

**LM-YHD-03**  
**Use Manual of Heatless Regenerative**  
**Adsorption Air Dryer Control Box**

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**Attention**

1. Please read the manual carefully and wiring according to the requirements, when installation or maintenance, avoid producing External short circuit and damage the internal components.
2. To ensure the safety, Maintenance personnel must cut off power supply first, to check the output lines, because the output terminal is electrically charged.
3. After sensor installation, please no electricity or gas welding for the adsorption air dryer, so as not to damage the sensor.

# Chapter one - technical condition

## 1. Function summary

The LM-YHD series heatless adsorption dryer control box adopt PLC+LCD panel or touch screen display, which is more reliable and simple than SCM control on the market.

The machine with the features of advanced technology, reliable performance, complete functions, attractive appearance, more convenient operation, installation and maintenance, in addition, which adopted the independent power supply processing module, the performance is more reliable, and with the output display of dew point and inlet temperature, including dew point energy saving control function.

## 2. Technical indicator

(1) **Power input:** Ac voltage 220v±5%, 50HZ/60HZ

(2) **Power supply:** 24W

(3) **Switch output:** voltage is AC220v or DC24v, perceptual load current 0.8A, Impedance load: 2 A

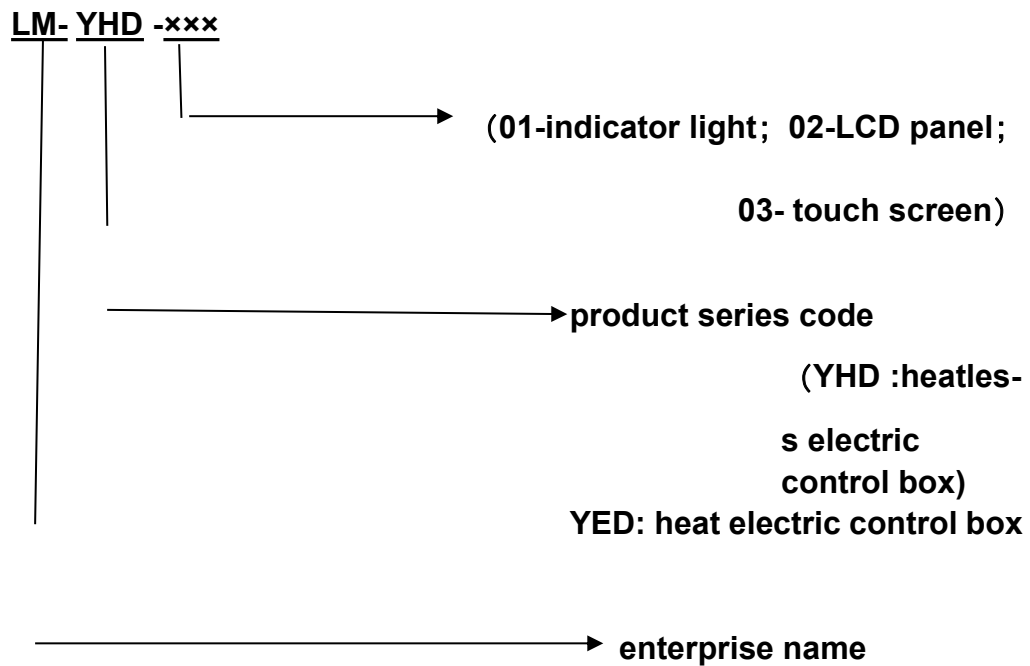
(4) **Switch input:** 8 point input, GND for public input.

(5) **Work environment:** Temperature: 0~50℃, humidity less than 85%, vibration less than 0.5g. Ambient air has no obvious dust, acid, corrosion gas or material.

## 3. Controller model named

Model	Input	Output	Analog input	Hole size
LM-YHD	8	6	3	163X85(MM)

## Naming principle :



## 4. Content of function and measurement and control

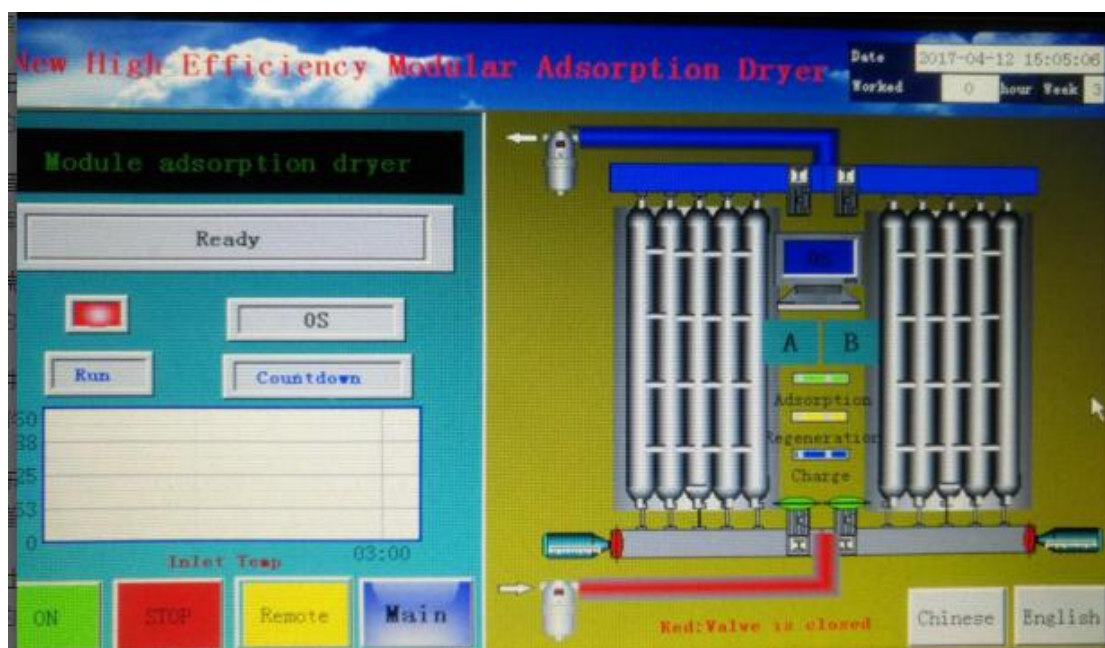
function	model	
Temperature acquisition/monitor	Channel	probe
Inlet temperature	yes	yes
Outlet temperature	yes	no
Dew point temperature	yes	no
Switch value input	Channel	remark
Lock together	yes	standard
Local/remote starting up	yes	standard
Time control/dew point control	no	standard
Positive valve/against valve	yes	standard
Switch value output	Channel	standard
Warning	yes	standard
Running indication	yes	standard
Inlet /outlet solenoid valve of group A	yes	standard

Inlet /outlet solenoid valve of B group	yes	standard
Remote operation indication	no	standard

## Chapter two - operation and maintenance

### 1. Boot screen

After power on the screen display as follow:



Key	Function and (authority)	Purpose
On	Quick function key (touch) no permission	Boot
Stop	Quick function key (touch) no permission	Stop
Remote	Quick function key (touch) no permission	Local or remote switch key. Note: touch screen also can control starting up or stop machine under the remote control
main	Quick function key (touch) no permission	Switch to main screen
Chinese	Quick function key (touch) no permission	Chinese display

<b>English</b>	Quick function key (touch) no permission	<b>English display</b>
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## Working state

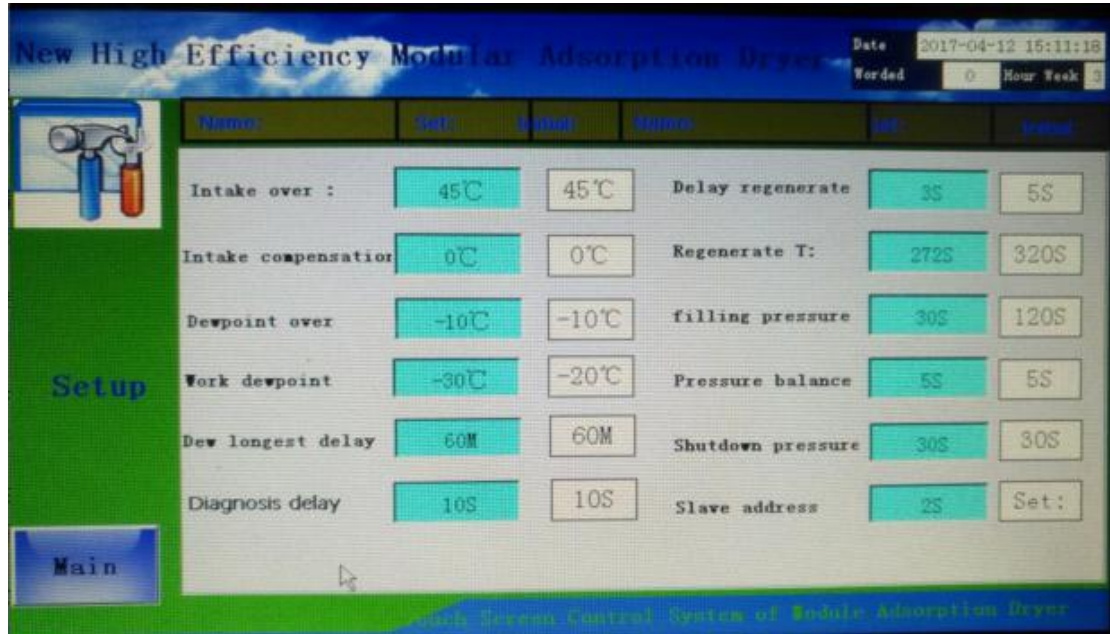
Display output	Function	Purpose
Pressure stamping in stopping	Working state	At pressure stamping stage in the delay time of boot
Ready	Working state	The system have already prepared to work
Buffer delay	Working state	Buffer to pressure balance of two groups tank
Group A adsorption, group B waiting for regeneration	Working state	Enter the state of group A adsorption, group B waiting for regeneration
Group A adsorption, group B regeneration	Working state	Enter the adsorption of group A, group B for regeneration
Group A adsorption, group B stamping pressure	Working state	Enter the adsorption of group A, group B in pressure stamping
Group A adsorption, group B pressure equalizing	Working state	Enter the state of group A adsorption, group B pressure equalizing
Group B adsorption, group A waiting to regeneration	Working state	Enter the state of B group adsorption, A group waiting to regeneration
Group B adsorption, group A regeneration	Working state	Enter the state of group B adsorption, group A regeneration
Group B adsorption, group A stamping pressure	Working state	Enter the state of group B adsorption, group A stamping pressure
Group A adsorption, group B pressure equalizing	Working state	Enter the state of group A adsorption, group B pressure equalizing

## 2. Main screen



Key	Function and (permissions)	Purpose
<b>Log in</b>	Function key (touch) no permission	Switch to this screen.
<b>Log out</b>	Function key (touch) no permission	Switch to this screen.
<b>flow</b>	Function key touched by technical person or manufacturer	Switch to this screen.
<b>Alarm screen</b>	Function key (touch) no permissions	Switch to this screen.
<b>setting</b>	Function key touched by technical person or manufacturer	Switch to this screen.
<b>Password set</b>	Function key (touch) no permissions	Switch to this screen.
<b>Y5 spare</b>	Function key (touch) no permissions	Spare: intake valve Y0 of group A intake valve Y1 of group B exhaust valve Y2 of group A exhaust of Y3 of group B

### 3. Setting parameter screen 1



Name	Setting value or function description	Setting range
Shutdown pressure	30s	3~999s
Delay regenerate T	5	1~3600s
Regenerate T	272s	1~3600s
Filling pressure T	30s	1~3600s
Pressure balance T	5s	1~3600s
Slave address	2s	1~255s
Intake over	45°C (no permissions)	0~300°C
Dew point over	-10°C (no permissions)	-500°C~500°C
Intake compensation	0°C (no permissions)	-500°C~500°C
Dew point Temp compensation	0°C (no permissions)	-500°C~500°C
Dew longest delay	60min	1~999min
Work dew point	-30°C	-100°C~30°C

User can adjust the corresponding parameters according to the needs of the work.

#### 4. manufacturer setting parameters screen 2



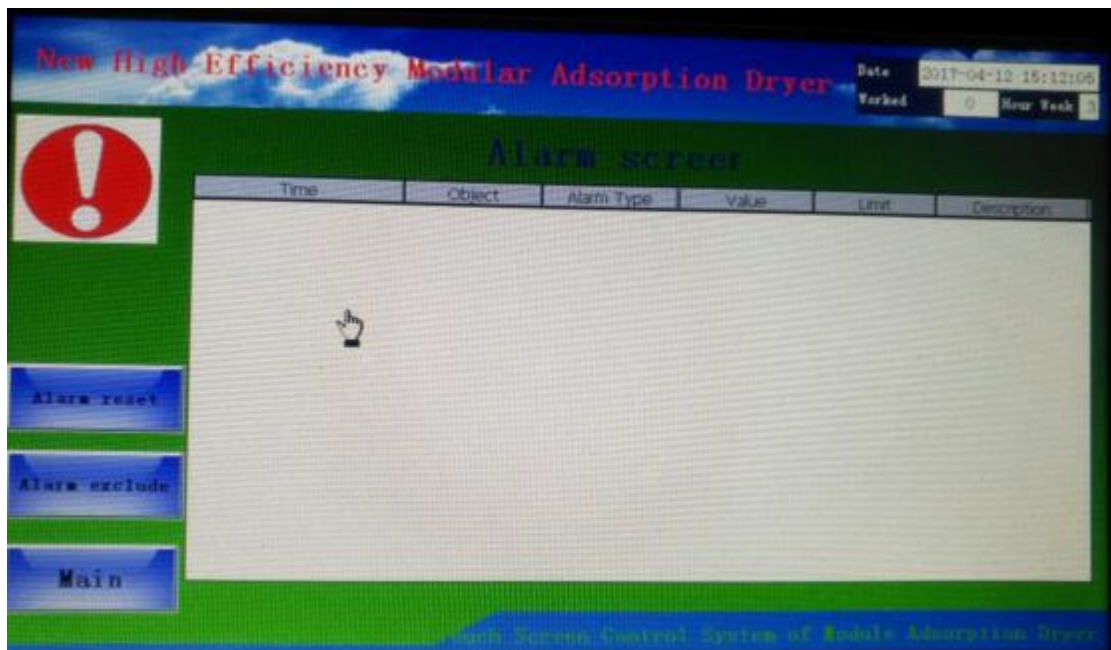


Name	Setting value or function description	Setting range
Dew point range setting	-100°C (+20~-100) (no permission) -80°C (+20~-80) (no permission) -60°C (+60~-60) (no permission) -40°C (+60~-40) (no permission)	-100\ -80\ -60\ -40
Dew point Temp compensation	0°C (no permission)	-500°C ~500°C
Muffler replacement time	0H	0-30000 (H) When setting 0, the operation time not limited, if not 0, and less than the setting time, the machine will alarm but not stop
Maintenance time setting	0H	0-30000 (H) When setting 0, the operation time not limited, if not 0, and less than the setting time, the machine will alarm and stop
Positive/negative valve selection	Function key (Touch )	Positive valve: intake often open: Negative valve: intake often close:

Main	Function key (Touch )	Switch to main screen 。
Run time is canceled	Function key (Touch )	Clear the run time
Intake Temp button	Function key (Touch )	The channel of inlet temp open or close
Dew point Temp button	Function key (Touch )	Dew point temp open or close
Dew point/time control button	Function key (Touch )	When open the dew point temp can dew point control or time control, if close, must set time control.

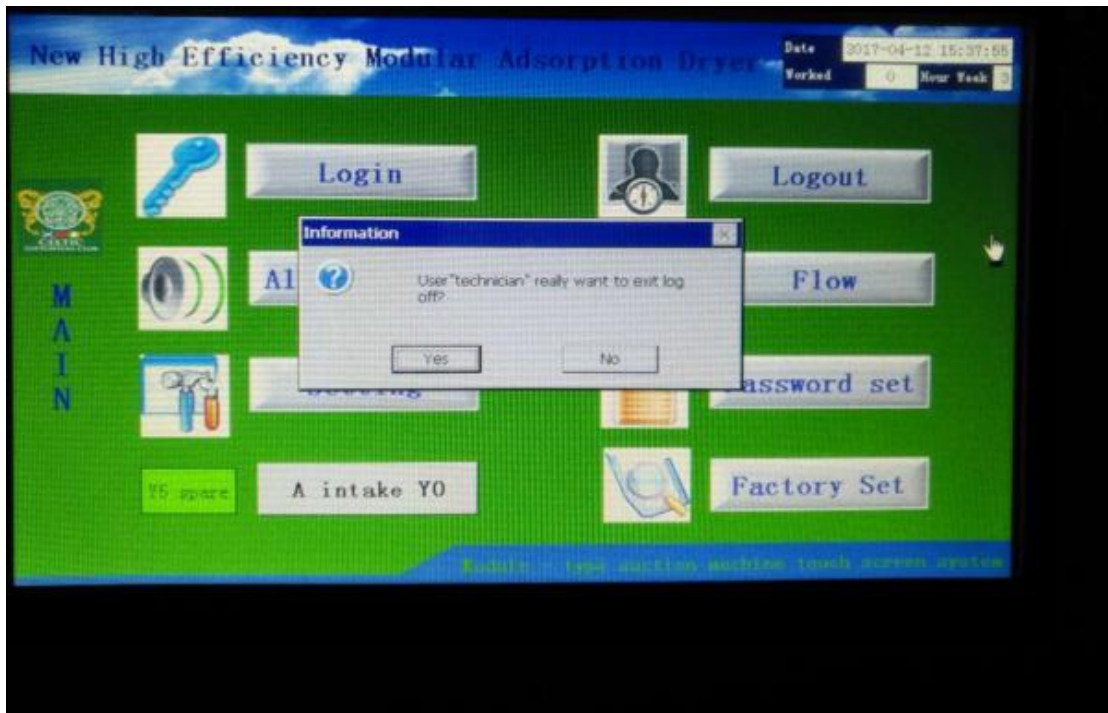
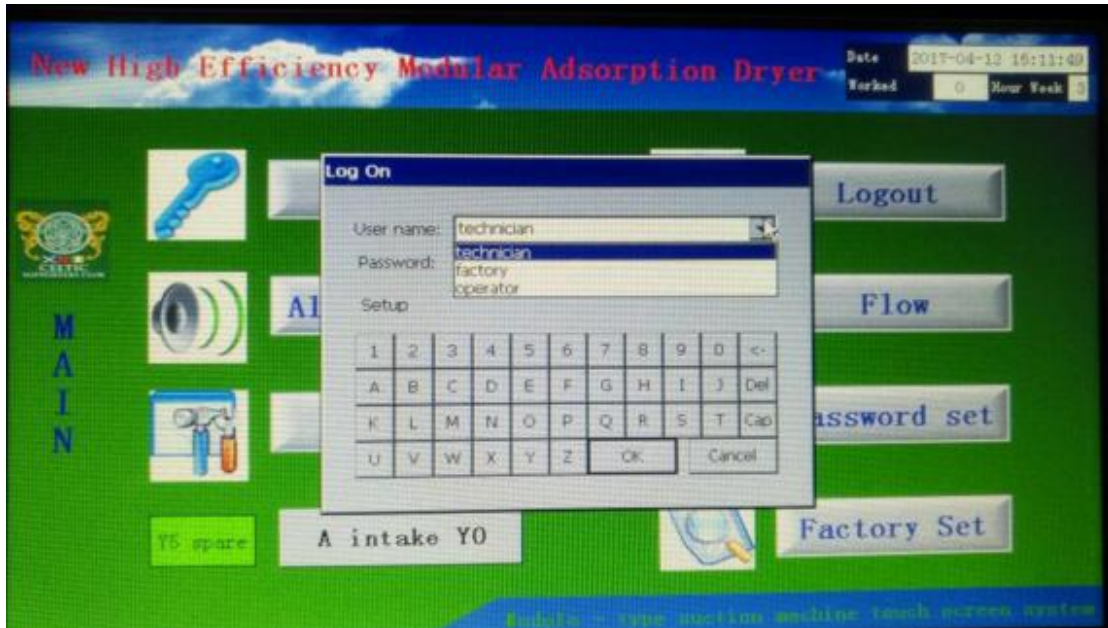
## 5. Alarm screen

Touch the alarm key on the main screen or when an alarm occurs will automatically switch to this screen.



## 6. User log in, log out and setting password screen

Touch the log in function key on the main menu will automatically switch to this screen.



**key table:**

User name	Function and permission	Initial password
factory	The highest permission	1111
technician	Part of permission	2222
operator	The Minimum permission	3333

User can operate the machine according to your permission, and can also

set your password on the setting password screen, when you needn't operate the machine, please logout, which can protect the equipment safety operation.