

Alarm Setter LCD Display operating method Manual

**WSP-HL
WSP-HP**

watanabe

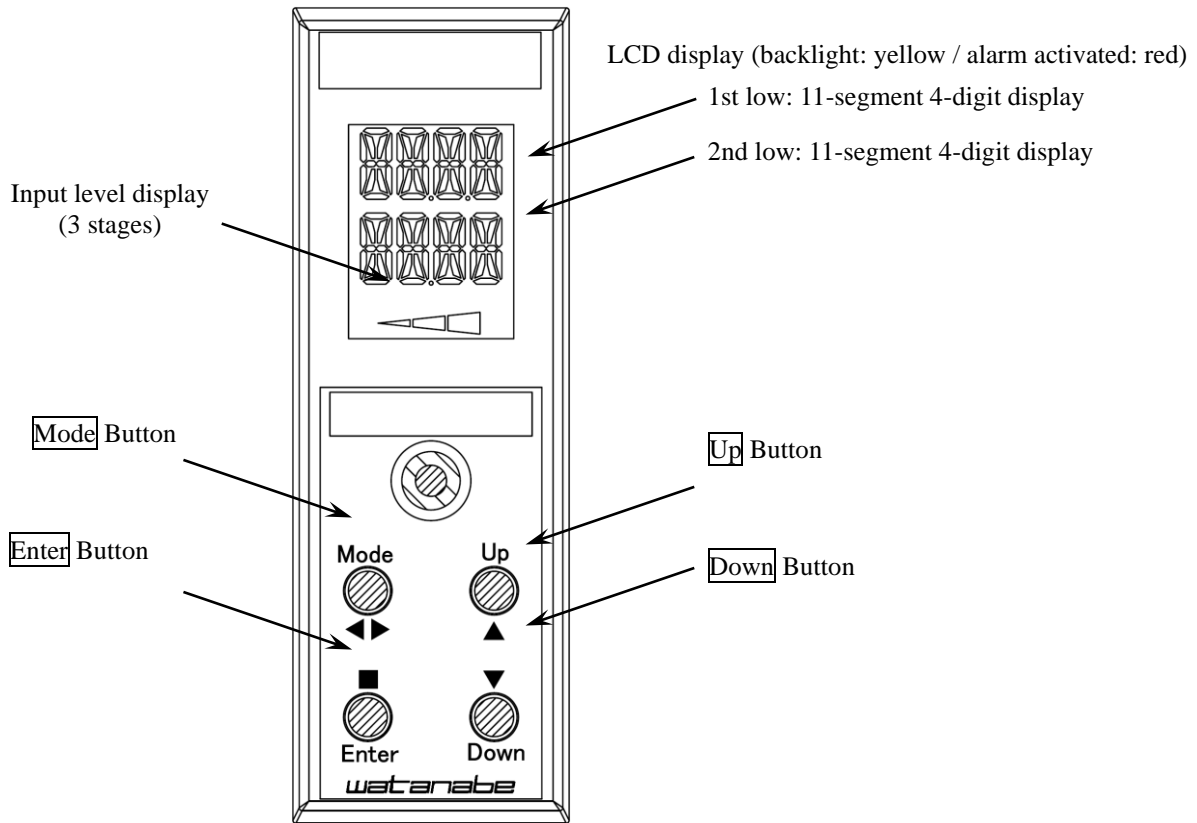
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1. Introduction

This instruction manual describes how to set various parameters using the LCD display of the alarm setter (WSP-HL/HP). For other specifications, please refer to the catalog.

2. LCD display and Button names



Main display contents

		Monitor mode		Alarm setpoint change mode Alarm action setting change mode tool mode
		Actual value confirmation mode	Set value confirmation mode	
11 segments ※ 1	1st low	Input value	Alarm 1 setting	Setting parameters
	2nd low	Alarm operating status	Alarm 2 setting ※ 2	Setting value
Level display ※ 1		Input level		Hidden
Backlight	Yellow	Lights up when no alarm is activated ※ 1		
	Red	Lights up when an alarm is activated		

※ 1 : When no button operation is performed for about 1 minute with no alarm generated, the backlight is turned off and the LCD display is displayed in low contrast.

By pressing the button, the backlight turns on and the LCD display returns to normal contrast.

Also, it may not look yellow depending on the surrounding environment.

※ 2 : WSP-HP (1 output) does not display anything on the 2nd line in the setting value confirmation mode.

3. Button operation and operation mode

3-1. Overview of button operation

After the power is turned on, the alarm setter becomes monitor mode (actual value confirmation mode) and displays the input value and input level.

To change the settings, switch from the monitor mode to each mode by pressing the buttons on the LCD display and change the settings.

When the backlight is off, pressing any button will turn on the backlight.

3-2. Button operation list

The button operations and actions in each mode are shown in the table below.

○: Short press (within 1 second)

⊙: Long press (more than 3 seconds)

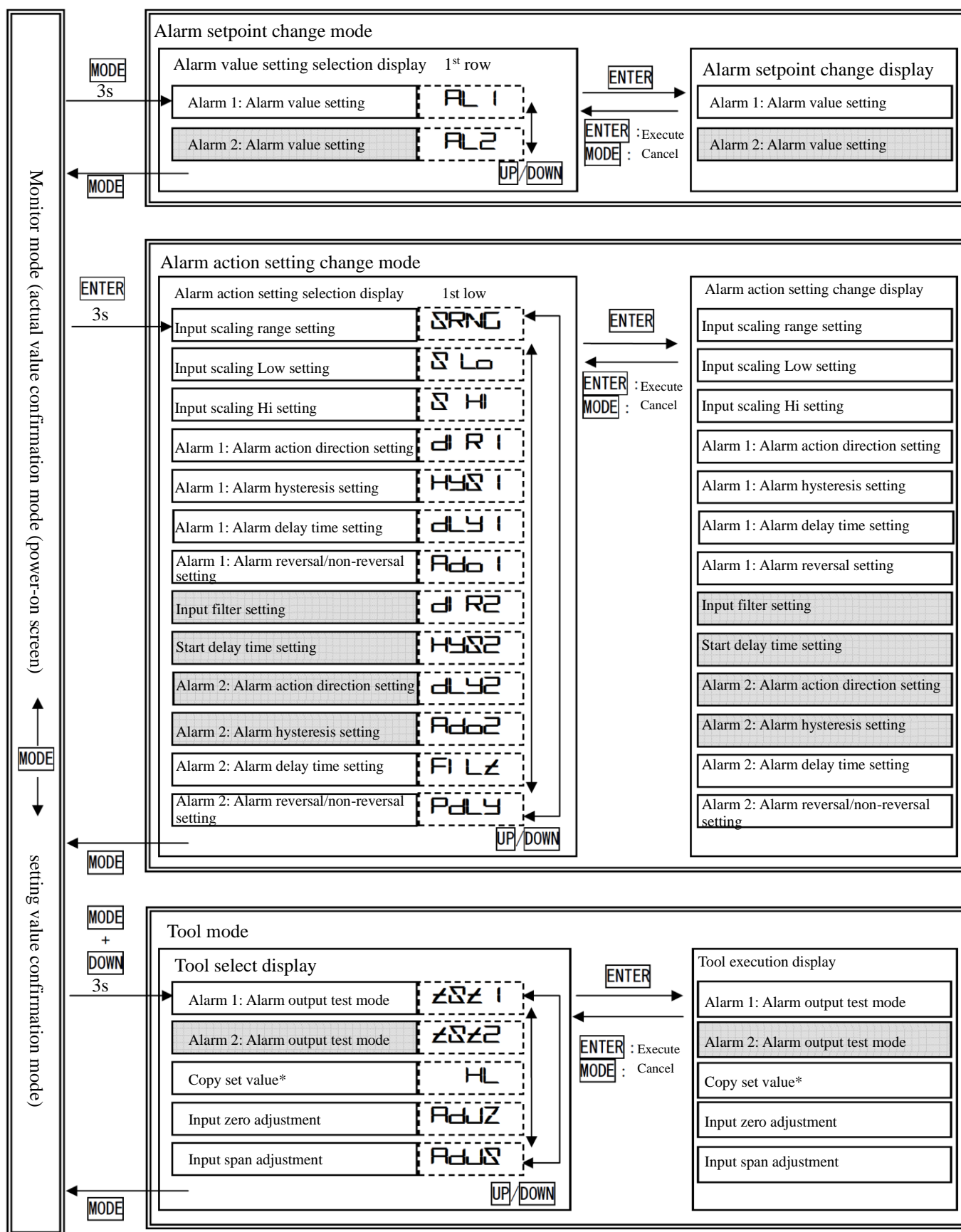
★: Press and hold simultaneously (3 seconds or more)

The button operations and actions in each mode are shown in the table below.

Monitor mode (Actual value confirmation mode (screen when power is turned on)/Set value confirmation mode)				
Mode	Enter	Up	Down	Operation details
○				Switch between actual value confirmation mode and set value confirmation mode
⊙				Move to alarm setpoint change mode (setting selection screen)
	⊙			Move to alarm action setting change mode (setting selection screen)
★			★	Move to tool mode (tool selection screen)
Alarm set value change mode/Alarm action setting change mode/Tool mode (setting selection screen/tool selection screen)				
Mode	Enter	Up	Down	Operation details
		○	○	Selection of setting change items or selection of tool execution items
	○			Move to the setting change screen or the tool execution screen
○				Return to monitor mode (actual value confirmation mode)
Alarm set value change mode/alarm action setting change mode/tool mode (setting change screen/tool execution screen)				
Mode	Enter	Up	Down	Operation details
		○		Addition or switching of set values (press and hold for 1 second or longer for fast forward, press and hold for 3 seconds or longer for fast forward)
			○	Subtraction or switching of set values (press and hold for 1 second or longer to fast-forward, press and hold for 3 seconds or longer to fast-forward)
	○			Confirm the setting change and move to the setting change selection screen
○				After executing the selected tool processing, move to the tool execution item selection screen
	⊙			Discard the changed setting value and move to the setting change selection screen.
When an internal error occurs				
Mode	Enter	Up	Down	Operation details
	★	★		Clear the error display and resume normal operation

3-3. Button operation and transition of operation mode

The transition of the operation mode by button operation is shown in the figure below.



※ The set value copy function cannot be used with this instrument. Also, in WSP-HP, the first line display is " HP".

■ : Alarm 2 can be set only for WSP-HL (2 outputs).

Not displayed with WSP-HP (1 output).

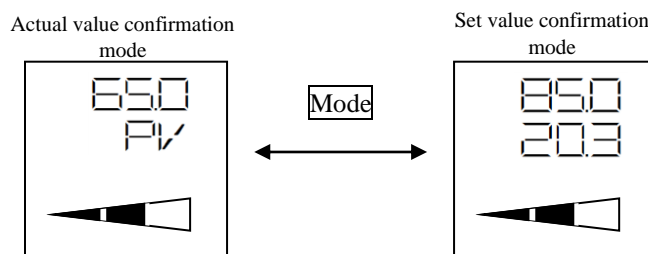
4. Monitor mode

4-1. Overview of monitor mode

This mode is the base point for confirming the alarm action and for shifting to each mode.

There is an actual value confirmation mode that displays the scaled input value and a set value confirmation mode that displays the alarm set value.

You can switch between the actual value confirmation mode and the set value confirmation mode by briefly pressing the **Mode** button.



4-2. Actual value confirmation mode

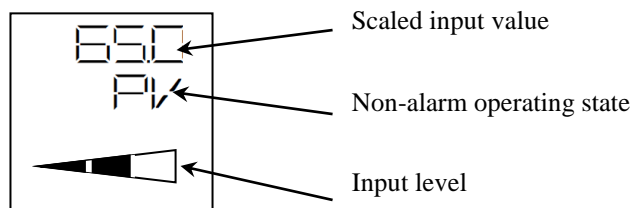
4-2-1. Normal operation display

4-2-1-1. LCD Display

After turning on the power or when returning to the monitor mode by pressing the **Mode** button from each mode,

The alarm setter enters the actual value confirmation mode. The scaled input value is displayed on the first line of the LCD display, and " **PV** " is displayed on the second line. The input value display is updated every 400msec.

In addition, the input level is displayed in 3 stages in the level display section.



*The actual value displayed is the value rounded off to the lowest digit of the display.

The input level is displayed by dividing the full scale into thirds as shown in the table below according to the input % value.

Input value	Level display contents	Remarks
less than 0%		No level display
0% or more and 33% or less		left segment only
More than 33% and less than or equal to 66%		Left/middle segment
More than 66% and 100% or less		Left/middle/right segment
over 100%		Flashing display every 250msec

*If no button operation is performed for about 1 minute or more, the LCD display will be displayed in low contrast. Press the button to return to normal contrast.

4-2-1-2. Backlight

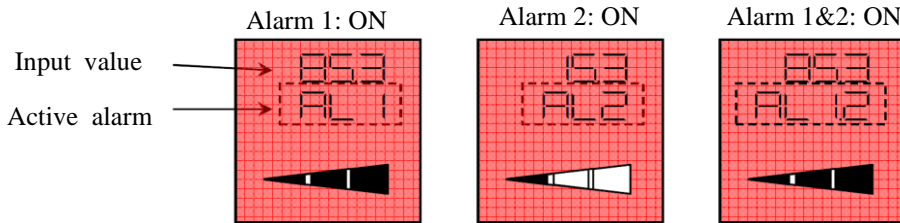
The backlight is yellow.

The backlight turns off when no button operation is performed for about 1 minute.

The backlight turns on when the button is operated.

4-2-2. Display during alarm ON

When the alarm is activated, the backlight of the LCD display emits red light, and the alarm display on the 2nd line blinks every 500msec. When the input value is out of the alarm range and the alarm is cleared, the display returns to normal operation.



* The display inside [] indicates blinking.

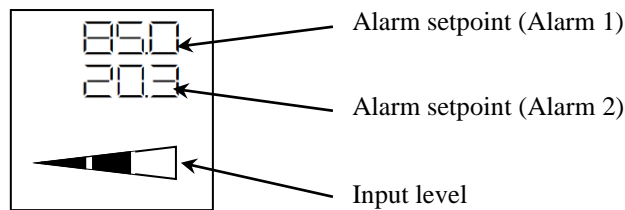
* Due to internal arithmetic processing, there may be a difference between the displayed value and the alarm output operation.

4-3. Set value confirmation mode

4-3-1. Normal operation display

The alarm setting value is displayed on the numeric display of the LCD display.

In addition, the input level is displayed in 3 stages in the level display section.



* WSP-HP (1 output) does not display the alarm setpoint (alarm 2).

* The input level display and backlight display are the same as in the actual value confirmation mode.

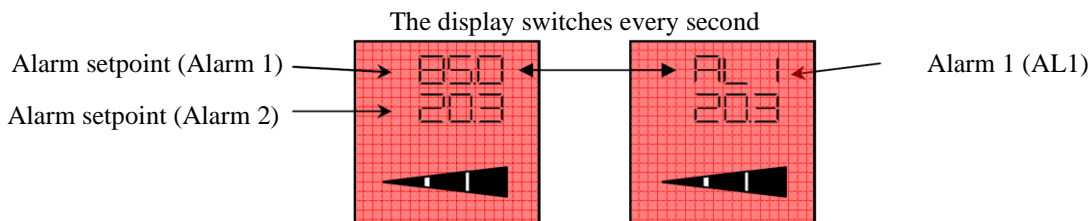
For details, please refer to each item in the actual value confirmation mode.

4-3-2. Display during alarm ON

When the alarm is activated, the backlight of the LCD display emits red light, and the contents of the LCD display switch between the alarm set value and the generated alarm display (AL1 or AL2) every second as shown in the figure below.

When the input value is out of the alarm range and the alarm is cleared, the display returns to normal operation.

Example) WSP-HL (2 outputs) Alarm 1 Alarm activated (Alarm 2 is non-alarm activated)



* When the alarm 2 alarm is activated, the alarm set value and AL2 are displayed alternately on the 2nd row in the same way.