

Turing on the Load

- 1 Make sure that the load is off.**
- 2 Select an operation mode.**
Press MODE to switch between modes.
- 3 Select a current range.**
Press RANGE to switch between ranges.
- 4 Select a voltage range.**
Press VRANGE (SHIFT + RANGE) to switch between ranges.
- 5 Set the current, voltage, conductance, or power value.**
Press SET/VSET to select a value, and set the value using the rotary knob.
- 6 Turn on the load.**
Press LOAD. You can change the setting (current, voltage, conductance, or power) while the load is on.

• +CV Mode

You can press +CV (SHIFT + MODE) in CC mode or CR mode to add CV. You can add CV even while the load is on.

The value that you can set changes when you press SET/VSET.

Protection Functions

The electronic load has seven kinds of protection functions. When a protection function is activated, an alarm occurs.

You can set the value to detect for the OCP, OPP, and UVP functions.

You can choose the action (load off or limit) that is performed by the OCP and OPP functions from the menu.

You can stop an alarm by pressing ENTER. The alarm will be activated again if its cause has not been eliminated.

Overcurrent Protection (OCP)

Activated at the specified value or at 110% of the maximum current. To set the value, press OPP/OCP, and turn the rotary knob. Press OPP/OCP to switch between OCP and OPP.

Overvoltage Protection (OVP)

Activated at 110 % of the maximum input voltage.

Overpower Protection (OPP)

Activated at the specified value or at 110 % of the maximum power. To set the value, press OPP/OCP, and turn the rotary knob. Press OPP/OCP to switch between OCP and OPP.

Undervoltage Protection (UVP)

Activated when the voltage goes below the set value. To set the value, press UVP, and turn the rotary knob. If you do not want to use UVP, select OFF.

Reverse-Connection Protection (REV)

Activated when reverse voltage is applied to the load input terminals. Turn off the power of the DUT within 30 seconds. If reverse voltage is detected when you are using the PLZ164WA/PLZ664WA in a test where a DC power supply is connected in series with the DUT, see “When the DC power supply and the DUT are connected in series, and turning on/off of the DUT” (p. 5-5) in the User’s Manual.

Overheat Protection (OHP)

Activated when the temperature of the internal power unit exceeds 95°C.

Alarm Input Protection

Activated when a low-level signal is applied to the ALARM INPUT pin of the J1 terminal.

ABC Preset Memory

The preset memory can be used to save and recall current, resistance, voltage, and power values.

• Saving

- 1 Switch to the operation mode that you want to save, and set its ranges and value.**
- 2 Press ABC.**
The A, B, and C keys blink.
- 3 Press the key that corresponds to the memory that you want to save to.**
The key will light. After you change the settings, the key light will turn off.

• Recalling

Switch to the operation mode that you want to load values into, and press the key that corresponds to the memory that you want to recall (A, B, or C).If Memory is set to SAFETY, press ENTER.

Setup Memory

You can use the setup memory to save and recall protection-function activation values, ABC setup memory settings, menu settings, and so on.

• Saving

- 1 Press STORE (SHIFT + RECALL).**
- 2 Use the rotary knob to select the memory no. that you want to save to.**
- 3 Enter a memo.**
- 4 Press ENTER.**

• Recalling

- 1 Press RECALL.**
You cannot recall settings while the load is on.
- 2 Use the rotary knob to select the memory no. that you want to recall.**
- 3 Press ENTER.**

Switching Function

You can use this function to set two load current values and switch between them. Set the switching level and the switching interval.

• Switching Level

Press LEVEL to select a value, and set the value using the rotary knob. Press % (SHIFT + LEVEL) to set the level as a percentage.

• Switching Interval

You can set the switching interval by specifying a frequency and duty ratio or by specifying an amount of time.

Setting a Frequency and Duty Ratio

Use the FREQ/DUTY key and the rotary knob to set the values. Press FREQ/DUTY to switch between the frequency and the duty ratio.

Setting a Time

Use the Th/TL (SHIFT+FREQ/DUTY) key and the rotary knob to set a time. Press Th/TL (SHIFT+FREQ/DUTY) to switch between the high and low sides of the switching time.

Functions Useful for Battery Discharge Testing

• Elapsed Time Display (Count Time)

You can measure the time from the start of discharge to the cutoff voltage. You can enable the elapsed time display from the menu.

• Auto Load-Off Timer (Cut Off Time)

You can use this function to turn the load off after a specified amount of time has passed since the start of discharge and measure the closed circuit voltage immediately before the load is turned off. You can set the auto load-off timer from the menu.

Other Settings

• Soft Start

In CC mode and CR mode, you can use this function to raise the electronic load’s current gradually. This is useful in cases such as when voltage application begins at the same time that the load is turned on and when voltage is applied while the load is on and there is no load input.

You can enable the soft start function from the menu.

• Locking the Electronic Load

You can press LOCK (SHIFT + LOCAL) to lock the electronic load and disable all operations other than the turning on and off of the load, sequence execution, and memory recall. To release the lock, press and hold LOCK (until you hear a confirmation sound).

• Short Function

You can use this function to specify the maximum current value (CC mode) or the minimum resistance value (CR mode) instantaneously. To activate the short function, press SHORT (SHIFT + SLEW RATE) while the load is on. Press SHORT again to deactivate the short function.

• Response Speed

This is the speed at which the input current and voltage values are detected and controlled through negative feedback. You can set the response speed in CC mode and CR mode.

You can set the response speed from the menu.

When you operate an electronic load in parallel or at high speeds (with the switching function for example), refer to “Notes about Parallel and High-Speed Operation” on the CD-ROM to set the response speed.

• Slew Rate Setting

When the current changes rapidly because you are using the switching function or for some other reason, set the slew rate to determine the rate at which the current is changed.

Press SLEW RATE, and set the value using the rotary knob.

• Resetting to the Factory Default Settings

While holding ENTER, turn on the power switch. The contents of the memory are deleted.

Menu Settings

- 1 Make sure that the load is off.**
- 2 Press MENU (SHIFT + SET/VSET).**
The menu screen appears.
- 3 Use the cursor keys and ENTER to select the item that you want to set.**
Press PREV (SHIFT +) to return to the previous screen.
- 4 Use the rotary knob to select a value.**
- 5 Press MENU (SHIFT + SET/VSET).**
The menu screen will close and the settings that you configured will be applied. The Configuration settings are not applied until you turn the power off and then on again.

Menu 1 ¹	Menu 2	Item	Settings	Description		
1.Setup	1.Function	Soft Start	1ms, 2ms, 5ms, 10ms, 20ms, 50ms, 100ms, 200ms	Soft start time		
		Count Time	OFF, ON	Elapsed time display		
	2.Protect Action	OCP	LOAD OFF, LIMIT	Operation to be performed when OCP is activated		
		OPP	LOAD OFF, LIMIT	Operation to be performed when OPP is activated		
	3.Memory	ABC Preset Memory Recall	DIRECT, SAFETY	Method for recalling the preset memory		
	4.Cut Off	Time	OFF, 0:00:01 to 999:59:59	Auto load-off timer		
	5.Response	---	1/1, 1/2, 1/5, 1/10	Response speed		
2.Configuration ²	1.Master/Slave	Operation		Master, Slave	Master/slave switching	
		Parallel		-, 2, 3, 4, 5	Number of devices operating in parallel	
		Booster		-, 1, 2, 3, 4	Number of boosters connected in parallel	
	2.Power On	Load On		OFF, ON	State of the load when the power switch is turned on	
		Key Lock		OFF, ON	Key lock	
	3.Interface	Control		GPIO, RS232C, USB		Interface setting
		GPIO	Address	1 to 30		GPIO address
		RS232C	Baudrate	2400bps, 4800bps, 9600bps, 19200bps		Baud rate
			Data ³ , Stop	Data: 8 Stop: 1, 2		Data length (fixed at 8 bits) and the stop bit
			Parity ³	NONE		Parity (fixed at none)
			Ack	OFF, ON		Acknowledgment
		USB ³	VID	0x0B3E		Vendor ID
			PID	xxxxxx		Product ID
			S/N	xxxxxxxx		Serial number
	4.External	Control		OFF, V, R, Rinv		External control for the CC, CR, and CP modes
		LoadOn IN		LOW, HIGH		External control logic setting for turning the load on and off
4.Model Info ³	(MODEL)	---		PLZxxxx	Model name	
	VERSION SUB	---		x.xx	Firmware version	
	VERSION MAIN	---		x.xx	ROM version	

¹ In menu 1, 3. Calibration is for calibrating the electronic load. For details, see the User’s Manual.

² The Configuration settings are not applied until you turn the power off and then on again.

³ This is information about the electronic load. It cannot be changed.