CHD9000 Series 3 phase Coulometer Instruction Manual

Thanks a lot for selecting Sanyou products!
Before operating this instrument, please carefully read this manual and fully understand its contents. If have 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

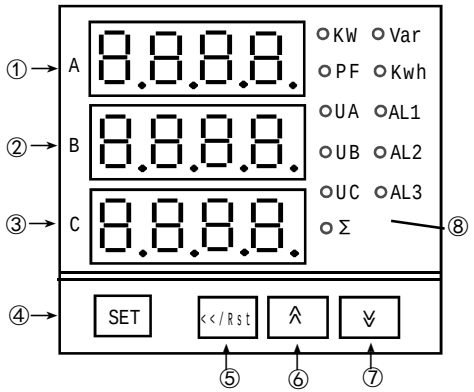
This instrument should be installed in a domestic environment. Otherwise electrical shock, fire or malfunction may result. The operating temperature environment should between 0 (32F) to 50 (122F).
To avoid using this instrument in environment full of dust or caustic gas.
To avoid using this instrument in environment of strong shock or concussion.
To avoid using this instrument in environment of overflow water or explosive oil.
The is no current protection power supply or fuse in this instrument. If reinforced is needed, the specifications of the fuse should be: 250VAC, 0.5A.
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.

★ 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 display window
② 3 phase voltage measured value/parameter display window
③ 3 phase voltage measured value/parameter modified display window
④ Convert/Set/Confirm key ⑤ Shift/Clear key
⑥⑦ Up key/Down key
⑧ Indication lamps
KW : 3 phase A/B/C/ watt
PF : 3 phase A/B/C/ power factor
UA/UB/UC : Phase A/B/C running
Σ: Summation of the 3 phase
Var:3 phase A/B/C/ VAR
Kwh:3 phase A/B/C/ energy consumption
AL1/AL2/AL3: Alarm1/2/3 On: Output Off: No alarm

Models

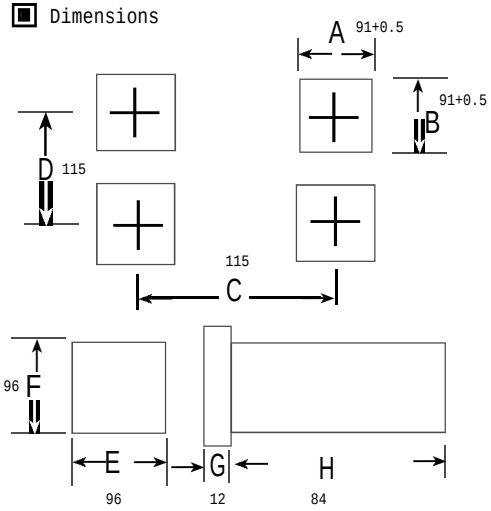
CHD9000□□ - □□□□□□ — Input signals: AV, AA, DA, DV for option
Communication interface
Blank: No communication
2: RS232 4: RS485
AL3: R:RELAY S: SSR/LOGIC
T: SCR N: No alarm
AL2: R:RELAY S: SSR/LOGIC
T: SCR N: No alarm
AL1: R:RELAY S: SSR/LOGIC
T: SCR N: No alarm
Analogue: Default: No analogue
I: DC 0-10V or DC 4-20mA
3: 3 phase
Power Supply: Default: 90-260VAC 50-60Hz E: DC 24V
DW series 3 phase of coulometer, size: 96x96x80mm

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 special order to mention each range.

Specifications

Power supply	90-260V AC/DC 50/60H
Measured objects	True value, simple/three phases/voltage/current/Watt/Power factor/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
Sampling rate	2 degre/s
Accuracy	Voltage: ± 0.4% ± 0.1%F.S
	Current: ± 0.3% ± 0.1%F.S
	Watt: ± 0.8% ± 0.2%F.S
	Power factor: ± 0.02
Analogue	0-10V or 4-20mA selectable by software
Alarm	RELAY: NO 250V AC 3A or 30V DC 3A COSΦ=1
Communication	RS232 or RS485 with MODBUS TRU protocol

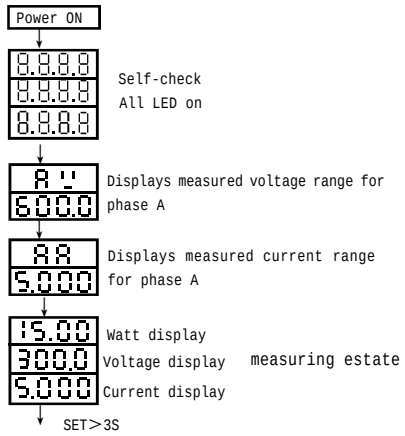
Dimensions



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 ∧/∨ 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
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 key to select the phase that you want to clear UA/UB/UC, then press <</RST key for 2 seconds till the window A display "0.000".
5.Power fail protection. Only 3 phase Kwh value is available.
6.Window A power on display setting: Set by the parameter "DIS".

Operation processes:



Enter parameter setting menu

Control parameter setting

SET>3S
Password setting, range: 0-200, LCK=000 means the parameter can be modified. LCK=010 means the parameter can be red only, but not can be modified.
SET
AL1 alarm value setting, range: -1999-9999
SET
AL1 deviation alarm setting, range ± 50.00

SET

AL1 alarm modes: There are qwH、qwL、PFH、PFL、KwH、KwL、VAH、VAL、AAH、AAL、VBH、VBL、ABH、ABL、VCH、VCL、ACH、ACL stands for the high or low limit of Var, power factor, watt, phase A voltage, phase A current, phase B voltage, phase B current, phase C voltage, phase C current.

SET

AL2 alarm value setting, range: -1999-9999

SET

AL2 deviation alarm setting, range ±50.00

SET

AL2 alarm modes: Same as AL1

SET

AL3 alarm value setting, range: -1999-9999

SET

AL3 deviation alarm setting, range ±50.00

SET

AL3 alarm modes: Same as AL1

SET

qw、PF、KW、VA、AA、VB、VA、VC、AC stands for Var, power factor, watt, phase A voltage, phase A current, phase B voltage, phase B current, phase C voltage, phase C current.

SET

Analogue low limit setting value 4mA

SET

Analogue high limit setting value 20mA

SET

Phase A P/T rate setting. (for simple phase only)

SET

PhaseA C/T rate setting, (for simple phase only)

SET

Power unit displaying
0:kw/kwh
1:W/MWor MH/MWH

SET

SET

Reserved

SET

Phase B C/T rate setting, (for 3 phase only)

SET

Phase C C/T rate setting, (for 3 phase only)

SET

Decimal point setting for 3 phase current. There are 0000, 0.000, 00.00, 000.0 for option

SET

Window A display selection:
0:KW 1:PF 2:Var 3:Kwh

SET

Bit rate setting. The factory setting is 9.6k bit/s, if need other value, please mention when order

SET

Communication address, setting range: 0-255

SET

Single phase/3 phase terminal connection selection:
0: Single phase 1: 3 phase 2 wire or 3 phase 3 wire 2: 3 phase 4 wire

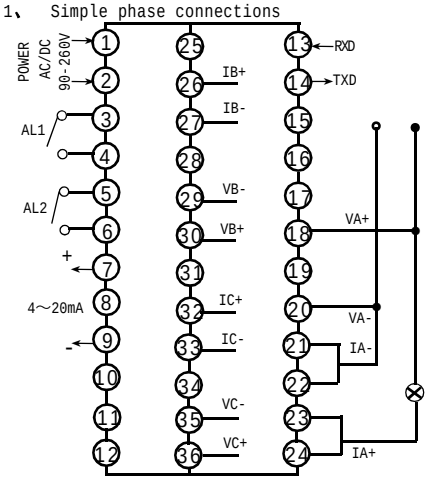
SET

Return LCK menu

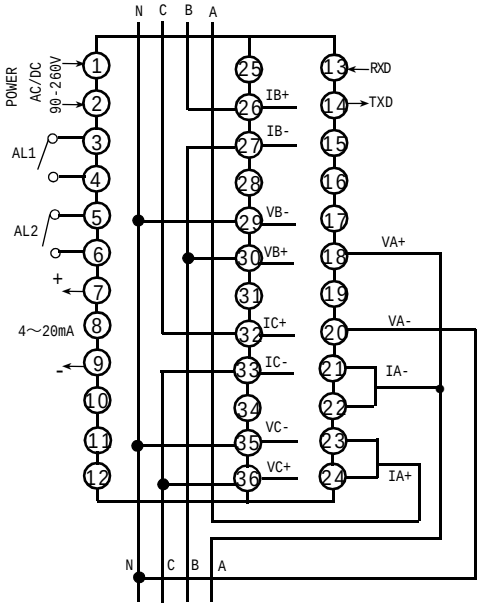
■ Terminal configurations

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

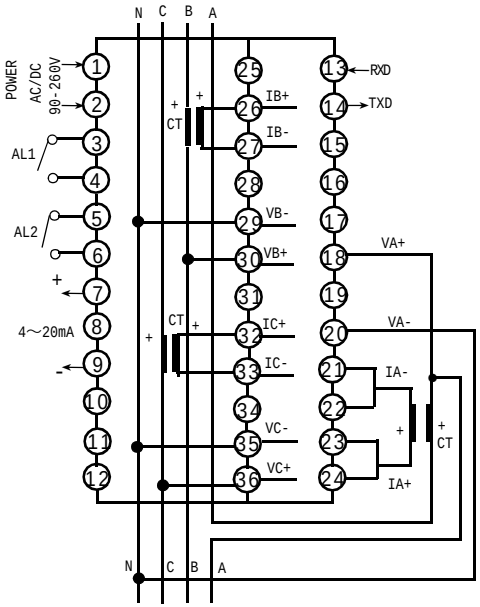
1、 Simple phase connections



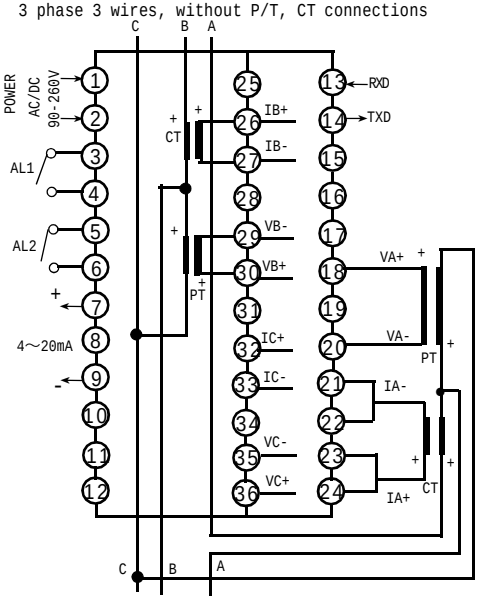
2、 3 phase 4 wires, without P/T, CT connections



3、 3 phase 4 wires, with P/T, CT connections



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



5、 3 phase 3 wires, with P/T, CT connections