

Attention: Before operating CLJ-03A03 type temperature and humidity Laser Particle Counter, user must read this operating manual carefully, please! Keeping the manual for reference.

CLJ-03A03 Type Temperature And Humidity Laser Particle Counter

Executing standard: Q/320500BSK009-2005

OPERATING MANUAL

ISO9001: 2000 CERTIFIED

**SUZHOU CLEANING TECH. RESEARCH INSTITUTE
BAISHEN TECHNOLOGY (SUZHOU) CO., LTD.**

Welcome to use CLJ-03A03 Type Temperature And Humidity Laser Particle Counter, thank you warmly entering into our company's consumer team!

1. Introduction :

CLJ-03A03 type temperature and humidity temperature and humidity laser particle counter is set up 6 particles channel which can show directly testing & inspecting data, by microprocessor control. It possess the store and print function it can proceed testing and inspecting data's disposal to computer by RS232 /RS485 joint .

CLJ-03A03 counter is adopted laser diode to test the particle for lamp house , the laser diode's light irradiate at particle and is scattered. it focus on diode by condensing lens, than convert electric pulse signal by optical signal, impulse signal's height is particle size measured value, and is taking count of meantime cover electronic after amplifier enlarging , according to particle size range ,the test is proceed.

CLJ-03A03 counter is built-in sensor of temperature and humidity with which we can test T&RH.

2. Open the box acceptance check

2.1 This is an accurate test instrument. the product has already proceeded detection before leaving the factory, the consumers can directly be used for particle's testing and inspecting. when receiving goods, the customers should check the transportation damage situation first, if no wrapping transportation damage situation, please retain the packing material using for the transportation next time, the apparatus is testing instrument which need to be proceed calibration once per year, at that time, you can repeat using the wrapping.

2.2 spare part and accessories

Aluminium alloy suitcase : protect the apparatus from damage.

Motivity sampling head : it is used for disorderly flow environmental sampling action, It can be measured the particle size distribution. especially ,portable fixed-point particle test.

Filter: used for sensor's reset device to ensure sensor under no dust condition.

Charger: used for apparatus battery's charge.

RS232 port: between computer and printer's connection.

Matched compact disc: used for apparatus and computer application software.

Option accessory: Sampling bracket 、 Printer.

3. Usage attention

3.1 The apparatus can not be using in active gas, rot gas environment, otherwise it maybe bring blast danger and damage apparatus.

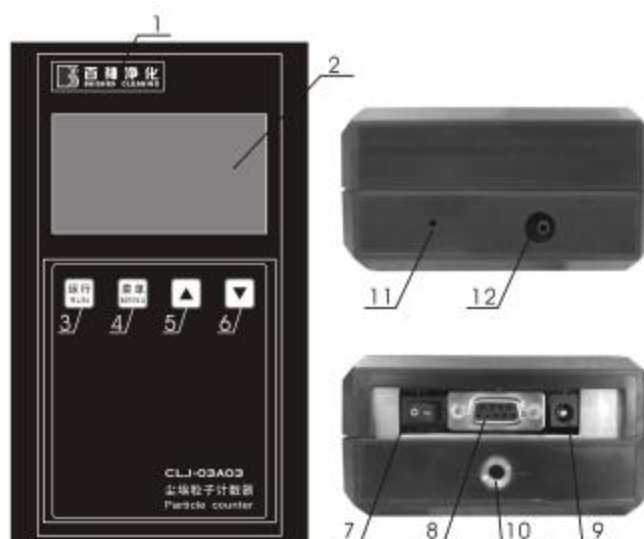
3.2 When using charger , pay attention to local voltage to prevent damage charger.

3.3 when using, the apparatus can not be grave impacted, otherwise, it will make optical system damage and shell disrepair which affect usage.

3.4 The Apparatus is a laser product, if it has any trouble, please contact with manufacturer, it can not be disassembled by oneself.

4. Panel display control button introduction

- (1) Company registered mark
- (2) Liquid crystal display monitor
- (3) Test , run and stop button (RUN)
- (4) Menu selection key
- (5)、(6) Set up key
- (7) Mains switch
- (8) RS232/RS485 and print port
- (9) Charge port
- (10) Tripod fixing screw hole
- (11) Humiture test outlet
- (12) Samplng outlet



Key position State	Run	Menu	π	θ
Initial interface	Run	Menu	209E/ISO Reset	Chinese English Shift
Menu	Exit	Select	Up	Down
Run	Stop	Menu	N/A	209E/ISO Mode
Data reading	Exit	Data printing	Up	Down

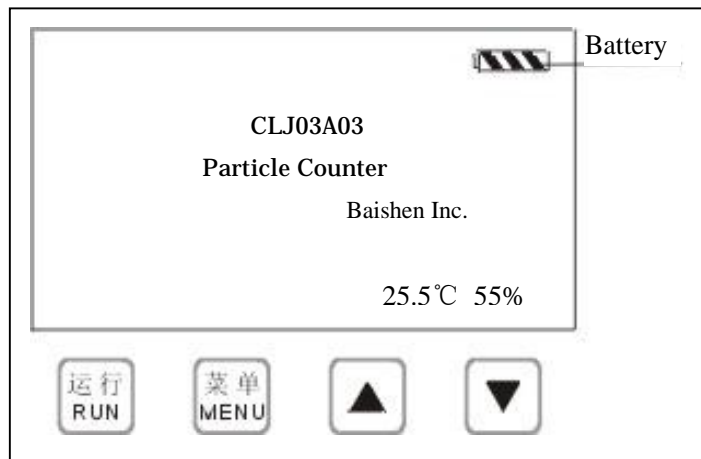
5. Displaying interface and panel function set up

A. Displaying interface

Put "ON" at general mains switch (Open)

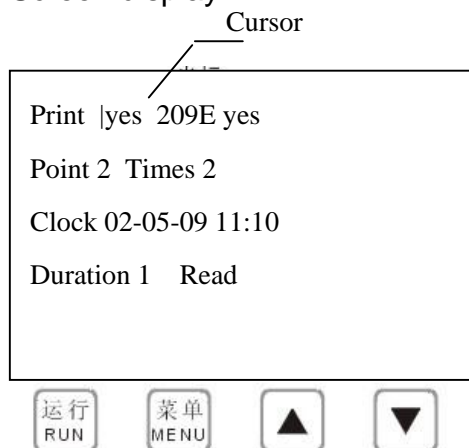
A.1 turn on

Screen display, interface is as follow:



Press menu key, screen display function is as follow:

Screen display



B. set time :

Press "△" selection, move cursor to back of clock (Cursor is broken line)

Set up year, move cursor to |00-00-00 00:00. Press menu key, cursor is real line, press "▽" key to ascertain year, after setting up year , press menu key again, cursor is broken line. Set up month, day, hour, minute according to up mentioned operation.

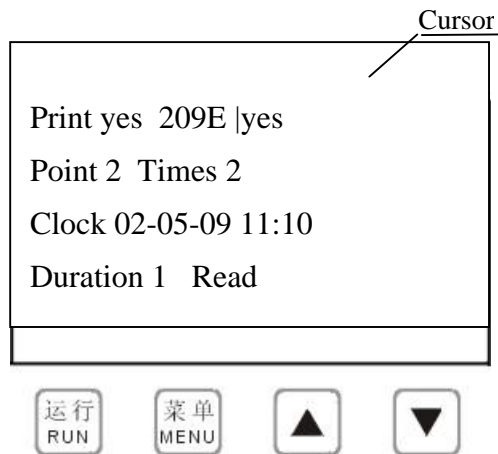
Set up month, move cursor to 00-|00-00 00:00

Set up day, move cursor to 00-00-|00 00:00


Set up hour, move cursor to 00-00-00 |00:00

Set up minute, move cursor to 00-00-00 00:|00



C. Set up 209E clean degree differentiate Menu display

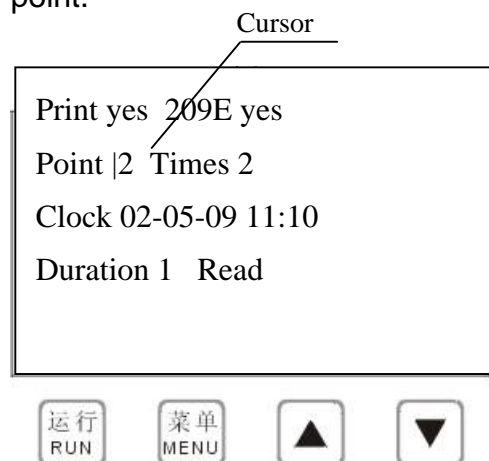


C.1 Set up 209E



Press " , move cursor to back of 209E, choice "Yes "or "Not ", Press menu key, cursor is real line. if select "Yes ": denote as select 209E functions, select "Not ":denote as no 209E functions.

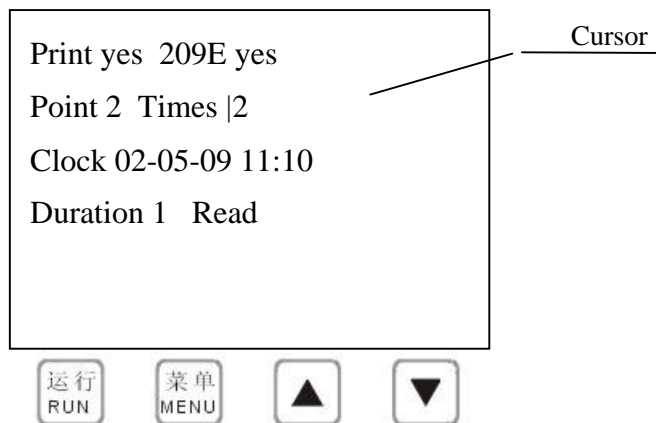
C.2 Set up the point

Press " " , move cursor to point back, then press menu key, cursor is real line, press " "  again, choice need the point, press menu key again, end setting up point.

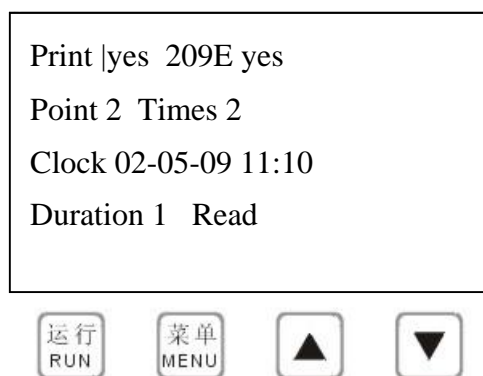


C.3 Fix each dot times

Press " " , move cursor to times back, then press menu key, cursor is real line, press " "  again, choice needed times, press menu key , end time setting up.



D. print setting up

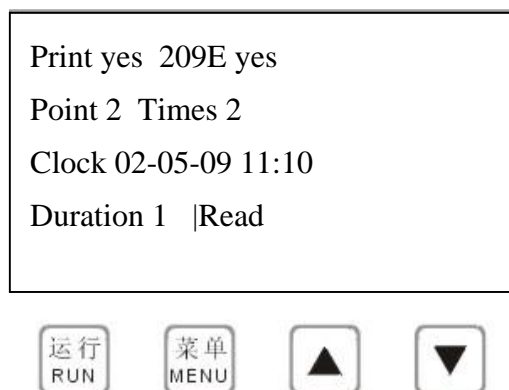


Press "key, move cursor to print back, press menu key, cursor is real line, choose to yes or not, "Yes "denote needing to print, "No "Denote: does not print, then press menu key, quit setting up.

E. cycle

Press "Δ" key, move cursor to the back of cycle, then press menu key, cursor is real line, press "Δ" key again, choice the check and measure cycle (Unit : minute), press menu key after setting, end cycle setting.

F. read



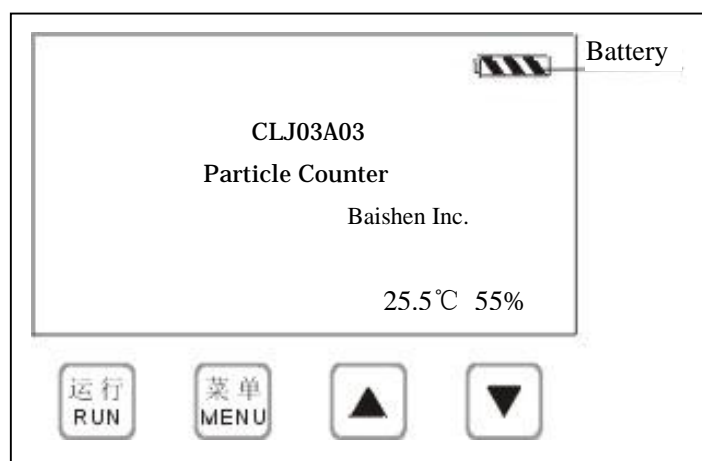
This function is for read at all point time that stored data.

Press "key, move cursor to in the front of read, press menu key. Press "key again to show each period of time's data one by one, after examining, press "run" to return beginning state.

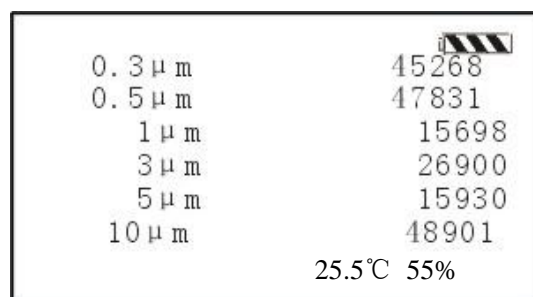
G. detection count

After the each item function setting up, and the sampling outlet is connected sampler, then detect and count.

Primary display



Press "run" key, enter into test, meanwhile, pump start up, after a minute, it stop, the screen will display each particle consistence per minute (Add up)



Apparatus reset : after finishing operation, proceed apparatus reset, please connect filter to sampling outlet, filter arrow direction points to apparatus sampling outlet, and come into running state till 0.5μ m display for 0, At "Test spot":enter to test point and name.

Press "run" key again, enter into next minute test until the continuous operation to end.

H. 209E determining

After pressing "run" key to enter into test mode, press

"Key into 209E

determining, screen will display the check number and time currently .after testing ,quit 209E determining mode automatically .next test will need to press " "key again. power supply can be closed between two 209E determinings, system could save the check number and time currently automatically .If need set the check number and time repeatedly, press " Δ " to make check number and time to set "1" repeatedly, recover starting condition .

0.3 μ m	45268
0.5 μ m	47831
1 μ m	15698
3 μ m	26900
5 μ m	15930
10 μ m	48901
Point: 1 Times: 1 25.5 °C 55%	

As the check number and time arrive setting value, the meter can calculate UCL automatically

0.3 μ m	45268
0.5 μ m	47831
1 μ m	15698
3 μ m	26900
5 μ m	15930
10 μ m	48901
UCL0.5	5.0/28.3L ISO
47831	1593 8

Cleanliness Comparison

ISO14644-1	FS-209E	PCS/CF	
		0.5	5.0
5	100	100	-
6	1000	1000	7
7	10000	10000	70
8	100000	100000	700
9	>100000	>100000	>700

UCL:mean value 95% certainty factors (PCS/CF).

If the meter is connected to printer, meanwhile,it has already set up print mode, the screen content and clean class will be printed.

I. charging

When quantity of electricity sign shows "empty", it need to be charged use

charger (No use other charger to prevent damaging) 。 red lamp light for charging, green lamp light for full .

6. The software using illustration


CLJ03A03 can be connected with computer , the users can read the storage content of CLJ03A03 by the software, convenient for proceeding report print and data storage.

6.1 Connecting Port

CLJ03A03 RS232 serial port can be connected to computer's serial port by 9 pins serial cables (port number is COM1).

6.2 Read storager content

open CLJ03A03 power supply, start computer and run CLJ03A. EXE.Choice "Online operation " - "Read storager content ", if connecting is right, the user can read the past store data from CLJ03A03 . CLJ03A03 will be showed "Computer link " "Uploading data ", "Transfer completed "will be not showed on the liquid crystal screen till the



测试地点	时间	0.3 μm	0.5 μm	1 μm	3 μm	5 μm	10 μm	点数	次数	ISO	209E	温度	湿度
<input checked="" type="checkbox"/> 灌装车间	2005-4-25 14:19	10	5	0	0	0	0	0	0	5	100级	20.9℃	45%
<input checked="" type="checkbox"/> 制造车间	2005-4-25 20:39	23	7	0	0	0	0	0	0	5	100级	21.4℃	43%

schedule bar of host computer is completed.

6.3 print

hook in small pane, then choose to print for the report printing.

6.4 Data's conservation and reading

choice "File " - "Save ", save the data content;

choice "File " - "Read ", can put in saving data content;

The data file format is "CSV "Format, it can be used Excel software

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