

Automatic Generator Control Unit

GCU-10



The Model GCU-10 is an Automatic Engine Control Module, designed to meet the demand of the generator industry. The module starts and stops the generator, and at the same time indicates the operation status and fault conditions, if it senses a fault it will automatically shut down the engine and indicates the engine failure by means of eight LED's. The technician can program the module according to different generator requirements complying with different conditions and protections.

Protection Setting

Engine fail to start reattempt

Engine tries 3 times to start

Engine High Water temperature Protection

Shutdown activated after 3 sec delay by NO Contacts

Engine Low Oil Pressure Protection

Shutdown activated after 3 seconds

Oil Pressure Switch Type: NO or NC Contacts

Engine Over-speed Protection

Shutdown activated after 3 seconds

At 50Hz activation at 55 Hz - 60Hz activation at 66 Hz

Engine Underspeed Protection

Shutdown activated after 5 seconds

At 50Hz activation at 55 Hz - 60Hz activation at 66 Hz

Emergency Shutdown

Shutdown activated by NO Contacts

Spare / User define Shutdown

Shutdown activated after 5 sec delay by NO Contacts

Low Battery Voltage Warning

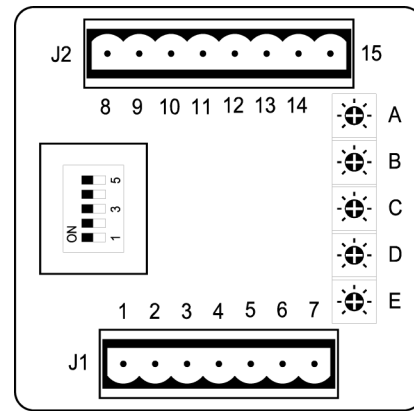
Activated after 5 seconds delay

For 12VDC activated at 10VDC - 24VDC activated at 20DCV

Icon Reference Table

ICON	DESCRIPTION	ICON	DESCRIPTION
	Power Source		Over-speed
	Engine Running		Under-speed
	Start Failure		Emergency Stop
	High Water Temperature		Spare Shutdown
	Low Engine Oil Pressure		Low Battery Voltage

Rear Panel Layout



Cut-Out: 66 x 66 ± 0.5 mm

Adjustment

In the back, the GCU-10 has five adjustment pots that changes five common time delay functions.

- **A - Engine Pre-Heat** Adjustable from 2 to 30sec
- **B - Starter Cranking time** Adjustable from 1 to 15sec
- **C - Energize to STOP** Adjustable from 1 to 15sec
- **D - Engine Idle (Elec. Governor)** Adjustable from 0 to 300sec
- **E - Engine Cool-down** Adjustable from 0 to 300sec

Function Setting

On the back of the control we have five pins dipswitches that set the specification of the genset.

SW 1: Generator Frequency

ON-50Hz - OFF-60Hz

SW 2: Battery Voltage

ON-12V - OFF-24V

SW 3: Fuel Solenoid

ON: Energize to Start - OFF: Energize to Stop

SW 4: Oil Pressure Switch Type

ON - Normal Open Sensor - OFF - Normal Close Sensor

SW 5: Oil Pressure Switch (Used For Crank Disconnect)

ON - Disabled, not used for crank disconnect

OFF - Enable, used for crank disconnect

Specification

ITEM	DESCRIPTION
DC Supply	9.0 to 36 VDC
Alternator Input Range	5 ~ 300VAC
Alternator Input Frequency	50/60 Hz
Fuel Solenoid Signal Output	5 Amp @ 12/24VDC
Start Signal Output	5 Amp @ 12/24VDC
Warm up Signal Output	5 Amp @ 12/24VDC
Alarm Signal Output	5 Amp @ 12/24VDC
Idle Control Conductor Capacity	5 Amp @ 12/24VDC
Operating Temperature	-20 °C to +70 °C
Relative Humidity	90% or Below
Power Consumption	Under 3VA
Weight	100 gram

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