HRM3300

Remote Control Module

User Manual

ZHENGZHOU SMARTGEN TECHNOLOGY CO.,LTD

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If the colors of actual products are different from the manual, please take the actual product as the standard.

Software Version

Date	Version	Content
2013-12-05	1.0	Original release.
2015-03-25	1.1	Modify case dimension.

This manual is suitable for HRM3300 remote control module only.

Clarification of notation used within this publication.

SIGN	INSTRUCTION
 NOTE	Highlights an essential element of a procedure to ensure correctness.
 CAUTION!	Indicates a procedure or practice, which, if not strictly observed, could result in damage or destruction of equipment.
 WARNING!	Indicates a procedure or practice, which could result in injury to personnel or loss of life if not followed correctly.

CONTENTS

1.OVERVIEW AND FEATURES

HRM3300 remote control module is a remote control module for HMC9000 controller. With the help of CANBUS it can carry out remote start/stop of the marine genset, data measurement, alarm display and other functions. HRM3300 is designed for single generator remote control systems. The module has monitor mode, in which it only monitors, but does not control the genset. Up to 16 HRM3300 modules can be connected to one HMC9000 controller.

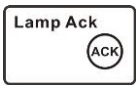
The module contains 32-bit ARM microprocessor; it is fitted with a large 480*272 resolution TFT-LCD monitor, selectable English/Chinese interface. The home page of the monitor is instrument display. The brightness of the LCD monitor and LED light indicators can be adjusted, which enables operation in different conditions. The module is designed for panel mounting, it has simple structure, simple connections and can be widely used in various situations.

2.SPECIFICATION

Items	Content
Operating Voltage	DC18.0V to 35.0V, continuous power supply.
CANBUS Baud rate	125kbps
Max. transmission distance	500m
LCD/LED Brightness	11 Stage adjustable
Total consumption	≤2W
Overall dimension	266mm x 182mm x 45mm
Panel cutout	214mm x 160mm
Shell material	Self extinguishing ABS+PC
Button material	Silicon rubber
Working Conditions	Temperature：(-25~+70)°C Humidity：(20~93)%RH
Storage Condition	Temperature：(-25~+70)°C
Protection Level	IP55 Gasket
Weight	0.75kg

3.DISPLAY

3.1 PUSHBUTTONS

	Stop	Stop running generator in remote mode; During stopping process, press this button again to stop generator immediately.
	Start	Start genset in remote mode.
	Sound Alarm Acknowledge	In case of sound alarm pressing this button will mute the panel buzzer.
	Light Alarm Acknowledge	In case of alarm pressing this button will return flash indicator to its illuminating condition.
	Lamp Test	Pressing this button will illuminate all the LED indicators on the panel and highlight the LCD monitor.
	Brightness+	Pressing and holding this button can increase brightness of LCD monitor and LED indicators.
	Brightness-	Pressing and holding this button can decrease brightness of LCD monitor and LED indicators.
	Up/Increase	Scroll the screen up.
	Down/Decrease	Scroll the screen down.
	Left	Scroll the pages left.
	Right	Scrolls the pages right.
	Homepage	Press this button to return to the home page;

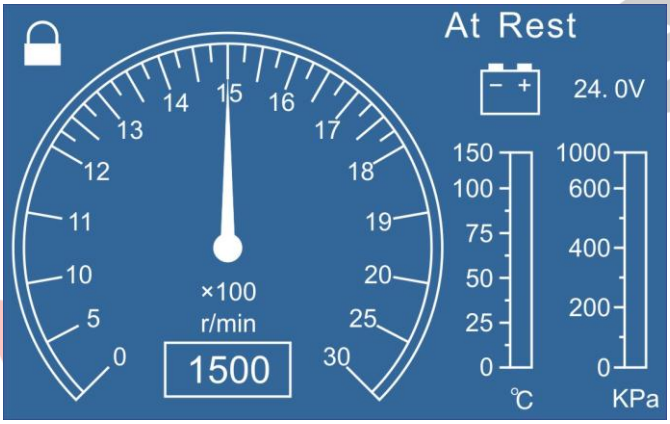
		In settings menu press this button to save changes.
	Settings	Press this button to enter into settings screen; In settings menu press this button to return to previous menu.

3.2 LCD DISPLAY

Data displayed on the LCD is obtained from HMC9000 via CANBUS port. Press  to switchover between the pages of the monitor. Press  to return to the home page and  to enter into parameter configuration pages.

3.2.1 MAIN DISPLAY (HOME PAGE)

The main screen displays engine speed, coolant temperature, oil pressure, two batteries voltage and engine status. The main screen looks as follows:



3.2.2 DATA DISPLAY

The main screen is divided into two separate viewing areas: left and right. Left area has only one page and shows diesel engine operation status and battery status; press  to view the right area. Right area is divided into pages: engine page, alarm page, expansion module data page and event log page etc.

1. Engine page

   Displays engine speed, sensors 1-8 values, main battery voltage, standby battery voltage, charger voltage, GOV output ratio, total run time and total start times.

   For J1939 engines, an additional ECU page will be displayed. ECU data includes coolant pressure, coolant level, fuel temperature, fuel pressure, inlet temperature, exhaust temperature, turbo pressure, fuel consumption,

total fuel consumption etc (Different engine with different parameters).

2. Alarm page:
   It displays all kinds of warning alarms and shutdown alarms which detected by controller.
3. Other parameters page
   HMC9000 main controller's date and time, inputs/outputs status.

4. OPERATION

Press  and input the password to enter into parameter configuration menu. Configurable parameters include displayed language, operation mode and password.

The module has two operation modes:

1. Monitor mode, in which  and  buttons have no effect.
2. Control mode, in which the engine can be stopped and started by press  and  pushbuttons; this mode activates only if HMC9000 is in remote mode.

4.1 REMOTE START/STOP PROCEDURE

Remote mode is selected by pressing the  button; a LED besides the button will illuminate to confirm the operation;

1）Remote start

Press  button to start the gen-set, then preheat delay, safety on delay, start idle delay and warming up delay will be displayed on the screen in turn (according to the engine settings);

2）Remote stop

Press  button, then the screen will display cooling down delay, stop idle delay, ETS delay and fail to stop delay in turn (according to the engine settings);

Note: If an alarm condition occurs during starting or stopping procedure, alarm information will be synchronously displayed on HRM3300 LCD.

4.2 ACKNOWLEDGE OPERATION

In case of alarm pressing  and  buttons will mute the panel

buzzer and return flash indicator to its illuminating condition. In case of new alarm situation, sound alarm will be initiated again and the light indicator will start flashing and the user will have to press the acknowledge buttons again to clear them.

5. BACK PANEL

HRM3300 controller back panel is shown below：

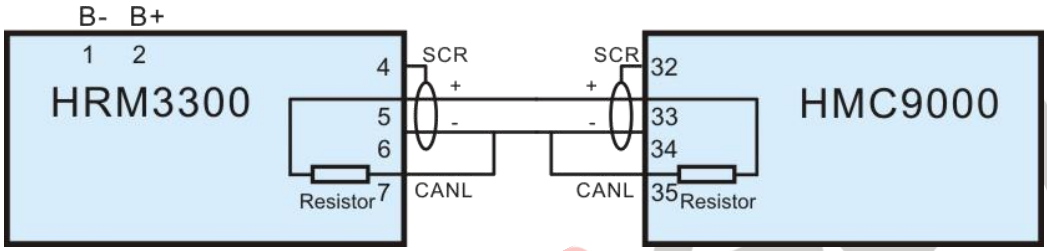
Terminal connections description：

Terminal	Function	Cable Size	Description
1	B-	1.0mm^2	Power supply negative input.
2	B+	1.0mm^2	Power supply positive input.
3	NC		Not connected
4	SCR (REMOTE)	0.5mm^2	A CANBUS port which communicate with main control. Impedance-120Ω shielded wire with its one end connected to ground is recommended. There is 120Ω terminal resistance inside already; if needed, make
5	CAN(H) (REMOTE)		
6	CAN(L) (REMOTE)		

Terminal	Function	Cable Size	Description
7	RE (120Ω resistance)		terminal 6, 7 short circuits.
USB	USB		Factory use

6.APPLICATION DIAGRAM

HRM3300 Application Diagram



7. INATALLATION

Controller is panel built-in design; it is fixed by clips when installed. The controller's overall dimensions and cutout dimensions for panel, please refers to as following,