

Intelligent Central Temperature Monitoring Control System by Web(PC/ Mobile)

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Features

User can easy to install the Remote I/O Controller in the Harsh environment .
The Remote I/O Controller was one of engineering level devices. Now we make User easy to install & control by Web.
Application for sensor Thermocouple(K type) by Web control thru Ethernet/ RS485 of RS485 bus of EX9018BL-M



Specification

THE SYSTEM FUNCTIONS

- . 全自動化溫度監控系統.
- . Wi-Fi/ Ethernet/ RS485 溫控箱 .
- . 即時監控院內冷凍冷藏設備的溫度變化：
單一地點：同建築內同區域 / 自設群組：可自訂配置區域群組/ 即時監控：即時讀取群組內度.
as Fig. A/ F/ G
- . 可擴充監控至少 10 個溫控箱.: 可單一溫控箱運作; 也可同時多台(>8 台)溫控箱運作. as Fig. B
- . 操作介面簡單好上手：使用者登入後，即可選擇群組進行即時監控與基本設定。(基本設定：溫度安全範圍、警報開關/ 即時監控：即時讀取群組內溫度) . as Fig. D
- . 自動發送 Email、簡訊及電話通知: 可觀看即時溫度與警報通知/可進階設定警報延遲時間/可選擇指定的連絡人. as Fig. E/ H
- . 安全性高：設置具有不同權限的使用者帳號: 查看(User); 警報設定與校正(Mgr); 使用者管理 (Admin)/ 符合美國聯邦法規 21 章第 11 條(FDA Title 21 CFR Part 11)標準 /自動將記錄備份於主監控端電腦，以維護資料安全. as Fig. C/ I

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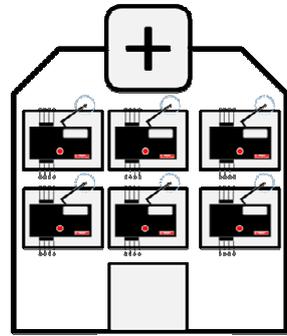


Fig. A

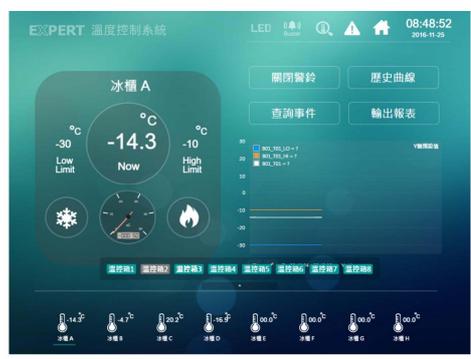


Fig. B



Fig. C



Fig. D



- . 用戶可依需求設定溫度安全範圍(High/Low)。
- . 一旦超過溫度範圍，自動彈出警報並發送警報通知(Email/簡訊)。

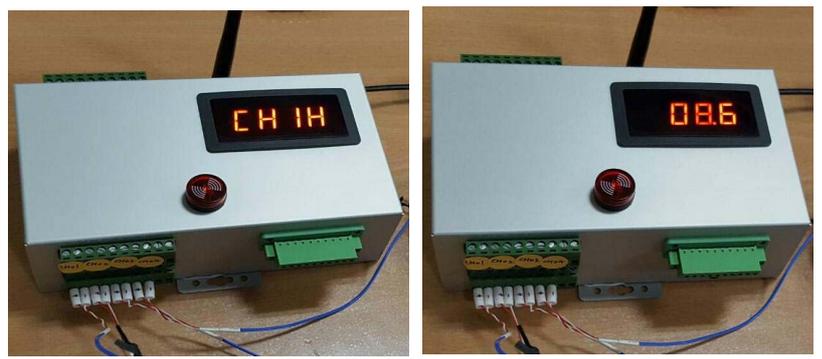
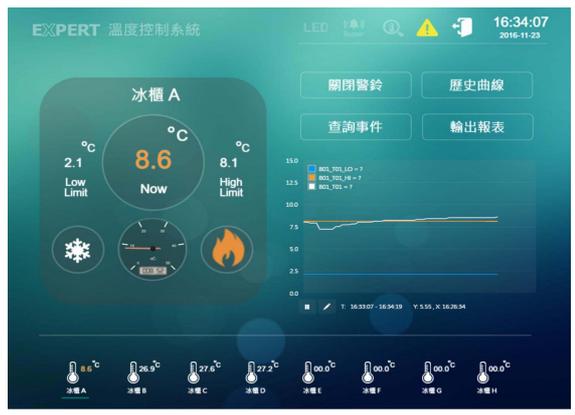


Fig.F

- . 曲線圖可直接觀看即時溫度變化。
- . 移動游標顯示溫度異常的讀值與時間點。
- . 一旦超過溫度範圍，自動主畫面顯示警報，並有真人語音與警鈴。

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- . 可觀看即時溫度與警報通知
- . 可進階設定警報延遲時間
- . 可選擇指定的連絡人

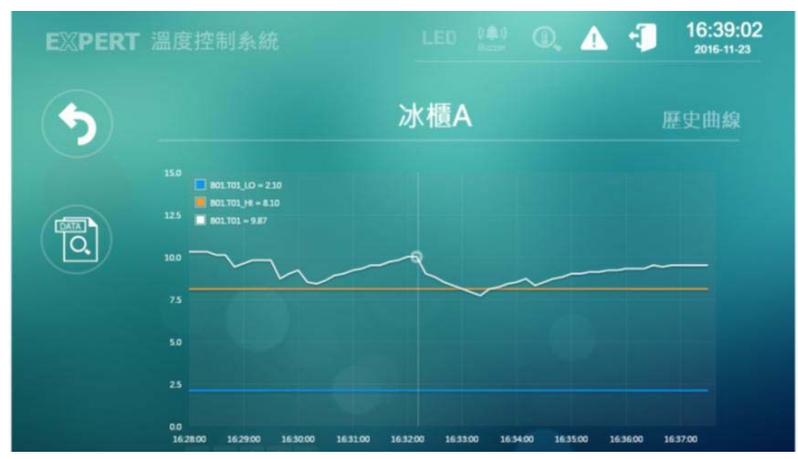
Fig. E



- . 區網內的用戶可透過網頁登入進行即時溫度監控。

Fig. G

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- . 用戶可依需求自行調整歷史紀錄的時間長度。
- . 曲線圖可直接觀看即時溫度變化。
- . 移動游標顯示溫度曾經異常的讀值與時間點

Fig. H

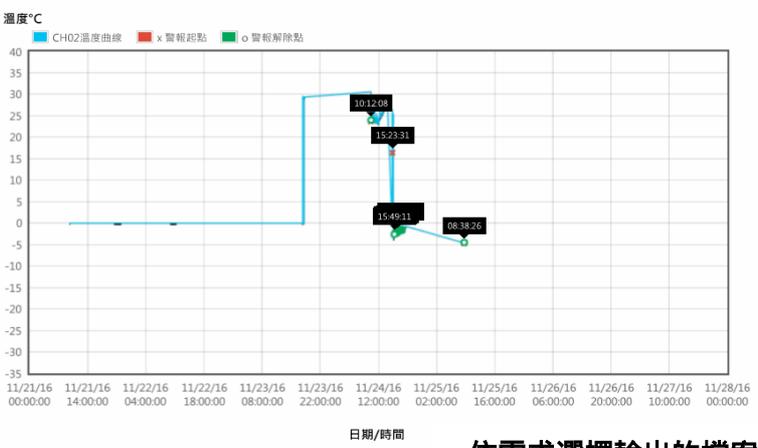
PDF B01.T02溫度報表輸出

建檔時間: 11/25/16 08:53:45

注意: 本報表所有的時間採用元元(DD/MM/YY hh:mm:ss)格式

數據分析		記錄時間: 11/24/16 10:12:00		警報狀態: 否	
最高溫度值: 30.6 °C	最低溫度值: -5 °C	記錄時間: 11/25/16 08:53:40	資料點數: 3946	警報狀態: 否	高溫警報次數: 14
平均溫度值: 10.2 °C	低溫警報次數: 2				

事件名稱	觸發時間	記錄值	復歸時間	確認時間	確認人員
B01_T02_AH	11/25/16 08:38:26	-4.7	11/25/16 08:38:58	11/25/16 08:38:35	mgr
B01_T02_AH	11/24/16 17:38:30	-1.6	11/24/16 17:39:17	11/24/16 17:38:55	mgr
B01_T02_AH	11/24/16 17:36:58	-1.7	-	11/24/16 17:37:18	mgr
B01_T02_AH	11/24/16 17:21:57	-1.6	11/24/16 17:24:07	11/24/16 17:22:01	mgr
B01_T02_AH	11/24/16 17:18:28	-1.5	11/24/16 17:19:50	11/24/16 17:18:49	mgr
B01_T02_AH	11/24/16 16:59:16	-1.6	11/24/16 16:59:57	11/24/16 16:59:29	mgr
B01_T02_AH	11/24/16 16:56:27	-1.6	11/24/16 16:58:50	11/24/16 16:57:05	mgr
B01_T02_AH	11/24/16 16:52:59	-1.7	11/24/16 16:54:17	11/24/16 16:53:56	mgr
B01_T02_AH	11/24/16 16:35:57	-2.1	11/24/16 16:39:45	11/24/16 16:37:06	mgr
B01_T02_AH	11/24/16 16:31:11	-2.3	11/24/16 16:32:19	11/24/16 16:31:37	mgr
B01_T02_AH	11/24/16 16:09:33	-2.4	11/24/16 16:10:17	11/24/16 16:09:50	mgr
B01_T02_AH	11/24/16 16:03:03	-2.3	11/24/16 16:03:48	11/24/16 16:03:15	mgr
B01_T02_AH	11/24/16 16:02:32	-2.3	-	-	-
B01_T02_AH	11/24/16 15:49:11	-2.6	11/24/16 15:49:48	11/24/16 15:49:23	mgr
B01_T02_AL	11/24/16 15:28:31	16.4	11/24/16 15:23:48	11/24/16 15:24:17	user
B01_T02_AL	11/24/16 10:12:08	23.7	11/24/16 10:13:32	11/24/16 10:12:25	user



- . 依需求選擇輸出的檔案格式(PDF, Excel, etc.).

Fig. I

Intelligent Central Temperature Monitoring Control System by Web(PC/ Mobile)

Appendix:

HARDWARE SPECIFICATION

Certificate(optional) : ISPE ' s GAMP4(essential)、FDA ' s CFR 21 Part 11、 domestic ' s cGMP、 CE ROHS
meet FCC Part 15.

Maximum monitoring devices: 10+ .

Temperature measurement range : -100 ~100 (change the probe to extend the temperature measurement
range as -200~200).

Temperature accuracy : $\pm 0.1\%$.

Probe reaction time: Within 30 seconds Reaction at least 63% of temperature different .

Probe types: External thermocouple(K Type:default) .

Probe length: At least 1.2 meters .

Number of probes: 1~ 8 probes can be connected .

Audible alarm: Sensor with buzzer alarm .

Alarm mute: The alarm mute button (optioal: automatically restart time) .

Wireless transmission: Regularly detects temperature and sends the data back to the Server(PC/ Notebook).

Transmission mode: Through Wi-Fi/ Ethernet/ RS485 to transmit the refrigerator/devices temperature and
conditions to the central monitoring system(PC/ Notebook).

Transmission range : Wi-Fi 100 meters (open area)/ Ethernet over 100 meters/ RS485 over 1.2Km~2Km .

Data Capacity: 32,000 T values above .

Wired Downloads: From PC(Web Page) .

Display: 1 x 2 inch"4 Digits LED .

Installation options: Stand-alone or wall-mounted (there are keyhole) .

Power cord: At least 2 meters .

Power Input : DC24V, 1.87A or above .

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SOFTWARE SPECIFICATION

(Temperature/ Thermocouple:default)

Software Language: English

Personnel management: It can set the account password to management.

Electronic Approved(optional): To prevent data tampering, data movement need to have the record by FDA CFR21 PART 11.

Sensor settings: It can set the time intervals of temperature record, alert type, high and low temperature threshold.

Data information: Data can be distinguished between normal and abnormal.

Alert types: Temperature anomalies, lack of electricity, the correction maturity & signal interruption.

Software Alert: Central monitoring system will pop up a warning with an alarm sound on Windows and send Email (required); SMS(optional) to the administrator for notify why.

Email Alert: It can set multiple sets of accounts (> 4) to send and incidental cause of the alarm.

Chart features: Historical data and real-time data displays by Graphical and automatic corresponding to monitoring device.

Create groups: Simultaneously monitoring all devices and device groups..

Historical data query: It can query historical data by graphic and reading by listing..

Report Output: Need to report a variety of formats as PDF from Web Page(optional: Excel,Html will soon).

Print function: Historical data printing or instant printing..

Data Backup: Data Backup by automatic or manual (optional: year / month / week / day).

Data Acquisition: A minimum sampling rate is 10 seconds and a maximum is 59 minutes.

Remote monitoring: Can be Wi-Fi/ Ethernet/ RS485 by a web page monitoring the devices(optional: wired).

Password protection: Central monitoring system can set different levels of user password (local and remote).

Temperature Calibration: It need internal calibration features to ensure the temperature are correct.