

# Computer Room Air Conditioners Automation System

Made in Taiwan

Empowered by Siemens

## Computer Room Air Conditioner Management System



- Up to 4 Air Conditioners
- Group Schedule
- Temp Control
- Back Up Enable
- Temp/Event Logs Record
- Alarm Contact Points/Email (Option)
- Internet Connection(VNC)/ Modbus RTU

Target:

### Data Collection and Management for Computer Room/Server Room

- Embedded in Siemens Automation Controller / Touch Screen Interface
  - Internet Connection (Support VNC)
  - Manage Up to 4 Sets of Air Conditioners in Server Room/ Computer Room both in **Schedule and Temp.**
  - Air Conditioners Scheduling (Single Schedule/ Group Schedule)
  - Support Air Conditioners Back Up Automation (When one is broken, enable Back Up Air Conditioner(s))
  - Support Air Conditioner Err DI input. (When Air Conditioners System Error ( High or Low Pressure Error))
  - Support Air Conditioner Operating Feedback DI input. (When Feedback message is not right, Alarm On)
  - Real Time Temp. Trend Recording / History Temp. Reload (Specify History Date/Timing)
  - Temp. including Cold Aisle Temp. / Hot Aisle Temp. or other appoint Temps.
  - Event Log Recording / History Event Log Reload (Specify History Date/Timing)
  - Event including (On/Off, Broken, Temp Hi Enable Back Up Air , Feedback Error, Alarms...)
  - Alarms (Dry Contacts) - Air Conditioner Broken / Temp. Super Hi / Fire Alarm / Cold Aisle Temp. Hi...
  - Support Modbus RTU
  - Option (Support Email Alarming, Online Web-Based Management)
  - .... Contact for more information
- Email:ken88chiang@gmail.com, -Cell:+886-936115966, Office TEL:+886-2-82627166

# Operation Screens

## Server Room Air Conditioner Management System

iController(3S) V 3.9.2 23:59:59

Temp. °C  2010/12/31 Sunday

Lo Temp. to Stop Set  °C  Off

Hi Temp. Alliance Set  °C  Off

Super Hi Temp. Alarm Set  °C  Off

System Error Alarm  Off

Reset  Off

ON/OFF #A #B #C

Error #A #B #C

Operating Status #A #B #C

Select #A #B #C

Manual On #A #B #C

RealTime Temp Other Pages

## Server Room Air Conditioner Management System Setting

All -99 °C Off Set  After Set  °C 23:59:59

Enable #A #B #C

Sys Err DI  #A  #B  #C

Status DI  #A  #B  #C

Hi Temp. Operating  #A  #B  #C

Fire Alarm Stop All

Delay Off(Secs)  #A  #B  #C

Alliance Off Range Set.  °C

ParaSetting Save  Para Setting Reload  Reboot

TimeAdjust 23:59:59

Year (20XX) 99

Month (1-12) 99

Day (1-31) 99

Hour (0-23) 99

Minute (0-59) 99

Second (0-59) 99

TimeSync Sync

Beep

Beep

Password

HOME

## Real Temp. Recording

RealTime Temp 23:59:59

31/12/10 23:59 -99.99 -99.99

2010/12/31 Sunday

— Cold Aisle °C

— Hot Aisle °C

History Temp

Zoom In

Zoom Out

HOME

## History Temp. Reload

History Temp. 23:59:59

31/12/10 00:00 -99.99 -99.99

2010/12/31 Sunday

— Cold Aisle °C

— Hot Aisle °C

LOAD

Zoom In

Zoom Out

RealTime Temp

HOME

## Group Scheduling

### Group Operation Schedule

2010/12/31 Sunday 23:59:59

First Schedule  ON HH.MM 99 : 99  OFF HH.MM 99 : 99  A  B  C

Second Schedule  ON HH.MM 99 : 99  OFF HH.MM 99 : 99  A  B  C

Third Schedule  ON HH.MM 99 : 99  OFF HH.MM 99 : 99  A  B  C

Forth Schedule  ON HH.MM 99 : 99  OFF HH.MM 99 : 99  A  B  C  Weekend OFF

Fifth Schedule  ON HH.MM 99 : 99  OFF HH.MM 99 : 99  A  B  C

Sixth Schedule  ON HH.MM 99 : 99  OFF HH.MM 99 : 99  A  B  C  HOME

LaVent

## Single Scheduling

### Single Schedule

23:59:59

2010/12/31 Sunday

#	Name	Status	Set	Start	End	Apply
1		Red	<input type="checkbox"/>	00:00:00	00:00:01	Today
2		Green	<input type="checkbox"/>	00:00:00	00:00:01	Today
3		Yellow	<input type="checkbox"/>	00:00:00	00:00:01	Today
4		Green	<input type="checkbox"/>	00:00:00	00:00:01	Today
5		Green	<input type="checkbox"/>	00:00:00	00:00:01	Today
6		Green	<input type="checkbox"/>	00:00:00	00:00:01	Today
7		Green	<input type="checkbox"/>	00:00:00	00:00:01	Today
8		Green	<input type="checkbox"/>	00:00:00	00:00:01	Today
9		Green	<input type="checkbox"/>	00:00:00	00:00:01	Today

#A Schedule Enable  #B Schedule Enable  #C Schedule Enable  HOME

LaVent

## Event Log Recording

### Real Time Event Log

2010/12/31 Sunday 23:59:59

Date	Time	Alarm#	Message
31/12/10	23:59	99	A...
31/12/10	23:59	99	A...
31/12/10	23:59	99	A...
31/12/10	23:59	99	A...
31/12/10	23:59	99	A...
31/12/10	23:59	99	A...
31/12/10	23:59	99	A...
31/12/10	23:59	99	A...
31/12/10	23:59	99	A...

Search History Event Log

### History Evnet Log

Date	Time	Alarm#	Status	Message
31/12/10	23:59	99	AAA	A...
31/12/10	23:59	99	AAA	A...
31/12/10	23:59	99	AAA	A...
31/12/10	23:59	99	AAA	A...
31/12/10	23:59	99	AAA	A...
31/12/10	23:59	99	AAA	A...
31/12/10	23:59	99	AAA	A...
31/12/10	23:59	99	AAA	A...
31/12/10	23:59	99	AAA	A...

Status : A- Announcement, ACK-Acknowledged

HOME LaVent

## History Event Log Reload

### Search History Event Log

2010/12/31 Sunday 23:59:59

日期	時間	區編號	級別	編號	狀態	訊息
31/12/10	23:59	99	1	AAAAAA	AAA	A...
31/12/10	23:59	99	2	AAAAAA	AAA	A...
31/12/10	23:59	99	3	AAAAAA	AAA	A...
31/12/10	23:59	99	4	AAAAAA	AAA	A...
31/12/10	23:59	99	5	AAAAAA	AAA	A...
31/12/10	23:59	99	6	AAAAAA	AAA	A...
31/12/10	23:59	99	7	AAAAAA	AAA	A...
31/12/10	23:59	99	?	AAAAAA	AAA	A...

Status : A- Announcement, ACK-Acknowledged

Read History Event Log HOME LaVent

## Other Pages

iController(3S) V.3.9.2

23:59:59

2010/12/31

Sunday

RealTime Temp.

History Temp.

Real Time Event Log

History Evnet Log

ABC Group Schedule

Single Schedule

Setting Page

POL wiring diagram

HOME



## Wiring Diagram

iController(3S) V.3.9.2

LUI V 2.0.6.00

Date:2014/11/11

POL wiring diagram

Sys Error Alarm

A B C Super Hi Temp  
Alarm  
DO1 DO2 DO3 DO4 DO5 DO6

DI1 DI2 DI3 DI4 DI5 X1 X2 X3 X4 X5 X6 X7 X8  
A Broken B Broken DI Fire C DFS  
A DPS B DPS All C Broken

HOME

## Successful Case Studies:

### Taiwan Organic Food Chain Company Server Room.

<p>WWW.LAVENT.COM.TW ISO9001:2008 Made in Taiwan</p>   <p>lavent.en.alibaba.com</p>	<p>-6 Racks with Cold / Hot Aisles</p> <p>-3 Air Conditioners in Server Room</p> <p>- 2 Wall Mount Air Conditioners +1 Fan Coil Air Conditioner</p>
<p>-Group Schedule: 16 Hours/ Each Air Conditioner</p> <p>-Temp. Setting:</p> <p>Reach Hi-Temp. --- Call Backup Air Conditioner to Operating ; Reach Super Hi-Temp --- Send Super Hi Temp. Alarm</p> <p>-Alarm:</p> <p>-Water Leaking Alarm ; -Air Conditioner Error Alarm ; -Super Hi Temp. Alarm</p> <p>BY Short Message, Email (Option)</p>	

## Taiwan Machinery Company Server Room.



-3 Racks with Cold / Hot Aisles

-2 Air Conditioners in Server Room

- 2 Fan Coil Air Conditioners

-Group Schedule: 12 Hours/ Each Air Conditioner

-Temp. Setting:

Reach Hi-Temp. --- Call Backup Air Conditioner to Operating ; Reach Super Hi-Temp --- Send Super Hi Temp. Alarm

-Alarm:

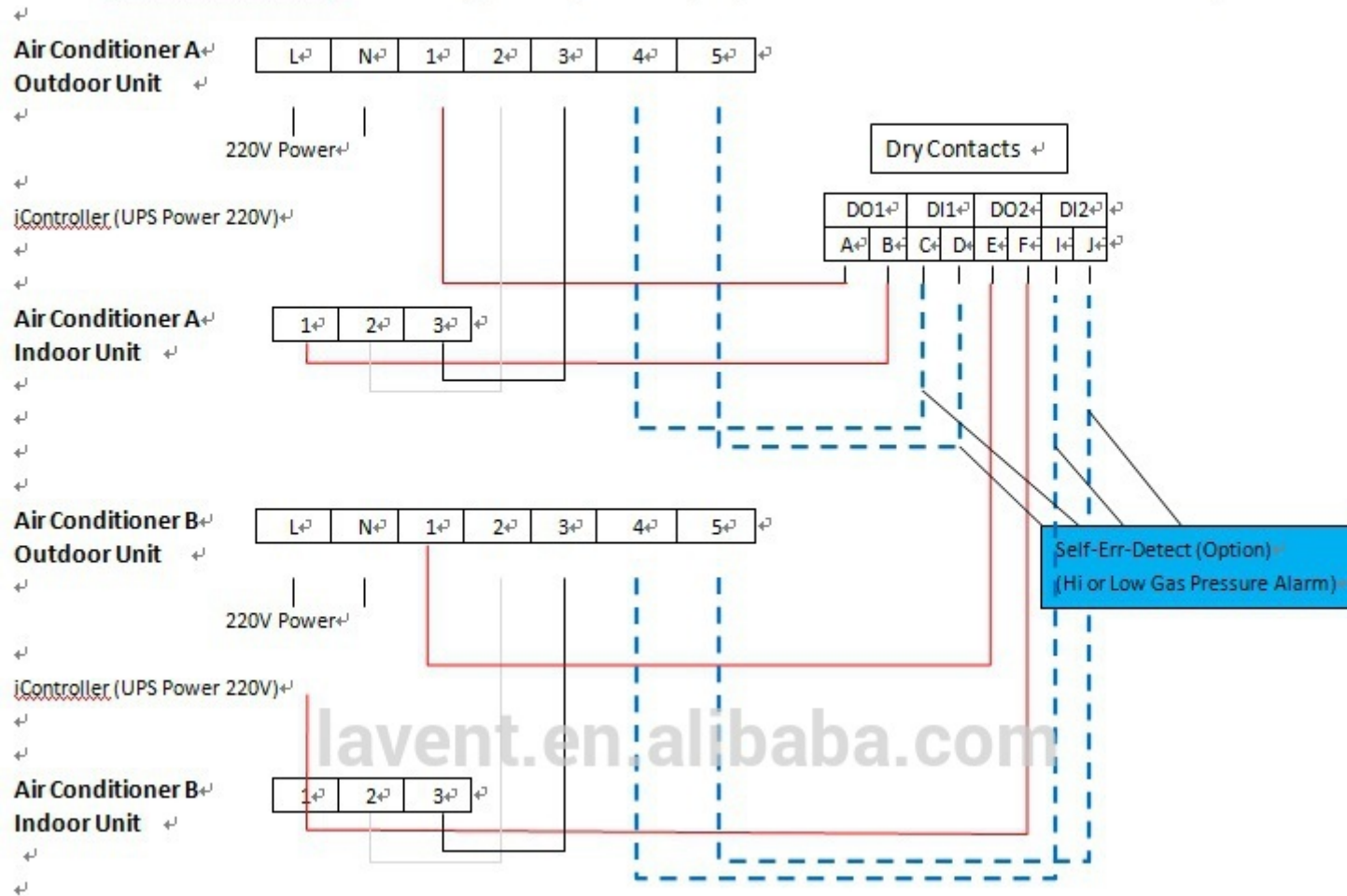
-Water Leaking Alarm ; -Air Conditioner Error Alarm ; -Super Hi Temp. Alarm

BY Short Message, Email (Option)

# iController Wiring Diagram:

-Can Control several types of Air Conditioners - Wall Mount/ Fan Coil/Floor Standing / InRow/ CRAC

## iController Wiring Diagram (up to 4 Air Conditioners)





# DETAIL SPEC :

Controller	Enbeded Siemens PLC Controller
Interface	4.3" Touch Screen
Number of Air Conditioners Controlling	2-4 Air Conditioners, More than 5 (Including) Need to custom Made
Schedule	Both Single Schedule and Group Schedule
Temp. Control	3 levels of temp setting & controlling  Low Temp- Stop ALL Air Conditioners  Hi Temp- Call BackUp Air Conditioner to ON  Super Hi Temp. - Send Alarm signal out by dry contact, email
Temp. Sensors	2 Temp. Sensors, each sensor with 6 meters long. One for Cold Aisle and the other for Hot Aisle
Temp. GRAGH	Real time Trend Graph/ History Graph
LOG	Real time log & History log
Internet Connection	Yes, Support VNC or Web Based Application (Option)
Modbus RTU	Support
Power	220V/50 or 60 HZ

Contact for more information

-Email:ken88chiang@gmail.com, -Cell:+886-936115966, Office TEL:+886-2-82627166, www.tx-taixin.com.tw; www.lavent.com.tw