



TECHNICAL MANUAL

DKG

Generator Control Module

<https://gensetpart.com/generator-controller/>

COMPATIBLE REPLACEMENT PART

POPULACE has manufactured generator electronic parts in Xiamen, China since 2006.
1000+ SKUs in stock, 1-5 day dispatch, every unit burn-in tested before shipment.

Document contents

- Specification and technical characteristics
- Terminal assignment and wiring diagram
- Installation, adjustment and settings
- Troubleshooting table

This document is supplied by POPULACE Electronic Co., Ltd. as an installation and operating guide for a POPULACE compatible replacement part. It is not an original equipment manufacturer (OEM) document. Any brand names or part numbers mentioned are for cross-reference and identification purposes only and do not indicate affiliation with, or endorsement by, the respective manufacturers.

Why source this part from POPULACE

- Factory in Xiamen, China - operating since 2006 (20 years)
- Over 1000 SKUs held in stock; dispatch within 1-5 days
- Every unit burn-in tested at 65 C before shipment
- CE and ISO 9001 production system; full batch traceability
- Free technical support for wiring, settings and fault diagnosis

Get a quote / technical support

Web: <https://gensetpart.com>
Email: grace@genpart.cn
Phone / WhatsApp: +86-138-5038-3550

No.702 Xiniya Building, No.90 Anling Second Road, XIAMEN, FUJIAN, China

210*290MM

128克铜板

正面

DKG 307 英文说明书

反面

DKG-307 AUTOMATIC MAINS FAILURE UNIT

CANBUS AND MPU VERSIONS

DESCRIPTION

The DKG-307 is a comprehensive AMF unit for single genset standby or dual genset mutual standby operations.

The unit is available with MPU or CANBUS versions. The CANBUS version connects to ECU controlled electronic engines providing engine control, protection and instrumentation without extra senders.

The unit is able to initiate modem calls and send SMS messages in fault conditions through external modems.

The unit provides a comprehensive set of digitally adjustable timers, threshold levels, input and output configurations, operating sequences and engine types. All programs may be modified via front panel pushbuttons, and do not require an external unit.

Last 100 faults are stored in the event log file. The event log includes not only the date-time information, but also a comprehensive list of measured genset parameters at the time that the fault has occurred.

The WINDOWS based RAINBOW program allows remote monitoring and control.

The unit supports MODBUS protocol enabling communication with PLCs and building management systems. The MODBUS protocol is also supported through GSM and PSTN modems.

MEASUREMENTS

Generator Volts: L1-N, L2-N, L3-N
Generator Volts: L1-L2, L2-L3, L3-L1
Generator Amps: L1, L2, L3
Generator total kW
Generator total pf
Generator Frequency
Engine rpm
Mains Volts: L1-N, L2-N, L3-N
Mains Volts: L1-L2, L2-L3, L3-L1
Battery Voltage
Engine Coolant Temperature
Engine Oil Pressure
Fuel Level
Engine Oil Temperature



FEATURES

True RMS measurements
ECU connection through J1939 CAN option
MPU input option
Dual genset mutual standby operation
Event logging with time stamp and measurements
Battery backed-up real time clock
Built in daily / weekly / monthly exerciser
Weekly operation schedule programs
Field adjustable parameters
RS-232 serial port
Free MS-Windows Remote monitoring SW
GSM and PSTN modem support
GSM SMS message sending on fault
MODBUS communications
10ADC relay outputs
Configurable analogue inputs: 4
Configurable digital inputs: 7
Configurable relay outputs: 2
Total relay outputs: 6
I/O expansion capability
Plug-in connection system

DIGITAL INPUTS

The unit has 7 configurable digital inputs. Each input is fully configurable with alarm type, polling, latching and contact type.

ANALOG INPUTS

Engine analog inputs are provided for coolant temperature, oil pressure, oil temperature and fuel level. The inputs have programmable sensor characteristics so that they are suitable for any type and brand of sensors.

RELAY OUTPUTS

The unit provides 6 relay outputs and 2 of them have programmable functions, selectable from a list. Any function or alarm condition may be output as a relay output. Using two Relay Expansion Modules, the number of relays may be increased to 22, 16 of them being volt-free contacts.

EVENT LOGGING

The unit records last 100 events with date-time stamp and a total of 18 measured parameters.

TELEMETRY AND REMOTE PROGRAMMING

The unit provides the user with large telemetry facilities via its standard RS-232 serial port, connecting either to a PC, PLC or a GSM or PSTN modem. It supports both RAINBOW and MODBUS communication protocols. The standard PC software offers local and modem operation capabilities as well as modem networking feature.

The PC program is used for below purposes:

- parameter upload/download
- remote monitoring and control
- diagnostics and analysis

The MODBUS interface allows the unit to be integrated in building management systems.

TECHNICAL SPECIFICATIONS

Alternator voltage: 0 to 300 V-AC (Ph-N)
Alternator frequency: 0-100 Hz.
Mains voltage: 0 to 300 V-AC (Ph-N)
Mains frequency: 0-100 Hz.
DC Supply Range: 9.0 to 33.0 V-DC
Cranking dropouts: survives 0 V for 100ms.
Typical Standby Current: 100 mA-DC
Maximum Operating Current: 250 mA-DC (Relay outputs open)
Generator/Mains Contactor Relay Outputs: 16 A / 250V
DC Outputs: 10A @ 28V
Charge excitation: min 2 Watts
Magnetic pickup input: 0.5 – 30 V-AC.
Magnetic pickup frequency: 10 KHz max.
Current inputs: from CTs, .../5A. Max load 0.7VA per phase.
Analog input range: 0-5000 ohms.
Serial port: RS-232, 9600 bauds, no parity, 1 bit stop
Operating temp.: -40°C (-40°F) to 70°C (158°F).
Storage temp.: -55°C (-67°F) to 80°C (176°F).
Maximum humidity: 95% non-condensing.
Dimensions: 172x 134 x 46 mm (VxHxD)
Panel Cut-out Dimensions: 151x111 mm minimum.
Weight: 340 g (approx.)
Case Material: High Temperature ABS/PC (UL94-V0)
IP Protection: IP65 from front panel, IP30 from the rear
Installation: Flat surface mounting on a Type 1 Enclosure. Rear retaining plastic brackets.

