BJ192e-9X4

Three-phase Combination Meter

User Manual

Version：1.1

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Read me

When you use BJ192e series Combination Meter, be sure to carefully read this user manual, and be able to fully understand the implications, the correct guidance of operations in accordance with user manual, which will help you make better use BJ192e series Combination Meter, and help to solve the various problems at the scene.

1. Before the meter turning on the power supply, be sure that the power supply within the provisions of the instrument;

2. When installation, the current input terminal must non-open, voltage input terminals must Non-short circuit;

3. Communication terminal (RS232 or RS485) is strictly prohibited to impose high pressure;

4. Be sure the instrument wiring consistent with the internal system settings;

5. When communicating with the PC, instrument communication parameters must be consistent with the PC.

- **Please read carefully before using this user manual**
- **Please save this document**

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Directory

CONTENTS **Page**

1.- SUMMARIZE

BJ192e series Combination Meter is used for power quality monitoring, factory automation and building automation.

These series can measure the power parameters in power grid:

Current,	Reactive power,
Voltage,	Apparent power,
Frequency,	Energy,
Active power,	Power factor,

Notes: User can choose any of the three above parameters, please recognition with Blue Jay sales before order!

It can replace many of a traditional analog measurement instruments, improve system accuracy and reliability.

2. - SPECIFICATIONS

1.- Reference standard:

Basic electricity: GB/T13850-1998 (IEC688-1992)
Active power: GB/T17215-2002 (IEC61036:2000)
Reactive power: GB/T17882-1999 (IEC61268:1995)

2- Accuracy standards

Parameter	Accuracy	A phase	B phase	C phase	All	Average
Voltage	0.5%fs	V1	V2	V3		VE
Current	0.5%fs	A1	A2	A3		AE
Active Power	0.5%fs	W1	W2	W3	W	
Reactive Power	0.5%fs	var1	var2	var3	var	
Apparent power	0.5%fs	VA1	VA2	VA3	VA	
Power Factor	0.5%fs	PF1	PF2	PF3	PF	
Active Energy	1%rd				Wh	
Reactive Energy	2%rd				varh	
Frequency	0.05%rd				Hz	

3.- Input

Voltage: Rated 100/400V
Current: Rated 5A (optional 1A)
Frequency: 45-65Hz

4.- Load

Voltage: <0.5VA / phase (rated 220V)

Current: <0.5VA / phase (rated 5A)

5.- Overload

Current: 2 times rated continuous; 10 seconds for 10 times the rated

Voltage: 2 times the rated continuous; 10 seconds for 600V

6.- Dielectric strength

IEC 688 / IEC 255-3 (1989)

2kV AC RMS 1 minute, between input / output / case / power supply

7.- EMC Test

	standard	Test voltage
Electrostatic discharge immunity test:	IEC-61000-4-2 level 4	8KV
Electrical fast transient burst immunity test:	IEC61000-4-4 level 3	Input 1kV; Power supply 2kV
Surge (Shock) immunity test:	IEC61000-4-5 level 4	common mode test voltage 4kV

8.- Work environment

Temperature: -20℃ ~ +60℃ (-4℉ ~ 140℉)

Humidity: RH 20%～95%（No condensation）

9.- Protection

Panel: IP40

10.- Storage Conditions

Temperature: -25℃～+70℃(-13℉ ~ 158℉)

Humidity: RH 20%～95%

11.- Power Supply

AC /DC 80-270V

Maximum power consumption 3W

12.- Dimensions

L × W × H =96x96x123mm (3.78x3.78x4.85 inch)

13.- Installation hole size

L × W =(91+0.8)×(91+0.8)mm [(3.58+0.032) x (3.58+0.032) inch]

3.- INSTALLATION AND START-UP

The manual you hold in your hands contains information and warnings that the user should respect in order to guarantee a proper operation of all the instrument functions and keep its safety conditions. The instrument must not be powered and used until its definitive assembly on the cabinet's door.

Whether the instrument is not used as manufacturer's specifications, the protection of the instrument can be damaged.

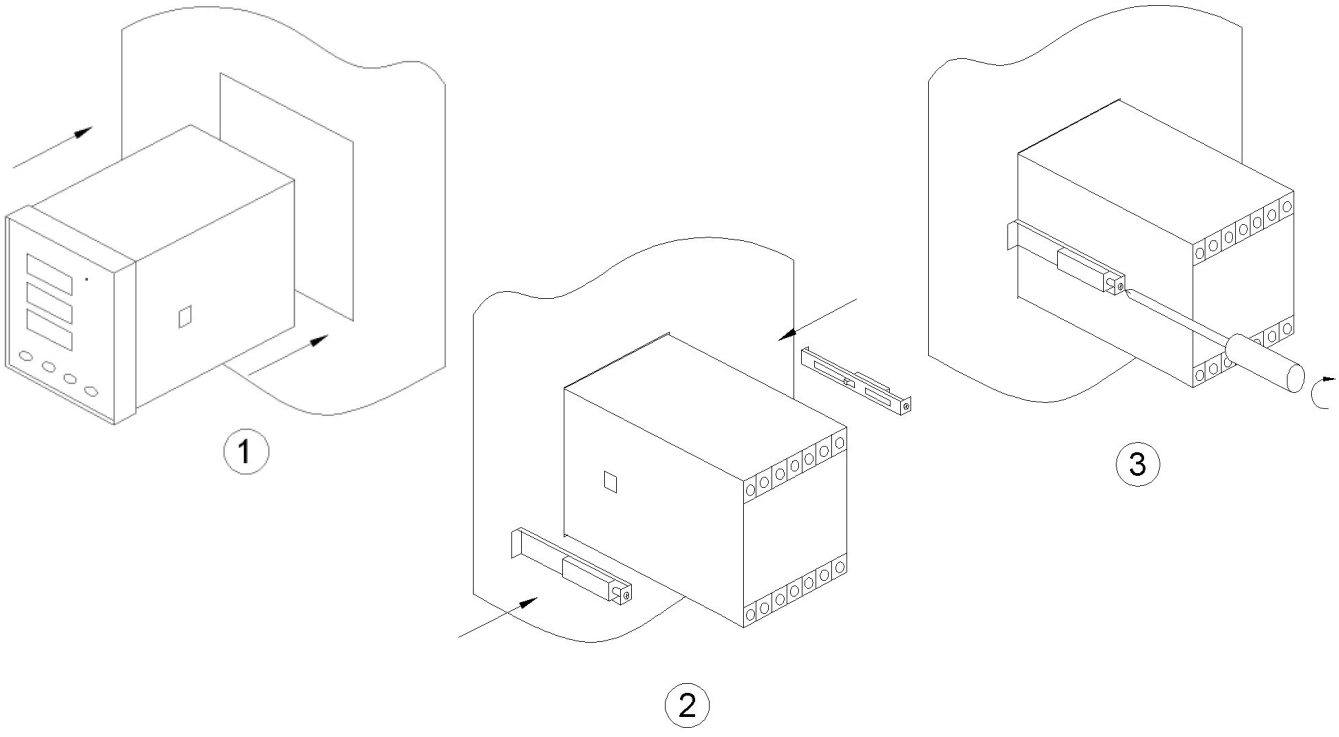
When any protection failure is suspected to exist (for example, it presents external visible damages),the instrument must be immediately powered off. In this case contact a qualified service representative.

3.1.- Installation

Mounting

Instrument is to be mounted on panel (cut-out *91+0.8 x 91+0.8 mm*). All connections keep inside the cabinet.

Note that with the instrument powered on, the terminals could be dangerous to touching and cover opening actions or elements removal may allow accessing dangerous parts. Therefore, the instrument must not be used until this is completely installed.



Notes:

Auxiliary power:

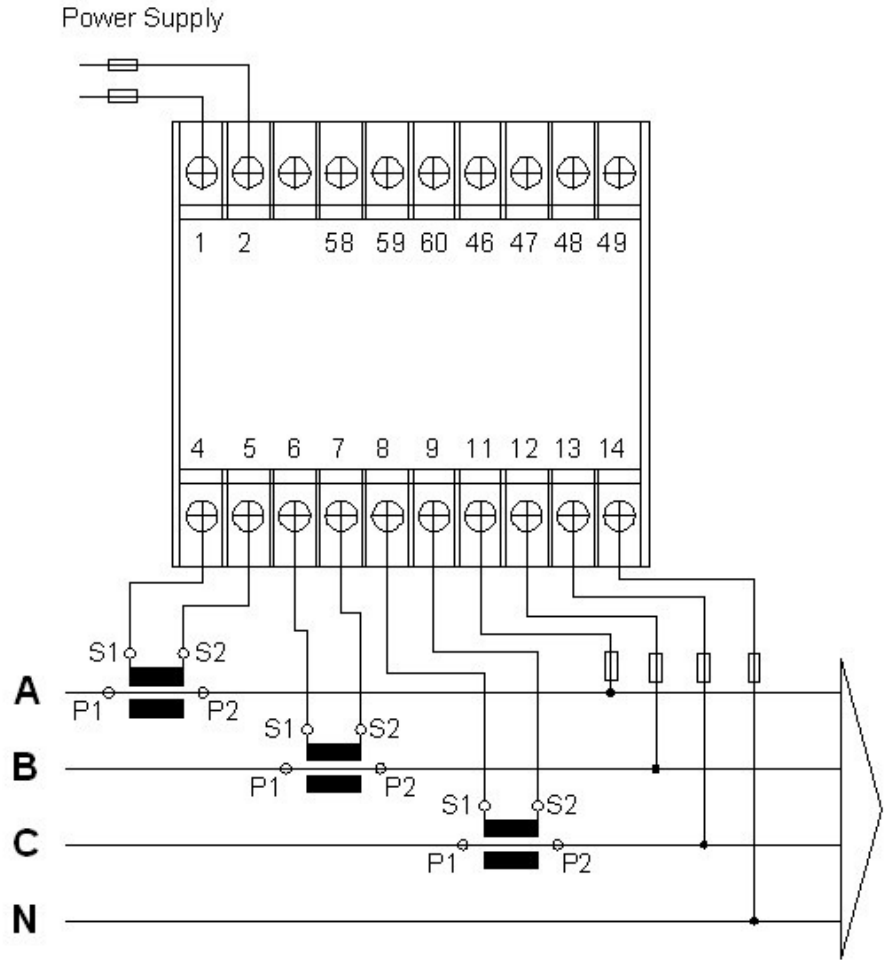
BJ192e Series Combination Meter with universal (AC / DC) power input, if not for a special statement, we provide the 220VAC/DC or 110VAC/DC power interface for standard products Instruments limit work power supply : AC / DC :80-270V, please ensure that the auxiliary power can match for BJ192e series meter to prevent damage to the product.

A. Suggest install 1A fuse in the fire line side.
B. For the areas with poor power quality, suggest install lightning surge suppressor and rapid burst suppressor to prevent lightning strikes

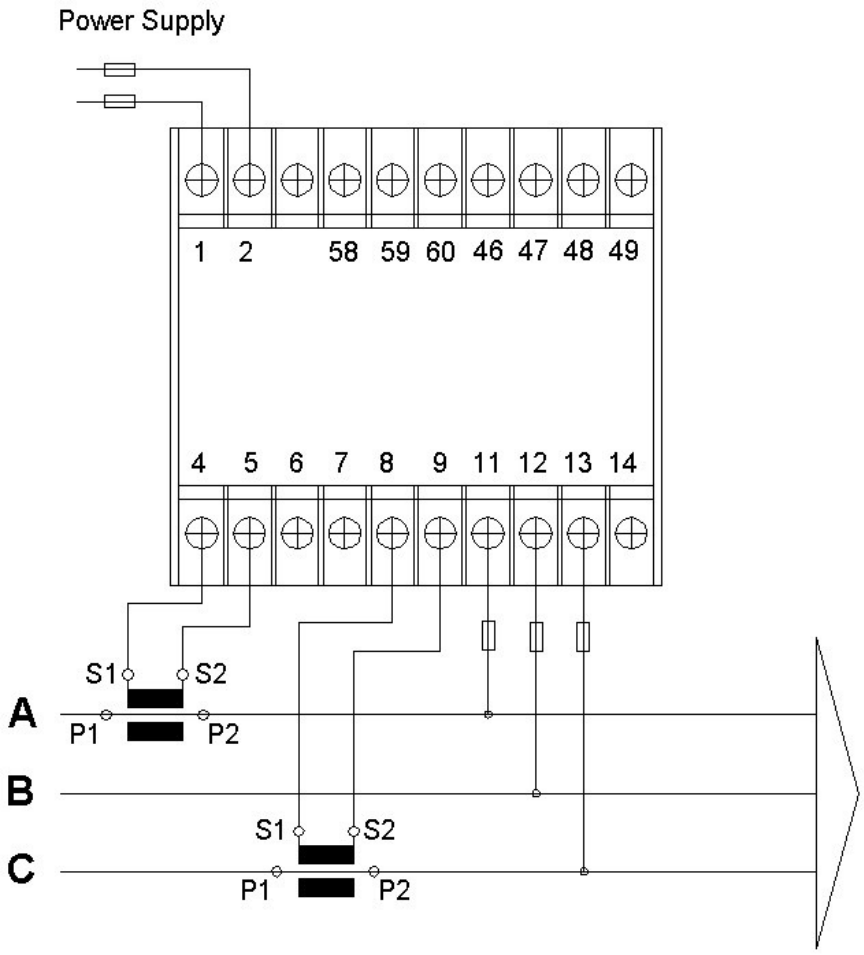
3.2.- Connection terminal and drawing for BJ192e (see label on the rear part)

Terminal description

*1. *Supply voltage input: 0 V*
*2. *Supply voltage input:220 Va.c.*
4. Current A-phase - S1 input
5. Current A-phase - S2 input
6. Current B-phase - S1 input
7. Current B-phase - S2 input
8. Current C-phase - S1 input
9. Current C-phase - S2 input
11. Voltage A-phase input
12. Voltage B-phase input
13. Voltage C-phase input
14. Neutral Voltage input
58. RS-485 (+)
59. RS-485 (-)
60. RS-485 (GND)



Three-phase network.- 3 wires (low voltage) :



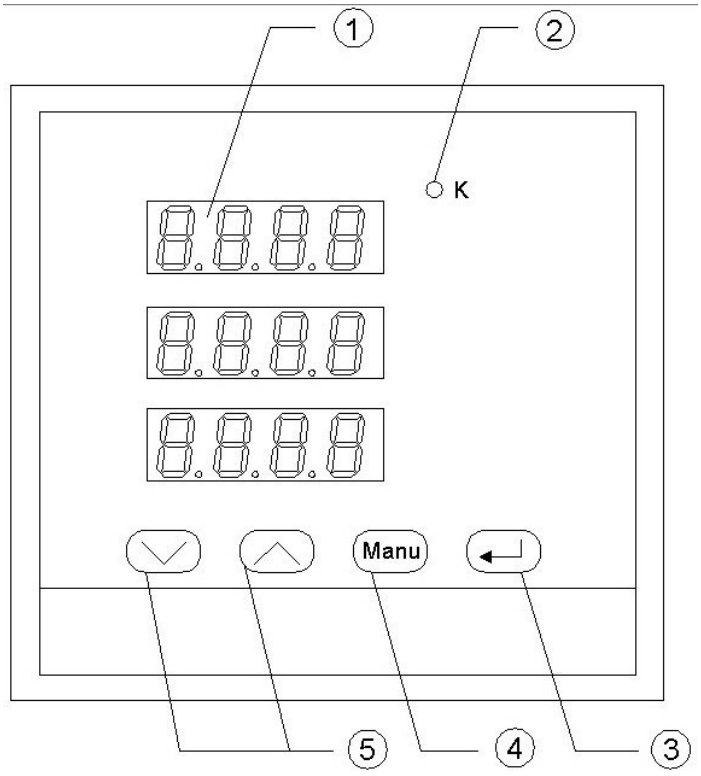
IMPORTANT REMARK!

If power = -0.01 is shown for any of the phases and voltage and current are not zero for this phase, check out following points:

- Assure that A,B,C phases coincide in voltage and current.
- Correct polarity? Reverse the current transformer placed at this phase.

4. Screen display

4.1.- Panel diagram:



4.2.- Display Summary

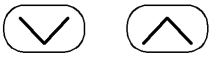
No.	Display	Explanation
1	Digital display module	Three lines 4 digital LED show active power
2	Indicator of the data Unit	"K" means thousand
3*	Enter key	For menu selection and confirmation
4*	Menu key	Used to open the menu and return to previous menu
5*	Up and Down key	Set the programming value

Note: Please see detail instructions of "*" items at "**OPERATION MODE"**

5.- OPERATION MODE

The instrument has three displays. Every led will be on according to the parameter presently shown in screen.

When the 192e-X is powered up, all the LED indicator will on, and meter start self- test, after some seconds, the meter is ready for operation and shows one of the available screens.



Parameters on display can be switch by pressing the key or . LED on the right indicate the parameters shown on screen at any moment.

At programming display mode, press and to increase or decrease the value, pressing the key and Manu or and Manu the instantaneous at the same time, value can increase or decrease number “x10”.

Pressing the "Manu" key the can open the programming menu and return to previous menu.

Pressing the ”Enter” key ,you exit it with saving any modification that you might have done, in menu operation press “Enter” key ,user can go to the next menu.

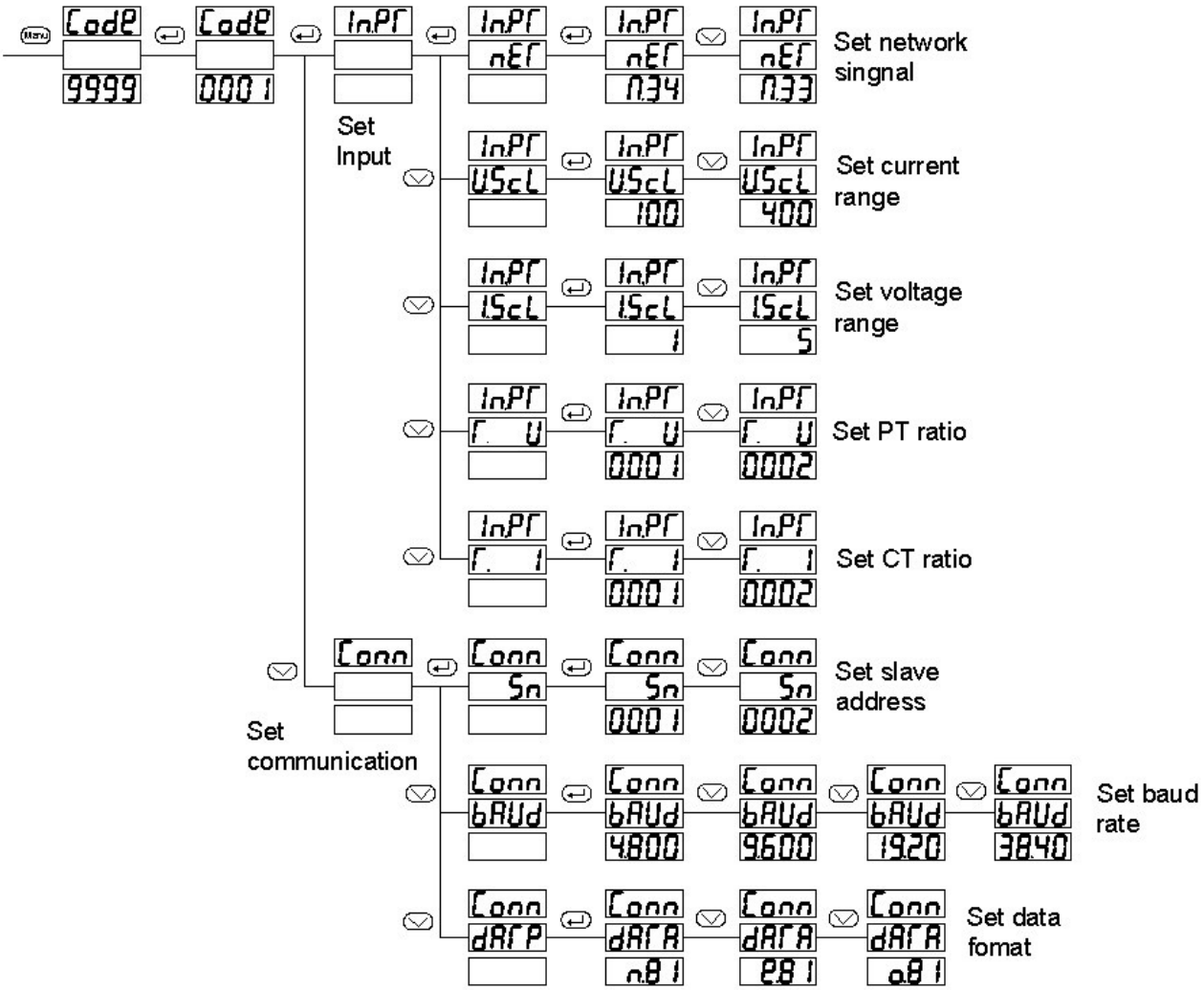
6.- SETUP PROCEDURE

The SETUP procedure of the BJ192e-X is performed by means of several SETUP options. Once into the SETUP, use the keyboard to select different options and enter required variables:

1. Password enter

2. Input signal selection

3. Communication preferences



7.- SAFETY CONSIDERATIONS

All installation specification described at the previous chapters named : INSTALLATION AND STARTUP, INSTALLATION MODES and SPECIFICATIONS.

Note that with the instrument powered on, the terminals could be dangerous to touching and cover opening actions or elements removal may allow accessing dangerous parts. This instrument is factory-shipped at proper operation condition.

8.- MAINTENANCE

The 192e-X does not require any special maintenance. No adjustment, maintenance or repairing action should be done when the instrument open and powered on, should those actions are essential, high-qualified operators must perform them.

Before any adjustment, replacement, maintenance or repairing operation is carried out, the instrument must be disconnected from any power supply source.

When any protection failure is suspected to exist, the instrument must be immediately put our of service. The instrument's design allows a quick replacement in case of any failure.

9.- TECHNICAL SERVICE

For any inquiry about the instrument performance or whether any failure happens, contact to Blue Jay's technical service.

Blue Jay - After-sales service

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