



DKG-103 AUTOMATIC MAINS FAILURE UNIT



FEATURES

- Microprocessor controlled,*
- Automatic engine starting and stopping,*
- Automatic load transfer,*
- Automatic shutdown on fault condition,*
- Survive cranking dropouts,*
- Operation in Automatic, Test and Off modes,*
- Low cost,*
- Small dimensions,*
- High power relay outputs,*
- Emergency backup operation,*
- Different models for 12V and 24V battery systems,*
- 3 Phase mains voltage monitoring,*
- Alternator phase monitoring,*
- Digital alternator frequency display,*
- Overspeed and underspeed protection,*
- Low oil pressure protection,*
- High engine temperature protection,*
- Dust proof,*
- Vibration proof,*
- Two part connectors for easy replacement,*
- Low failure rate,*

DESCRIPTION

The DATAKOM model DKG-103 automatic start unit is a microprocessor based low cost 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.

Thanks to its 30 Amp relay outputs, the unit needs no extra relay in the control panel.

As the device needs no programming process, it is easy to use and has a very low rate of failure.

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.

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. When the mains are restored, the unit transfers the load and stops the engine.

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

OUTPUTS

FUEL: Positive output relay used to control the fuel solenoid. (30A / 28V)

START: Positive output relay used to control the engine starter solenoid. (30A / 28V)

ALARM: Positive output relay activated by any alarm condition. (5A / 28V) This output may also be configured to control a stop solenoid or a preheat output.

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

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

INPUTS

LOW OIL PRESSURE: negative closing switch input.

HIGH TEMP SWITCH: negative closing switch input.

EMERGENCY STOP SWITCH: negative closing switch input.

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

R-S-T: 3 phase mains voltages.

G: Generator phase voltage.

NEUTRAL: Mains and generator neutral terminal.

TECHNICAL SPECIFICATIONS

Overspeed : 57Hz

Underspeed : 30Hz

Multi attempts to start : 3 attempts

Start delay : 3 secs

Crank time : 6 secs

Rest time : 10 secs

Crank disconnect : 10Hz

Return time: 30 secs

Run on: 90 secs

Operating temperature: -10 to + 70 degrees C.

Relative humidity: %10 to %90.

DC Supply:

DKG-103/12V: 9 to 18 volts.

4.0-18 V while cranking

DKG-103/24V: 18 to 33 volts

8.0-33 V while cranking

Power consumption: 1W average, 5W max.

Dimensions: 153 x 120 x 40mm (WxHxD)

Mounting hole dimensions:

142x96 mm minimum.

Weight: 700g (approx.)

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