5.3 Operation Using the Keypad

5.3.1 LCD monitor, keys and LED indicators on the keypad

The keypad allows you to run and stop the motor, monitor the running status, specify the function code data, and monitor I/O signal states, maintenance information, and alarm information.

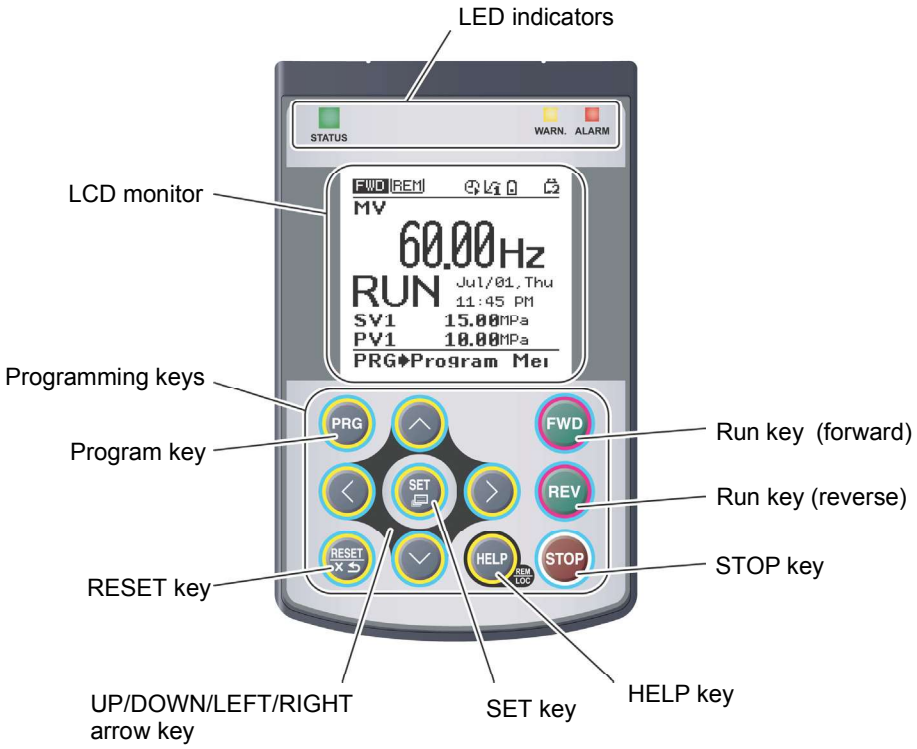


Figure 5.11 Names and Functions of Keypad Components

1. LED indicators:	These indicators show the current running status of the inverter.	Refer to Table 5.4.
2. LCD monitor:	This monitor shows the following various information about the inverter according to the operation modes.	Refer to Figure 5.12 and Table 5.6.
3. Keys:	These keys are used to perform various inverter operations.	Refer to Table 5.5.

Table 5.4 Indication of LED Indicators

LED Indicators	Indication	
STATUS (Green)	Shows the inverter running state.	
	Flashing	No run command input (Inverter stopped)
	ON	Run command input
WARN. (Yellow)	Shows the light alarm state.	
	OFF	No light alarm has occurred.
	Flashing /ON	A light alarm has occurred.
ALARM (Red)	Shows the alarm state (heavy alarm).	
	OFF	No heavy alarm has occurred.
	Flashing	A heavy alarm has occurred.

Table 5.5 Overview of Keypad Functions

Number	Keys	Functions
3-1		This key switches the operation modes between Running mode/Alarm mode and Programming mode.
3-2		Reset key which works as follows according to the operation modes. ■ In Running mode: This key cancels the screen transition. ■ In Programming mode: This key resets the alarm states and switches to Programming mode. ■ In Alarm mode: This key discards the settings being configured and cancels the screen transition.
3-3		UP/DOWN key which works as follows according to the operation modes. ■ In Running mode: These keys switch to the digital reference frequency and PID command modification screen (when commands from the keypad are enabled). ■ In Programming mode: These keys display multiple alarms and alarm history. ■ In Alarm mode: These keys select menu items, change data, and scroll the screen.
		These keys move the cursor to the digit of data to be modified, shift the setting item, and switch the screen.
3-4		Set key which works as follows according to the operation modes. ■ In Running mode: Pressing this key switches to the selection screen of the LCD monitor content. ■ In Programming mode: Pressing this key switches to the alarm detailed information screen. ■ In Alarm mode: Pressing this key established the selected items and data being changed.
3-5		Pressing this key calls up the HELP screen according to the current display state. Holding it down for 2 seconds toggles between the remote and local modes.
3-6		Pressing this key starts running the motor in the forward rotation (when a run command from the keypad is enabled).

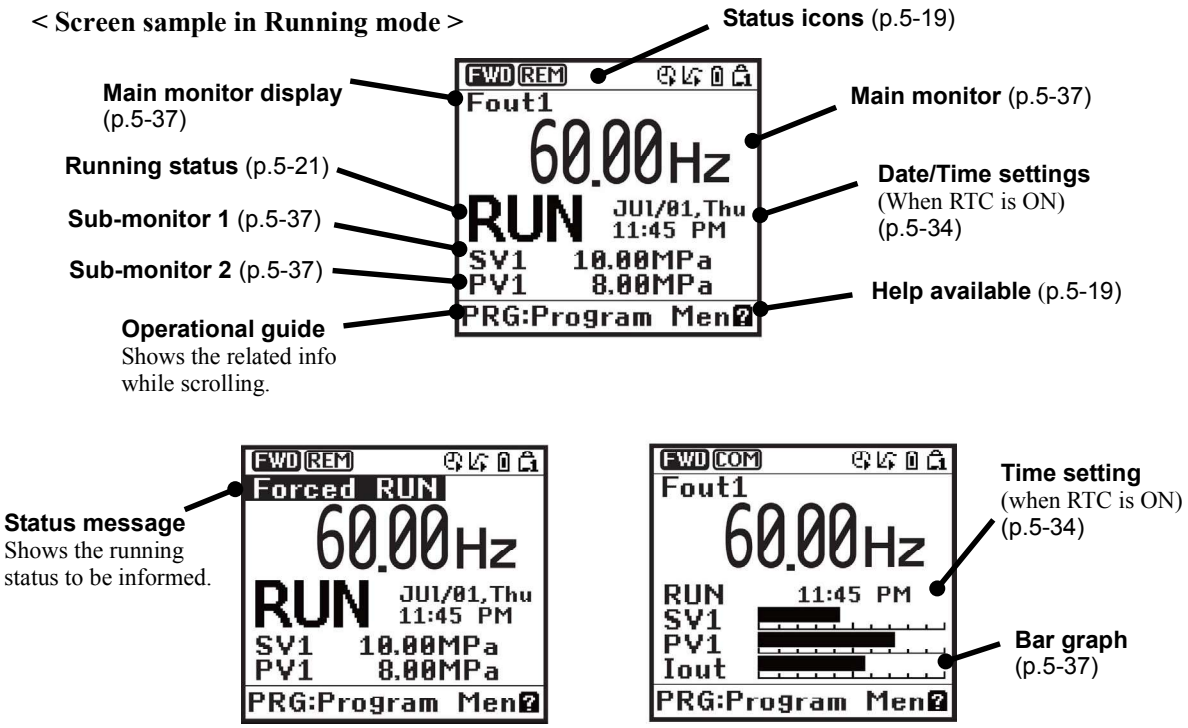
Table 5.5 Overview of Keypad Functions (continued)

Number	Keys	Functions
3-7	REV	Pressing this key starts running the motor in the reverse rotation (when a run command from the keypad is enabled).
3-8	STOP	Pressing this key stops the motor (when a run command from the keypad is enabled or the STOP key priority is selected).

■ LCD monitor

The LCD monitor shows various information of the inverter according to the operation modes.

< Screen sample in Running mode >



< Screen sample in Alarm mode >

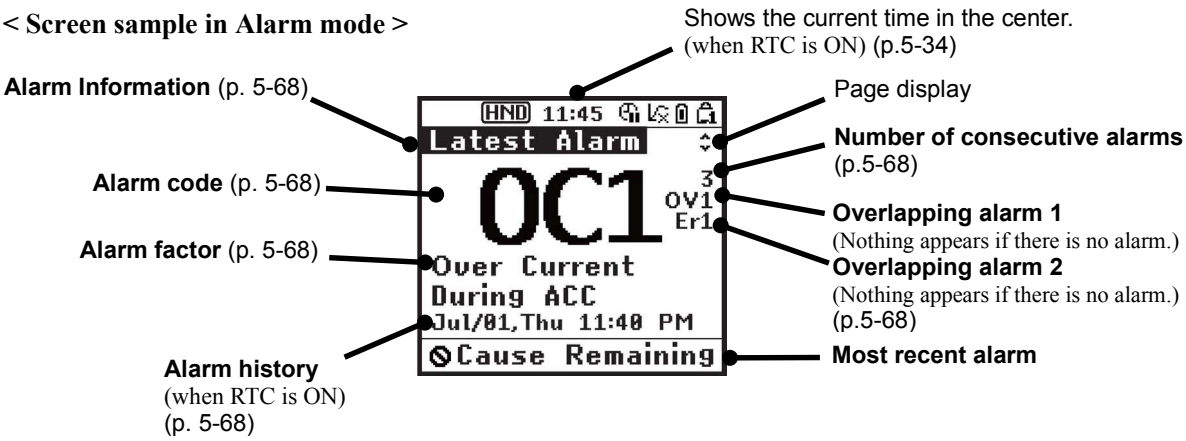


Figure 5.12 Screen Samples In Running and Alarm Modes

Table 5.6 Icons on the LCD Monitor

Status icons that show the running status, run command sources and various icons			
	FWD	Running status (rotation direction)	Running forward
	REV		Running reverse
	HND	Run command source	Keypad
	REM		External terminals
	LOC		Keypad in local mode
	COM		Communications link
		Timer operation	Running under timer control (Timer enabled and run command entered)
			• Stopped under timer control (Timer enabled and run command entered) • PID control being canceled (during running or stop) • Pause date (during running or stop)
			Timer enabled, real-time clock normal, no run command entered (except during canceling)
			Timer operation specified and real-time clock info lost (running prohibited) All of terminals [TM1] to [TM4] are OFF (running prohibited)
		PID operation (Internal PID)	Internal PID configured and PID1 being selected (This icon appears even a run command is OFF.)
			Internal PID configured and PID2 being selected (This icon appears even a run command is OFF.)
			PID operation stopped temporarily, e.g., due to slow flowrate (Run command being ON)
			PID operation canceled (including boost)
		Battery state	Battery connected and sufficiently charged.
			Battery not connected or low battery charge
		Password protection state	Inverter being locked (Force to stop, Inoperable)
			Locked with password 2 (Access to function codes is prohibited.)
			Locked with password 1 (Function code data change is prohibited.)
			Lock being released (Password being canceled)
Running status			
	STOP	Running status	No run command entered or inverter stopped
	RUN		Run command entered or during inverter output
HELP that displays help information corresponding to the current screen			
			Help available
			(flashing) Help being displayed

Note LCDs have temperature characteristics. The low temperature slows down the LCD response; the high temperature makes the screen contrast high so that contrast adjustment may be needed.