Single-Phase Coulometer

DW Series

User Manual

ww.yotochn.net

DW8 48X96

DW9 96X96

Ordering Code

DW□ □-□ □ □ □ □ □ □ □ —

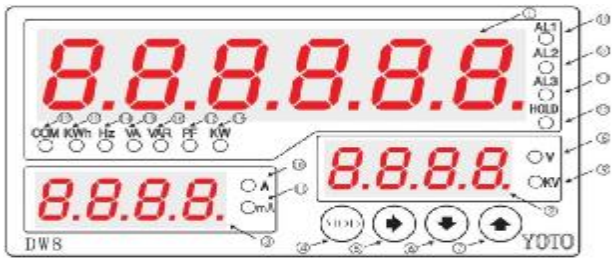
- IN2 input signal: AV, AA, DA, DV is optional
- IN1 input signal: AV, AA, DA, DV is optional
- Communication: Blank: no communication 2: RS-232 4: RS-485
- AL3: R: Relay S: SSR/ LOGIC T: SCR control N: no alarm 3#
- AL2: R: Relay S: SSR/ LOGIC T: SCR control N: no alarm 2#
- AL1: R: Relay S: SSR/ LOGIC T: SCR control N: no alarm 1#
- Analogue output: Default: No analogue output I: DC 0 ~ 10mA or DC 4 ~ 20mA
- Dimension: 8: 48H X 96W X 100L 9: 96H X 96W X 100L
- Power supply: Default: AC 90 ~ 260V 50/ 60Hz E: DC 24V
- DW Series Intellligent single pahse coulometer

Note: AV: AC Voltmeter AA: AC Ampere meter DA: DC Ampere meter DV: DC Voltmeter

Technical Data

Power supply	90-260V AC 50/60Hz
Measuring object	Ture effective value measuring , single phase, voltage/ current/ power/ power factor/ Frequency/ Kilowatt-hour/ reactive power etc
Direct input range	Voltage: 0 ~ 600V Current: 0 ~5A or 0 ~ 10A
PT, CT setting	Setting freely by software
Accuracy	Voltage: ±0.5%FS ±2 digit
	Current: ±0.3%FS ±2 digit
	Watt: ±0.5 %F S±2 digit
	Power Factor: ±0.5%FS ±2 digit
	Frequency: 0-400Hz ±1Hz
Analogue	0 ~ 10V or 4 ~ 20mA selectable by software
Alarm	Relay: Normal On 250V AC/ 3A or 30V DC/ 3A COSφ=1
Communicatin	RS232 or RS485 with MODBUS RTU protocol

Panel Illustration



⑱ Power indicator lamp: When flashing the unit is KW, else it's W. when on, the unit is W.

⑲ AL1# indicator lamp: ON: Alarm OFF: No alarm

⑳ AL2# indicator lamp: ON: Alarm OFF: No alarm

㉑ AL3# indicator lamp: ON: Alarm OFF: No alarm

㉒ Power fail data hold indicator lamp

① Measured value converting indication for Hz/ VA/ PF/ KW/ VAR/ KWh

② Voltage measure value/ Parameter code

③ Current measure value/ Parameter modification

④ MOD: Parameter select/ confirm key

⑤ Shift/ Energy consumption value clear key

⑥ Down key ⑦ Up key ⑧⑨ Voltage indicator lamp

⑩⑪ Current indicator lamp ⑫ Communication indicator lamp

⑬ Energy consumption KWh indicator lamp ⑭ Frequency indicator lamp

⑮ Apparent power indicator lamp. When light on, the unit is W, when flashing, the unit is KW.

⑯ Reactive power indicator lamp. When light on, the unit is W, when flashing, the unit is KW.

⑰ Power factor indicator lamp.

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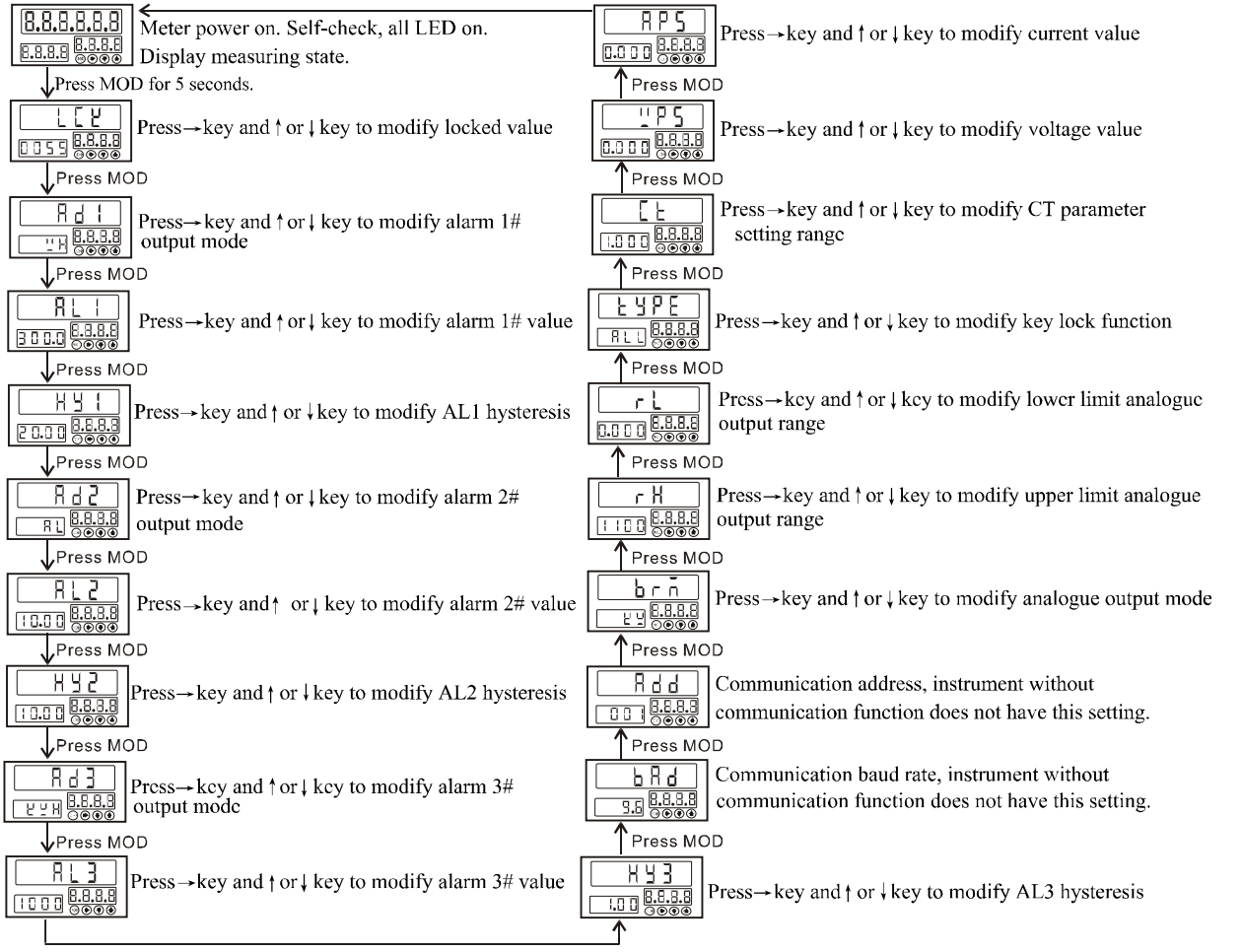
Operation Process

1. In the measuring state, press and hold MOD key for more than 5 seconds, enter control parameters setting menu. Press→ key to shift digit, LED light flashing, press↑ or↓key to increase or decrease and press→& ↑key to modify decimal point. Press MOD to confirm and to read the following parameters one by one.
2. The instrument will return to the measuring state without any operation for 25 seconds.
3. Press MOD and ↑key at the same time can clear the energy consumption KWh.
4. Peak value and power fail data memory function. Press MOD and↓key to read the voltage and current top value, press→key to clear.

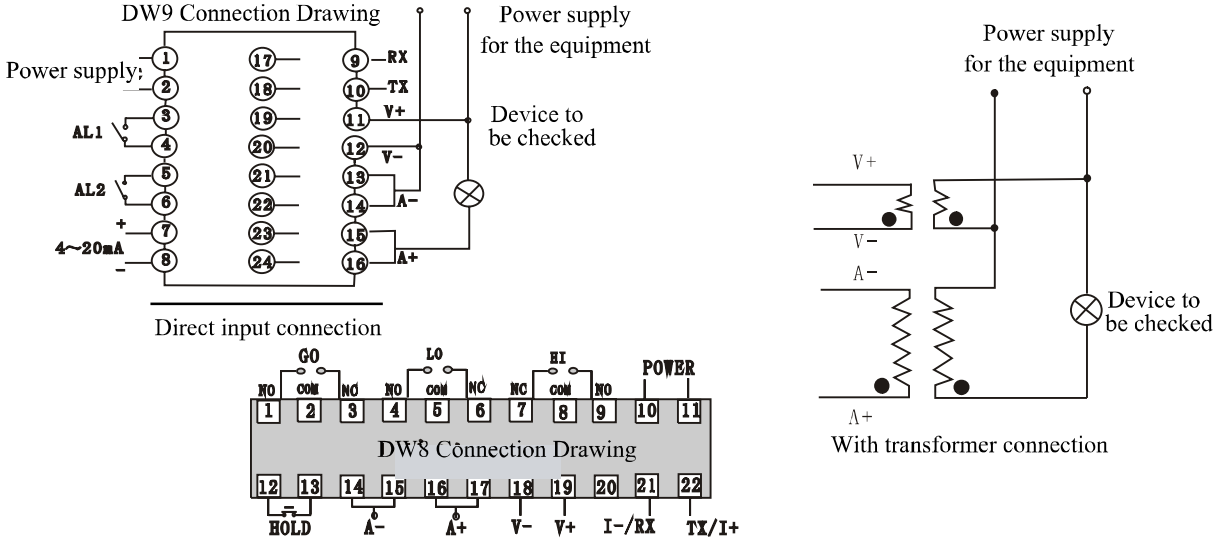


Menu Structure

Display	Name	Description	Factory setting
LCK	Menu Lock	If the value LCK=0055, parameters can be changed If the value LCK=other, parameters can be read but can not be changed	0055
Ad1	1st Alarm mode setting	AL1 alarm mode setting, there are VL, VH, AL, AH, HzL, HzH, PFL, PFH, KwL, KwH, VArL, VArH, KwhL, KwhH for option Note: L means Lower limit alarm, H means upper limit alarm, such as AL means lower limit alarm	VH
AL1	1st alarm value setting	AL1 setting range -1999 ~ 9999	10
HY1	AL1 Alarm hysteresis	AL1 hysteresis setting range:±50.00	0000

Ad2 Ad2	2# Alarm mode setting	AL2 alarm mode setting same as 1st alarm (Ad1).	AH
AL2 AL2	2# alarm value setting	AL2 alarm value setting range is same as 1st alrm (AL1).	10
HY2 HY2	AL2 Alarm hysteresis	AL2 hysteresis setting range is same as HY1	0
Ad3 Ad3	3# Alarm mode setting	AL3 alarm mode setting same as 1st alarm (Ad1).	KW
AL3 AL3	3# alarm value setting	AL3 alarm value setting range is same as 1st alrm (AL1).	10
HY3 HY3	AL3 Alarm hysteresis	AL3 hysteresis setting range is same as HY1	0
bAd BAd	Communication Baud Rate	Default baud rate is 9.6K Bit/S or 4.8K Bit/S. If need other value, please mention when order.	9.6K Bit/S
Add Add	Communication Address	Setting range: 0 ~ 255	001
brn Brm	Transmit output signals	V: Voltage transmit; A: Current transmit; PF: Power factor transmit Var: Reactive power transmit; Hz: Frequency transmit VA: Apparent power transmit; KW: Active power transmit	V
rH Rh	Transmit upper Limit setting	Display setting value for 20mA transmit output Setting range: -1999 ~ 9999	
rL R1	Transmit lower Limit setting	Display setting value for 4mA transmit output Setting range: -1999 ~ 9999	0.000
tYPE TYPE	Key Lock	This function is only applied to KWH = KWh、HZ =HZ、VA =VA、Var =Var、PF=PF、P =W/KW、ALL=ALL . If select (press) ALL key, meter can display all the set parameters. Then press MOD to modify.	ALL
Ct CT	Current transform (CT) setting	Setting range: 1.000 ~ 9999. For example, if the measured current is 10A user must use a current transformer which transform value is 10:5. Then 5A X 10A= 50A with CT.	1.000
VPS VPS	Voltage amendment value	Voltage display value after amendment: measured value + APS value Amendment Range: 0 ~ 9999	0000
APS APS	Current amendment value	Voltage display value after amendment: measured value + APS value Amendment Range: 0 ~ 9999	0000

Terminal Connection



Note: Please subject to the drawing on the meter if it is different to the one on the user manual.

For the current input connector, there are two connectors for one end. If load current is larger than 3A, please connect wire with all current input connectors as per the above drawing in order to share the input current per each end and avoid connectors over heating.

Warnning

1. Please do not turn on the power supply until all of the wiring is completed. Otherwise electrical shock, fire or malfunction may result.
2. 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.
3. Use this instrument in the scope of its specifications. Otherwise fire or malfunction may result.
4. The use life of the output relay is quite differenet according to its capacity and conditions. If use out of its scope, fire or malfunction may result.

Caution:

1). This instrument should be installed in a domestic environment. Otherwise electrical shock, fire or malfunction may result.

2). The operation temperature environment should between 0 (32F) to 50 (122F).

3). To avoid using this instrument in environment full of dust or castic gas.

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

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

6). There is no current protection power supply or fuse in this instrument. If reinforced is needed, the specifications of the fuse should be: rated voltage:250V AC, rated current: 0.5A.

7). The power supply wire should not put together with large current wire to avoid electromagnetic radiation. If it must be put together, we suggest to use the individual pipe or shielded cable.

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

Error Estimation

Check all 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 if the input mode is correct.