increase the output current rating.

START: Positive output relay used to control the engine starter solenoid. (5 amps) Use an external power relay to increase the output current rating.

ALARM: Positive output relay activated by any alarm condition. (5 amps) This output can also be configured to control a stop solenoid or a preheat output.

GENERATOR CONTACTOR: Outputs the alternator phase voltage to energize the generator contactor. (5 amps @250V-AC)

MAINS CONTACTOR: Outputs the mains phase voltage to energize the mains contactor. (5 amps @250V-AC)

INPUTS

DC SUPPLY: 12 or 24 volts DC, (+) and (-) terminals.

R-S-T: 3 phase mains voltages.

G: Generator phase voltage.

LOW OIL PRESSURE: negative closing switch input.

HIGH TEMP: negative closing switch input.

EMERGENCY STOP: negative closing emergency stop button. This non-latching input causes the generator to be stopped immediately. Also used for external deactivation of automatic mode.

PROGRAM LOCK: Tie this input to negative supply to prevent program modifications.

CHARGE: Charging alternator connection.

A-11: Spare engine failure input.

B-21: Spare warning input.

TECHNICAL SPECIFICATIONS

Operating temperature: -10 to + 70 degrees C.

Relative humidity: %10 to %90.

DC Supply:

DKG-203/12V: 9 to 18 volts.

4.0-18 V while cranking

DKG-203/24V: 18 to 33 volts

8.0-33 V while cranking

Power consumption: 1W (automatic mode, line voltages present), 3W max.(relay outputs disconnected)

Dimensions: 144 x 72 x 50mm (WxHxD)

Mounting hole dimensions:

138x66 mm minimum.

Weight: 500g (approx.)

Accuracy:

Phase voltages: 2% + 1V

Battery voltage: 2% + 0.2V

Generator frequency: +/- 0.5 Hz

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