*Quick Chill*

*Application*

rev.: **1.0**

FREE SMART



## REVISION

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Version** | **Author** | **Data** | **Description** | **Checked** | **Approved** |
| 1.0 | TT | 22/01/2015 | First release |  |  |
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## ALIAS

| Acronimi | Definizione |
| --- | --- |
| SMP | Eliwell SMP5500 Panel programmable controller |
| HMI | Human Machine Interface |

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# 2.NOTE

## Reference

* [01] Quick Chill Application Manual: 9MA10244\_EWFCBaseLine\_BlastChill\_Application\_EN\_1213.pdf

## 1.1.Premessa

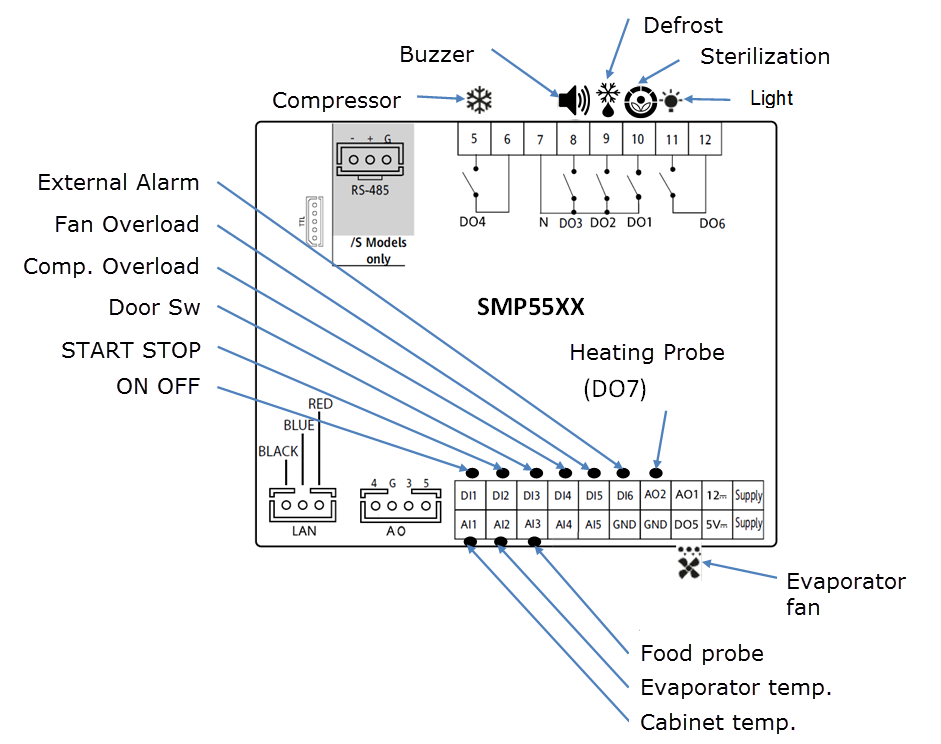
The purpose of this document is to describe the changes made to the application EWFC for FREE Evolution in order to be executed on a programmable device Free SMART.

The version of the application starting EVO\_EWHT is the 1p8.

The control algorithm is unchanged and authentic on the reference manual [01].

# 2. Electrical Wiring

In the follow drawing, the electrical connections with the default parameter settings.



# 2. Data Logger

The data logger has been removed.

# 2. Alarm History

The alarm history function allows you to record some information for each alarm such as:

* Alarm Code (es. 1 = ; 2, ecc.)
* Alarm Date (XX.YY)
* Alarm Hour , Minutes Allarme (HH.MM)
*  regulation probe value
*  evaporator probe value
*  humidity probe value

The activation of each alarm in the alarm history is recorded in a circular queue of 10 elements.

Reached the maximum number of alarms, with activation of a new alarm, the oldest recorded alarm will be overwrite with the information coming from the last alarm.

## 2. Parameter

In the following table has been listed the parameter added for the alarm history features.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Address** | **Variable** | **Lable** | **Visibility** | **Note** |
| 16722 | LogData\_NextEntry\_Code |  | no | Reserved |
| 16723 | LogData\_FULL\_Code |  | no | Reserved |
| 16724 | LogDataE2\_00 |  | si | First historical element |
| … | … | *…* | … | … |
| 16783 | LogDataE2\_60 |  | si | Last historical element |
| 16784 | LogData\_NextEntry\_Date |  | no | Reserved |
| 16785 | LogData\_FULL\_Date |  | no | Reserved |
| 16786 | LogData\_NextEntry\_Time |  | no | Reserved |
| 16787 | LogData\_FULL\_Time |  | no | Reserved |
| 16788 | LogData\_NextEntry\_V1 |  | no | Reserved |
| 16789 | LogData\_FULL\_V1 |  | no | Reserved |
| 16790 | LogData\_NextEntry\_V2 |  | no | Reserved |
| 16791 | LogData\_FULL\_V2 |  | no | Reserved |
| 16792 | LogData\_NextEntry\_V3 |  | no | Reserved |
| 16793 | LogData\_FULL\_V3 |  | no | Reserved |

## 2. Alarm history control register

In the following table has been listed the status variable added for the alarm history feature.

|  |  |  |  |
| --- | --- | --- | --- |
| **Address** | **Label** | **Read/ Write** | **Description** |
| 9141 |  | R/W | Location Alarm history (number from 1 to 8) |
| 9142 |  | R | Code Alarm identified (eg. 1 = ; 2 =  etc.). |
| 9143 |  | R | Date Alarm identification (XX.YY) |
| 9144 |  | R | Now and minutes Alarm identification (HH.MM) |
| 9145 |  | R | Value control probe recorded in the current event |
| 9146 |  | R | Evaporator probe value recorded in the current event |
| 9147 |  | R | Value probe humidity recorded in the current event |
| 9148 |  | R | Number of alarms stored in the historical records |
| 9149 |  | R/W | Request reset alarm log 0 = OK / Idle, 1 = reset historical inquiry |

# 2. Alarm codes

In the following table has been listed the alarm codes and their descriptions.

For details of the causes activation refer to the manual for EWHT Evolution [1].

|  |  |
| --- | --- |
| **Error Code** | **Alarm Description** |
|  | Probe control temperature outside the measuring range |
|  | Evaporator temperature sensor outside measuring range |
|  | Food sensor outside measuring range |
|  | External alarm input signal |
|  | Compressor overload alarm |
|  | Fan overload alarm |
|  | High temperature alarm |
|  | Low temperature alarm |
|  | Alarm time out defrosting |
|  | Error clock |

# 2. Display – LED

The display can be configured to see always the same value “static mode” or to change continuously the information “dynamic mode”.

## 2. Static display

The parameter Fond\_Disp\_Start\_SMART () can be use to select witch value show on the main display. The value can be 1=; 3=; 5=; 9=.

The parameter  (Fond\_Dynamic\_Mode\_SMART) shall be set to false.

## 2. Dynamic Display

The parameter  (Fond\_Dynamic\_Mode\_SMART) enable the dynamic display option.

This features will show a different information every 2 seconds.

In the follow table a description of the information loop.

|  |  |  |  |
| --- | --- | --- | --- |
| **Valore** | **Condizioni visibilità** | **Note** |  |
|  | \_1180\_H41 <> 0 | Case Temperature |
| <Probe Value> |
|  | \_1181\_H42 <> 0 | Evaporator Temperature |
| <Probe Value> |
|  | \_1182\_H43 <> 0 | Food Temperature |
| <Probe Value> |
|  |  |  |
| <step number > |  |  |

Note: You can enable / disable the dynamic display by configuring a function key or by changing the parameter  (Fond\_Dynamic\_Mode\_SMART).

## 2. Led Configuration



Heat

Alarm

Cool

ON-OFF

Defrost

Economy

Alarm out

Light

Fan

Compressor

Dehumidification

Heater

Humidification

# 2. Function key

The functions associated with the keys can be configured.

## 2. Function key configuration

It can bind to the six function keys seven different functions. For this purpose are defined the following parameters:

|  |  |  |
| --- | --- | --- |
| **Address** | **Label** | **Description** |
| 16399 |  | UP short function |
| 16400 |  | UP long function |
| 16401 |  | DW short function |
| 16402 |  | DW long function |
| 16404 |  | ESC long function |
| 16414 |  | SET long function |

## 2. Key function option

The following table lists the functions associated with each key.

|  |  |
| --- | --- |
| **Parameter value** | **Related Function** |
| 0 | not Assigned |
| 1 | System ON - OFF Toggle |
| 2 | Start Defrost |
| 3 | Light ON - OFF Toggle |
| 4 | reset Alarms |
| 5 | Request Method Statement |
| 6 | Start - Stop Program |
| 7 | Start - Stop Dynamic Display |

# 2.Miscellaneous

1. 2. The logic output is controlled DOL7 on AO2 configured as open collector.