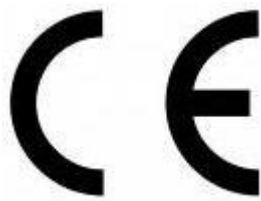


GTR-168

Generator Controller

Manual



Web Site : <http://www.monicon.com.tw>

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Controller Description

GTR-168 is low cost but multi-function diesel engine generator controller. It applies a key switch and provides 3 kinds of operation mode: Manual, Auto, Off. No special training is required due to the easy operation. Fault protection includes: Emergency stop, Over speed, High water temperature, Low oil pressure, and Over crank. GTR-168 also displays the low battery voltage warning, and indicates the running status and power status. GTR-168 equips with high firm continental-type terminal that provides easy plug in and removal. Furthermore, GTR-168 has 10 pins Dip switch for adjusting parameter according to system requirements, and make it not only reducing stock but also meeting the various system specifications. GTR-168 build-in 5 output powers relays which perform high power capacity reach to 5 Amp (DC) that saves the wiring for connection with extra power relays. No matter in function, protection or operation performance. GTR-168 is your best choice.

2. Profile

A、LED Indication

- Emergency / Auxiliary Shutdown
- Low Battery Warning
- Over Speed Shutdown
- High Water Temperature Shutdown
- Low Oil Pressure Shutdown
- Over Crank
- Run
- Power



Fig.1 168 Front Panel

B、Operation Key Switch

- **ATS**
Auto Start function by detect ATS terminal 12 grounded.
- **Off**
Stop running engine or stand still / Reset Alarm.
- **Manual**
Manual start engine directly.

3. Back Panel Function Description

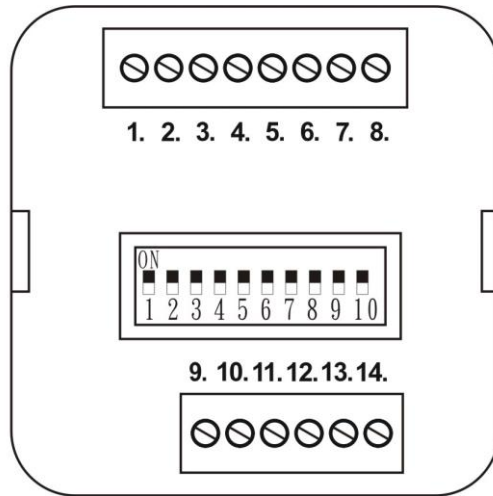


Fig. 2 GTR-168 Controller Back Panel

European Style Connector	Number	Description	Code
	1	Input power (Battery +)	++
	2	Ground (Battery -)	GND
	3	Output starter relay	Motor
	4	Output fuel valve relay	Valve
	5	Output alarm relay	Alarm
	6	Output stop relay	Stop
	7	Idle/Pre-heat relay	PreHeat
	8	Charge fire point	Charge
	9	Aux. switch shutdown	Em.Stop
	10	Input , High water temp.	H.W.T.
	11	Input, Low oil press.	L.O.P.
	12	Input , Auto start	ATS
	13	Input , Frequency detect terminal	F.D1
14	Input , Frequency detect terminal	F.D2	

List 1 GTR-168 Terminal

A 、 Dip switch settings function

- Pin 1 & Pin 2 : Valve on to stop engine timer

Pin1	Pin2	Valve on stop engine delay
OFF	OFF	5 sec
ON	OFF	10 sec
OFF	ON	15 sec
ON	ON	20 sec

List 2 Stop Period

- Pin3 : System frequency 【ON : 50Hz ; OFF : 60Hz】
- Pin4 : Escape motor by oil pressure switch 【ON : Enable ; OFF : Disable】
- Pin5 : Pressure switch type 【ON : Normal Open ; OFF : Normal Close】
- Pin6 : Idle / Pre-heat output delay time 【ON : 10 (120) Sec ; OFF : 1 (10) Sec】
- Pin7 : Low DC Volt 【ON : 10.5VDC ; OFF : 21VDC】
- Pin8 & Pin9 Cooling time :

Pin8	Pin9	Cooling time
OFF	OFF	0 Sec
ON	OFF	60 Sec
OFF	ON	150 Sec
ON	ON	300 Sec

List 3 Cooling Time

- Pin10 : Idle / Pre-heat Function Select 【ON : Idle ; OFF : Pre-heat】

4. Case Dimension

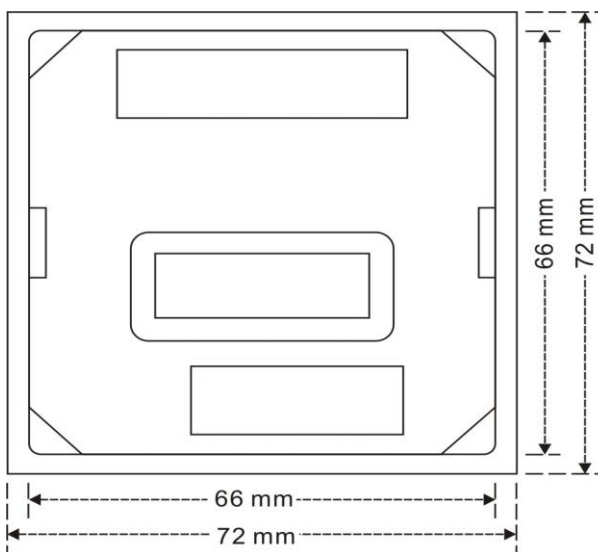


Fig. 3 GTR-168 Case Dimension of Back View

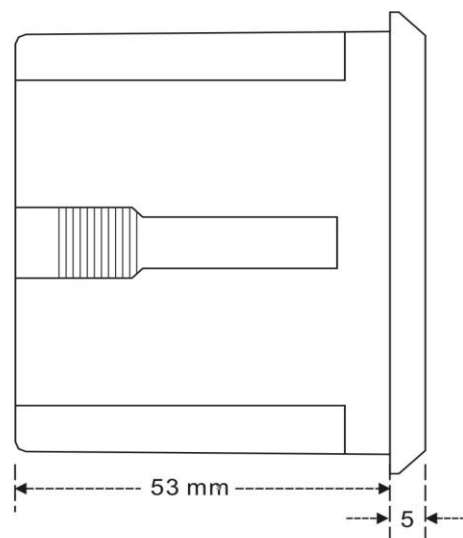


Fig. 3 GTR-168 Case Dimension of Back View

5. Specifications

DC supply :

8~36 VDC

Power Consumption :

Max.5 W

Measuring Frequency :

0~75 Hz (min AC Volt. 5V ; max AC Volt. 300V)

Relay Output :

Start output : 5A

Valve output : 5A

Idle / Pre-heat output : 5A

Alarm Output : 5A

Stop output : 5A

Ambient Temperature Range :

-30 °C ~ 70 °C

Dimension (W * H * D) :

72mm × 72 mm × 58 mm

Panel cut-out (W * H) :

68 mm × 68 mm

Weight :

190 g (0.42 lb.)

6. Protections and parameters :

Auxiliary shutdown protection: 1 Sec., Normal Close

Low battery warning: 5 Sec., 10.5 / 21 VDC

Over speed protection: 2 Sec., 55/66 Hz

High water temp. protection: 2 Sec., Normal Open

Low oil pressure protection: 2 Sec., Normal Open / Normal Close

Over crank: 3 attempts

Cranking speed up limited: 0.5 Sec., 16Hz

Safety on timer: 5 Sec (*)

(*) All alarms are ignored until safety on timer expired, except the emergency stop and over speed.

7. Remark (UL File E319081)

- “Maximum Surrounding Air Temperature 60°C”
- “For Use on a Flat Surface of a Type 1 Enclosure” or equivalent statement.
- Instructions for installation in a Pollution Degree 2 environment.
- Unless the proper wiring connections are plainly evident, wiring terminals shall be marked, or the device shall be provided with suitable wiring diagram to indicate the connections.

8. Controller Wiring Example

