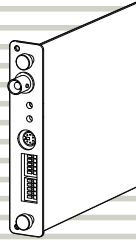


## Setup Guide

PCR-LE series  
Analog Signal Interface

**EX05-PCR-LE**

**EX06-PCR-LE**



Thank you for purchasing the PCR-LE Series analog signal interface.

This option is used to control PCR-LE Series AC power supply output with analog signals.

- EX05-PCR-LE

This board simply amplifies the waveforms that it receives and outputs the result.

- EX06-PCR-LE

This board varies the voltage of the output AC waveform (sine wave) on the basis of DC signals that it receives.

## Features

Using this product with external signals, you can achieve the following:

- Use as a power amplifier (EX05-PCR-LE only)
- Vary the voltage of output AC waveforms (EX06-PCR-LE only)
- Control through external contacts

You can turn the output on and off, execute and stop sequences, clear alarms, and shut down the output.

- Monitor the PCR-LE Series operation status

You can monitor the output status, alarm status, busy status, current peak limit status, and overload status.

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The specifications of this product and the contents of this manual are subject to change without prior notice.

### WEBSITE

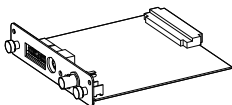
<http://www.kikusui.co.jp/en>

The newest version of the operation manual can be downloaded from Download service of Kikusui website.

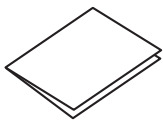
Printed in Japan © 2012

## Check at Unpacking

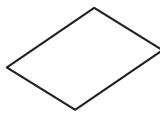
Upon reception of the product, confirm that the package contains the necessary accessories and that the device and accessories have not been damaged during transportation. If the device is damaged or any accessory is missing, notify Kikusui distributor/agent.



☐ EX05-PCR-LE or EX06-PCR-LE (1 pc.)



☐ Setup guide  
(This guide, 1 pc.)  
[Z1-005-540]



☐ China RoHS sheet  
(1 pc.)  
[Z9-000-449]

## Combination with Other Options

This product cannot be used simultaneously with the following PCR-LE Series options.

LIN40MA-PCR-L Line Impedance Network

IT01-PCR-L Immunity Tester

The EX05-PCR-LE and EX06-PCR-LE cannot be used at the same time.

## Firmware version of PCR-LE

When using the EX05-PCR-LE/ EX06-PCR-LE, the PCR-LE must be required with the firmware version of 3.00 or later. If the firmware version of the PCR-LE is 2.99 or previous version, the PCR-LE is required for the firmware update.

To check the firmware version of the PCR-LE, refer to the operation manual of the PCR-LE series. In case, the PCR-LE needs update, contact your Kikusui agent or distributor.

## Handling Precautions

### ■ Handling of the Board

- Ground yourself by touching a grounded metal object before touching the board.
- Avoid handling the interface board in an environment subject to strong static electricity.
- For storage, provide electrostatic protection measures such as the anti-static bag accompanying the interface board.
- Do not drop a board or subject it to other impact.
- Do not install or uninstall the interface board with the power ON of the PCR-LE Series.

## Functional Restrictions during Analog signal control

### Functional limitations when the EX05-PCR-LE is installed

When you install the EX05-PCR-LE into the PCR-LE Series, you will be able to select which signal source to use. Depending on the signal source that you select, the PCR-LE Series functional limitations will vary.

#### ■ Internal signal source (INT)

The EX05-PCR-LE outputs the PCR-LE Series signal source. External signal sources are not used.

There are no functional limitations placed on the PCR-LE Series.

#### ■ External signal source (EXT)

The EX05-PCR-LE amplifies the waveform signal that it receives and outputs the result.

The following functions are not available when the board is installed in the power supplies.

- Setting the output voltage and voltage limit
- Setting the frequency and frequency limit
- Measurement of the line voltage
- Action to perform when the current limit is exceeded: DISABLE (do not turn the output off)
- Synchronization Function
- Output on/off phase control
- Using memory
- Generating special waveforms
- Harmonic current analysis function
- Internal Vcc: AUTO (it is not fixed)
- Voltage compensation function: Soft sensing or Regulation adjustment
- Soft starts
- Power line abnormality simulations
- Sequence function
- Phase difference (Single-phase three-wire output or three-phase output (optional) only)

#### ■ Internal and External signal source (INT+EXT)

Output the sum of the PCR-LE Series signal source and an external signal source.

The following functions are not available when the board is installed in the power supplies.

- Measurement of the line voltage
- Action to perform when the current limit is exceeded: DISABLE (do not turn the output off)
- Harmonic current analysis function
- Internal Vcc: AUTO (it is not fixed)
- Voltage compensation function: Soft sensing or Regulation adjustment

### Functional limitations when the EX06-PCR-LE is installed

When you install the EX06-PCR-LE into the PCR-LE Series to control the AC voltage with external DC signals, you will not be able to use the following PCR-LE Series features.

- Setting the AC voltage
- Soft starts
- Power line abnormality simulations
- Sequence function

## Installing the board on the PCR-LE

Insert the board in SLOT 3 on the rear panel.

Depending on the output condition or the item to control with the EX05-PCR-LE/ EX06-PCR-LE, the PCR-LE that the EX05-PCR-LE/ EX06-PCR-LE must be installed in changes. Refer to the table below, and install in the appropriate PCR-LE.

	PCR-LE series to install in			
	Control using external signal		External contact control	Status monitoring
	EX05-PCR-LE	EX06-PCR-LE		
Single-phase	PCR-LE series to use			
Single-phase three-wire	U-phase, V-phase	U-phase		
Three-phase	Each phase			
parallel operation	Master unit			

- 1** Check that the **POWER** switch of PCR-LE is off.
- 2** Touch a grounded metal object (for example, the metal parts of the PCR-LE rear panel) to discharge any static electricity from your body.
- 3** Remove the screws that are holding the **SLOT 3** cover in place on the rear panel, and remove the cover from the panel.
- 4** Hold the panel parts of the board so that the printed circuit board side is facing down.
- 5** Insert the board into the slot so that the printed circuit board's connector is inserted into the connector at the back of the slot.
- 6** Insert the board all the way into the slot.
- 7** Use the screws that you removed in step 3 to fix the board in place in the panel.  
This completes installation of the phase board.

## Controlling the Output Using External Analog Signals

For details on how to controlling the output using external analog signals, see the operation manual included with the PCR-LE series.

The screen captures used in the PCR-LE series operation manual are examples. They may differ from the screens that are displayed when you are controlling the output using external analog signals.

