



The PIA4850 is a controller designed to digital control Kikusui's DC power supply unit with a TP-BUS via USB. The Kikusui's DC power supply unit with an analog remote-control function can be controlled using the expansion unit PIA4820.

For details of connection of power supply, PIA4820 and device messages, see the "Connecting & Programming Guide." The "Connecting & Programming Guide" is provided in the accompanying CD-ROM.

When inserting the CD-ROM in drive, the menu program will be started as shown below. Click on the "Connecting & Programming Guide."



The "Connecting & Programming Guide" is in HTML format that can be viewed with a WWW (World Wide Web) browser. The Microsoft Internet Explorer 11 or later browsers is required to view this manual.

The "Connection of the PIA4820", the "Connection of power supply" and the "List of messages" of the "Connecting & Programming Guide" are provided in a PDF file. Adobe Reader 9.2 or later is required to view the file.

### ■ Firmware version of the product to which this manual applies

This manual applies to PIA4850 with firmware version 2.2x.

You can check the PIA4850 version using \*IDN?.

When making an inquiry about the product, please provide us with the model, firmware version and serial number.

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WEBSITE

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

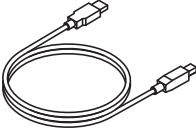
The newest version of PIA4850 manuals can be downloaded from Download service of Kikusui website.



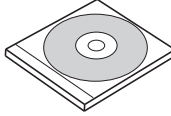
## Checking the Package Contents

When you receive the product, check that all accessories are included and that the product and accessories have not been damaged during transportation.

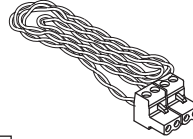
If any of the accessories are damaged or missing, contact your Kikusui agent or distributor.



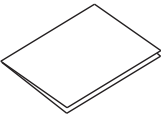
- USB cable (1 pc.)  
[85-00-0080]



- PIA4800 Utilities CD  
(1 pc.)  
[SA-6002]



- Twisted-pair wire  
with TP-BUS connectors  
(1 pc.)  
[91-80-5931]



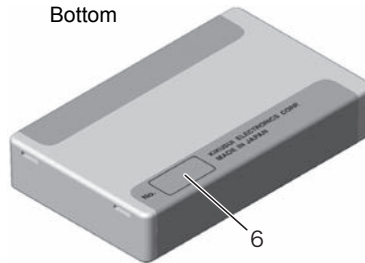
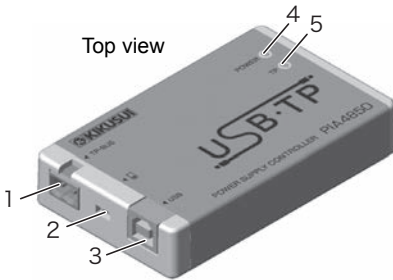
- Operation manual  
(1 copy)



- Magnetic sheet for  
mounting the product  
(1 pc.) [R7-000-003]

Peel off the adhesive  
tape and stick it  
to the bottom of  
the product.

## Part Names and Functions



No.	Name	Description
1	TP-BUS connector	Connect the TP-BUS communication cable.
2	Switch	Switch for firmware update. Normally set the switch position to the right side.
3	USB connector	Connect the USB cable.
4	POWER LED	Lights up or blinks by the power line failure or internal errors.
5	TP LED	Lights up during communication in TP-BUS line.
6	Serial number	Serial number of PIA4850.

## Connection

Use a standard USB cable to connect the PIA4850 to the PC. Once it is connected, the PIA4850 will be turned on the power. For detail of connection of the PIA4850 to the PC, see the “Connecting & Programming Guide” on the accompanying CD-ROM.

## USB function

Complies with USB Specification 2.0

Complies with USBTMC Specification 1.0 and USBTMC-USB488 Specification 1.0

Data rate: 12 Mbps maximum (full speed)

VID (vendor ID): 0x0B3E, PID (product ID): 0x1014

## VISA Library

In case of using USB to control the PIA4850, any of the following VISA library is required to be installed at the PC. The newest version can be downloaded from each company’s website. Do not install the plural number of VISA library to the PC. It may cause possible malfunction.

- NI-VISA Ver. 3.0 or later by National Instruments.
- Agilent VISA (Agilent IO Libraries) M01.00 or later by Agilent Technologies .
- KI-VISA Ver. 3.0.x or later

### ■ Installing KI-VISA

KI-VISA is Kikusui’s original VISA library that supports VXIplug&play VISA Specifications 3.0. The newest version can be downloaded from Download service of Kikusui website (<http://www.kikusui.co.jp/en/download/>). KI-VISA is not required if NI-VISA or Agilent VISA is already installed.

Double-click Kivisa\_3\_0\_x.exe, then proceed with the installation according to the instructions on the screen. The value for x varies depending on the revision of the VISA library stored on the CD-ROM.

## Commands

For detail of commands, see the “Connecting & Programming Guide” on the accompanying CD-ROM.

### Operation status of the “POWER LED” and the “TP LED”.

The LED lights up or blinks under the indicated conditions of following table.

Status	POWER LED	TP LED
Power on	Lights up	Lights up for 0.5s, then lights out
Suspended	Blinking	Lights out
TP-BUS communication error	Lights out for 0.1s, then lights up	Lights out
Firmware update (Switch position: left side)	Lights up	Lights up

## Specifications

Consumption current		500 mA or less
OS		Windows Vista Home Premium, Business, Ultimate (32 bits version) Windows 7 (32 bits version)
VISA		Ver 3.0 or later
Input buffer size		256 bite
Environment	Operating environment	Indoor use
	Operating temperature and humidity range	0 °C to 40 °C (32 °F to 104 °F), 10 %rh to 90 %rh (no condensation)
	Storage temperature and humidity range	-20 °C to 70 °C (-4 °F to 158 °F), 10 %rh to 90 %rh (no condensation)
	Altitude	Up to 2000 m
Insulation resistance	Between TP-BUS and USB	500 Vdc, 30 MΩ or more
Safety		Complies with the requirements of the following directive and standard. Low Voltage Directive 2014/35/EU EN 61010-1 (Class III, Pollution Degree 2 <sup>1</sup> )
Electromagnetic Compatibility (EMC) <sup>2</sup>		Complies with the requirements of the following directive and standards. EMC Directive 2014/30/EU EN 61326-1
Weight		Approx. 100 g (0.22 lbs)
External dimensions		58 mm x 95 mm x 18 mm (2.28 inch x 3.74 inch x 0.71 inch)
Accessories	USB cable	1 pc.
	Twisted-pair wire with TP-BUS connectors	1 pc. (1 m)
	Magnetic sheet for mounting the product	1 pc.
	Operation manual	1 copy
	CD-ROM	1 pc.

1. Pollution is addition of foreign matter (solid, liquid or gaseous) that may produce a reduction of dielectric strength or surface resistivity. Pollution Degree 2 assumes that only non-conductive pollution will occur except for an occasional temporary conductivity caused by condensation.
2. Only on models that have CE marking on the panel.

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该标记为适用于在中华人民共和国销售的电子信息产品的环境保护使用期限。

只要遵守有关该产品的安全及使用注意事项，从制造年月起计算，在该年度内，就不会对环境、人身、财产产生重大的影响。

产品的废弃请遵守有关规定。

产品的制造年月可以在以下网址中确认。

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

### 有毒有害物质或元素名称及含有标示 Name of hazardous materials and symbol of element in the equipment and quantity

部件名称	有毒有害物质或元素					
	铅 Pb	汞 Hg	镉 Cd	六价铬 Cr (VI)	多溴联苯 PBB	多溴二苯醚 PBDE
印刷电路板组装品	×	○	×	○	○	○
外壳	×	○	○	○	○	○
辅助设备	○	○	○	○	○	○

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