

4. KEYPAD Panel

! WARNING

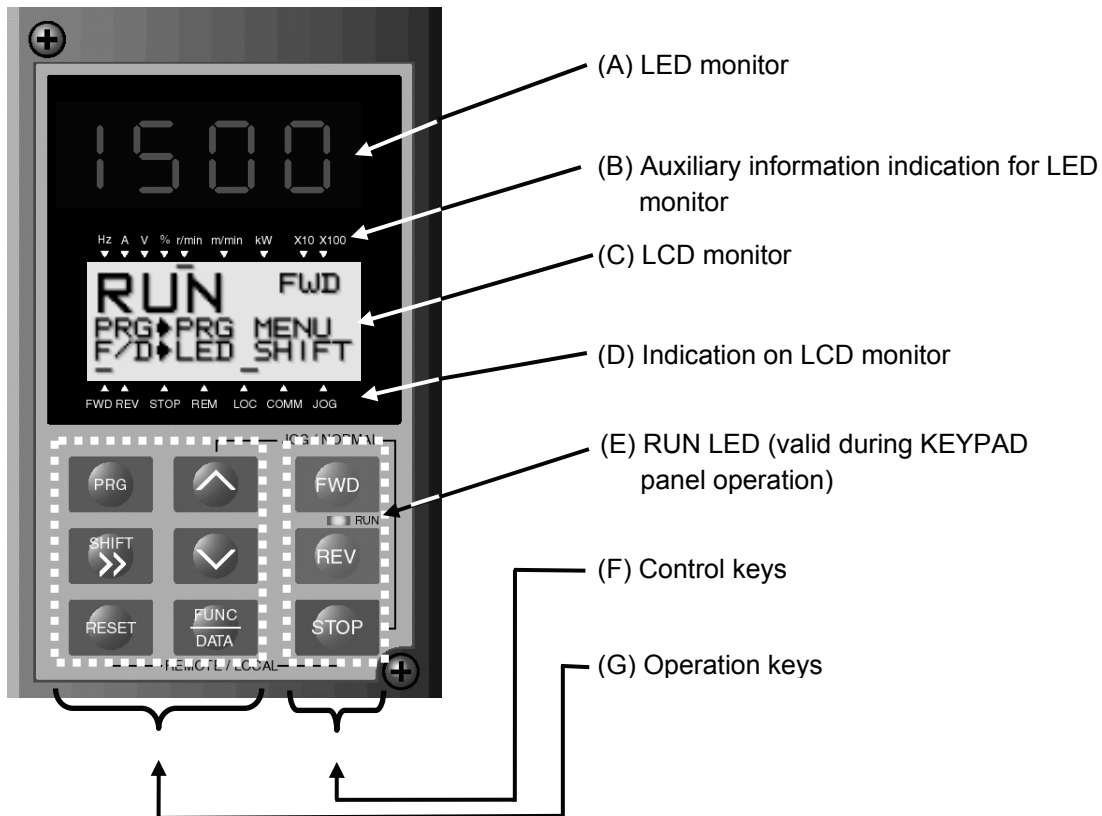
- If the user set the function codes wrongly or without completely understanding this user's manual, the motor may rotate with a torque or at a speed not permitted for the machine.

Accident or injury may result.

- The STOP key is effective only when its function has been set. Install an emergency stop switch separately.

Accident may result.

4-1 Appearance of KEYPAD Panel

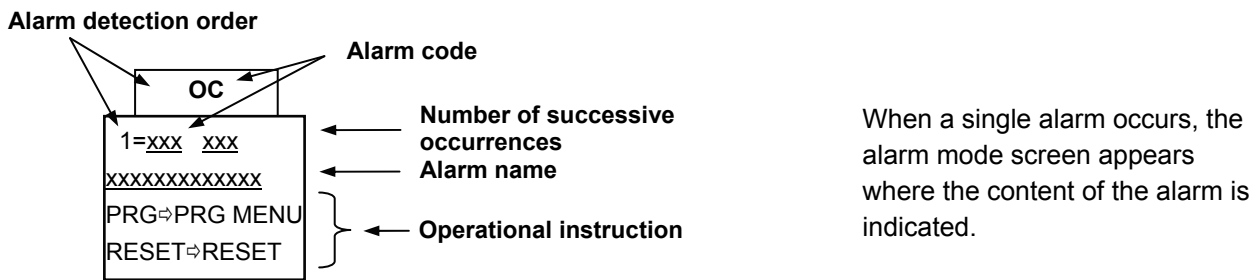


- (A) LED monitor:
Four-digit 7-segment display
Used to display various items of monitored data such as setting frequency, output frequency and alarm code.
- (B) Auxiliary information indication for LED monitor:
Selected units or multiple of the monitored data (on the LED monitor) are displayed on the top line of the LCD monitor. The **■** symbol indicates selected units or multiple number. The symbol **▲** indicates there is an upper screen not currently displayed. (×100 indicators are not used.)
- (C) LCD monitor:
Used to display such various items of information as operation status and function data. An operation guide message, which can be scrolled, is displayed at the bottom of the LCD monitor.
- (D) Indication on LCD monitor:
Displays one of the following operation status with **■** .
FWD: Forward operation REV: Reverse operation STOP: Stop
Displays the selected operation method:
REM: External signal LOC: KEYPAD panel COMM: Communication terminal JOG: Jogging mode
The symbol **▼** indicates there is a lower screen not currently displayed.
- (E) RUN LED (valid during KEYPAD panel operation):
Indicates that an operation command is being input by pressing the **FWD** or **REV** key.
- (F) Control keys:
Used for inverter run and stop
FWD : Forward operation command **REV** : Reverse operation command **STOP** : Stop command
- (G) Operation keys:
Used for screen switching, data change, frequency setting, etc.
The Table 4-1-1 shows the main function of the operation keys.

Table 4-1-1 Functions of Operation Keys

Operation key	Main function
PRG	Used to switch the current screen to the menu screen or switch to the initial screen in the operation/alarm mode.
FUNC DATA	Used to switch the LED monitor or to determine the entered frequency, function code, or data.
▲ , ▼	Used to change data, move the cursor up or down, or scroll the screen
SHIFT ➤	Used to move the cursor horizontally at data change. When this key is pressed with the up or down key, the cursor moves to the next function block.
RESET	Used to cancel current input data and switch the displayed screen. If an alarm occurs, this key is used to reset the trip status (valid only when the alarm mode initial screen is displayed).
STOP + ▲	Used to switch normal operation mode to jogging operation mode or vice versa. The selected mode is displayed on the LCD monitor.
STOP + RESET	Switches operation method (from KEYPAD panel operation to external signal operation or vice versa). When these keys are pressed, function F02 data is also switched from 0 to 1 or from 1 to 0. The selected mode is displayed on the LCD indicator. (REM, LOC)

4-2 Alarm Mode



When multiple alarms occur at the same time, the contents of the alarms can be checked using the **▲** and **▼** keys.

Alarm Detection Order			
Operating keys	LED display	LCD display	Content
▲ ▼ ↑ ↓	5.	5	Alarm No. 5
	4.	4	Alarm No. 4
	3.	3	Alarm No. 3
	2.	2	Alarm No. 2
	1.	1	Alarm No. 1 (multiple alarms)
	Blank	0	Latest alarm (single alarm/already has been reset)
	Blank	-1	1st latest alarm
	Blank	-2	2nd latest alarm
	Blank	-3	3rd latest alarm
	Blank	-4	4th latest alarm
Blank	-5	5th latest alarm	
Blank	-6	6th latest alarm	
Blank	-7	7th latest alarm	
Blank	-8	8th latest alarm	
Blank	-9	9th latest alarm	
Blank	-10	10th latest alarm	

- As for the screen when the alarm occurs, and it shifts to the display of the alarm mode, the indicate of LCD and LED of only the case it to occurs multiple alarms, and one the alarm is different.
 - When multiple alarms occurs, the first alarm is indicated.
 - When the alarm is only one, the latest alarm is indicated.
- When multiple alarms occurs, only the first alarm is recorded in the alarm history. The alarm since the second doesn't remain in the alarm history.
- When the alarm is only one, the latest alarm is recorded in the alarm history.

4-3 KEYPAD Operation System (Hierarchical Structure of LCD Screens)

4-3-1 During Normal Operation

The basic KEYPAD operation system (hierarchical structure of screens) is illustrated below.

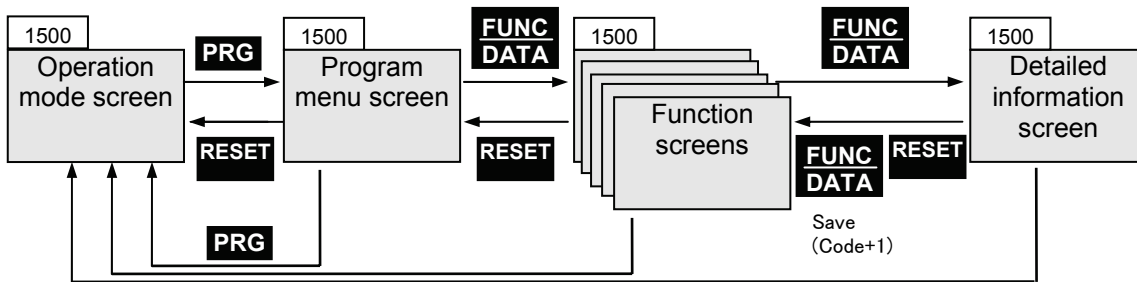
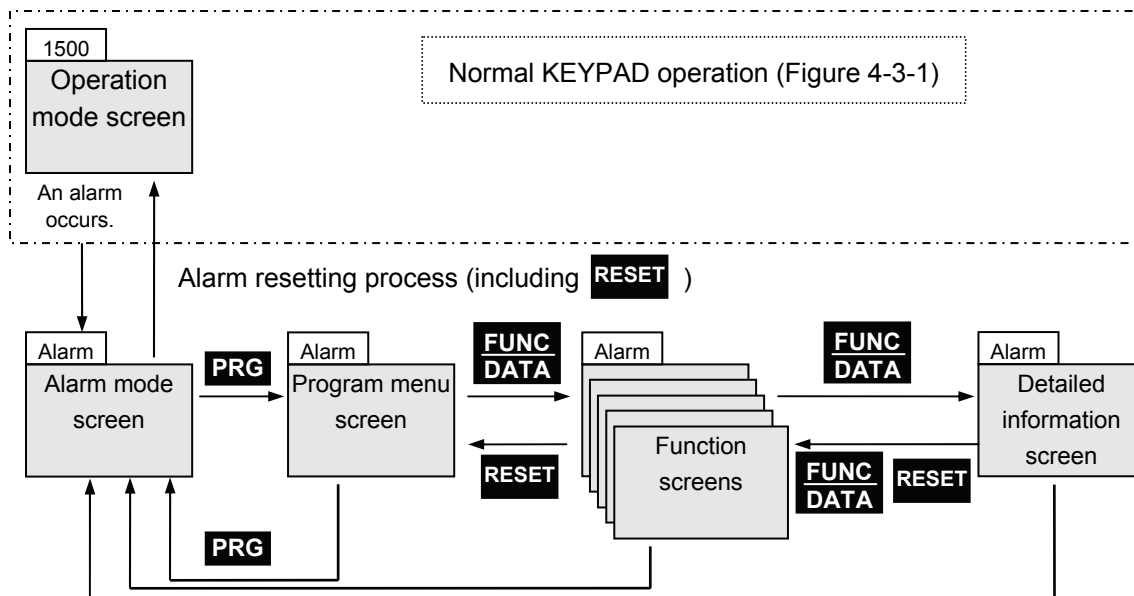


Figure 4-3-1 KEYPAD Operation in Operation Mode

4-3-2 When an Alarm Raised Occurs

When an alarm occurs, the KEYPAD screen system is switched from the normal operation mode to the alarm mode. The alarm mode screen appears where the alarm information is indicated.

The program menu, function, and detailed information screens are similar to those of normal operation. The program menu screen can be switched to the alarm mode screen using **PRG** only.



Outline of Indications on Different Screens

No.	Screen name	Description																														
1	Operation mode	You can change motor speed or switch LED monitor when this screen is shown on KEYPAD during normal operation.																														
2	Program menu (Program mode)	<p>Function menu is shown on this screen for your selection. Select a desired function from menu and press FUNC DATA to call screen for selected function. Menu contains the following options as KEYPAD functions.</p> <table border="1"> <thead> <tr> <th>No.</th> <th>Menu item</th> <th>Outline</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>Function menu</td> <td>If this is selected, a name list of function codes appears. Select a desired code to call data setting screen for that code where its setting can be checked or changed.</td> </tr> <tr> <td>2</td> <td>CHECK DATA</td> <td>If this is selected, a data list of function codes appears. Select a desired code to check its setting. Similar to the SET DATA above, data setting screen can be selected where its setting can be changed.</td> </tr> <tr> <td>3</td> <td>MONITOR</td> <td>This screen is used as operation status monitor to check various data.</td> </tr> <tr> <td>4</td> <td>I/O CHECK</td> <td>This screen is used to check status of inverter and optional analog input/output and digital input/output signals.</td> </tr> <tr> <td>5</td> <td>MAINTENANCE INFO</td> <td>This screen is used to check maintenance information including inverter status, life expectancy, communication errors, and ROM version.</td> </tr> <tr> <td>6</td> <td>MEASURE LOAD FACTOR</td> <td>Maximum and average currents and average braking power can be measured to determine load factor.</td> </tr> <tr> <td>7</td> <td>ALARM INFO</td> <td>This screen is used to check operation status and I/O status at the time of the latest alarm.</td> </tr> <tr> <td>8</td> <td>ALARM HISTORY</td> <td>This screen is used to check the latest alarm, multiple alarms that occurred at the same time, and alarm history. Select an alarm and press FUNC DATA to check cause of that alarm and troubleshooting information.</td> </tr> <tr> <td>9</td> <td>COPY DATA</td> <td>Function code settings for an inverter can be stored and copied to another inverter.</td> </tr> </tbody> </table>	No.	Menu item	Outline	1	Function menu	If this is selected, a name list of function codes appears. Select a desired code to call data setting screen for that code where its setting can be checked or changed.	2	CHECK DATA	If this is selected, a data list of function codes appears. Select a desired code to check its setting. Similar to the SET DATA above, data setting screen can be selected where its setting can be changed.	3	MONITOR	This screen is used as operation status monitor to check various data.	4	I/O CHECK	This screen is used to check status of inverter and optional analog input/output and digital input/output signals.	5	MAINTENANCE INFO	This screen is used to check maintenance information including inverter status, life expectancy, communication errors, and ROM version.	6	MEASURE LOAD FACTOR	Maximum and average currents and average braking power can be measured to determine load factor.	7	ALARM INFO	This screen is used to check operation status and I/O status at the time of the latest alarm.	8	ALARM HISTORY	This screen is used to check the latest alarm, multiple alarms that occurred at the same time, and alarm history. Select an alarm and press FUNC DATA to check cause of that alarm and troubleshooting information.	9	COPY DATA	Function code settings for an inverter can be stored and copied to another inverter.
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3	Function screens	When a function is selected from program menu, the corresponding function screen appears for execution of that function.																														
4	Detailed information screen	Functions that cannot be executed by function screens (change of function code settings and indication of causes of alarms) are displayed by detailed information screen.																														

4-3-3 Program Mode

The KEYPAD operation (hierarchical structure of screens) in the program mode is illustrated below.

