



GTR-700 series

(GTR-720/GTR-760)

Generator controller

User manual

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1. Product Overview

GTR-720/GTR-760 is a multi-function generator controller. LCD supports Chinese and English languages. The generator controller provides auto start/stop, data measurements, alarm protection, and many other functions. GTR-700 series is easy to operate and no special training is required.

The parameters of the controller can be adjusted from the panel, or through the RS485 Modbus port to adjust and monitor the status. The user can change the settings according to the system requirements to achieve programmable control. The GTR 720/GTR760 is your best choice in terms of functionality, protection, and ease of operation.

2. Specifications & Features

The controller contains a powerful ARM microprocessor that provides a complex range of functions.

GTR-720: Automatic start-stop, condition monitoring, and fault protection for the generator.

GTR-760: Added to the GTR-760 SAE J1939 Canbus communication supports the electronically controlled engines(ECU).

The information and readings available from the controller are:

Battery voltage (V).

Cooling water temperature (°C, °F).

Oil pressure (PSI, BAR).

Fuel level (%)

Speed (RPM).

Engine Running Hours (HR)

Generator line voltage (V).

Phase voltage (V).

Frequency (HZ).

Current (A).

Power factor

Real power (KW).

Virtual power (KVAR).

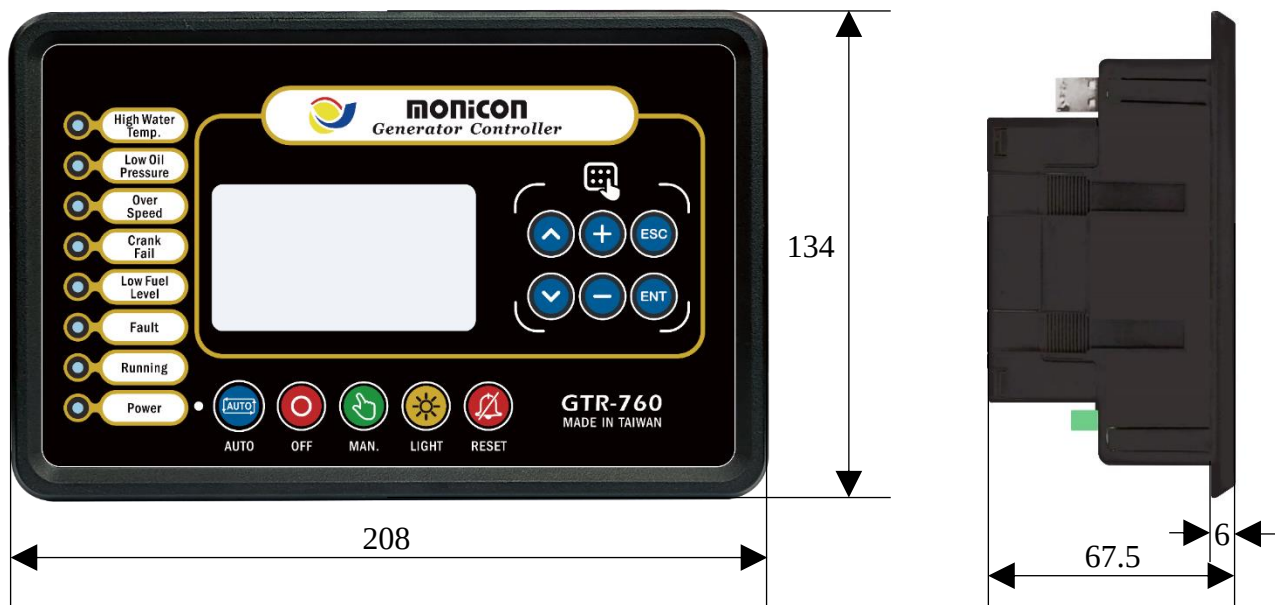
Apparent power (KVA).

Cumulative power (KWH, KVAH).

2.1 specification

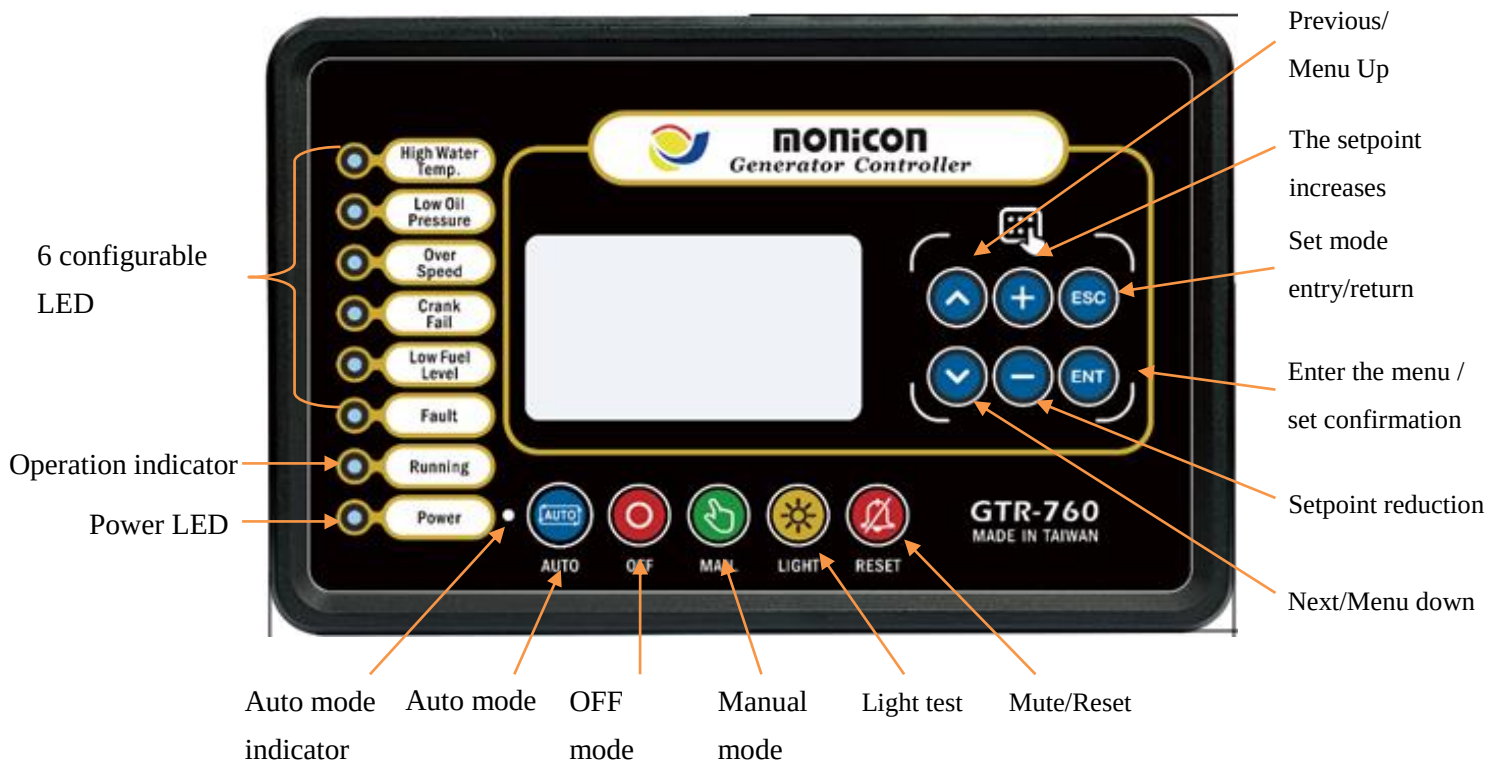
DC input voltage: 8~36 V (DC).
 Power consumption: Max. 5.5 W
 AC input voltage: 10~500 V (AC).
 Frequency: 3~75 Hz
 CT input: MAX 5A
 Pickup voltage: 5 V~70 V (peak-to-peak).
 Pickup frequency: 10~10000 Hz
 Output (Relay): 5 A / 30V
 Working temperature: -30 °C~70 °C
 Measurements :W 208 mm × H 134 mm × D 67.5 mm
 Panel opening :H 185 mm × H 114 mm
 Weight: 565 g

2.2 Dimensions



3. Controller

3.1 Front panel descriptions



3.2 Operating key pad description

icon	Key name	Feature description
	Automatic mode	Press this key to switch the controller to automatic mode
	Off mode	Press this button to stop the generator.
	Manual start	Press this button to start the generator.
	LED test	Press this key to test the functionality of the LED.
	Mute/Reset	Press once, the alarm output will be turned off, pressed twice, the fault light will be cleared. Press and hold the button will turn off the alarm output and the fault light.

icon	Key name	Feature description
	Previous	- Change the LCD to the previous page. - Moves the cursor up in the parameter settings.
	Next	- Change the display page to the next page. - Moves the cursor down in the parameter settings
	The value increases	Increase the parameter value in the parameter settings
	The value decreases	Decrease the parameter value in the parameter settings
	Return key	- Enter the setup menu. - In the parameter settings, return to the previous menu
	Configuration key	Confirm the settings in the parameter settings

3.3 Operating instructions

3.3.1. Auto Start/Stop:

- A. Press the key to switch to AUTO mode. The LED indicator next to the button lights up and the screen status bar shows 'Standby'. In auto mode, the controller starts or stops the generator from the ATS signal.
- B. If preheat is enabled, the controller starts preheat timer according to the setting, and the LCD displays "preheating". After preheating, the fuel relay outputs, if pre-fueling is also enabled, the LCD displays "pre-fueling".
- C. If pre-fueling is disabled, the engine crank relay outputs and drive the starter motor. If the engine cannot be started successfully, the starting relay and fuel relay will stop output and enter the crank rest. After the rest timer, the starting cycle repeats for the second time. A total of 3 starting cycles will be performed, after that the LCD displays "Start Failure".
- D. When the engine is successfully started, the generator continues to run until the ATS signal is lost.
- E. When the ATS signal is lost, the generator enters the engine cooling timer, if enabled. Fuel output will be terminated and the stop output timer begins after the engine cooling timer.

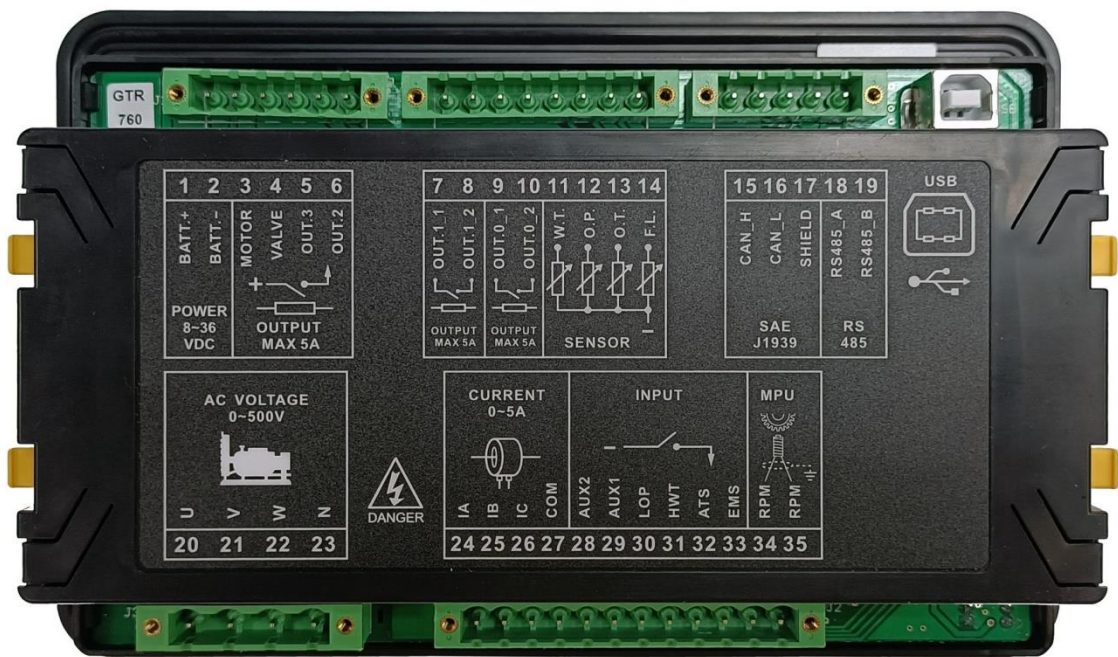
3.3.2. To start manually:

Press  the button to enter the manual start mode, the controller starts the starting program, and the operation process is the same as the B~C step 3.3.1

3.3.3. Shutdown:

When the generator is running, press the stop button to shutdown the engine. Fuel output terminates and the stop output enables until the engine stop timer expires.

4. Backplane Descriptions



Foot position	function	Illustrate the narrative
1	DC + input	Connect to the positive terminal of the battery
2	DC - input	Connect to the negative terminal of the battery
3	Crank output	Connect to the starter motor relay, power supply maximum 5Amp.
4	Fuel and electrical appliances	Connect to the governor or fuel pump, power supply maximum 5Amp.
5	Configurable relay output 3	Power supply, maximum 5Amp
6	Configurable relay output 2	Power supply, maximum 5Amp
7	Configurable relay	Dry contact, maximum 5Amp

Foot position	function	Illustrate the narrative
8	output 1	
9	Configurable relay output 0	Dry contact, maximum 5Amp
10		
11	Water temperature sensor input	Connects to a water temperature sensor
12	Oil pressure sensor input	Connects to the oil pressure sensor
13	Oil temperature sensor input	Connects to the oil temperature sensor
14	Fuel level sensor input	Connects to the fuel level sensor
15	CAN H terminal	Connects to the CAN H on the ECU, it is recommended to use a shielded wire of 120 ohms
16	CAN L terminal	Connects to the CAN L on the ECU, it is recommended to use a shielded wire of 120 ohms
17	ECU shield terminals	It is recommended to use a shielded wire of 120 ohms
18	RS485 A terminal (D+)	It is recommended to use a shielded wire of 120 ohms
19	RS485 B terminal (D-)	
20	Generator U-phase voltage input	Connect to the generator U-phase output
21	Generator V-phase voltage input	Connect to the generator V-phase output
22	Generator W phase voltage input	Connect to the generator W phase output
23	Generator N phase input	Connect to the generator N phase
24	U-phase current import	Connects to the CT (K)
25	V-phase current import	Connects to the CT (K)
26	W-phase current import	Connects to the CT (K)
27	Current joint end import	Connects to the CT (L)
28	Programmable input 2	Activates with B- signal
29	Programmable input 1	Activates with B- signal
30	Low oil pressure switch input	Activates with B- signal

Foot position	function	Illustrate the narrative
31	High water temperature switch input	Activates with B- signal
32	Externally Activated Import (ATS)	Activates with B- signal
33	Emergency stop button input	Normally closed to B-. The circuit opens to activate the generator emergency shutdown.
34	Speed sensor input	Connect to the speed sensor
35		
	USB connector	Not used

4.1 Wiring example

5. Parameter Modify (Default code: 0000)

Parameter name	Parameter range	Default value	illustrate
Crank			
Detect Freque.	Enable/Disable	Enable	Disengaging the starter motor when the frequency reaches the setting.
Det. oil press	Enable/Disable	Disable	Detects oil pressure switch status before cranking. If pressure switch is activated, the controller will not crank and enters running mode
Crank Interval	5~40(sec)	10	Set the crank duration of the starter motor.
Crank attempts	1~10	3	Set the number of total crank attempts.
Escape up lim.	15~30(Hz)	20	Set up the frequency value for disengaging the starter motor during crank.
Engage lowlim.	15~30(Hz)	20	Set up the frequency value for engaging the starter motor before crank.
OP Build up T.	0.2~6.0(sec)	1.2	Time delay for disengaging the starter motor during crank. When the oil pressure switch

Parameter name	Parameter range	Default value	illustrate
			activates during the crank interval, the controller starts the timer and then disengages the starter motor.
Idle Interval	0~240(sec)	0	Set up the idle timer. After the engine is running idle timer starts before entering full speed.
Engine			
PreAdd Fuel T.	0~50(sec)	0	Sets the pre-fuel timer. The fuel relay will output before initiating crank procedure.
Pre-heat time	0~90(sec)	0	Set up the preheat duration. The preheat timer starts before crank interval and will remain on until the crank rest.
Energied Stop	1~30(sec)	10	Output duration for stop solenoid to shut down the engine.
Fail to Stop	Enable/Disable	Enable	Time delay before triggering engine shutdown failed alarm.
Trip then shut	Enable/Disable	Enable	When faults(trip) occurred, the run LED starts to blink, and after the delay timer, the engine shuts down.
Trip Duration	30~900(sec)	30	When error occurred, controller outputs error signal, if error is not cleared within setting, system initiates Genset shutdown.
Cooling Time	0~1250(sec)	0	Set engine cooling time for normal Genset shutdown. Engine cooling time is disabled during malfunction shutdown
Freq vs RPM	0~100	30	To conver RPM from frequency, divide RPM by frequency ($1800\text{rpm}/60\text{HZ}=30$), 30 is the ratio for this setting.
Man. Imm. Stop	Enable/Disable	Enable	Manual shutdown the Genset without cooling down the engine
Hour Meter			
ACC.: Second	0~59	0	Setup engine accumulated running hours
ACC.: Minute	0~59	0	Setup engine accumulated running hours
ACC.: Hour	0~99	0	Setup engine accumulated running hours
ACC.: 100 Hour	0~99	0	Setup engine accumulated running hours

Parameter name	Parameter range	Default value	illustrate
Sensors switch			
H.W.T. Detect.	Enable/Disable	Enable	Activates high water temperature protection
H.T. Sw. Type	Enable/Disable normally open	Normally open	Setup the switch to normally close or normally open.
H.W.T. Sw. DLY	1~9.5(sec)	1.5	When high water temperature occurs, timer starts before initiating shutdown.
L.O.P. Detect.	Enable/Disable	Enable	Activates low oil pressure protection
O.P. Sw. Type	Normally closed/normally open	Normally closed	Setup the switch to normally close or normally open.
L.O.P Sw. DLY.	0.2~6.0(sec)	1.0	When low oil pressure occurs, timer starts before initiating shutdown.
Auxiliary input			
Auto input DLY	0.2~5(sec)	1.0	Time delay for ATS input before initiating crank procedure.
Input0 Detect	Enable/Disable	Enable	Activates Input 0 function
Input 0 Name		Emergency stop	1.Emergency Stop 2.User Define 03.Fanout Heat 4. Pre-Alarm 5.High fuel level 6. System trip 7.Lo water temp. 8.Fault Stop 9.Ground Fault
In0 Protection	As indicated	Stop the car	1.Warning 2.Alarm 3.Trip 4.Stop
In0 Switch Type	Normally closed/normally open	Normally closed	Setup input 0 to normally close or normally open
Input0 Delay	0.2~5(sec)	0.2	When input0 activates, timer starts before activating protection
Input1 Detect	As indicated	Overall lethality	Activates Input 1 function
Input 1 Name		Low fuel level	1.Low Fuel Lvl. 2.User Define 01.Fanout Heat 4. Pre-Alarm 5.High fuel level 6.

Parameter name	Parameter range	Default value	illustrate
			System trip 7.Lo water temp. 8.Fault Stop 9.Ground Fault
In1 Protection	As indicated	Stop the car	1.Warning 2.Alarm 3.Trip 4.Stop
In1 Switch Type	Normally closed/normally open	Normally open	Setup input 1 to normally close or normally open
Input1 Delay	0.2~5(sec)	5	When input1 activates, timer starts before activating protection
Input2 Detect	As indicated	Overall lethality	Activates Input 2 function
Input 2 Name		low water	1.Low Water Lvl. 2.User Define 02.Fanout Heat 4. Pre-Alarm 5.High fuel level 6. System trip 7.Lo water temp. 8.Fault Stop 9.Ground Fault
In2 Protection	As indicated	Stop the car	1.Warning 2.Alarm 3.Trip 4.Stop
In2 Switch Type	Normally closed/normally open	Normally open	Setup input 2 to normally close or normally open
Input2 Delay	0.2~5(sec)	2	When input2 activates, timer starts before activating protection
Auxiliaryoutput			
Output 0 func.			Set up the output functions: All Errors, All Trip, System Alarm, Pre-Heating, Idle Inteval, Reset switch, Breaker ON, Breaker Hold, Power Avail., Engine Running, Over Crank, Over speed, Over Frequency, Low Frequency, LOP SW. ACT., HWT SW. ACT., Hi AC Voltage, Low AC Voltage, Over Current, Short Circuit, Low Battery, Hi DC Volt, Aux. IN0 Act., Aux. IN1 Act., Aux. IN2 Act., HWT Value Al., LOP
Output 1 func.			
Output 2 func.			
Output 3 func.			

Parameter name	Parameter range	Default value	illustrate
			Value Al., LFL Value Al., HFL Value Al., Not In Auto, System In Auto, Manual Start, Auto Start, SensorChecking, Standby, Preheat Int., Pre-Add Fuel, Craqnk Inteval, Crank Rest, System Running, System Alarm, System Trip, Stop Interval, Cooling Int'al, Sensor Fail, Charge Fail, Reverse Power, Over Load(KW).
LED Function			
LED 0 function	As indicated	High water temperature	Configurable options: high water temperature , low oil pressure, engine overspeed, crank failure, low fuel level, system alarm, system trip, command fault output, idle control, reset, breaker closing output, generator voltage normal, generator on load, overspeed, high frequency action, low frequency action, low oil pressure, high water temperature, high voltage, low voltage, overcurrent, short circuit, low battery, high battery, input 0, input 1, input 2, high water temperature value, low oil pressure value, low fuel value, high fuel value, system no in auto mode, system in auto mode, system manual start, system auto start, Sensor inspection, start interval, Preheat, Pre fuel, Crank interval, crank rest, engine running, system alarm, system trip, stop interval, engine coolin, sensor failure, charging failure, reverse power failure, overload.
LED 1 function	As indicated	Low Oil	
LED 2 function	As indicated	Over Speed	
LED 3 function	As indicated	Ove crank	
LED 4 function	As indicated	Low fuel	
LED 5 function	As indicated	Common Alarm	
CAN Bus J1939 (limited to GTR-760 valid).			
J1939 function	Enable/Disable	Enable	Set whether to enable J1939 communication
ECU brand			Set up the ECU brand
Send speed cmd	Enable/Disable	Enable	Enable speed command
Speed comd hold	0~30(sec)	0	The delay timer for speed command output

Parameter name	Parameter range	Default value	illustrate
Idle speed	550~1300(RPM)	950	Setup idle speed
Rated speed	1200~2000(RPM)	1800	Setup normal engine speed
ACC hour Disp	Enable/Disable	Enable	Display Hour Meter from ECU
Ramp Control	Enable/Disable	Enable	
Ramp up speed	1~20(RPM)	1	
Ramp down speed	1~20(RPM)	1	
Frequency			
System frequency	50/60(Hz)	60	Setup Genset frequency in 50Hz or 60Hz
Hi Freq. Detect	Enable/Disable	Enable	Activates high frequency protection
H.F. set point	50~60/58~72(Hz)	55/66Hz	When AC frequency is higher than setting, controller shuts down the engine and display high frequency error, if high frequency protection is enable.
Hi Freq. Delay	0.5~5(sec)	1	When high frequency occurs, timer starts before activating protection
Low freq. Det	Enable/Disable	Enable	Activates low frequency protection
L.F. Protect.		alert	Setup the action when low frequency occurs
L.F Set Point	40~53/48~63(Hz)	45/54Hz	When AC frequency is lower than setting, controller outputs trip signal.
Low Freq. DLY	0.5~10 (seconds).	5	When low frequency occurs, timer starts before activating protection
Min. Freq. Det	Enable/Disable	Enable	Activates minimum low frequency protection.
M.F. set point	25~40/30~48 (Hz)		When sudden drop of frequency belows setting; low frequency protection automatically disables and engine operates at idle speed.
Battery			
System DC volt	12/24(V)	24	Setup DC voltage in 12V or 24V
Batt. Fault Al.	Enable/Disable	Enable	Activates battery error protections

Parameter name	Parameter range	Default value	illustrate
LowBattery Set	8.4~14/16.8	21.6~30(V)	When battery voltage is below setting, controller displays low DC volt warning.
Hi Battery Set	10~16.8/22~36(V)	30	When battery voltage is above setting, controller displays high DC volt warning.
Weak Bat. Det.	Enable/Disable	Enable	Activates weak battery protection
Weak Batt. Set	7~9.6/9.6~19.2(V)	16.8	When battery voltage is below setting, controller displays battery warning
Charge fail	12~14.2/24~28.6(V)	25.2	When voltage is out of range, controller displays charge fail.
Charge F. DLY.	0~60(sec)	5	Delay timer for charge failed
AC voltage			
S'TEM AC phase	As indicated	3 phases 4 wires	Configurable options: 3-phase 4-wire, 3-phase 3-wire, single-phase 3-wire
Gen. output v.	110~11400(V)	380	Setup Genset AC voltage
Sys. input volt	110~440(V)	380	Set up the input voltage on the controller (transformer secondary side)
Hi ACV Detect	Enable/Disable	Enable	Activates high voltage protection
Hi ACV Protect		Stop	Setup the action when high voltage occurs.
Hi AC volt Set		418	When AC voltage is above the setting, the controller outputs trip signal.
Hi AC Volt DLY	0.5~5(sec)	2	When high voltage occurred, timer starts before activating protection
Low ACV Detect	Enable/Disable	Enable	Activates low voltage protection
Low ACV Protect		Stop	Setup the action when low voltage occurs
Low ACVolt Set		418	When AC voltage is below setting, controller outputs trip signal
Low ACV delay	0.5~5(sec)	2	When low voltage occurred, timer starts before activating protection
Min. ACV Det.	Enable/Disable	Enable	Activates extreme low voltage protection.
Min. ACV Set		121	When sudden drop of AC voltage blows setting, low voltage protection is disabled.
ACV Esc. Motor	Enable/Disable	Disable	Disengage starter motor by AC voltage
AC ampere			

Parameter name	Parameter range	Default value	illustrate
Current ratio	20:5~5000:5	500:5	Setup the current transformer ratio
Current R.Mend	0~20%	0	Fine tune current reading
Over Cu't Det.	Enable/Disable	Enable	Activates overload protection
Over Cu't Pro.	Warn, Alarm, Trip, Stop	Stop	Setup the action when overload occurs
Over Cur't Set		180	When current is above setting, the controller outputs trip signal, setup range is related to the CT ratio.
Over Cur't DLY	10~300(sec)	10	When overload occurs, timer starts before activating protection
Short Detect	Enable/Disable	Enable	Activates AC short protection
Short protect		Stop the car	Setup the action when AC short occurs
Short Set		800	When current is above the setting, controller outputs trip signal, setup range is related to the CT ration setup.
Short Delay		0.2	When AC short occurs, timer starts before activating protection
R.P.M.			
RPM Mul. Fact.	1~200	60	Please use value calculated in next parameter setting
RPM Div. Fact.	1~200	2	1. The R.P.M. Mul. and Div. are the ratio of engine revolution versus total number of fly wheel teeth; or the RPM of fly wheel versus the RPM of alternator charger. For example: Set up the RPM numerator and the denominator to 1 to find input pulse from the LCD. (A) If the engine revolution is 1800 and alternator revolution is 460 (input pulse), the R.P.M. numerator could be set to 90→ (1800÷20) and R.P.M. denominator could be set to 23→(460÷20).

Parameter name	Parameter range	Default value	illustrate
			Solution: $1800 / 460 = 3.913$ The R.P.M. calculation formula is as below R.P.M. = Input pulse * (RPM numerator / RPM denominator) $1800 = 460 * (90/23)$ (B) If the engine revolution is 1500 and total count of fly wheel teeth in one second is 4437 (input pulse), the R.P.M. numerator should be set to 45 and R.P.M. denominator should be set to 133. Solution: $1500 / 4437 = 0.338$ The R.P.M. calculation formula is as below R.P.M. = Input pulse * (revolution numerator / revolution denominator) $1500 = 4437 * (45/133)$ 5.1.1. (C) If the teeth count of engine flywheel is 118. Assume the rated rpm of Gen-set is 1500 rpm. Then the $1500 \text{ rpm}/50\text{hz} \Rightarrow 30 \text{ rpms/per second}$ also generate $30 \times 118 = 3540$ electronic signals. Then $1500 / 3540 = 0.423$ ($75/177=0.423$), set the R.P.M. numerator to 75 and R.P.M. denominator to 177.
RPM Esc. motor	Enable/Disable	Enable	Disengage starter motor by RPM setting
RPM Esc. Set	150~900(RPM)	480	Disengage starter motor when RPM reaches setting
RPM Source	As indicated	Convert from frequency	Converts the RPM from frequency or alternator speed.
O.S. Detection	Enable/Disable	Enable	Activates over speed protection
O.S. set point	1350~2100(RPM)	1980	If the engine speed is higher than the setting, the controller shuts down the engine only if

Parameter name	Parameter range	Default value	illustrate
			over speed is enabled
Over speed DLY	0.5~9.5(sec)	1	When over speed occurs, timer starts before activating the protection
Low-speed Det.	Enable/Disable	Enable	Set whether to detect low speeds
Low-speed Func		Alarm	Set the action when low speed occurs
Low-speed set	1200~1810(RPM)	1650	The setpoint for low rpm operation
Low-speed DLY	0.5~10(sec)	2	Set the delay timer for low-rpm action
Sensors options			
LFL Value Al.	Enable/Disable	Enable	Activates low fuel warning
LowFuel L. set	6~55(%)	20	When fuel level is below setting, the controller displays a warning message.
Hi Fuel L. set	35~99(%)	90	When fuel level is above setting, the controller displays a warning message
LOP value Fun.		Enable	Activates low oil pressure warning
LOP Set point	15~140(Psi)	30	When the oil pressure is below setting, the controller displays a warning message
HWT Value Fun.		Enable	Activates high water temperature protection.
HWT Set Point	45~110(°C)	100	When water temperature is above setting, controller displays warning message
OP Esc. Motor	Enable/Disable	Enable	Disengage starter motor when oil pressure reaches setting.
Esc. Oil Press	25~65(Psi)	45	Disengage starter motor when oil pressure reaches setting.
OPSensor Brand		Monicon	Select oil pressure sensor brand
WTSensor Brand		Monicon	Select water temperature sensor brand
FLSensor Brand		Susuki	Select fuel level sensor brand
Sensor Check	Enable/Disable	Enable	Check the sensor status before starting the engine
Cel. Or Feh	°F /°C	°C	Set the display temperature unit
P.S.I or Bar	BAR /PSI	PSI	Set the display pressure unit
Exercise Func. (GTR-760 only).			
Exercise Funct.	Enable/Disable	Enable	Activates exerciser function.

Parameter name	Parameter range	Default value	illustrate
Date/ week	Day/Week	day	Setup monthly exercise by date or week
Date Set Point	1~31(Sun)	28	Setup date of monthly exercise
Week Dependent		First week	Setup week of monthly exercise
Week Set Point	Monday~ Sunday	Monday	Setup day of the week.
Hour set point	0~23(hours)	12	Setup the starting hour of the exercise
Min. set point	0~59(min)	0	Setup the starting minute of the exercise
Run'ng Inteval	0~510(min)	4	Setup the duration of each exercise
Maintain (GTR-760 Only).			
Maintain Funct.	Enable/Disable	Enable	Activates service reminder function
Maintain Prot.		alert	Setup the action when the service reminder reaches setting
Maintain Code 0	0~99	12	Setup first two digits of the service password (default: 1215)
Maintain Code 1	0~99	15	
Maintain Count	2~500(Hours)	250	Setup the duration between each service
Reverse power (GTR-760 Only).			
Rev power Det	Enable/Disable	Enable	Set whether the reverse power protection is enabled
R.P. Protect		Trip	Setting reverse power protection
R.P. Set point			Reverse power protection setting
R.P. Delay	0.5~10 (seconds).	2	Set the delay time for the reverse power
Overload (GTR-760 Only)			
Over Load Det.	Enable/Disable	Enable	Activates overload detection.
Over Load Pro.	Warn, Alarm, Trip, Stop	Stop	Setup the action when overload occurred
Over Load Set			Setup the overload amperage limit
Over Load DLY	0.5~40 (seconds).	5	When overload reaches setting, timer starts before activating the protection
Others			
Protect Pending	1~30 (sec).	10	Time delay before activating the protections after engine starts.

Parameter name	Parameter range	Default value	illustrate
Comm. address	01H~FEH	01	Modbus communication ID
Not in auto	Enable/Disable	Enable	When in OFF mode, controller triggers alarm.
Baud Rate	9600/19200 (BPS)	9600	Modbus communication rate
Displays option			
Language	English/Chinese	Chinese	Choose between English or Chinese language
Display Oil T.	Enable/Disable	Enable	Choose whether to display the oil temperature
Fuel level Disp	Enable/Disable	Enable	Choose whether to display the fuel level
Displays dealer I.	Enable/Disable	Enable	Select whether to display the manufacturer information page
Displays power I.	Enable/Disable	Enable	Choose whether to display the power information
A Scroll page	Enable/Disable	Enable	Enable rolling Information page
Scroll time Gap	1~10(sec)	5	Information page rolling timer
B. light Al. On	Enable/Disable	Enable	LCD backlight constant on function
B. light Dura.	5~99.5(sec)	60	LCD backlight on timer