

# GENSET CONTROLLER DC50D Series



This series controller is specialized for Diesel / Gasoline / Gas Genset Start, Stop, Parameters monitoring, faults-checking as well as data setting.

3.5 inch LCD screen display with brand new UI design is adapted in this controller that the relative failures can be displayed directly. All the parameters can be displayed by simulated indicators and words. LCD screen can display various faults in the same time that the genset will be stopped once it can not work smoothly.

There are Chinese/English interface options, more language can be set according to user's request. All the parameters can be configured through the front face buttons or use programmable interface by RS485 or USB to adjust via PC. It can be widely applied for all kinds of auto control system of gensets.

## Features

- There are four Models under DC50D series.
- DC50D : used for single machine automation, Start/Stop through remote start signal.
- DC52D :Based on DC50D, it adds Mains monitoring and AMF (Mains/Generator automatic switching control) , especially suitable for the automation system composed by mains and genset.
- DC50DR : Based on DC50D, it adds RS485 port.
- DC52DR : Based on DC52D, it adds RS485 port.
- DC42DR : Based on DC42D, it adds RS485 port.

## MAIN FEATURES

- 32 units Micro-processing technology is used.
- 3.5 inches 240\*128 LCD display with backlight, option language interface(Chinese/English), user's language set if necessary.
- Indicator and number display through UI surface.
- Acrylic material is adapted to protect the screen.
- The silica gel panel is effective, waterproof, oil resistant and UV resistant. It has good handle and long service life.
- USB Port: parameters can be set even without power.
- With RS485 communication port, can achieve "Three Remote" functions via MODBUS protocol.
- Collect and display a variety of engine and generator parameters.
- Input/output function, status can be shown directly.
- Real time clock inside: preset time operate and auto maintenance is available. Genset working plan can be set as per week or month.
- Class protection countdown function, which can set the maintenance time or date.
- Records function: relative faults shall be recorded in real time.
- It has 6 relay outputs, 4 of which are configurable, and more than 20 functions can be selected for each channel, and 3 groups of outputs are passive contacts.
- 5 switch value input, and each can be set as max 20 functions.
- 3 sensor simulation input connectors, various kinds of units can be set.
- Battery charging control function, which can protect the battery according to battery voltage status.
- Sensor can be self-defined by front face button or PC software.
- Adapt to 3P4W, 1P2W, 2P3W (120V/240V, 50/60HZ).
- Various of crank conditions (RPM, Frequency, Oil Pressure) can be chosen
- Control Protection: Auto Start/Stop of genset, load transfer (ATS control) and perfect failure display and protection.
- Standard water-proof rubber gasket. The waterproof can reach IP54.
- Module design: All the connections are adapted with European connectors so that installation, connection, repair and replacement can be more easily.

## PARAMETERS DISPLAY

- Engine RPM
- Engine oil pressure
- Engine temperature
- Engine fuel level
- Engine battery voltage
- Charging voltage
- Mains Frequency (only for DC52D)
- Mains phase voltage L-N (only for DC52D)
- Mains phase voltage L-L (only for DC52D)
- Generator 3 Phase voltage L-N
- Generator 3 Phase voltage L-L
- Generator 3 phase current A
- Generator Frequency Hz
- Generator Power Factor COS  $\phi$
- Generator active power KW
- Generator apparent power KVA
- Generator reactive power KVar
- Current loading rate %
- Total average loading rate %
- Current consumption KWH
- Total consumption Kwh
- Successful start Times
- Total Crank times
- Current running time
- module power on time
- Total running time
- Classes maintenance notice
- Current date / time

## PROTECTION

- Over speed
- Under speed
- Low oil pressure
- High temperature
- Low fuel level
- External emergency alarm
- D+ Opened
- RPM Lost
- Sensor Open
- Over Frequency
- Under Frequency
- Over voltage
- Under voltage
- Over current
- Non-balance of current
- Over power
- Maintenance expire
- Low water level alarm
- Emergency Stop
- Crank failure
- Over battery voltage
- Under Battery voltage
- Charging failure
- Battery Charging failure
- Stop Failure

## SPECIFICATION

Options	Parameters
Working voltage	DC8V~36V Continuous
Power consumption	Standby: 24V: MAX 1W
	Working: 24V: MAX 5W
AC Voltage Input	1P2W 30VAC-276VAC(ph-N)
	2P3W 30VAC-276VAC(ph-N)
	3P4W 30VAC-276VAC(ph-N)
Rotate speed sensor Frequency	50-10000Hz
MAX Accumulating Time	99999.9Hours (Min Store time: 6min)
Fuel Relay Output	16Amp DC+VE Supply voltage
Start Relay Output	16Amp DC+VE Supply voltage
Programmable Relay output 1	5Amp DC+VE Supply voltage
Programmable Relay output 2	5 Amp Non-contact-Normal open--Normal close output
Programmable Relay output 3	5 Amp P Non-contact Normal Open output
Programmable Relay output 4	5 Amp Non-contact normal open output
Excitation output	Max 1 Amp DC+VE supply voltage
Switch value input	Available if connecting with Battery -
Working condition	-25~65°C
Storage condition	-40~85°C
Protection Level	IP54: when waterproof rubber gasket is added between controller and its panel
Insulation Intensity	Object: among in input/output/power Quote standard: IEC688-1992 Test way: AC2.2 kV / 1min 3mA leakage current
Overall dimension	210mm*160mm*50mm
Panel cutout	186mm*142mm
Weight	0.85Kg

# APPLICATION CONNECTION DIGRAM

