Connection to the PMC-A Series

NOTE

- In case the control board "OP01-PIA" is used, the optional cable SC03-PIA(J2 connector: 14-pins) / SC05-PIA(J2 connector: 26-pins) is required for connection to the PMC-A. In case the control board "OP02-PIA" is used, the optional cable SC04-PIA is required for connection to the PMC-A. If either one is not installed, please contact your Kikusui distributor/agent.

1. Control Parameters

There are three connecting methods specified below for connection to the PMC-A. The control parameters are viried depending on the connecting method and the number of pins on the J2 connector.

The following parameters can be controlled.

Table 1 Control Parameters

✔ : Can be controlled, No mark : Uncontrollable

Connection	PMC-1		PMC-2		PMC-3
Control board	OP01-PIA				OP02-PIA
Peripheral option	SH		–		–
J2 connector pin number	26-pins	14-pins	26-pins	14-pins	26-pins / 14-pins
Output voltage setting	✔	✔	✔	✔	✔
Output current setting	✔	✔	✔	✔	✔
Output voltage readback	✔		✔		
Output current readback	✔*1	✔*1	✔*2		
Output ON/OFF					✔
Power switch OFF monitoring	✔		✔		
C.V mode monitoring	✔		✔		
C.C mode monitoring	✔		✔		
Output ON/OFF monitoring	✔		✔		
Alarm monitoring	✔		✔		

*1. Accuracy 0.3 % of full scale
*2. Accuracy 5 % of full scale

2. PMC-1

The optional connecting cable “SC03-PIA” is required for the 14-pins type of J2 connector on the rear panel of PMC-A. The optional connecting cable “SC03-PIA” is required for the 26-pins type of J2 connector.

The application of the SH series (PMC-A connections) allows readback of more acccurate current values (Accuracy of current monitoring: 0.3 % of full scale) than values in PMC-2 connections.

Connect the flat cable between the OP01-PIA and the SH Series in which the flat cable is included as an accessory in the optional control board "OP01-PIA", and connect the optional connecting cable "SC03-PIA / SC05-PIA" between the PMC-A and the SH Series. For details on PMC-A connection, see the operation manual for the PMC-A series.

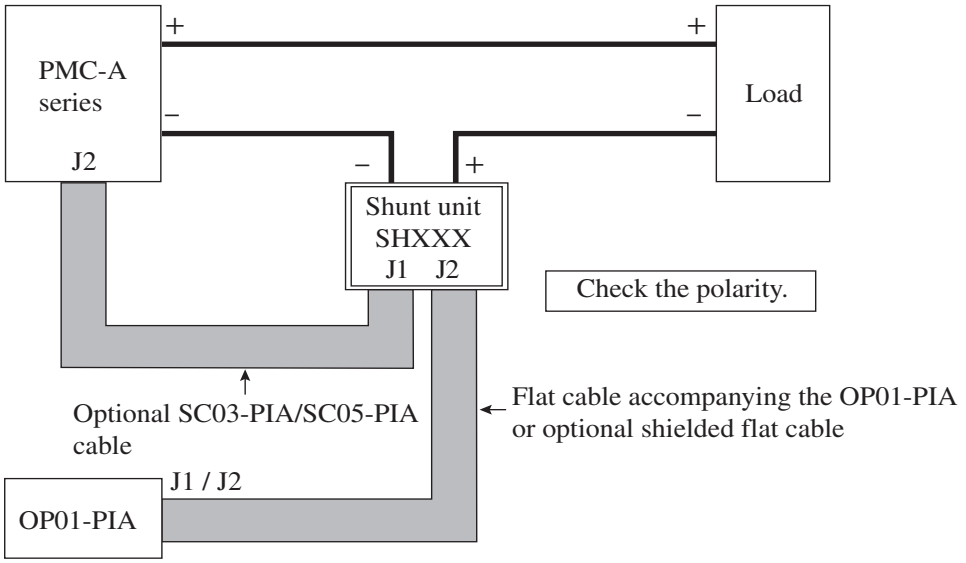

Fig.1 PMC-1 connections

3. PMC-2

The optional connecting cable "SC03-PIA" for the PMC-A Series is required.

To connect the OP01-PIA to the PMC-A series, use the optional connecting cable SC03-PIA / SC05-PIA. For details on PMC-A connection, see the operation manual for the PMC-A series.

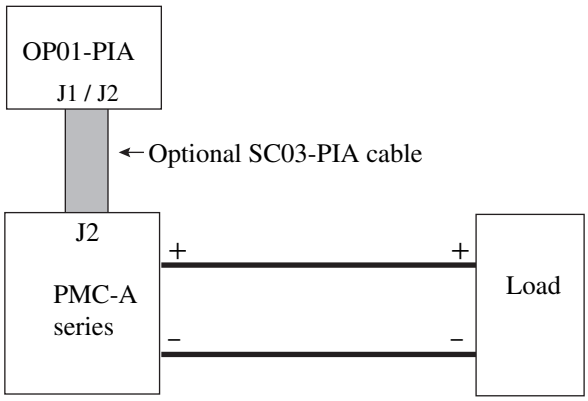

Fig.2 PMC-2 connections

4. PMC-3

The optional connecting cable "SC04-PIA" for the PMC-A Series is required.

Connect the optional connecting cable "SC04-PIA" between the PMC-A Series and the OP02-PIA as referred to the Table 2 "Pin Layout for PMC-3". For details on the PMC-A-Series connections, see the operation manual for the PMC-A Series.

Table 2　Pin layout for PMC-3

Cable color	OP02-PIA CH1/CH2	PMC-A series Control terminal	Remarks
Red	A	1	Output voltage control
White	B	3	Common for output voltage control
Red	C	9	Output current control
White	D	11	Common for output current control
Red	E	13	Output ON/OFF
White	F	14	Common for output ON/OFF
Black	Connect to the mounting screw on OP02-PIA.	—	Shield

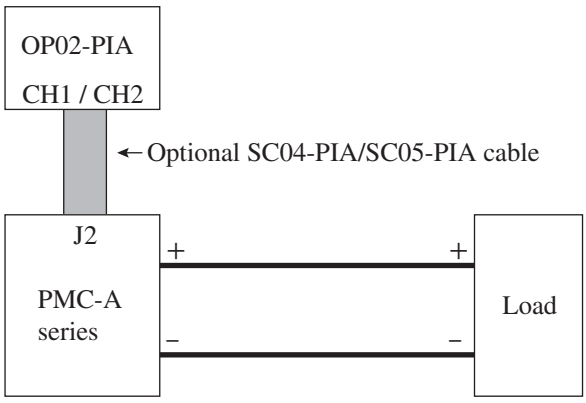

Fig.3　PMC-3 connection

5. Preparations for Starting Control

Settings on the PMC-A unit

Before starting the operation, set the position of switches in the sub-panel of the front panel (S1 to S5) of the PMC-A to the following status respectively. (remote settings for C.C and C.V).

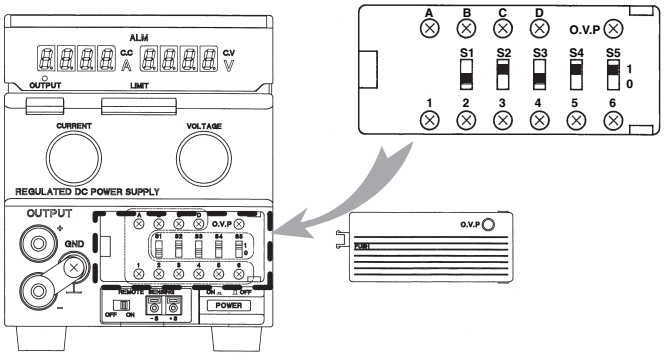

Fig.4　Switch settings

Table 3　Switch settings for PMC-A

Switch No.	Switch location
S1	Down position（0）
S2	Up position（1）
S3	Down position（0）
S4	Up position（1）
S5	Up position（1）

Setting and checking the PMC-A Model ID

The newest version of ID list can be downloaded from download service of Kikusui website (http://www.kikusui.co.jp/en/download/).

Table 4 ID list

ID No	Model	Output-current setting range [V]	Output-current setting range [A]	SH series	Switch setting position on the control board[*1]	
					100/200[*2]	101/201[*2,*3]
080	PMC18-1A	0-18.000	0-1.0000	Special orders	H	J2 connector 14-pins: L/NC 26-pins: H/NC
081	PMC18-2A	0-18.000	0-2.0000	Special orders		
082	PMC18-3A	0-18.000	0-3.0000	SH10		
083	PMC18-5A	0-18.000	0-5.000	SH10		
084	PMC35-0.5A	0-35.000	0-0.5000	Special orders		
085	PMC35-1A	0-35.000	0-1.0000	Special orders		
086	PMC35-2A	0-35.000	0-2.0000	Special orders		
087	PMC35-3A	0-35.000	0-3.0000	SH10		
088	PMC70-1A	0-70.00	0-1.0000	Special orders		
089	PMC110-0.6A	0-110.00	0-0.6000	Special orders		
090	PMC160-0.4A	0-160.00	0-0.4000	Special orders		
091	PMC250-0.25A	0-250.00	0-0.25000	Special orders		
092	PMC 350-0.2A	0-350.00	0-0.20000	Special orders		
093	PMC 500-0.1A	0-500.0	0-0.10000	Special orders		

*1. The setting positions for the switch of OP01-PIA or OP02-PIA.
*2. The number "100" and "101" are applied for the switch of Channel 1, "200" and "201" are for the switch of Channel 2.
*3. The setting positions of "L" or “H” is used for OP01-PIA, "NC" is used for OP02-PIA.

For the ID settings, see 3.4, “Configuration Software” of PIA4800 series operation manual.

Calibrating PMC-A

When a new Model ID has been set, be sure to conduct calibration.

Calibration can be performed for two parameters: output voltage and output current.

For the calibration procedure, see Chapter 3, “Calibration by Device Configuration” of PIA4800 series operation manual.

Checking PMC-A performance

Following calibration, set a voltage via GPIB or RS232C to check the performance of the PMC-A.

Checking procedure (example)

By sending the message “NODE 1;CH 1;VSET 12.0” to the PIA4800 series, make sure the preset voltage on the PMC-A is set at 12.0 V.

6. Commands

For the commands, see “Device Messages” of Connecting & Programming Guide.