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DGC 2000

Diesel Generator Controller, Automatic Mains Failure

The DGC 2000 is a third generation microprocessor based controller designed for most types of diesel generators systems in fully automatic mode and via remote or manual start/stop commands. The DGC 2000 scans sixteen discrete sensors and true RMS measurements of the mains and generator three-phase voltages and load currents. Incorporating analogue inputs from engine temperature, oil pressure, coolant and fuel levels into its advanced protective algorithm while continuously performing self-status tests and measuring its own battery supply voltage.

In addition, it calculates generator active and reactive power, power factor, mains and generator frequency (can use three sources to measure generator frequency: voltage inputs, magnetic pick-up and alternator). The DGC 2000 incorporates 26 different trips, faults and alarms which may be individually enabled or disabled, thus, providing flexible adjustment of its settings. Auto reset feature allows resetting of the trips, faults or alarms after user preset time. Most of the described protection contains level and time delay adjustment, manually or through the RS 232/ RS 485 serial link.

A Liquid Crystal Display (LCD), together with a Keypad and LED's enables user-friendly interface, accurate digital parameters setting, actual parameters reading, and detailed trip and alarm messages display.



Functions

- Complete diesel engine control: pre-heating, fuel valve, starter, air damper
- Separate Trip, Fault, Alarm and Horn relays
- Engine cool down
- Auto reset features
- Pause mode
- Serial communication with Modbus protocol
- Line/generator switch transfer control
- Local and remote control
- Plug-in AC/DC relays Adapter
- Short circuit protected control relays
- Special circuitry allows functioning at battery voltage below 4VDC, thus allowing for voltage drop at starting
- Flexible field settings of all setting parameters
- Easy jumper-less settings of the discrete inputs (N/O, N/C, connected to + or -).
- Wrong polarity detection of discrete inputs connect

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Monitoring (Actual Measurement)

- Over Cranking
- Low Oil Pressure
- Engine Under Temperature
- Engine Over Temperature (two levels)
- Low Coolant Level
- Under/Over Speed
- Under/Over Voltage
- Under/Over Current
- Under/Over Power
- Generator Over Temperature
- **Under/Over Battery Voltage**
- Low Fuel Level
- Sensor Fault
- Charging Fault
- External Fault
- Diesel Generator Maintenance