

DW Series 3 phase Coulometer Instruction Manual

Thanks a lot for selecting the product!
Before operating this instrument, please carefully read this manual and fully understand its contents. Any problems, please contact our sales or distributors whom you buy from. This manual is subject to change without prior notice.

Warning

Please do not turn on the power supply until all of the wiring is completed. Otherwise electrical shock, fire or malfunction may result.

Do not wire when the power is on.

Do not connect the unused terminals.

Do not turn on the power supply when cleaning this instrument.

Do not disassemble, repair or modify the instrument. This may cause electrical shock, fire or malfunction.

Use this instrument in the scope of its specifications. Otherwise fire or malfunction may result.

The use life of the output relay is quite different according to is capacity and conditions. If use out of its scope, fire or malfunction may result.

Caution

This instrument should be installed in a domestic environment. Otherwise electrical shock, fire or malfunction may result. The operating temperature environment should be between 0 (32F) to 50 (122F).

To avoid using this instrument in environment full of dust or caustic gas.

To avoid using this instrument in environment of strong shock or concussion.

To avoid using this instrument in environment of overflow water or explosive oil.

In case the instrument is use in environment of nuclear control, iatrical equipment, auto, train, airplane or security equipment that need protections, please contact the manufacturer for details.

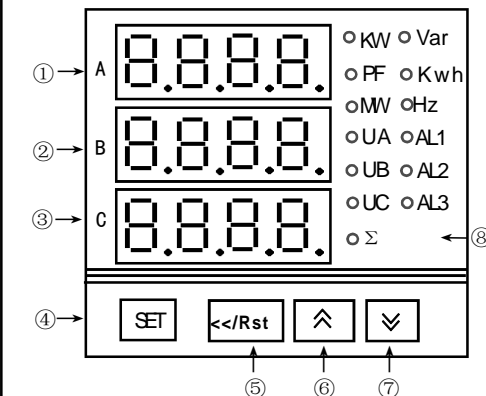
When it's for 8 digits coulometer, it displays in 2 windows 4 digits each. B window displays the high 4 digits, and C window displays the low 4 digits. Unit: WH/KWH available for user's choice.

Applications

The instrument is to measure any range of AC/DC voltage or current set by user. It can be available for data reserve or top value reserve function. To measure or display true value of voltage/ampere/watt/power factor/frequency/energy consumption. Up to 3 alarm output.

The instrument is widely applied to power system, factory power distribution, building automation etc. With RS485 for remote control.

Name of parts



- ① 3 phase KW/Var/PF/Kwh/MW/Hz display window
- ② 3 phase voltage measured value/parameter display window
- ③ 3 phase current measured value/parameter modified display window
- ④ Convert/Set/Confirm key
- ⑤ Shift/Clear key
- ⑥ Up key/Down key
- ⑧ Indication lamps
MW: 3 phase A/B/C/Σ watt
KW: 3 phase A/B/C/Σ watt
PF: 3 phase A/B/C/Σ power factor
Var: 3 phase A/B/C/Σ VAR
Kwh: 3 phase A/B/C/Σ energy consumption
inactive power displays when Var & Kwh lamps on at the same time
UA/UB/UC Ls Phase A/B/C/Σ running value
Σ: Summation of the 3 phase
AL1/AL2/AL3: Alarm1/2/3 On: Output Off: No alarm

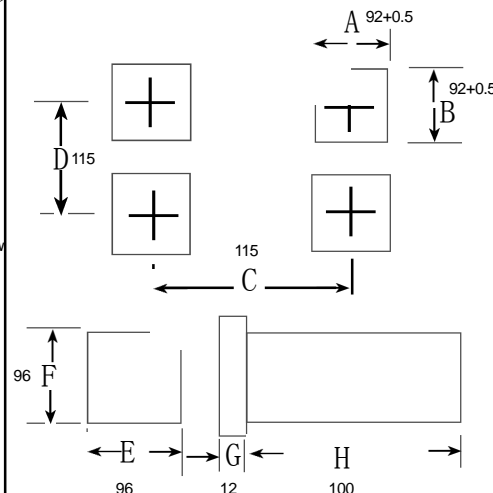
Notes: The instrument can measure both simple phase and 3 phase. Factory setting is 600V, 5A AC, P/T rate free set by software .Measure AC voltage more than 600V, please use the instrument with C/T. Measure AC current more than 5A, please use the instrument with P/T.

Three phase different voltage/current input need

Specifications

Power supply	90-260V AC/DC 50/60Hz others:18-30V AC/DC indicate when ordering
Measured objects	True value, simple/three phases/voltage/current/Watt/Power factor/frequency/energy consumption/reactive power
Direct input range	Voltage:0-600V Current:0-5A or 0-10A
P/T, C/T	P/T, C/T free set by software
Measured frequency range	0-2.5KHz
Accuracy	Voltage: $\pm 0.2\% \pm 0.1\%F.S$
	Current: $\pm 0.2\% \pm 0.1\%F.S$
	Watt: $\pm 0.3\% \pm 0.2\%F.S$
	Power factor: ± 0.01
Frequency	Display 0-400Hz $\pm 1Hz$
Analog	0-10V or 4-20mA selectable by software
Alarm	RELAY:NO 250V AC 3A or 30V DC 3A COS $\phi=1$
Communication	RS232 or RS485 with MODBUS TRU protocol

Dimensions

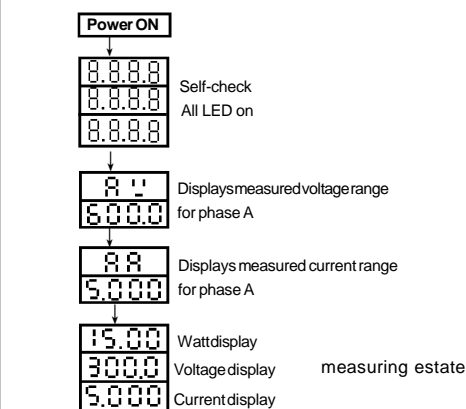


Parameter setting

1. In the measuring estate, press and hold SET key for more than 3 seconds, enter control parameters setting menu. Press <</RST key, LED flashes, press \wedge/\vee key to modify, and then press SET key to confirm. Press SET key to read the following parameters one by one.

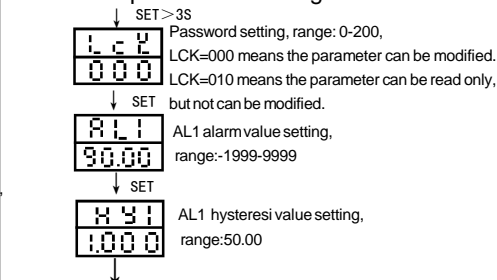
2. The instrument will return to the measuring estate without any operation for 25 seconds.
3. Convert display (Frequency input is displayed in A phase only, and voltage > 80V. A. Window A is mainly used to display KW/Var/PF/Kwh of one of phase A/B/C/. You can select one of them by press <</RST key. The indication lamps UA/UB/UC/ will show the present selected phase or summation. Press SET key can convert displaying KW/Var/PF/Kwh. B. Window B is mainly used to display voltage of phase A/B/C, indicated by UA/UB/UC lamps C. Window C is mainly used to display current of phase A/B/C, indicated by UA/UB/UC lamps
4. Kwh value clear: Press SET key, and let the indication lamp Kwh is on, press <</CLRkey to select the phase that you want to clear UA/UB/UC, then press <</CLR key for 2 seconds till the window A display "0" or "0.000".
5. Power fail protection. Only for 3 phase total Kwh value.
6. Window A power on display value setting: Set by the parameter "DIS".

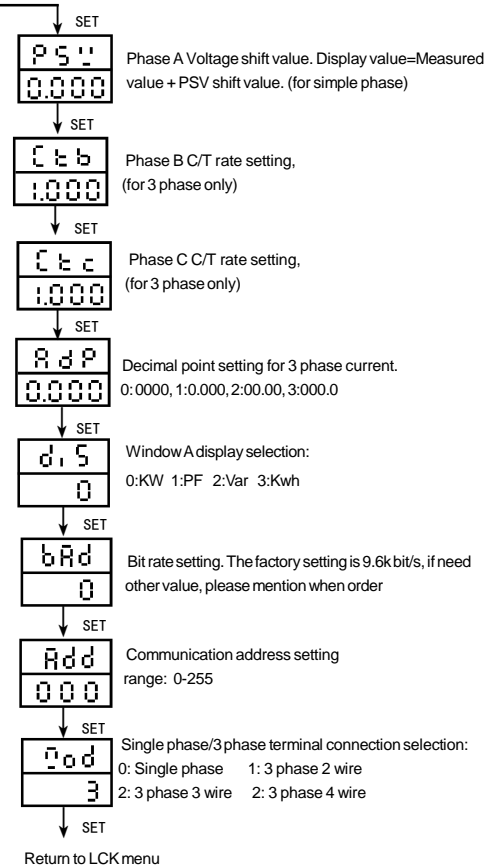
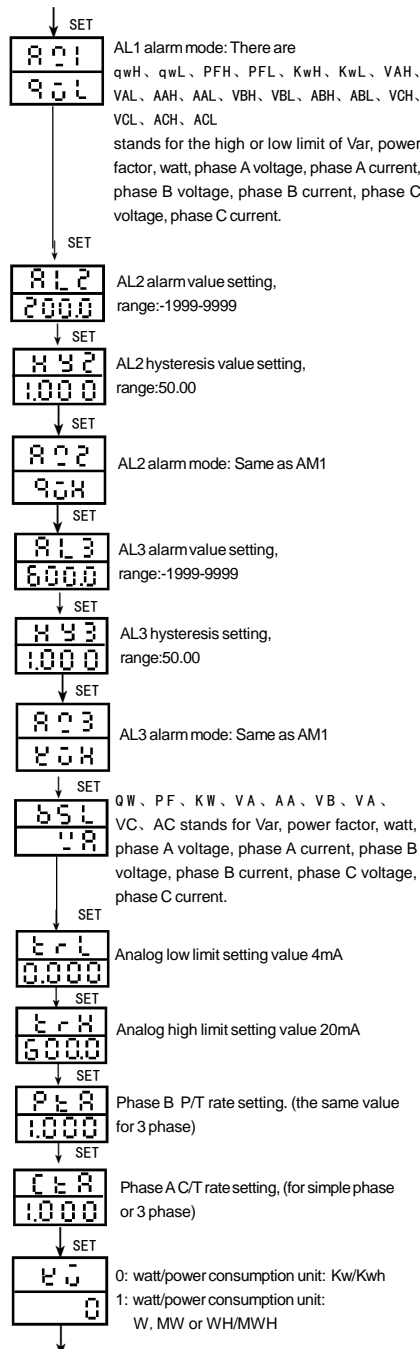
Operation processes



Enter parameter setting menu

Control parameter setting



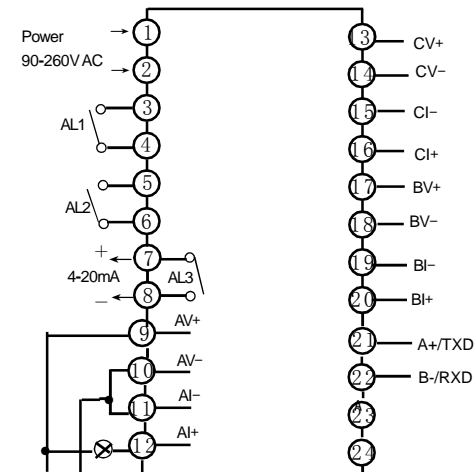


★ the parameters showed are factory setting.

Terminal configurations

(If any changed, please refer to the product showing)

1, Simple phase connections



Inspected equipment

For simple phase, connect only AV+/AV-/AI-/AI+, A phase for measurement.

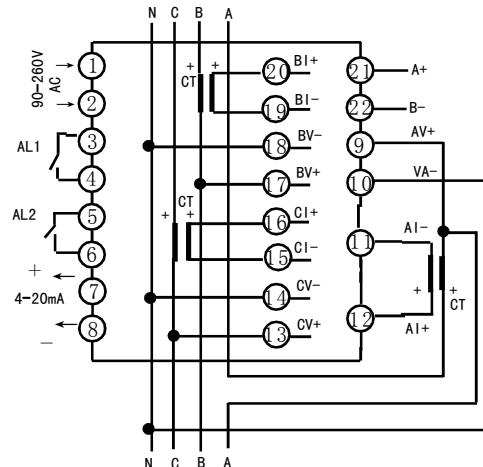
For 3 phase, BV+ BV-/BI+ BI-, B phase for measurement

CV+ CV-/CI+ CI-, C phase for measurement

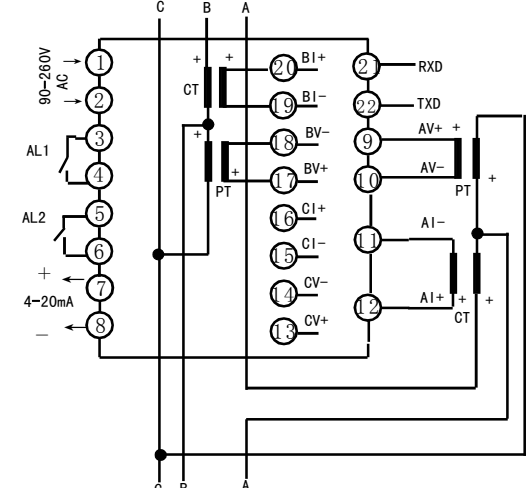
"+" "-" is just code for phase comparison relationship

Note: values are 8 digit LED display in total, each 4 in UP and DOWN. Normally displays Down 4 digits. Press the lamp flash, then display the UP values.

2, 3 phase 4 wires, without P/T, CT connections

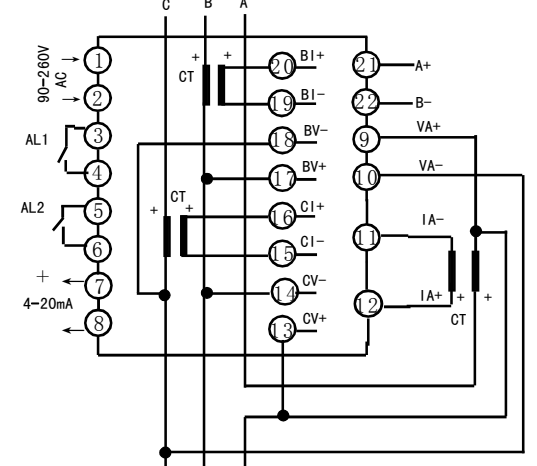


3, 3 phase 4 wires 2 phase(A/B phase only)



Note: when there is no transformer, please connect volt/ampere in series directly, eg the connection of 3 phase 4 wires without P/T, C/T connections

4, 3 phase 3 wires 3 phase (Power for A/B phase, C phase for display only)



Malfunction estimate

- ◆ Check the connection and wiring if it is correct. Specially pay attention to the power supply terminals and signal input terminals, please do not wrong connect. As well pay attention to do not short the output terminals by strong current.
- ◆ If the measurement is incorrect, please check if the connection is contrary.
- ◆ Check input mode setting, especially 3 phase connection. The parameter is 000