





Carry out the installation following the instructions given in the section MEASUREMENTS AND INSTALLATION.

EVCO S.p.A. | EVY Cold MEDIUM | Instruction sheet ver. 1.0 | Code 104YCM12E103 | Page1 of 6 | PT 18/24

- Power up the device: an internal test will start up.
- The test normally takes a few seconds; when it is finished, the display will switch off. Configure the device as shown in the section Setting configuration parameters. 3



Next check that the remaining settings are appropriate; see the section CONFIGURATION PARAMETERS.

Disconnect the device from the mains. 4.

Make the electrical connection as shown in the section ELECTRICAL CONNECTION, with 5. out powering up the device.

To perform the configuration upload or download, connect the EVJKEY programming keep To activate real-time functions, connect the EVInking RS-485 EVIF23TSX converter. To control the device using the EVconnect app, connect the EVlinking BLE EVIF25TE module then synchronise it with the app.

To control the device using the EPoCA monitoring system or a third-party MODBUS T system connect the EVlinking Wi-Fi EVIF25TWX module to the device and then to a loc Wi-Fi n



## witching the device on/off 4.3

- டு 1. If POF = 1 (default), touch the ON/STAND-BY key for 4 s
- If the device is switched on, the display will show the P5 value (default "cabinet or product

|    |  |  |  | FLASHING  | 47   | Activating (deactiv  | vating manual defrect (if rE          | - 0. dofault)                        |  |  |
|----|--|--|--|---|--|--|---------------------------------------|--------------------------------------|--|--|
|    | LED  |  | UFF  | FLASHING  | 4.7<br>Chock   | that the keynad is no  | valing manual derrost (ii ro          |                                      |  |  |
| у. | _₩_  | compressor on                          | compressor on  | compressor protection active                                      | 1  |  |                                       | s not active.                        |  |  |
| 3X | -WVr   | heating active                         | heating not active   | demisting on or door heaters on                                   | 1.   |  |                                       | 25                                   |  |  |
| CP | ф  | evaporator fans on                     | evaporator fans off  | evaporator fans off active  | the d2   | <ul> <li>I (default), defrost<br/>or d2b threshold.</li> </ul> | is activated provided that the        | evaporator temperature is lower than |  |  |
| al | ***  | defrost or pre-drip ac-<br>tive        | defrost or pre-drip not active                                   | <ul> <li>defrost delay active</li> <li>dripping active</li> </ul> | 4.8  | Activating/deactiv   | vating manual energy saving           | g                                    |  |  |
| т  | Ō  | clock active                           | clock not active   | -   | Check  | that the keypad is no  | ot locked.                            |                                      |  |  |
| а  | %  | active humidity level<br>displayed     | -  | -   | 1.   | (E)  | Touch the ENERGY SAVING k             | ey                                   |  |  |
|    | °C   | temperature displayed                  | -  | -   | FUNC   | TION   | CONDITION                             | CONSEQUENCE                          |  |  |
|    |  | in Celsius                             |  |   | energ  | jy saving  | r5 = 0                                | the setpoint becomes "setpoint +     |  |  |
|    | r  | temperature displayed<br>in Fahrenheit | -  | -   | lf u1c.  | u8c = 16, the evap   | <br>porator fans will operate at this | speed during the energy-saving func- |  |  |
|    | a  | energy saving active                   | energy saving not ac-  | -   | tion.  |  |                                       |                                      |  |  |
|    | D  | 5.00                                   | tive   |   | If u1c.  | u8c = 18, the cond   | denser fans will operate at this      | speed during the energy-saving func- |  |  |
|    |  | overcooling or over-                   | overcooling or over-   | -   | tion.  |  |                                       |                                      |  |  |
|    | 0~   | heating active                         | heating not active   |   |  |  |                                       |                                      |  |  |
|    | $\wedge$   | alarm active                           | alarm not active   | compressor maintenance request                                    | st 4.9 Activating/deactivating overcooling and overheating |  |                                       |                                      |  |  |
|    | НАССР  | saved HACCP alarm<br>not displayed     | no HACCP alarm saved<br>or no saved HACCP<br>alarm not displayed | new HACCP alarm saved   | 1.   | 8∼   | Touch the OVERCOOLING/OVERHEATING key |                                      |  |  |
|    | 0  | cabinet light on                       | cabinet light off  | cabinet light on from digital input                               | FUNC   | TION   | CONDITION                             | CONSEQUENCE                          |  |  |
|    | ÷  |  |  |   | overc  | ooling   | r5 = 0 and defrosting not ac-         | the setpoint becomes "setpoint -     |  |  |
|    | Æ  | connection with                        | no connection  | -   |  |  | tivated                               | r6", for the r7 time                 |  |  |
|    |  | EVconnect app or                       |  |   | overh  | eating   | r5 = 1                                | the setpoint becomes "setpoint +     |  |  |
|    |  | EPoCA remote moni-                     |  |   |  |  |                                       | r6", for the r7 time                 |  |  |
|    |  | toring system                          |  |   |  |  |                                       |                                      |  |  |
|    | <u>ک</u> مُد   | -                                      | thawing not active   | thawing active  | 4.10   | Manually switchin  | ng the cabinet light on∕off (i<br>│   | f u1c u8c = 5)                       |  |  |
|    | AUX1   | auxiliary load 1 on                    | auxiliary load 1 off   | -   | 1.   | ļ Ų  | Touch the CABINET LIGHT ke            | ey .                                 |  |  |
|    | AUX2   | auxiliary load 2 on                    | auxiliary load 2 off   | -   |  | I.   | 1                                     |                                      |  |  |
|    | If Loc = 1   | (default) and 30 s have                | elapsed without the keys   | s being pressed, the display will show                            | 4.11   | Silencing the buzz   | er (if u9 = 1, default)               |                                      |  |  |
|    | the "LOCK" label and the keypad will lock automatically. |  |  |   |  | a key.   |                                       |                                      |  |  |
|    |  |  |  |   | If u1c.  | u8c = 11 and u4 =  | 1, the alarm output is deactive       | ated.                                |  |  |
|    | 4.4 U  | nlocking the keypad                    |  |   |  |  | ·                                     |                                      |  |  |
|    | Touch a k  | ey for 1 s: the display w              | ill show the label "UNLO   | СК".  |  |  |                                       |                                      |  |  |
|    |  |  |  |   |  |  |                                       |                                      |  |  |
|    |  |  |  |   |  |  |                                       |                                      |  |  |

| спеск тлат тле кеурай із пот юскей. |                             |     |  |  |  |
|-------------------------------------|-----------------------------|-----|--|--|--|
|                                     | 1. <b>SET</b><br>2 <b>F</b> |     | Touch the SET key  |  |  |
|                                     |                             |     | Touch the UP or DOWN key within 15 s to set the value within the limits r1 and r2 (default "-40 $50^{\circ}$ ) |  |  |
|                                     | 3.                          | SET | Touch the SET key (or take no action for 15 s)   |  |  |

Setting the 0-10 V evaporator fan speed for normal operation (percentage 0-10 4.6 V output; available if Ao1... Ao3 = 3 and F30 = 0)

| leck that the keypad is not locked. |       |  |  |  |  |  |  |
|-------------------------------------|-------|--|--|--|--|--|--|
| 1.                                  | Ъ.    | Touch the FAN key  |  |  |  |  |  |
| 2.                                  | ý 🔨 🦻 | Touch the UP or DOWN key within 15 s to set the value within the limits F31 and F32 (default "50 100") |  |  |  |  |  |
| 3.                                  | SET   | Touch the SET key (or take no action for 15 s)   |  |  |  |  |  |

- connect the EVlinking RS-485 EVIF24TSX converter to the device then to an I-EV3 Web gateway or EVD Web. Next connect this to a free Ethernet port of
- router or an Ethernet hub connected to a local network. Power up the device again.

## USER INTERFACE AND MAIN FUNCTIONS

4.1 Keypad

4



| vco s                  | S.p.A.   EVY Cold MEDIU  | JM   Instruction sheet ver. 1.0  | Code 104YCM12E103   Page2 of 6   PT 18/3  | 24           |  |               |  |        | -          |
|------------------------|--|--|---|--------------|--|---------------|--|--------|------------|
| 5<br>5.1               | ADDITIONAL FUN<br>Setting the date a   | CTIONS<br>nd time (available when the  | e EVlinking RS-485 EVI F23TSX con-        | 5.6<br>Check | Deleting comp<br>that the keypad   | is no         | sor operation days<br>t locked.  | 4.     | Ý          |
|                        | verter, the EVlinki  | ing BLE EVIF25TBX module   | or the EVlinking Wi-Fi EVIF25TWX          | 1.           |  |               | Touch the ADDITIONAL FUNCTIONS key   | 5.     |            |
|                        |  |  |   | 2.           |  | ٠             | Touch the UP or DOWN key within 15 s to select the option "Ser-  | 6.     |            |
|                        | - do not disconn   | ect the device from the main   | s in the two minutes after setting the    | 3.           | SFT  |               | Touch the SET key  | 7      |            |
| Q <sub>0</sub>         | date, time and day of the week<br>- if the device communicates with the EVconnect app or the EPoCA remote monitoring |  |   |              |  | *             | Touch the UP or DOWN key within 15 s to select the option "Reset   |        |            |
|                        | system, the da<br>smartphone or t  | system, the date, time and day of the week will automatically be set by the smartphone or tablet |   |              |  |               | Compressor Working Hours"  | 0.     |            |
| neck                   | that the keypad is no  | ot locked.   |   |              |  |               |  | 9.     |            |
|                        | :=   | Touch the ADDITIONAL FUN   | CTIONS key                                | 6.           |  |               |  | 10.    |            |
| 2.                     |  | Touch the UP or DOWN key within 15 s to select the option "Ser-                                  |   | 7.           |  | •             | Touch the UP or DOWN key to set "149"  | 11.    | Ý          |
| I.                     | SET  | Touch the SET key  |   | 8.           | 561  |               | Touch the SET key: the display will show the message "DONE".   | 12.    | !          |
|                        |  | Touch the UP or DOWN key   | within 15 s to select the option "Clock"  | 9.           |  |               | Touch the ON/STAND-BY key a few times to exit the procedure  | 13.    |            |
| 5.                     | SET  | Touch the SET key  |   | 5.7<br>Chock | Setting the lar  | ngua          | ge   | 7.2    | Rest       |
| ·.                     | SET  | Touch the SET key again  |   | 1.           |  | 15 110        | Touch the ADDITIONAL FUNCTIONS key   | *      | N.B        |
|                        |  | Touch the UP or DOWN key   | within 15 s to set the year               | 2.           |  | ٠             | Touch the UP or DOWN key within 15 s to select the option "Ser-  | Υœ     | Che<br>RAN |
|                        | SET  | Touch the SET key  |   |              | 5FT  | -             | vice"  | Check  | that t     |
|                        |  | Touch the UP or DOWN key   | within 15 s to set the month $(01  12)$   |              |  |               | Touch the UP or DOWN key within 15 s to select the option "Lan-  | 1.     |            |
| <u> </u>               |  |  |   | 4.<br>       |  | - J           | guage"   | 2.     | Ý          |
| J.                     |  |  |   | 5.           |  |               |  | 3.     |            |
| 1.                     |  | Touch the UP or DOWN key   | within 15 s to set the day (01 31)        | 6.           |  | •             | Touch the UP or DOWN key within 15 s to set the language   | 4.     | Ý          |
| 2.                     |  | Touch the SET key  |   | 7.           | 561  |               | Touch the SET key  | 5.     |            |
| 3.                     |  | Touch the UP or DOWN key   | within 15 s to set the time (00 23)       | 8.           | U U  |               | Touch the ON/STAND-BY key a few times to exit the procedure  | 6.     |            |
| 4.                     | SET  | Touch the SET key  |   | 5.8          | Rebooting the  | EVIi          | inking Wi-Fi module  |        | د          |
| 5.                     |  | Touch the UP or DOWN key 59)   | within 15 s to set the minute (00         | Check        | that the keypad  | is no         | t locked.<br> <br>Touch the ADDITIONAL FUNCTIONS key   |        |            |
| <b>)</b> .             | U  | Touch the ON/STAND-BY ke   | y a few times to exit the procedure       |              |  |               | Touch the UP or DOWN key within 15 s to select the option "Ser-  | o.<br> |            |
| 2                      | Switching on/off   | the demisting function (if   | u1c u6c = 8), auxiliary load 1 (if        |              |  |               | vice"  | 9.     | Disc       |
| neck                   | u1c u8c = 10) a<br>that the keypad is no   | nd auxiliary load 2 (if u1c.   | u8c = 11)                                 | 3.<br>       |  |               | Touch the UP or DOWN key within 15 s to select the option "Re-   | •      | 0.00       |
|                        |  | Touch the ADDITIONAL FUN   | CTIONS key                                | 4.           |  | •             | boot EVlinking   | 0      |            |
|                        |  | Touch the UP or DOWN key   | within 15 s to select an option           | 5.           | SET  |               | Touch the SET key for 2 s: the device will exit the procedure  |        | NO.<br>1   |
|                        | SFT  | Touch the SET key: the disp  | lay will show a message                   | 6            | INTERNAL STA   | ATUS          | 3  |        | NO.<br>2   |
|                        | OPTION   | DESCRIPTION  | MESSAGE                                   | 6.1<br>Check | that the keypad  | is no         | arm information<br>t locked.   |        | 3          |
|                        | AUX 1  | auxiliary load 1   | AUX 1 switch ON/OFF<br>SET To Confirm     | 1.           | रई <b>रे</b>   |               | Touch the INTERNAL STATUS key  |        | 5          |
|                        | AUX 2  | auxiliary load 2   | AUX 2 switch ON/OFF<br>SET To Confirm     | 2.           |  | ٠             | Touch the UP or DOWN key within 15 s to select the option "HACCP"  |        | 7          |
|                        | Demisting  | demisting  | Switch on/off Demisting<br>SET To Confirm | 3.           | SET  |               | Touch the SET key  |        | 8          |
|                        | SET  | Touch the SET key: the dev   | ice will exit the procedure               | 4.           |  | ٠             | Touch the UP or DOWN key to select an option   |        | 9          |
| ; de                   | n<br>emisting function stay  | is on at full power for the dura   | ation of u6 at the most.                  |              |  |               | DESCRIPTION  |        | 10         |
| <b>1</b>               | Setting the humid  | lity level (if F0 = 5)   |   | 1            | ture   | -1 d=         |  |        |            |
| сCК                    | •  | Touch the ADDITIONAL FUN   | CTIONS key                                | 1            | ture   | era-          |  |        |            |
|                        |  | Touch the UP or DOWN key   | within 15 s to select the option "Hu-     |              | Door Open<br>Power Failure   | e             | door open alarm (if i4 = 1)<br>power failure alarm (available when the EVlinking RS-485  |        |            |
|                        |  | midity Level"  |   |              |  |               | EVIF23TSX converter, the EVIinking BLE EVIF25TBX module or the<br>EVIinking Wi-Fi EVIF25TWX module is connected)   |        |            |
|                        |  |  |   |              |  |               | Touch the SET key: the display will show:<br>- the date and time of the alarm (available when the EVlinking  |        |            |
|                        |  | TOUCH THE UP OF DOWN KEY   | within 15 s to set the value              | 5.           | SET  |               | RS-485 EVIF23TSX converter, the EVIInking BLE EVIF25TBX<br>module or the EVIInking Wi-Fi EVIF25TWX module is connected)  |        |            |
| 11c                    | u8c = 16 the even  | Touch the SET key: the dev   | ice will exit the procedure               |              |  |               | - the duration of the alarm  | $\cap$ | 11         |
|                        | Activating /deacting   | wating thewing   |   | 6.           | U  |               | Touch the ON/STAND-BY key a few times to exit the procedure  |        | 12         |
| eck                    | that the keypad is no  | t locked and that overcooling  | is not active.                            |              | ,  |               |  |        |            |
|                        |  | Touch the ADDITIONAL FUN   | CTIONS key                                | 6.2<br>Check | that the keypad  | is no         | tatus<br>t locked.   |        | 13         |
|                        |  | Touch the UP or DOWN key within 15 s to select the option "Thaw-<br>ing" Touch the SET key       |   | 1.           | \$\$   |               | Touch the INTERNAL STATUS key  |        | 14         |
|                        | SET  |  |   | 2.           | Ý  | ٠             | Touch the UP or DOWN key within 15 s to select the option "In-<br>ternal Values"   |        |            |
|                        | ý 🔨 🦻  | Touch the UP or DOWN key   | to select an option                       | 3.           | SET  |               | Touch the SET key  |        |            |
|                        |  | DESCRIPTION  |   | 4.           |  | ٠             | Touch the UP or DOWN key to select an option   |        |            |
|                        | MEDIUM LOAD  | medium load  |   |              | OPTION   |               | DESCRIPTION  |        |            |
|                        | FULL 1 C 1 C   | Ault In a l  |   |              |  |               | Leapinet temperature (VISIDIE IT PP1 PP4 = () and PP1 PP4 $\neq$ 5)  |        | 1          |
|                        |  | full load  | ice will exit the procedure               |              | Cabinet T<br>Evaporator T  |               | evaporator temperature (visible if PP1 PP4 = 2)  |        |            |
|                        | FULL LOAD  | full load<br>Touch the SET key: the dev  | ice will exit the procedure               |              | Cabinet T<br>Evaporator T<br>Condenser T<br>Critical Temp  | ).            | evaporator temperature (visible if PP1 PP4 = 2)<br>condenser temperature (visible if PP1 PP4 = 3)<br>critical temperature (visible if PP1 PP4 = 4)   |        |            |
|                        | FULL LOAD<br>SET<br>SET  | full load<br>Touch the SET key: the dev<br>Touch the SET key for 2 s to                          | ice will exit the procedure               |              | Cabinet T<br>Evaporator T<br>Condenser T<br>Critical Temp<br>Outgoing Air<br>Evaporator          | ).<br>T.<br>2 | evaporator temperature (visible if PP1 PP4 = 2)<br>condenser temperature (visible if PP1 PP4 = 3)<br>critical temperature (visible if PP1 PP4 = 4)<br>outgoing air temperature (visible if PP1 PP4 = 6)<br>evaporator 2 temperature (visible if PP1 PP4 = 7) |        |            |
| 5.<br>5.<br><u>UNC</u> | FULL LOAD<br>SET<br>SET  | full load<br>Touch the SET key: the dev<br>Touch the SET key for 2 s to<br>CONDITION             | consequence                               |              | Cabinet T<br>Evaporator T<br>Condenser T<br>Critical Temp<br>Outgoing Air<br>Evaporator<br>Temp. | р.<br>Т.<br>2 | evaporator temperature (visible if PP1 PP4 = 2)<br>condenser temperature (visible if PP1 PP4 = 3)<br>critical temperature (visible if PP1 PP4 = 4)<br>outgoing air temperature (visible if PP1 PP4 = 6)<br>evaporator 2 temperature (visible if PP1 PP4 = 7) |        | 15         |

| ŕ                          | $\checkmark$   | )  | Touch the UP or DOWN key within<br>rameters"  | n 15 s to select the option "Pa-   |  |  |
|----------------------------|--|--|---|--|--|--|
|                            | <b>SET</b>   |  | Touch the SET key   |  |  |  |
|                            | <b>SET</b>   |  | Touch the SET key again   |  |  |  |
| ۔<br>ا                     |  | <u> </u>   | Touch the UP or DOWN key withir   | 15 s to set the PAS value (de-   |  |  |
|                            |  |  | fault "-19")  |  |  |  |
|                            |  |  |   |  |  |  |
| Ý                          | $\mathbf{\mathbf{\nabla}}$   |  | Touch the UP or DOWN key to sel   | ect a parameter  |  |  |
|                            | <u>11</u>  |  | Touch the SET key   |  |  |  |
| ŕ                          | $\checkmark$   |  | Touch the UP or DOWN key within   | 15 s to set the value  |  |  |
|                            | ΞET  |  | Touch the SET key (or take no act   | tion for 15 s)   |  |  |
|                            | டு   |  | Touch the ON/STAND-BY key a fe  | w times to exit the procedure  |  |  |
| Post                       | orina f  | actory   | settings  |  |  |  |
|                            |  |  | settings  |  |  |  |
| Che                        | ck that  | the fact   | ory settings are appropriate; see the   | ne section CONFIGURATION PA-   |  |  |
| RAN                        | 1ETERS   |  |   |  |  |  |
| hat ti                     | ne keyp  | ad is no   | t locked.   | 10.1   |  |  |
|                            | _  |  | Touch the UP or DOWN key within   | NS Key   |  |  |
| <b>√</b>                   | $\checkmark$   |  | vice"   |  |  |  |
|                            | БΕT  |  | Touch the SET key   |  |  |  |
| ŕ                          | $\checkmark$   | )  | Touch the UP or DOWN key within<br>Parameters"  | 15 s to select the option "Reset   |  |  |
| !                          | <b>SET</b>   |  | Touch the SET key   |  |  |  |
|                            | <b>E</b> T   |  | Touch the SET key again   |  |  |  |
| -<br>ا                     |  |  | Touch the UP or DOWN key to set   | "149"  |  |  |
|                            |  |  |   |  |  |  |
| -                          |  |  | Touch the SET Key. the display will show the messageDONE  |  |  |  |
| Disc                       |  | the dev  | Touch the ON/STAND-BY key a fe  | w times to exit the procedure  |  |  |
|                            |  |  |   |  |  |  |
|                            | IFIGUR   |  | PARAMETERS  |  |  |  |
| NO.<br>1                   | PAR.<br>SP   | DEF.<br>0.0  | SETPOINT<br>setpoint  | MIN MAX.<br>r1 r2  |  |  |
| NO.                        | PAR.   | DEF.   | ANALOGUE INPUTS   | MIN MAX.   |  |  |
| 3                          | CA1<br>CA2   | 0.0  | probe 2 offset  | -25 25 °C/°F   |  |  |
| 4                          | CA3  | 0.0  | probe 3 offset  | -25 25 °C/°F   |  |  |
| 5                          | CA4  | 0.0  | probe 4 offset  | -25 25 °C/°F   |  |  |
|                            | 10   | Ľ.   |   | 2 = Pt 1000  |  |  |
| 7                          | P1   | 1  | enable decimal point °C   | 0 = no 1 = yes   |  |  |
| 8                          | P2   | 0  | temperature measurement unit  | 10 - °C $1 - °F$   |  |  |
| 7                          | E - 2  | . 1  | ovaporator proba function   | 0 = 0  |  |  |
|                            |  | 1  | evaporator probe function   | 0 = disabled<br>1 = defrost + fans   |  |  |
|                            |  | 1  | evaporator probe function   | 0 = disabled<br>1 = defrost + fans<br>2 = fans   |  |  |
| 10                         | P5   | 0  | evaporator probe function   | 0 = disabled<br>1 = defrost + fans<br>2 = fans<br>0 = if PP1PP4 = 5, product<br>temperature (CPT) oth  |  |  |
| 10                         | P5   | 0  | evaporator probe function   | 0 = disabled<br>1 = defrost + fans<br>2 = fans<br>0 = if PP1 PP4 = 5, product<br>temperature (CPT), oth-<br>erwise cabinet tempera-  |  |  |
| 10                         | P5   | 0  | evaporator probe function   | 0 = disabled<br>1 = defrost + fans<br>2 = fans<br>0 = if PP1 PP4 = 5, product<br>temperature (CPT), oth-<br>erwise cabinet tempera-<br>ture  |  |  |
| 10                         | P5   | 0  | evaporator probe function   | 0 = disabled<br>1 = defrost + fans<br>2 = fans<br>0 = if PP1 PP4 = 5, product<br>temperature (CPT), oth-<br>erwise cabinet tempera-<br>ture<br>1 = setpoint<br>2 = evaporator temperature  |  |  |
| 10                         | P5   | 0  | evaporator probe function   | <ul> <li>0 = disabled</li> <li>1 = defrost + fans</li> <li>2 = fans</li> <li>0 = if PP1 PP4 = 5, product<br/>temperature (CPT), oth-<br/>erwise cabinet tempera-<br/>ture</li> <li>1 = setpoint</li> <li>2 = evaporator temperature</li> <li>3 = condenser temperature</li> </ul>  |  |  |
| 10                         | Ρ5   | 0  | evaporator probe function   | <ul> <li>0 = disabled</li> <li>1 = defrost + fans</li> <li>2 = fans</li> <li>0 = if PP1 PP4 = 5, product<br/>temperature (CPT), oth-<br/>erwise cabinet tempera-<br/>ture</li> <li>1 = setpoint</li> <li>2 = evaporator temperature</li> <li>3 = condenser temperature</li> <li>4 = critical temperature</li> <li>5 = incoming air temperature</li> </ul>  |  |  |
| 10                         | Ρ5   | 0  | evaporator probe function   | <ul> <li>0 = disabled</li> <li>1 = defrost + fans</li> <li>2 = fans</li> <li>0 = if PP1 PP4 = 5, product<br/>temperature (CPT), oth-<br/>erwise cabinet tempera-<br/>ture</li> <li>1 = setpoint</li> <li>2 = evaporator temperature</li> <li>3 = condenser temperature</li> <li>4 = critical temperature</li> <li>5 = incoming air tempera-<br/>ture</li> </ul>  |  |  |
| 10                         | P5   | 0  | evaporator probe function   | <ul> <li>0 = disabled</li> <li>1 = defrost + fans</li> <li>2 = fans</li> <li>0 = if PP1 PP4 = 5, product<br/>temperature (CPT), oth-<br/>erwise cabinet tempera-<br/>ture</li> <li>1 = setpoint</li> <li>2 = evaporator temperature</li> <li>3 = condenser temperature</li> <li>4 = critical temperature</li> <li>5 = incoming air temperature</li> <li>6 = outgoing air temperature</li> <li>7 = outgoing air temperature</li> </ul>  |  |  |
| 10                         | P5   | 0  | evaporator probe function   | <ul> <li>0 = disabled</li> <li>1 = defrost + fans</li> <li>2 = fans</li> <li>0 = if PP1 PP4 = 5, product<br/>temperature (CPT), oth-<br/>erwise cabinet tempera-<br/>ture</li> <li>1 = setpoint</li> <li>2 = evaporator temperature</li> <li>3 = condenser temperature</li> <li>4 = critical temperature</li> <li>5 = incoming air temperature</li> <li>6 = outgoing air temperature</li> <li>7 = evaporator 2 temperature</li> </ul>  |  |  |
| 10                         | P5<br>P5r  | 0  | evaporator probe function<br>value displayed<br>value shown on remote display<br>(when managed)   | <ul> <li>0 = disabled</li> <li>1 = defrost + fans</li> <li>2 = fans</li> <li>0 = if PP1 PP4 = 5, product<br/>temperature (CPT), oth-<br/>erwise cabinet tempera-<br/>ture</li> <li>1 = setpoint</li> <li>2 = evaporator temperature</li> <li>3 = condenser temperature</li> <li>4 = critical temperature</li> <li>5 = incoming air temperature</li> <li>6 = outgoing air temperature</li> <li>7 = evaporator 2 tempera-<br/>ture</li> <li>like P5</li> </ul>   |  |  |
| 10<br>11<br>12             | P5<br>P5r<br>P7  | 0  | value shown on remote display<br>(when managed)<br>incoming air effect to calculate   | <ul> <li>0 = disabled</li> <li>1 = defrost + fans</li> <li>2 = fans</li> <li>0 = if PP1 PP4 = 5, product<br/>temperature (CPT), oth-<br/>erwise cabinet tempera-<br/>ture</li> <li>1 = setpoint</li> <li>2 = evaporator temperature</li> <li>3 = condenser temperature</li> <li>4 = critical temperature</li> <li>5 = incoming air temperature</li> <li>6 = outgoing air temperature</li> <li>7 = evaporator 2 tempera-<br/>ture</li> <li>like P5</li> <li>0 100%</li> <li>CPT = {(107 x (incoming air))</li> </ul>  |  |  |
| 10<br>11<br>12             | P5<br>P5r<br>P7  | 0  | value shown on remote display<br>(when managed)<br>incoming air effect to calculate<br>product temperature (CPT)  | <ul> <li>0 = disabled</li> <li>1 = defrost + fans</li> <li>2 = fans</li> <li>0 = if PP1 PP4 = 5, product<br/>temperature (CPT), oth-<br/>erwise cabinet tempera-<br/>ture</li> <li>1 = setpoint</li> <li>2 = evaporator temperature</li> <li>3 = condenser temperature</li> <li>4 = critical temperature</li> <li>5 = incoming air temperature</li> <li>6 = outgoing air temperature</li> <li>7 = evaporator 2 tempera-<br/>ture</li> <li>1 evaporator 2 tempera-<br/>ture</li> <li< td=""></li<></ul> |  |  |
| 10<br>11<br>12<br>13       | P5<br>P5r<br>P7<br>P8  | 0  | value displayed<br>value displayed<br>value shown on remote display<br>(when managed)<br>incoming air effect to calculate<br>product temperature (CPT)<br>display refresh time  | <ul> <li>0 = disabled</li> <li>1 = defrost + fans</li> <li>2 = fans</li> <li>0 = if PP1 PP4 = 5, product<br/>temperature (CPT), oth-<br/>erwise cabinet tempera-<br/>ture</li> <li>1 = setpoint</li> <li>2 = evaporator temperature</li> <li>3 = condenser temperature</li> <li>4 = critical temperature</li> <li>5 = incoming air temperature</li> <li>6 = outgoing air temperature</li> <li>6 = outgoing air temperature</li> <li>7 = evaporator 2 tempera-<br/>ture</li> <li>like P5</li> <li>0 100%</li> <li>CPT = {[(P7 x (incoming air)]<br/>+ [(100 - P7) x<br/>(outgoing air)]: 100}</li> <li>0 250 s: 10</li> </ul>   |  |  |
| 10<br>11<br>12<br>13<br>14 | P5<br>P5r<br>P7<br>P8<br>PP1   | 0 0 50 5 1   | evaporator probe function<br>value displayed<br>value shown on remote display<br>(when managed)<br>incoming air effect to calculate<br>product temperature (CPT)<br>display refresh time<br>probe 1 function  | 0       = disabled         1       = defrost + fans         2       = fans         0       = if PP1 PP4 = 5, product<br>temperature (CPT), oth-<br>erwise cabinet tempera-<br>ture         1       = setpoint         2       = condenser temperature         3       = condenser temperature         4       = critical temperature         5       = incoming air temperature         6       = outgoing air temperature         7       = evaporator 2 tempera-<br>ture         like P5       0 100%         CPT = {[(P7 x (incoming air)]<br>+ [(100 - P7) x<br>(outgoing air)]: 100}         0 250 s: 10       0         0       = disabled   |  |  |
| 10<br>11<br>12<br>13<br>14 | P5<br>P5r<br>P7<br>P8<br>PP1   | 0<br>0<br>50<br>5<br>1   | evaporator probe function<br>value displayed<br>value shown on remote display<br>(when managed)<br>incoming air effect to calculate<br>product temperature (CPT)<br>display refresh time<br>probe 1 function  | <ul> <li>0 = disabled</li> <li>1 = defrost + fans</li> <li>2 = fans</li> <li>0 = if PP1 PP4 = 5, product<br/>temperature (CPT), oth-<br/>erwise cabinet tempera-<br/>ture</li> <li>1 = setpoint</li> <li>2 = evaporator temperature</li> <li>3 = condenser temperature</li> <li>4 = critical temperature</li> <li>5 = incoming air temperature</li> <li>6 = outgoing air temperature</li> <li>7 = evaporator 2 tempera-<br/>ture</li> <li>like P5</li> <li>0 100%</li> <li>CPT = {[(P7 x (incoming air)]<br/>+ [(100 - P7) x<br/>(outgoing air)] : 100}</li> <li>0 250 s: 10</li> <li>0 = disabled</li> <li>1 = if PP1 PP4 = 5, incom-<br/>ing or it temperature</li> </ul>  |  |  |
| 10<br>11<br>12<br>13<br>14 | P5<br>P5r<br>P7<br>P7<br>P8<br>PP1   | 0<br>0<br>50<br>5<br>1   | evaporator probe function<br>value displayed<br>value shown on remote display<br>(when managed)<br>incoming air effect to calculate<br>product temperature (CPT)<br>display refresh time<br>probe 1 function  | <ul> <li>0 = disabled</li> <li>1 = defrost + fans</li> <li>2 = fans</li> <li>0 = if PP1 PP4 = 5, product<br/>temperature (CPT), oth-<br/>erwise cabinet tempera-<br/>ture</li> <li>1 = setpoint</li> <li>2 = evaporator temperature</li> <li>3 = condenser temperature</li> <li>4 = critical temperature</li> <li>5 = incoming air temperature</li> <li>6 = outgoing air temperature</li> <li>7 = evaporator 2 tempera-<br/>ture</li> <li>like P5</li> <li>0 100%</li> <li>CPT = {[(P7 x (incoming air)]<br/>+ [(100 - P7) x<br/>(outgoing air)] : 100}</li> <li>0 250 s: 10</li> <li>0 = disabled</li> <li>1 = if PP1 PP4 = 5, incom-<br/>ing air temperature</li> </ul>  |  |  |
| 10<br>11<br>12<br>13<br>14 | P5<br>P5r<br>P7<br>P8<br>PP1   | 0<br>0<br>50<br>5<br>1   | evaporator probe function<br>value displayed<br>value shown on remote display<br>(when managed)<br>incoming air effect to calculate<br>product temperature (CPT)<br>display refresh time<br>probe 1 function  | <ul> <li>0 = disabled</li> <li>1 = defrost + fans</li> <li>2 = fans</li> <li>0 = if PP1 PP4 = 5, product<br/>temperature (CPT), oth-<br/>erwise cabinet tempera-<br/>ture</li> <li>1 = setpoint</li> <li>2 = evaporator temperature</li> <li>3 = condenser temperature</li> <li>4 = critical temperature</li> <li>5 = incoming air temperature</li> <li>6 = outgoing air temperature</li> <li>7 = evaporator 2 tempera-<br/>ture</li> <li>like P5</li> <li>0 100%</li> <li>CPT = {[(P7 x (incoming air)]<br/>+ [(100 - P7) &gt;<br/>(outgoing air)] : 100}</li> <li>0 250 s: 10</li> <li>0 = disabled</li> <li>1 = if PP1 PP4 = 5, incom-<br/>ing air temperature</li> <li>probe, otherwise cabine-<br/>temperature probe</li> </ul>   |  |  |
| 10<br>11<br>12<br>13<br>14 | P5<br>P5r<br>P7<br>P7<br>P8<br>PP1   | 0 0 50 5 1   | evaporator probe function<br>value displayed<br>value shown on remote display<br>(when managed)<br>incoming air effect to calculate<br>product temperature (CPT)<br>display refresh time<br>probe 1 function  | <ul> <li>0 = disabled</li> <li>1 = defrost + fans</li> <li>2 = fans</li> <li>0 = if PP1 PP4 = 5, product<br/>temperature (CPT), oth-<br/>erwise cabinet tempera-<br/>ture</li> <li>1 = setpoint</li> <li>2 = evaporator temperature</li> <li>3 = condenser temperature</li> <li>4 = critical temperature</li> <li>5 = incoming air temperature</li> <li>6 = outgoing air temperature</li> <li>7 = evaporator 2 temperature</li> <li>1 = outgoing air temperature</li> <li>1 = evaporator 2 temperature</li> <li>1 = if (PT x (incoming air))</li> <li>+ [(100 - P7) &gt;<br/>(outgoing air)] : 100}</li> <li>0 250 s: 10</li> <li>0 = disabled</li> <li>1 = if PP1 PP4 = 5, incom-<br/>ing air temperature<br/>probe, otherwise cabineir<br/>temperature probe</li> <li>2 = evaporator temperature</li> </ul>  |  |  |
| 10<br>11<br>12<br>13<br>14 | P5<br>P5r<br>P7<br>P7<br>P8<br>PP1   | 0 0 50 5 1   | value displayed<br>value displayed<br>value shown on remote display<br>(when managed)<br>incoming air effect to calculate<br>product temperature (CPT)<br>display refresh time<br>probe 1 function  | <ul> <li>0 = disabled</li> <li>1 = defrost + fans</li> <li>2 = fans</li> <li>0 = if PP1 PP4 = 5, product<br/>temperature (CPT), oth-<br/>erwise cabinet tempera-<br/>ture</li> <li>1 = setpoint</li> <li>2 = evaporator temperature</li> <li>3 = condenser temperature</li> <li>4 = critical temperature</li> <li>5 = incoming air temperature</li> <li>6 = outgoing air temperature</li> <li>7 = evaporator 2 temperature</li> <li>1 = outgoing air temperature</li> <li>1 = evaporator 2 temperature</li> <li>1 = ([07 x (incoming air])] + (100 - P7) &gt;<br/>(outgoing air)] : 100}</li> <li>0 250 s: 10</li> <li>0 = disabled</li> <li>1 = if PP1 PP4 = 5, incom-<br/>ing air temperature<br/>probe, otherwise cabiner<br/>temperature probe</li> <li>2 = evaporator temperature<br/>probe</li> <li>2 = evaporator temperature</li> </ul>  |  |  |
| 10<br>11<br>12<br>13<br>14 | P5<br>P5r<br>P7<br>P7<br>P7  | 1<br>0<br>50<br>5<br>1   | value displayed<br>value displayed<br>value shown on remote display<br>(when managed)<br>incoming air effect to calculate<br>product temperature (CPT)<br>display refresh time<br>probe 1 function  | <ul> <li>0 = disabled</li> <li>1 = defrost + fans</li> <li>2 = fans</li> <li>0 = if PP1 PP4 = 5, product<br/>temperature (CPT), oth-<br/>erwise cabinet tempera-<br/>ture</li> <li>1 = setpoint</li> <li>2 = evaporator temperature</li> <li>3 = condenser temperature</li> <li>4 = critical temperature</li> <li>5 = incoming air temperature</li> <li>6 = outgoing air temperature</li> <li>7 = evaporator 2 temperature</li> <li>1 = evaporator 2 temperature</li> <li>1 = (100 - P7) &gt;</li> <li>(outgoing air)] : 100}</li> <li>0 250 s: 10</li> <li>0 = disabled</li> <li>1 = if PP1 PP4 = 5, incom-<br/>ing air temperature<br/>probe, otherwise cabinet<br/>temperature probe</li> <li>2 = evaporator temperature</li> <li>3 = condenser temperature</li> </ul>  |  |  |
| 10<br>11<br>12<br>13<br>14 | P5<br>P5r<br>P7<br>P7<br>P7  | 0  | value displayed<br>value displayed<br>value shown on remote display<br>(when managed)<br>incoming air effect to calculate<br>product temperature (CPT)<br>display refresh time<br>probe 1 function  | <ul> <li>0 = disabled</li> <li>1 = defrost + fans</li> <li>2 = fans</li> <li>0 = if PP1 PP4 = 5, product<br/>temperature (CPT), oth-<br/>erwise cabinet tempera-<br/>ture</li> <li>1 = setpoint</li> <li>2 = evaporator temperature</li> <li>3 = condenser temperature</li> <li>4 = critical temperature</li> <li>5 = incoming air temperature</li> <li>6 = outgoing air temperature</li> <li>7 = evaporator 2 temperature</li> <li>1 = evaporator 2 temperature</li> <li>1 = (100 - P7) &gt;</li> <li>(outgoing air)] : 100}</li> <li>0 250 s: 10</li> <li>0 = disabled</li> <li>1 = if PP1 PP4 = 5, incom-<br/>ing air temperature<br/>probe, otherwise cabinet<br/>temperature probe</li> <li>2 = evaporator temperature<br/>probe</li> <li>3 = condenser temperature<br/>probe</li> <li>4 = critical temperature<br/>probe</li> </ul>  |  |  |
| 10<br>11<br>12<br>13<br>14 | P5<br>P5r<br>P7<br>P7<br>P8<br>PP1   | 0  | evaporator probation and evaporator probation function<br>value displayed<br>value shown on remote display<br>(when managed)<br>incoming air effect to calculate<br>product temperature (CPT)<br>display refresh time<br>probe 1 function   | <ul> <li>0 = disabled</li> <li>1 = defrost + fans</li> <li>2 = fans</li> <li>0 = if PP1 PP4 = 5, product<br/>temperature (CPT), oth-<br/>erwise cabinet tempera-<br/>ture</li> <li>1 = setpoint</li> <li>2 = evaporator temperature</li> <li>3 = condenser temperature</li> <li>4 = critical temperature</li> <li>5 = incoming air temperature</li> <li>6 = outgoing air temperature</li> <li>7 = evaporator 2 tempera-<br/>ture</li> <li>like P5</li> <li>0 100%</li> <li>CPT = {[(P7 x (incoming air)]<br/>+ [(100 - P7) x<br/>(outgoing air)] : 100}</li> <li>0 250 s: 10</li> <li>0 = disabled</li> <li>1 = if PP1 PP4 = 5, incom-<br/>ing air temperature<br/>probe, otherwise cabinet<br/>temperature probe</li> <li>2 = evaporator temperature<br/>probe</li> <li>3 = condenser temperature<br/>probe</li> <li>4 = critical temperature<br/>probe</li> <li>5 = outgoing air temperature</li> </ul>  |  |  |
| 10<br>11<br>12<br>13<br>14 | P5<br>P5r<br>P7<br>P7<br>P1  | 0  | value displayed<br>value displayed<br>value shown on remote display<br>(when managed)<br>incoming air effect to calculate<br>product temperature (CPT)<br>display refresh time<br>probe 1 function  | <ul> <li>0 = disabled</li> <li>1 = defrost + fans</li> <li>2 = fans</li> <li>0 = if PP1 PP4 = 5, product<br/>temperature (CPT), oth-<br/>erwise cabinet tempera-<br/>ture</li> <li>1 = setpoint</li> <li>2 = evaporator temperature</li> <li>3 = condenser temperature</li> <li>4 = critical temperature</li> <li>5 = incoming air temperature</li> <li>6 = outgoing air temperature</li> <li>7 = evaporator 2 tempera-<br/>ture</li> <li>100%</li> <li>CPT = {[(P7 x (incoming air)]<br/>+ [(100 - P7) x<br/>(outgoing air)]: 100}</li> <li>0 250 s: 10</li> <li>0 = disabled</li> <li>1 = if PP1 PP4 = 5, incom-<br/>ing air temperature<br/>probe, otherwise cabinet<br/>temperature probe</li> <li>2 = evaporator temperature<br/>probe</li> <li>3 = condenser temperature<br/>probe</li> <li>5 = outgoing air temperature<br/>probe</li> <li>6 = evaporator 2 temperature<br/>probe</li> </ul>  |  |  |
| 10<br>11<br>12<br>13<br>14 | P5<br>P5r<br>P7<br>P7<br>P7  | 0  | value displayed<br>value displayed<br>value shown on remote display<br>(when managed)<br>incoming air effect to calculate<br>product temperature (CPT)<br>display refresh time<br>probe 1 function  | <ul> <li>0 = disabled</li> <li>1 = defrost + fans</li> <li>2 = fans</li> <li>0 = if PP1 PP4 = 5, product<br/>temperature (CPT), oth-<br/>erwise cabinet tempera-<br/>ture</li> <li>1 = setpoint</li> <li>2 = evaporator temperature</li> <li>3 = condenser temperature</li> <li>4 = critical temperature</li> <li>5 = incoming air temperature</li> <li>6 = outgoing air temperature</li> <li>7 = evaporator 2 tempera-<br/>ture</li> <li>0 100%</li> <li>CPT = {[(P7 x (incoming air)]<br/>+ [(100 - P7) x<br/>(outgoing air)] : 100}</li> <li>0 250 s: 10</li> <li>0 = disabled</li> <li>1 = if PP1 PP4 = 5, incom-<br/>ing air temperature<br/>probe, otherwise cabinet<br/>temperature probe</li> <li>2 = evaporator temperature<br/>probe</li> <li>3 = condenser temperature<br/>probe</li> <li>4 = critical temperature<br/>probe</li> <li>5 = outgoing air temperature<br/>probe</li> <li>6 = evaporator 2 temperature<br/>probe</li> <li>6 = evaporator 2 temperature<br/>probe</li> </ul>   |  |  |
|                            | ✓         ✓ <t< td=""><td>Image: Set T         SET         SET</td><td>Image: second state of the second s</td><td>Touch the UP or DOWN key within rameters"         SET       Touch the SET key         SET       Touch the SET key again         Image: Set in the intervention of the intervent of the interventint of the intervent of the intervention of the</td></t<> | Image: Set T         SET         SET | Image: second state of the second s | Touch the UP or DOWN key within rameters"         SET       Touch the SET key         SET       Touch the SET key again         Image: Set in the intervention of the intervent of the interventint of the intervent of the intervention of the  |  |  |

|   | function of r19, r22 and r25, de-   |  |  |  |  |  |  |  |  |
|---|---|--|--|--|--|--|--|--|--|
|   | frost disabled  |  |  |  |  |  |  |  |  |
| - | if MEDIUM LOAD selected,  |  |  |  |  |  |  |  |  |
|   | main function of r20, r23 and   |  |  |  |  |  |  |  |  |
|   | r26, defrost disabled   |  |  |  |  |  |  |  |  |
| - | if HIGH LOAD selected, main   |  |  |  |  |  |  |  |  |
|   | function of r21, r24 and r27, de-   |  |  |  |  |  |  |  |  |
|   | frost disabled  |  |  |  |  |  |  |  |  |
| - | main function of r20, r23 and<br>r26, defrost disabled<br>if <b>HIGH LOAD</b> selected, main<br>function of r21, r24 and r27, de-<br>frost disabled |  |  |  |  |  |  |  |  |

When thawing is complete, a buzzer will sound for the duration of u10 and the device will go into conservation phase (main function of r28). The evaporator fan stays on. If the door is opened during thawing, the function is deactivated.

## 5.5 Deleting HACCP alarm information Check that the keypad is not locked.

|   | 1. | : <b>=</b> | Touch the ADDITIONAL FUNCTIONS key  |                      | No. Do<br>ings          |
|---|----|------------|---|----------------------|-------------------------|
| - | 2. | ý 🔨 🦻      | Touch the UP or DOWN key within 15 s to select the option "Ser-                   | 5.                   | ل<br>ل                  |
| - | 3. | SET        | Touch the SET key   | As rega<br>saves th  | rds the r<br>ne rEt val |
|   | 4. | f 🖍 4      | Touch the UP or DOWN key within 15 s to select the option "Reset<br>HACCP Alarms" | drip or o<br>When th | dripping a<br>ne device |
|   | 5. | SET        | Touch the SET key   | 7                    | SETTING                 |
| _ | 6. | SET        | Touch the SET key again   | Check t              | hat the k               |
|   | 7. | <b>f s</b> | Touch the UP or DOWN key to set "149"   | 1.                   | :=                      |
|   | 8. | SET        | Touch the SET key: the display will show the message "DONE".                      | 2.                   |                         |
|   | 9. | (I)        | Touch the ON/STAND-BY key a few times to exit the procedure                       | 3.                   | 5E                      |

| Compressor  | percentage of power supplied by the analogue output to the com-  |  |  |  |  |
|---|--|--|--|--|--|
| Speed   | pressor (visible if Ao1 Ao3 = 1)   |  |  |  |  |
| Condenser Fan   | percentage of power supplied by the analogue output to the con-  |  |  |  |  |
| Speed   | denser fan (visible if Ao1 Ao3 = 2)  |  |  |  |  |
| Evaporator Fan  | percentage of power supplied by the analogue output to the evap-   |  |  |  |  |
| Speed   | orator fan (visible if Ao1 Ao3 = 3)  |  |  |  |  |
| Minimum Tem-  | minimum temperature saved in the last 72 hours   |  |  |  |  |
| perature  |  |  |  |  |  |
| Maximum Tem-  | maximum temperature saved in the last 72 hours   |  |  |  |  |
| perature  |  |  |  |  |  |
| Comp. Days  | compressor operation days  |  |  |  |  |
| No. Comp. Acti-   | number of compressor switch-ons  |  |  |  |  |
| vations   |  |  |  |  |  |
| No. Door Open-  | number of door openings  |  |  |  |  |
| ings  |  |  |  |  |  |
| U   | Touch the ON/STAND-BY key a few times to exit the procedure  |  |  |  |  |
| ards the minimum and<br>he rEt value (default<br>dripping and with the<br>he device is switched | nd maximum temperatures saved in the last 72 hours, the device<br>"temperature of the cabinet or the product, not during defrost, pre-<br>e fans off").<br>I on/off, these temperatures are deleted. |  |  |  |  |
| SETTINGS  |  |  |  |  |  |
| etting configuration  | n parameters   |  |  |  |  |
| that the keypad is no<br>I  | t locked.  |  |  |  |  |
| :=  | Touch the ADDITIONAL FUNCTIONS key   |  |  |  |  |
|   | Touch the UP or DOWN key within 15 s to select the option "Ser-  |  |  |  |  |
|   | vice"  |  |  |  |  |
| SET   | Touch the SET key  |  |  |  |  |
|   |  |  |  |  |  |

|   | 17  | PP4  | 0    | probe 4 function                                | 0 = disabled (multi-purpose<br>input enabled) |
|---|-----|------|------|---|---|
|   |     |      |      |   | like PP1 for the remaining val-               |
|   | NO. | PAR. | DEF. | MAIN REGULATOR                                  | MIN MAX.                                      |
|   | 18  | r0   | 2.0  | setpoint differential                           | 1 15 °C/°F                                    |
|   |     |      |      |   | if Ao1 Ao3 = 0, compressor                    |
|   |     |      |      |   | band off (relative to setpoint,               |
|   |     |      |      |   | i.e. setpoint - r0)                           |
|   | 19  | r1   | -40  | minimum setpoint                                | -99 °C/°F r2                                  |
|   | 20  | r2   | 50.0 | maximum setpoint                                | r1 199 °C/°F                                  |
|   | 21  | r3   | 0    | enable setpoint lock                            | 0 = no 1 = yes                                |
|   | 22  | r4   | 0.0  | setpoint offset in energy saving                | 0 99 °C/°F                                    |
|   | 23  | r5   | 0    | hot or cold mode regulation                     | 0 = cold mode<br>1 = hot mode                 |
|   | 24  | r6   | 0.0  | setpoint offset in overcool-<br>ing/overheating | 0 99 °C/°F                                    |
| 4 | 25  | r7   | 0    | duration overcooling/overheating                | 0 240 min                                     |
| - | 26  | r12  | 1    | differential position r0                        | 0 = asymmetrical                              |
|   |     |      |      |   | 1 = symmetrical                               |
|   | 27  | r13  | 25.0 | proportional band with PWM com-                 | 0 99 °C/°F                                    |
|   |     |      |      | pressor (relative to setpoint)                  | setpoint + r13                                |
|   | 28  | r14  | 10   | integral action time with PWM                   | 0 99 min                                      |
|   |     |      |      | compressor                                      |   |
|   | 29  | r15  | 3    | type of PWM compressor                          | 1 = Embraco VEM                               |
|   |     |      |      |   | 2 = Embraco VEG                               |
|   |     |      |      |   | 3 = Embraco VNEK and VNEU                     |
|   |     |      |      |   | 4 = Secop VNL 50 150 Hz                       |
|   |     |      |      |   | (40 Hz when set to off)                       |
|   |     |      |      |   | 5 = Secop 33 133 Hz                           |
|   |     |      |      |   | 6 = Tecumseh 85 150 Hz                        |

|                | P.A.   |   | d MEDIU   | M   Instruction sheet ver. 1.0   Code 10   | 04YCM12E103   Page3 of 6   PT 18/2   |
|----------------|--|---|---|--|--|
|                |  |   |   |  | 7 = Embraco VES<br>8 = Embraco FMX   |
|                |  |   |   |  | 9 = Embraco VESF   |
|                | 30   | r16   | 0   | percentage 0-10 V output for<br>compressor with minimum capac-   | 0 % r17  |
|                |  |   |   | ity  |  |
|                | 31   | r1/   | 100   | percentage 0-10 V output for<br>compressor with maximum ca-  | r16 100%   |
|                |  |   |   | pacity   |  |
|                | 32   | r18   | 0   | maximum percentage 0-10 V out-<br>put for compressor in energy sav-  | 0 100%<br>0 = disabled   |
|                |  |   |   | ing mode   |  |
|                | 33   | r19   | 25.0  | initial regulation threshold for<br>light load thawing   | -50 99 °C/°F<br>for r25 : 5 (phase 1)  |
|                |  |   |   | ight load thanning   | next threshold = $\{ [(r19 - r22) \}$  |
|                |  |   |   |  | : 4] x 3}, for r25 : 5 (phase 2)   |
|                |  |   |   |  | : 4] x 2}, for r25 : 5 (phase 3)   |
|                |  |   |   |  | next threshold = { [(r19 - r22)<br>$\cdot$ 4] x 1 } for r25 : 5 (phase 4)  |
|                | 34   | r20   | 30.0  | initial regulation threshold for me-   | -50 99 °C/°F   |
|                |  |   |   | dium load thawing  | for r26 : 5 (phase 1)  |
|                |  |   |   |  | : 4] x 3}, for r26 : 5 (phase 2)   |
|                |  |   |   |  | next threshold = { [( $r20 - r23$ )  |
|                |  |   |   |  | next threshold = { $[(r20 - r23)]$   |
|                | 25   | -21   | 25.0  |  | : 4] x 1}, for r26 : 5 (phase 4)   |
|                | 35   | 121   | 35.0  | load thawing   | for r27 : 5 (phase 1)  |
|                |  |   |   |  | next threshold = { $[(r21 - r24)$  |
|                |  |   |   |  | $(r_{21} - r_{24})$<br>next threshold = { [(r_{21} - r_{24})   |
|                |  |   |   |  | : 4] x 2}, for r27 : 5 (phase 3)   |
|                |  |   |   |  | (121 - 124)<br>: 4] x 1}, for r27 : 5 (phase 4)  |
|                | 36   | r22   | 10.0  | final regulation threshold for light   | -50 99 °C/°F   |
|                | 37   | r23   | 12.0  | final regulation threshold for me-   | -50 99 °C/°F   |
|                |  |   | 45.   | dium load thawing  | for r26 : 5 (phase 5)  |
|                | 38   | r24   | 15.0  | unai regulation threshold for full<br>load thawing   | -50 99 °C/°F<br>for r27 : 5 (phase 5)  |
|                | 39   | r25   | 240   | light load thawing duration  | 1 999 min  |
|                | 40<br>41   | r26<br>r27  | 480<br>720  | meaium load thawing duration<br>full load thawing duration   | 1 999 min<br>1 999 min   |
|                | 42   | r28   | 3.0   | regulation threshold during con-   | -50 99 °C/°F   |
|                | 43   | r29   | 10  | servation  | 0 10 °C/°E   |
|                |  |   |   | ing and conservation (relative to  |  |
|                | 44   | r30   | 2.0   | current threshold)   | 1 25 °C/°E   |
|                |  | 150   | 2.0   | for thawing and conservation   | 1  |
|                | 45   | r31   | 2.0   | (r29) during heating   | 1 25 °C/°E   |
|                | 43   | 131   | 2.0   | for thawing and conservation   | 1  |
|                | 46   | r32   | 45  | (r29) during cooling   | 1 600 s  |
|                |  |   |   | thawing  |  |
|                | 47<br>NO   | r33   | 4   | heating on time during thawing   | 1 600 s  |
|                | 48   | U01   | 0   | evaporator fans on delay from  | -300 300 s   |
|                |  |   |   | compressor on for humidity level   | if values are negative, com-   |
|                |  |   |   | 0  | quest and evaporator fans im-  |
|                | 40   | 1102  |   | ovenerator fang off delay from   | mediately on   |
|                | 49   | 002   | 0   | compressor off for humidity level  | if values are negative, com-   |
|                |  |   |   | 0  | pressor off delay from off re-   |
|                |  |   |   |  | mediately off  |
|                | 50   | U03   | 60  | time evaporator fans on for hu-  | 0 60 s   |
|                | 51   | U04   | 1   | time evaporator fans off for hu-   | 0 59 min   |
|                | 52   | LIOF  |   | midity level 0   | 0 50 c   |
|                | 52   | 005   | Ŭ   | pressor is off for humidity level 0  | 0 37 5   |
|                | 53   | U11   | 0   | evaporator fans on delay from  | -300 300 s   |
|                |  |   |   | 1  | pressor on delay from on re-   |
|                |  |   |   |  | quest and evaporator fans im-  |
|                | 54   | U12   | 0   | evaporator fans off delay from   | -300 300 s   |
|                |  |   |   | compressor off for humidity level  | if values are negative, com-   |
|                |  |   |   | •  | pressor on delay non re  |
|                | 55   |   |   |  | quest and evaporator fans im-  |
|                |  | 112   | 60  | time evaporator fans on for his  | quest and evaporator fans im-<br>mediately off   |
|                |  | U13   | 60  | time evaporator fans on for hu-<br>midity level 1  | quest and evaporator fans im-<br>mediately off<br>0 60 s   |
|                | 56   | U13<br>U14  | 60<br>1   | time evaporator fans on for hu-<br>midity level 1<br>time evaporator fans off for hu-<br>midity level 1  | quest and evaporator fans im-<br>mediately off<br>0 60 s<br>0 59 min   |
|                | 56<br>57   | U13<br>U14<br>U15   | 60<br>1<br>0  | time evaporator fans on for hu-<br>midity level 1<br>time evaporator fans off for hu-<br>midity level 1<br>time evaporator fans on if com-   | quest and evaporator fans im-<br>mediately off<br>0 60 s<br>0 59 min<br>0 59 s   |
|                | 56<br>57<br>58   | U13<br>U14<br>U15   | 60<br>1<br>0  | time evaporator fans on for hu-<br>midity level 1<br>time evaporator fans off for hu-<br>midity level 1<br>time evaporator fans on if com-<br>pressor is off for humidity level 1<br>evaporator fans on delay from   | quest and evaporator fans im-<br>mediately off<br>0 60 s<br>0 59 min<br>0 59 s<br>-300 300 s   |
|                | 56<br>57<br>58   | U13<br>U14<br>U15<br>U21  | 60<br>1<br>0  | time evaporator fans on for hu-<br>midity level 1<br>time evaporator fans off for hu-<br>midity level 1<br>time evaporator fans on if com-<br>pressor is off for humidity level 1<br>evaporator fans on delay from<br>compressor on for humidity level   | quest and evaporator fans im-<br>mediately off<br>0 60 s<br>0 59 min<br>0 59 s<br>-300 300 s<br>if values are negative, com-   |
| <b>*</b>       | 56<br>57<br>58   | U13<br>U14<br>U15<br>U21  | 60<br>1<br>0  | time evaporator fans on for hu-<br>midity level 1<br>time evaporator fans off for hu-<br>midity level 1<br>time evaporator fans on if com-<br>pressor is off for humidity level 1<br>evaporator fans on delay from<br>compressor on for humidity level<br>2  | quest and evaporator fans im-<br>mediately off<br>0 60 s<br>0 59 min<br>0 59 s<br>-300 300 s<br>if values are negative, com-<br>pressor on delay from on re-<br>quest and evaporator fans im-  |
| <b>*</b>       | 56<br>57<br>58   | U13<br>U14<br>U15<br>U21  | 60<br>1<br>0  | time evaporator fans on for hu-<br>midity level 1<br>time evaporator fans off for hu-<br>midity level 1<br>time evaporator fans on if com-<br>pressor is off for humidity level 1<br>evaporator fans on delay from<br>compressor on for humidity level<br>2  | quest and evaporator fans immediately off         0 60 s         0 59 min         0 59 s         -300 300 s         if values are negative, compressor on delay from on request and evaporator fans immediately on   |
| <b>*</b>       | 56<br>57<br>58<br>59   | U13<br>U14<br>U15<br>U21<br>U22   | 60<br>1<br>0<br>0   | time evaporator fans on for hu-<br>midity level 1<br>time evaporator fans off for hu-<br>midity level 1<br>time evaporator fans on if com-<br>pressor is off for humidity level 1<br>evaporator fans on delay from<br>compressor on for humidity level<br>2<br>evaporator fans off delay from<br>compressor off for humidity level   | quest and evaporator fans immediately off         0 60 s         0 59 min         0 59 s         -300 300 s         if values are negative, compressor on delay from on request and evaporator fans immediately on         -300 300 s         if values are negative, compressor on delay from on request and evaporator fans immediately on   |
| <b>6</b> *     | 56<br>57<br>58<br>59   | U13<br>U14<br>U15<br>U21<br>U22   | 60<br>1<br>0<br>0   | time evaporator fans on for hu-<br>midity level 1<br>time evaporator fans off for hu-<br>midity level 1<br>time evaporator fans on if com-<br>pressor is off for humidity level 1<br>evaporator fans on delay from<br>compressor on for humidity level<br>2<br>evaporator fans off delay from<br>compressor off for humidity level<br>2  | quest and evaporator fans im-<br>mediately off<br>0 60 s<br>0 59 min<br>0 59 s<br>-300 300 s<br>if values are negative, com-<br>pressor on delay from on re-<br>quest and evaporator fans im-<br>mediately on<br>-300 300 s<br>if values are negative, com-<br>pressor off delay from off re-  |
| <b>6'</b>      | 56<br>57<br>58<br>59   | U13<br>U14<br>U15<br>U21<br>U22   | 60<br>1<br>0<br>0   | time evaporator fans on for hu-<br>midity level 1<br>time evaporator fans off for hu-<br>midity level 1<br>time evaporator fans on if com-<br>pressor is off for humidity level 1<br>evaporator fans on delay from<br>compressor on for humidity level<br>2<br>evaporator fans off delay from<br>compressor off for humidity level<br>2  | quest and evaporator fans immediately off         0 60 s         0 59 min         0 59 s         -300 300 s         if values are negative, compressor on delay from on request and evaporator fans immediately on         -300 300 s         if values are negative, compressor off delay from off request and evaporator fans immediately on   |
| <b>6</b> *     | 56<br>57<br>58<br>59<br>60   | U13<br>U14<br>U15<br>U21<br>U22<br>U22  | 60<br>1<br>0<br>0   | time evaporator fans on for hu-<br>midity level 1<br>time evaporator fans off for hu-<br>midity level 1<br>time evaporator fans on if com-<br>pressor is off for humidity level 1<br>evaporator fans on delay from<br>compressor on for humidity level<br>2<br>evaporator fans off delay from<br>compressor off for humidity level<br>2  | quest and evaporator fans immediately off         0 60 s         0 59 min         0 59 s         -300 300 s         if values are negative, compressor on delay from on request and evaporator fans immediately on         -300 300 s         if values are negative, compressor of delay from of request and evaporator fans immediately off         -300 300 s         if values are negative, compressor off delay from off request and evaporator fans immediately off         0 60 s  |
| <b>6</b> *     | 56<br>57<br>58<br>59<br>60<br>61   | U13<br>U14<br>U15<br>U21<br>U22<br>U22<br>U23<br>U24  | 60<br>1<br>0<br>0<br>60<br>1  | time evaporator fans on for hu-<br>midity level 1<br>time evaporator fans off for hu-<br>midity level 1<br>time evaporator fans on if com-<br>pressor is off for humidity level 1<br>evaporator fans on delay from<br>compressor on for humidity level<br>2<br>evaporator fans off delay from<br>compressor off for humidity level<br>2<br>time evaporator fans on for hu-<br>midity level 2   | quest and evaporator fans immediately off         0 60 s         0 59 min         0 59 s         -300 300 s         if values are negative, compressor on delay from on request and evaporator fans immediately on         -300 300 s         if values are negative, compressor off delay from off request and evaporator fans immediately off         0 60 s         0 59 min  |
| 6*             | 56<br>57<br>58<br>59<br>60<br>61   | U13<br>U14<br>U15<br>U21<br>U22<br>U22<br>U23<br>U24  | 60<br>1<br>0<br>0<br>0<br>60<br>1   | time evaporator fans on for hu-<br>midity level 1<br>time evaporator fans off for hu-<br>midity level 1<br>time evaporator fans on if com-<br>pressor is off for humidity level 1<br>evaporator fans on delay from<br>compressor on for humidity level 2<br>evaporator fans off delay from<br>compressor off for humidity level 2<br>time evaporator fans on for hu-<br>midity level 2<br>time evaporator fans off for hu-<br>midity level 2   | quest and evaporator fans immediately off         0 60 s         0 59 min         0 59 s         -300 300 s         if values are negative, compressor on delay from on request and evaporator fans immediately on         -300 300 s         if values are negative, compressor off delay from off request and evaporator fans immediately off         -300 300 s         if values are negative, compressor off delay from off request and evaporator fans immediately off         0 60 s         0 59 min         0 50  |
| 6              | 56<br>57<br>58<br>59<br>60<br>61<br>62   | U13<br>U14<br>U15<br>U21<br>U22<br>U22<br>U23<br>U24  | 60<br>1<br>0<br>0<br>60<br>1<br>0   | time evaporator fans on for hu-<br>midity level 1<br>time evaporator fans off for hu-<br>midity level 1<br>time evaporator fans on if com-<br>pressor is off for humidity level 1<br>evaporator fans on delay from<br>compressor on for humidity level<br>2<br>evaporator fans off delay from<br>compressor off for humidity level<br>2<br>time evaporator fans on for hu-<br>midity level 2<br>time evaporator fans off for hu-<br>midity level 2<br>time evaporator fans on if com-<br>pressor is off for humidity level 2   | quest and evaporator fans immediately off         0 60 s         0 59 min         0 59 s         -300 300 s         if values are negative, compressor on delay from on request and evaporator fans immediately on         -300 300 s         if values are negative, compressor of delay from off request and evaporator fans immediately off         0 60 s         0 59 min         0 59 s  |
| <b>6</b> *     | 56<br>57<br>58<br>59<br>60<br>61<br>62<br>63   | U13<br>U14<br>U15<br>U21<br>U22<br>U22<br>U22<br>U23<br>U24<br>U25<br>U31   | 60<br>1<br>0<br>0<br>60<br>1<br>0<br>0  | time evaporator fans on for hu-<br>midity level 1<br>time evaporator fans off for hu-<br>midity level 1<br>time evaporator fans on if com-<br>pressor is off for humidity level 1<br>evaporator fans on delay from<br>compressor on for humidity level<br>2<br>evaporator fans off delay from<br>compressor off for humidity level<br>2<br>time evaporator fans on for hu-<br>midity level 2<br>time evaporator fans on if com-<br>pressor is off for humidity level 2<br>evaporator fans on if com-<br>pressor is off for humidity level 2<br>evaporator fans on delay from   | quest and evaporator fans immediately off         0 60 s         0 59 min         0 59 s         -300 300 s         if values are negative, compressor on delay from on request and evaporator fans immediately on         -300 300 s         if values are negative, compressor off delay from off request and evaporator fans immediately off         0 60 s         0 59 min         0 59 s         -300 300 s         if unducts are   |
| <b>6</b> *     | 56<br>57<br>58<br>59<br>60<br>61<br>62<br>63   | U13<br>U14<br>U15<br>U21<br>U22<br>U22<br>U23<br>U24<br>U24<br>U25<br>U31   | 60<br>1<br>0<br>0<br>60<br>1<br>0<br>0  | time evaporator fans on for hu-<br>midity level 1<br>time evaporator fans off for hu-<br>midity level 1<br>time evaporator fans on if com-<br>pressor is off for humidity level 1<br>evaporator fans on delay from<br>compressor on for humidity level<br>2<br>evaporator fans off delay from<br>compressor off for humidity level<br>2<br>time evaporator fans on for hu-<br>midity level 2<br>time evaporator fans on if com-<br>pressor is off for humidity level 2<br>evaporator fans on if com-<br>pressor is off for humidity level 2<br>evaporator fans on delay from<br>compressor on for humidity level 3   | quest and evaporator fans immediately off         0 60 s         0 59 min         0 59 s         -300 300 s         if values are negative, compressor on delay from on request and evaporator fans immediately on         -300 300 s         if values are negative, compressor off delay from off request and evaporator fans immediately off         0 60 s         0 59 min         0 59 s         -300 300 s         if values are negative, compressor on delay from on request and evaporator fans immediately off         0 60 s         0 59 min         0 59 s         -300 300 s         if values are negative, compressor on delay from on re-  |
| <b>6'</b>      | 56<br>57<br>58<br>59<br>60<br>61<br>62<br>63   | U13<br>U14<br>U15<br>U21<br>U22<br>U22<br>U23<br>U23<br>U24<br>U25<br>U31   | 60<br>1<br>0<br>0<br>60<br>1<br>0<br>0  | time evaporator fans on for hu-<br>midity level 1<br>time evaporator fans off for hu-<br>midity level 1<br>time evaporator fans on if com-<br>pressor is off for humidity level 1<br>evaporator fans on delay from<br>compressor on for humidity level 2<br>evaporator fans off delay from<br>compressor off for humidity level 2<br>time evaporator fans on for hu-<br>midity level 2<br>time evaporator fans on if com-<br>pressor is off for humidity level 2<br>evaporator fans on delay from<br>compressor on for humidity level 2<br>a time evaporator fans on if com-<br>pressor is off for humidity level 2<br>evaporator fans on delay from<br>compressor on for humidity level 3<br>a  | quest and evaporator fans immediately off         0 60 s         0 59 min         0 59 s         -300 300 s         if values are negative, compressor on delay from on request and evaporator fans immediately on         -300 300 s         if values are negative, compressor off delay from off request and evaporator fans immediately off         0 50 s         0 59 s         -300 300 s         if values are negative, compressor off delay from off request and evaporator fans immediately off         0 50 s         0 59 min         0 59 s         -300 300 s         if values are negative, compressor on delay from on request and evaporator fans immediately off   |
| <b>6</b> *     | 56<br>57<br>58<br>59<br>60<br>61<br>62<br>63<br>64   | U13<br>U14<br>U15<br>U21<br>U22<br>U22<br>U22<br>U22<br>U22<br>U23<br>U24<br>U25<br>U31                             | 60<br>1<br>0<br>0<br>60<br>1<br>0<br>0  | time evaporator fans on for hu-<br>midity level 1<br>time evaporator fans off for hu-<br>midity level 1<br>time evaporator fans on if com-<br>pressor is off for humidity level 1<br>evaporator fans on delay from<br>compressor on for humidity level<br>2<br>evaporator fans off delay from<br>compressor off for humidity level<br>2<br>time evaporator fans on for hu-<br>midity level 2<br>time evaporator fans on if com-<br>pressor is off for humidity level 2<br>evaporator fans on delay from<br>compressor on for humidity level 2<br>evaporator fans on delay from<br>compressor on for humidity level 3<br>evaporator fans on delay from  | quest and evaporator fans immediately off         0 60 s         0 59 min         0 59 s         -300 300 s         if values are negative, compressor on delay from on request and evaporator fans immediately on         -300 300 s         if values are negative, compressor off delay from off request and evaporator fans immediately off         0 59 min         0 59 s         -300 300 s         if values are negative, compressor off delay from off request and evaporator fans immediately off         0 60 s         0 59 min         0 59 s         -300 300 s         if values are negative, compressor on delay from on request and evaporator fans immediately on         -300 300 s   |
| <b>6</b> *     | 56<br>57<br>58<br>59<br>60<br>61<br>62<br>63<br>64   | U13<br>U14<br>U15<br>U21<br>U22<br>U22<br>U22<br>U23<br>U24<br>U25<br>U31   | 60<br>1<br>0<br>0<br>60<br>1<br>0<br>0  | time evaporator fans on for hu-<br>midity level 1<br>time evaporator fans off for hu-<br>midity level 1<br>time evaporator fans on if com-<br>pressor is off for humidity level 1<br>evaporator fans on delay from<br>compressor on for humidity level 2<br>evaporator fans off delay from<br>compressor off for humidity level 2<br>time evaporator fans on for hu-<br>midity level 2<br>time evaporator fans on if com-<br>pressor is off for humidity level 2<br>evaporator fans on delay from<br>compressor on for humidity level 2<br>evaporator fans on delay from<br>compressor on for humidity level 3<br>evaporator fans off delay from<br>compressor off for humidity level 3  | quest and evaporator fans immediately off         0 60 s         0 59 min         0 59 s         -300 300 s         if values are negative, compressor on delay from on request and evaporator fans immediately on         -300 300 s         if values are negative, compressor off delay from off request and evaporator fans immediately off         0 59 s         -300 300 s         if values are negative, compressor off delay from off request and evaporator fans immediately off         0 59 s         -300 300 s         if values are negative, compressor on delay from on request and evaporator fans immediately on         -300 300 s         if values are negative, compressor on delay from on request and evaporator fans immediately on         -300 300 s         if values are negative, compressor on delay from on request and evaporator fans immediately on   |
| <b>6</b> *     | 56<br>57<br>58<br>60<br>61<br>62<br>63<br>64   | U13<br>U14<br>U15<br>U21<br>U22<br>U22<br>U22<br>U23<br>U24<br>U25<br>U31   | 60<br>1<br>0<br>0<br>60<br>1<br>0<br>0  | time evaporator fans on for hu-<br>midity level 1<br>time evaporator fans off for hu-<br>midity level 1<br>time evaporator fans on if com-<br>pressor is off for humidity level 1<br>evaporator fans on delay from<br>compressor on for humidity level 2<br>evaporator fans off delay from<br>compressor off for humidity level 2<br>time evaporator fans on for hu-<br>midity level 2<br>time evaporator fans on f com-<br>pressor is off for humidity level 2<br>evaporator fans on delay from<br>compressor on for humidity level 3<br>evaporator fans off delay from<br>compressor on for humidity level 3<br>evaporator fans off delay from<br>compressor on for humidity level 3   | quest and evaporator fans immediately off         0 60 s         0 59 min         0 59 s         -300 300 s         if values are negative, compressor on delay from on request and evaporator fans immediately on         -300 300 s         if values are negative, compressor off delay from off request and evaporator fans immediately off         0 59 s         -300 300 s         if values are negative, compressor off delay from off request and evaporator fans immediately off         0 60 s         0 59 nin         0 59 s         -300 300 s         if values are negative, compressor on delay from on request and evaporator fans immediately on         -300 300 s         if values are negative, compressor of delay from off request and evaporator fans immediately on         -300 300 s         if values are negative, compressor off delay from off request and evaporator fans immediately on  |
| <b>&amp;</b> * | 56<br>57<br>58<br>59<br>60<br>61<br>62<br>63<br>64   | U13<br>U14<br>U15<br>U21<br>U22<br>U22<br>U22<br>U22<br>U22<br>U23<br>U24<br>U25<br>U31                             | 60<br>1<br>0<br>0<br>60<br>60<br>1<br>0<br>0<br>0<br>0  | time evaporator fans on for hu-<br>midity level 1<br>time evaporator fans off for hu-<br>midity level 1<br>time evaporator fans on if com-<br>pressor is off for humidity level 1<br>evaporator fans on delay from<br>compressor on for humidity level 2<br>evaporator fans off delay from<br>compressor off for humidity level 2<br>time evaporator fans on for hu-<br>midity level 2<br>time evaporator fans on if com-<br>pressor is off for humidity level 2<br>evaporator fans on delay from<br>compressor on for humidity level 2<br>evaporator fans on delay from<br>compressor on for humidity level 3<br>evaporator fans off delay from<br>compressor on for humidity level 3<br>evaporator fans off delay from<br>compressor off for humidity level 3  | quest and evaporator fans immediately off         0 60 s         0 59 min         0 59 s         -300 300 s         if values are negative, compressor on delay from on request and evaporator fans immediately on         -300 300 s         if values are negative, compressor off delay from off request and evaporator fans immediately off         0 59 s         -300 300 s         if values are negative, compressor of delay from off request and evaporator fans immediately off         0 59 s         -300 300 s         if values are negative, compressor on delay from on request and evaporator fans immediately of         -300 300 s         if values are negative, compressor on delay from on request and evaporator fans immediately of         -300 300 s         if values are negative, compressor off delay from off request and evaporator fans immediately off   |
| <b>*</b>       | 56<br>57<br>58<br>59<br>60<br>61<br>62<br>63<br>64<br>64   | U13<br>U14<br>U15<br>U21<br>U22<br>U22<br>U22<br>U22<br>U22<br>U23<br>U24<br>U25<br>U25<br>U31                      | 60<br>1<br>0<br>0<br>60<br>1<br>0<br>60<br>60   | time evaporator fans on for hu-<br>midity level 1<br>time evaporator fans off for hu-<br>midity level 1<br>time evaporator fans on if com-<br>pressor is off for humidity level 1<br>evaporator fans on delay from<br>compressor on for humidity level 2<br>evaporator fans off delay from<br>compressor off for humidity level<br>2<br>time evaporator fans on for hu-<br>midity level 2<br>time evaporator fans on if com-<br>pressor is off for humidity level 2<br>evaporator fans on delay from<br>compressor on for humidity level 2<br>evaporator fans on delay from<br>compressor on for humidity level 3<br>evaporator fans off delay from<br>compressor off for humidity level<br>3<br>evaporator fans off delay from<br>compressor off for humidity level<br>3<br>time evaporator fans on for hu-<br>midity level 3   | quest and evaporator fans immediately off         0 60 s         0 59 min         0 59 s         -300 300 s         if values are negative, compressor on delay from on request and evaporator fans immediately on         -300 300 s         if values are negative, compressor of delay from off request and evaporator fans immediately off         0 59 min         0 59 s         -300 300 s         if values are negative, compressor off delay from on request and evaporator fans immediately off         0 59 s         -300 300 s         if values are negative, compressor of delay from on request and evaporator fans immediately on         -300 300 s         if values are negative, compressor off delay from off request and evaporator fans immediately on         -300 300 s         if values are negative, compressor off delay from off request and evaporator fans immediately off         -300 300 s         if values are negative, compressor off delay from off request and evaporator fans immediately off  |
| <b>6</b> *     | 56<br>57<br>58<br>59<br>60<br>61<br>62<br>63<br>64<br>64<br>65<br>66   | U13<br>U14<br>U15<br>U21<br>U22<br>U22<br>U23<br>U24<br>U25<br>U31<br>U32<br>U32                                    | 60<br>1<br>0<br>0<br>60<br>1<br>0<br>0<br>60<br>60<br>1   | time evaporator fans on for hu-<br>midity level 1<br>time evaporator fans off for hu-<br>midity level 1<br>time evaporator fans on if com-<br>pressor is off for humidity level 1<br>evaporator fans on delay from<br>compressor on for humidity level 2<br>evaporator fans off delay from<br>compressor off for humidity level 2<br>time evaporator fans on for hu-<br>midity level 2<br>time evaporator fans on if com-<br>pressor is off for humidity level 2<br>evaporator fans on delay from<br>compressor on for humidity level 2<br>evaporator fans on delay from<br>compressor on for humidity level 3<br>evaporator fans off delay from<br>compressor off for humidity level 3<br>time evaporator fans on for hu-<br>midity level 3<br>time evaporator fans on for hu-<br>midity level 3  | quest and evaporator fans immediately off         0 60 s         0 59 min         0 59 s         -300 300 s         if values are negative, compressor on delay from on request and evaporator fans immediately on         -300 300 s         if values are negative, compressor off delay from off request and evaporator fans immediately off         0 59 s         -300 300 s         if values are negative, compressor off delay from off request and evaporator fans immediately off         0 59 s         -300 300 s         if values are negative, compressor on delay from on request and evaporator fans immediately on         -300 300 s         if values are negative, compressor off delay from off request and evaporator fans immediately on         -300 300 s         if values are negative, compressor off delay from off request and evaporator fans immediately off         -300 300 s         if values are negative, compressor off delay from off request and evaporator fans immediately off         0 60 s         0 59 min   |
| <b>&amp;</b> * | 56<br>57<br>58<br>59<br>60<br>61<br>62<br>63<br>64<br>64<br>65<br>66<br>67   | U13<br>U14<br>U15<br>U21<br>U22<br>U22<br>U23<br>U24<br>U25<br>U31<br>U33<br>U33<br>U33                             | 60<br>1<br>0<br>0<br>60<br>1<br>0<br>60<br>1<br>0<br>60<br>1<br>0<br>60<br>1<br>0   | time evaporator fans on for hu-<br>midity level 1<br>time evaporator fans off for hu-<br>midity level 1<br>time evaporator fans on if com-<br>pressor is off for humidity level 1<br>evaporator fans on delay from<br>compressor on for humidity level<br>2<br>evaporator fans off delay from<br>compressor off for humidity level<br>2<br>time evaporator fans on for hu-<br>midity level 2<br>time evaporator fans on if com-<br>pressor is off for humidity level 2<br>evaporator fans on delay from<br>compressor on for humidity level<br>3<br>evaporator fans on delay from<br>compressor on for humidity level<br>3<br>evaporator fans off delay from<br>compressor on for humidity level<br>3<br>time evaporator fans on for hu-<br>midity level 3<br>time evaporator fans on for hu-<br>midity level 3<br>time evaporator fans on for hu-<br>midity level 3   | quest and evaporator fans immediately off         0 60 s         0 59 min         0 59 s         -300 300 s         if values are negative, compressor on delay from on request and evaporator fans immediately on         -300 300 s         if values are negative, compressor off delay from off request and evaporator fans immediately off         0 59 s         -300 300 s         if values are negative, compressor off delay from off request and evaporator fans immediately off         0 59 s         -300 300 s         if values are negative, compressor of delay from on request and evaporator fans immediately off         0 59 s         -300 300 s         if values are negative, compressor off delay from off request and evaporator fans immediately on         -300 300 s         if values are negative, compressor off delay from off request and evaporator fans immediately off         0 60 s         0 60 s         0 59 min   |
| <b>*</b>       | 56<br>57<br>58<br>59<br>60<br>61<br>62<br>63<br>64<br>65<br>66<br>67   | U13<br>U14<br>U15<br>U21<br>U22<br>U22<br>U23<br>U24<br>U25<br>U31<br>U32<br>U33<br>U33<br>U34<br>U35               | 60<br>1<br>0<br>0<br>60<br>1<br>0<br>60<br>1<br>0<br>60<br>1<br>0<br>60<br>1<br>0<br>60<br>1<br>0<br>60<br>60<br>60<br>60<br>60<br>60<br>60<br>60<br>60 | time evaporator fans on for hu-<br>midity level 1<br>time evaporator fans off for hu-<br>midity level 1<br>time evaporator fans on if com-<br>pressor is off for humidity level 1<br>evaporator fans on delay from<br>compressor on for humidity level 2<br>evaporator fans off delay from<br>compressor off for humidity level 2<br>time evaporator fans on for hu-<br>midity level 2<br>time evaporator fans on if com-<br>pressor is off for humidity level 2<br>evaporator fans on delay from<br>compressor on for humidity level 3<br>evaporator fans off delay from<br>compressor on for humidity level 3<br>time evaporator fans on for hu-<br>midity level 3<br>time evaporator fans on for hu-<br>midity level 3<br>time evaporator fans on for hu-<br>midity level 3<br>time evaporator fans off for hu-<br>midity level 3<br>time evaporator fans on for hu-<br>midity level 3<br>time evaporator fans on for hu-<br>midity level 3<br>time evaporator fans on for mu-<br>midity level 3  | quest and evaporator fans immediately off         0 60 s         0 59 min         0 59 s         -300 300 s         if values are negative, compressor on delay from on request and evaporator fans immediately on         -300 300 s         if values are negative, compressor off delay from off request and evaporator fans immediately off         0 59 s         -300 300 s         if values are negative, compressor off delay from off request and evaporator fans immediately off         0 59 s         -300 300 s         if values are negative, compressor on delay from on request and evaporator fans immediately off         -300 300 s         if values are negative, compressor of delay from off request and evaporator fans immediately off         -300 300 s         if values are negative, compressor off delay from off request and evaporator fans immediately off         0 60 s         0 59 min         0 60 s         0 59 min         0 59 s  |
| <b>6</b> *     | 56<br>57<br>58<br>59<br>60<br>61<br>62<br>63<br>64<br>64<br>65<br>66<br>67<br>68   | U13<br>U14<br>U15<br>U21<br>U22<br>U22<br>U23<br>U24<br>U25<br>U31<br>U31<br>U32<br>U32<br>U33<br>U34<br>U35<br>U41 | 60<br>1<br>0<br>0<br>60<br>1<br>0<br>60<br>1<br>0<br>60<br>1<br>0<br>0<br>0   | time evaporator fans on for hu-<br>midity level 1<br>time evaporator fans off for hu-<br>midity level 1<br>time evaporator fans on if com-<br>pressor is off for humidity level 1<br>evaporator fans on delay from<br>compressor on for humidity level 2<br>evaporator fans off delay from<br>compressor off for humidity level 2<br>time evaporator fans on for hu-<br>midity level 2<br>time evaporator fans on if com-<br>pressor is off for humidity level 2<br>evaporator fans on delay from<br>compressor on for humidity level 3<br>evaporator fans off delay from<br>compressor off for humidity level 3<br>time evaporator fans on for hu-<br>midity level 3<br>time evaporator fans on for hu-                             | quest and evaporator fans immediately off         0 60 s         0 59 min         0 59 s         -300 300 s         if values are negative, compressor on delay from on request and evaporator fans immediately on         -300 300 s         if values are negative, compressor of delay from off request and evaporator fans immediately off         0 59 min         0 59 s         -300 300 s         if values are negative, compressor off delay from off request and evaporator fans immediately off         0 59 s         -300 300 s         if values are negative, compressor of delay from on request and evaporator fans immediately on         -300 300 s         if values are negative, compressor off delay from off request and evaporator fans immediately on         -300 300 s         if values are negative, compressor off delay from off request and evaporator fans immediately off         0 59 sin         0 59 sin         0 59 sin         -300 300 s         if values are negative, compressor off delay form off request and evaporator fans immediately off         0 59 sin         -300 300 s         if values are negative, compressor off delay form off request and evaporator fans immediately off                        |
| <b>6</b> *     | 56<br>57<br>58<br>59<br>60<br>61<br>62<br>63<br>64<br>64<br>65<br>66<br>67<br>68   | U13<br>U14<br>U15<br>U21<br>U22<br>U22<br>U23<br>U24<br>U25<br>U31<br>U31<br>U32<br>U33<br>U33<br>U34<br>U35        | 60<br>1<br>0<br>0<br>60<br>1<br>0<br>0<br>60<br>1<br>0<br>60<br>1<br>0<br>0<br>60<br>1<br>0<br>0<br>0   | time evaporator fans on for hu-<br>midity level 1<br>time evaporator fans off for hu-<br>midity level 1<br>time evaporator fans on if com-<br>pressor is off for humidity level 1<br>evaporator fans on delay from<br>compressor on for humidity level 2<br>evaporator fans off delay from<br>compressor off for humidity level 2<br>time evaporator fans on for hu-<br>midity level 2<br>time evaporator fans on if com-<br>pressor is off for humidity level 2<br>evaporator fans on delay from<br>compressor on for humidity level 2<br>time evaporator fans on delay from<br>compressor is off for humidity level 3<br>evaporator fans off delay from<br>compressor on for humidity level 3<br>time evaporator fans on for hu-<br>midity level 3<br>time evaporator fans on for hu-<br>midity level 3<br>time evaporator fans on for hu-<br>midity level 3<br>time evaporator fans on if com-<br>pressor is off for humidity level 3<br>evaporator fans on delay from<br>compressor on for humidity level 3<br>time evaporator fans on for hu-<br>midity level 3<br>time evaporator fans on if com-<br>pressor is off for humidity level 3<br>evaporator fans on delay from<br>compressor on for humidity level 4  | quest and evaporator fans immediately off         0 60 s         0 59 min         0 59 s         -300 300 s         if values are negative, compressor on delay from on request and evaporator fans immediately on         -300 300 s         if values are negative, compressor off delay from off request and evaporator fans immediately off         0 59 s         -300 300 s         if values are negative, compressor off delay from off request and evaporator fans immediately off         0 59 s         -300 300 s         if values are negative, compressor off delay from on request and evaporator fans immediately on         -300 300 s         if values are negative, compressor off delay from off request and evaporator fans immediately off         59 s         -300 300 s         if values are negative, compressor off delay from off request and evaporator fans immediately off         0 59 min         0 59 s         -300 300 s         if values are negative, compressor off delay from off request and evaporator fans immediately off         0 59 s         -300 300 s         if values are negative, compressor on delay from on request and evaporator fans immediately off  |
| <b>&amp;</b> * | 56           57           58           59           60           61           62           63           64           65           66           67           68 | U13<br>U14<br>U15<br>U21<br>U22<br>U22<br>U22<br>U23<br>U24<br>U25<br>U31<br>U33<br>U34<br>U33<br>U34<br>U35<br>U41 | 60<br>1<br>0<br>0<br>60<br>1<br>0<br>60<br>1<br>0<br>60<br>1<br>0<br>0<br>  | time evaporator fans on for hu-<br>midity level 1<br>time evaporator fans off for hu-<br>midity level 1<br>time evaporator fans on if com-<br>pressor is off for humidity level 1<br>evaporator fans on delay from<br>compressor on for humidity level<br>2<br>evaporator fans off delay from<br>compressor off for humidity level<br>2<br>time evaporator fans on for hu-<br>midity level 2<br>time evaporator fans on if com-<br>pressor is off for humidity level 2<br>evaporator fans on delay from<br>compressor on for humidity level<br>3<br>evaporator fans off delay from<br>compressor on for humidity level<br>3<br>time evaporator fans on for hu-<br>midity level 2<br>time evaporator fans on for humidity level<br>3<br>time evaporator fans on for humidity level<br>3<br>time evaporator fans on for hu-<br>midity level 3<br>time evaporator fans on for hu-<br>midity level 3<br>time evaporator fans on if com-<br>pressor is off for humidity level 3<br>time evaporator fans on if com-<br>pressor is off for humidity level 3<br>time evaporator fans on delay from<br>compressor on for humidity level 3<br>time evaporator fans on if com-<br>pressor is off for humidity level 3<br>time evaporator fans on delay from<br>compressor on for humidity level 4 | quest and evaporator fans immediately off         0 60 s         0 59 min         0 59 s         -300 300 s         if values are negative, compressor on delay from on request and evaporator fans immediately on         -300 300 s         if values are negative, compressor off delay from off request and evaporator fans immediately off         0 59 s         -300 300 s         if values are negative, compressor of delay from off request and evaporator fans immediately off         0 59 s         -300 300 s         if values are negative, compressor off delay from on request and evaporator fans immediately on         -300 300 s         if values are negative, compressor off delay from off request and evaporator fans immediately off         0 59 min         0 59 s         -300 300 s         if values are negative, compressor off delay from off request and evaporator fans immediately off         0 59 s         -300 300 s         if values are negative, compressor on delay from on request and evaporator fans immediately o   |
| <b>*</b>       | 56<br>57<br>58<br>59<br>60<br>61<br>62<br>63<br>63<br>64<br>65<br>66<br>67<br>68<br>69   | U13<br>U14<br>U15<br>U21<br>U22<br>U23<br>U24<br>U25<br>U31<br>U32<br>U33<br>U34<br>U33<br>U34<br>U34<br>U35        | 60<br>1<br>0<br>0<br>60<br>1<br>0<br>60<br>1<br>0<br>60<br>1<br>0<br>0<br>0<br>0<br>0<br>0<br>0<br>0<br>0<br>0<br>0<br>0<br>0                           | time evaporator fans on for hu-<br>midity level 1<br>time evaporator fans off for hu-<br>midity level 1<br>time evaporator fans on if com-<br>pressor is off for humidity level 1<br>evaporator fans on delay from<br>compressor on for humidity level 2<br>evaporator fans off delay from<br>compressor off for humidity level 2<br>time evaporator fans on for hu-<br>midity level 2<br>time evaporator fans on if com-<br>pressor is off for humidity level 2<br>evaporator fans on for hu-<br>midity level 2<br>time evaporator fans on for mu-<br>midity level 2<br>time evaporator fans on for hu-<br>midity level 3<br>time evaporator fans on for mu-<br>midity level 3<br>time evaporator fans on for mu-<br>midity level 3<br>time evaporator fans on for mu-<br>midity level 3<br>time evaporator fans on delay from<br>compressor on for humidity level 3<br>evaporator fans on delay from<br>compressor on for humidity level 4  | quest and evaporator fans immediately off         0 60 s         0 59 min         0 59 s         -300 300 s         if values are negative, compressor on delay from on request and evaporator fans immediately on         -300 300 s         if values are negative, compressor off delay from off request and evaporator fans immediately off         0 59 min         0 59 s         -300 300 s         if values are negative, compressor on delay from on request and evaporator fans immediately off         0 59 s         -300 300 s         if values are negative, compressor on delay from on request and evaporator fans immediately on         -300 300 s         if values are negative, compressor off delay from off request and evaporator fans immediately off         0 60 s         0 59 min         0 59 s         -300 300 s         if values are negative, compressor off delay from off request and evaporator fans immediately off         0 59 s         -300 300 s         if values are negative, compressor on delay from on request and evaporator fans immediately off         0 59 s         -300 300 s         if values are negative, compressor on delay from on request and evaporator fans immediately on         -300 300 s |

|    |                   |                |              | I   |  |
|----|-------------------|----------------|--------------|---|--|
|    |                   |                |              |   | if values are negative, com-<br>pressor off delay from off re-   |
|    |                   |                |              |   | quest and evaporator fans im-<br>mediately off   |
|    | 70                | U43            | 60           | time evaporator fans on for hu-<br>midity level 4   | 0 60 s   |
|    | 71                | U44            | 1            | time evaporator fans off for hu-<br>midity level 4  | 0 59 min   |
|    | 72                | U45            | 0            | time evaporator fans on if com-<br>pressor is off for humidity level 4                                    | 0 59 s   |
|    | 73                | U51            | 0            | evaporator fans on delay from<br>compressor on for humidity level<br>5                                    | -300 300 s<br>if values are negative, com-<br>pressor on delay from on re-<br>quest and evaporator fans im-<br>mediately on    |
|    | 74                | U52            | 0            | evaporator fans off delay from<br>compressor off for humidity level<br>5                                  | -300 300 s<br>if values are negative, com-<br>pressor off delay from off re-<br>quest and evaporator fans im-<br>mediately off |
|    | 75                | U53            | 60           | time evaporator fans on for hu-<br>midity level 5   | 0 60 s   |
|    | 76                | U54            | 1            | time evaporator fans off for hu-<br>midity level 5  | 0 59 min   |
|    | 77                | U55            | 0            | time evaporator fans on if com-<br>pressor is off for humidity level 5                                    | 0 59 s   |
|    | 78                | U61            | 0            | evaporator fans on delay from<br>compressor on for humidity level<br>6                                    | -300 300 s<br>if values are negative, com-<br>pressor on delay from on re-<br>quest and evaporator fans im-<br>mediately on    |
|    | 79                | U62            | 0            | evaporator fans off delay from<br>compressor off for humidity level<br>6                                  | -300 300 s<br>if values are negative, com-<br>pressor off delay from off re-<br>quest and evaporator fans im-<br>mediately off |
|    | 80                | U63            | 60           | time evaporator fans on for hu-<br>midity level 6   | 0 60 s   |
|    | 81                | U64            | 1            | time evaporator fans off for hu-<br>midity level 6  | 0 59 min   |
|    | 82                | U65            | 0            | time evaporator fans on if com-   | 0 59 s   |
|    | 83                | U71            | 0            | evaporator fans on delay from<br>compressor on for humidity level<br>6                                    | -300 300 s<br>if values are negative, com-<br>pressor on delay from on re-<br>quest and evaporator fans im-<br>mediately on    |
|    | 84                | U72            | 0            | evaporator fans off delay from<br>compressor off for humidity level<br>7                                  | -300 300 s<br>if values are negative, com-<br>pressor off delay from off re-<br>quest and evaporator fans im-<br>mediately off |
|    | 85<br>86          | U73<br>U74     | 60<br>1      | time evaporator fans on for hu-<br>midity level 7<br>time evaporator fans off for hu-<br>midity level 7   | 0 60 s<br>0 59 min   |
|    | 87                | U75            | 0            | time evaporator fans on if com-   | 0 59 s   |
|    | 88                | U81            | 0            | evaporator fans on delay from<br>compressor on for humidity level<br>8                                    | -300 300 s<br>if values are negative, com-<br>pressor on delay from on re-<br>quest and evaporator fans im-                    |
|    | 89                | U82            | 0            | evaporator fans off delay from<br>compressor off for humidity level<br>8                                  | -300 300 s<br>if values are negative, com-<br>pressor off delay from off re-<br>quest and evaporator fans im-                  |
|    | 90                | U83            | 60           | time evaporator fans on for hu-<br>midity level 8   | mediately off<br>0 60 s  |
|    | 91                | 004            |              | midity level 8  | 0 59 min   |
|    | 92                | 1101           | 0            | pressor is off for humidity level 8   | -300 - 300 s   |
|    |                   |                |              | compressor on for humidity level  | if values are negative, com-<br>pressor on delay from on re-<br>quest and evaporator fans im-<br>mediately on                  |
|    | 94                | 092            | 0            | evaporator tans off delay from<br>compressor off for humidity level<br>9                                  | -300 300 s<br>if values are negative, com-<br>pressor off delay from off re-<br>quest and evaporator fans im-<br>mediately off |
|    | 95                | U93            | 60           | time evaporator fans on for hu-<br>midity level 9   | 0 60 s   |
|    | 96                | U94            | 1            | time evaporator fans off for hu-<br>midity level 9  | 0 59 min   |
|    | 97                | U95            | 0            | time evaporator fans on if com-<br>pressor is off for humidity level 9                                    | 0 59 s   |
|    | NO.<br>98         | PAR.<br>CPO    | DEF.         | COMPRESSOR<br>85 Hz PWM compressor time from  | MIN MAX.<br>0 100 s x 10   |
|    | 99                | CP1            | 50           | power-on<br>percentage 0-10 V compressor  | 0 100%   |
|    | 100               | CP3            | 100          | from power-on<br>percentage 0-10 V compressor in  | 0 100%   |
|    | 101               | CP4            | 0            | cabinet probe alarm<br>maximum 0-10 V compressor-on   | 0 240 min  |
|    | 102               | CO             | 0            | time<br>compressor-on delay from power-   | 0 240 min  |
|    | 103               | C1             | 5            | on<br>delay between two compressor  | 0 240 min  |
|    | 104<br>105<br>106 | C2<br>C3<br>C4 | 3<br>0<br>10 | switch-ons<br>minimum compressor-off time<br>minimum compressor-on time<br>compressor-off time in cabinet | 0 240 min<br>0 240 s<br>0 240 min  |
|    | 107               | C5             | 10           | probe alarm<br>compressor-on time (maximum  | 0 240 min  |
| C  | 108               | C9             | 5            | capacity) in cabinet probe alarm<br>cabinet temperature consecutive                                       | 0 99 h   |
|    |                   |                |              | time within proportional band to operate compressor at max.   | 0 = disabled<br>until cabinet temperature <  |
|    | 109               | C10            | 0            | power<br>compressor days for maintenance  | setpoint<br>0 999 days   |
|    | 110               | C11            | 10           | compressor 2 on delay   | 0 = disabled<br>0 240 s  |
|    | 111               | C12            | 2            | compressor hour value effect to<br>balance hours and switch-ons<br>(BHC)                                  | if C14 = 0<br>0 10<br>BHC = { [C12 x (compressor<br>hours)] + [C13 x (compressor<br>switch-ons)]}                              |
|    | 112               | C13            | 1            | compressor switch-ons value ef-<br>fect to balance hours and switch-<br>ons (BHC)                         | 010<br>BHC = {[C12 x (compressor<br>hours)] + [C13 x (compressor<br>switch-ons)]}<br>if C14 = 2                                |
|    | 113               | C14            | 1            | constraint between compressor<br>and compressor 2   | 0 = function of C11<br>1 = function of r0<br>2 = function of C12 and C13   |
| ٠. | NO.<br>114        | PAR.           | DEF.         | DEFROST (if r5 = 0)<br>enable "b" mode parameters   | MIN MAX.<br>0 = no 1 = yes   |

| 115        | d01       | 1.0       | setpoint threshold to activate "b"                      | r1 r2  |
|------------|-----------|-----------|---|--|
| 116        | d0        | 8         | automatic defrost interval                              | 0 99 h   |
|            |           |           |   | 0 = manual only  |
| 117        | d0b       | 6         | automatic defrost interval in "b"                       | like d0  |
|            |           |           | mode  |  |
| 118        | d1        | 0         | type of defrost   | 0 = electric<br>1 = hot gas (do not use with           |
|            |           |           |   | regulation with 2 com-                                 |
|            |           |           |   | pressors)<br>2 = compressor stopped                    |
| 119        | d1b       | 2         | type of "b" mode defrost                                | like d1  |
| 120        | d2        | 2.0       | defrost end threshold                                   | -99 99 °C/°F   |
| 121        | d2b<br>d3 | 4.0<br>30 | defrost duration  | 0 99 min   |
|            | 1.01      |           |   | if P3 = 1, maximum duration                            |
| 123        | d3b<br>d4 | 20        | "b" mode defrost duration<br>enable defrost at power-on | $11 \text{Ke d}_3$<br>0 = no 1 = ves                   |
| 125        | d5        | 0         | defrost delay from power-on                             | 0 99 min   |
| 126        | d6        | 1         | value displayed when defrosting                         | 0 = cabinet or product tem-<br>perature                |
|            |           |           |   | 1 = locked display                                     |
| 127        | d7        | 2         | drip duration   | 2 = label dEF  |
| 128        | d7b       | 2         | "b" mode drip duration                                  | like d7  |
| 129        | d8        | 0         | defrost interval count mode                             | 0 = hours device on                                    |
|            |           |           |   | 2 = hours evaporator tem-                              |
|            |           |           |   | perature < d9  |
|            |           |           |   | <ul> <li>adaptive</li> <li>4 = in real time</li> </ul> |
| 130        | d9        | 0.0       | evaporator temperature threshold                        | -99 99 °C/°F   |
|            |           |           | ror automatic defrost interval<br>count                 |  |
| 131        | d11       | 0         | enable defrost timeout alarm                            | 0 = no 1 = yes   |
| 132        | d15       | 0         | compressor-on consecutive time<br>for hot gas defrost   | -20 99 min<br>if values are negative, drip-            |
|            |           |           |   | ping heaters on time                                   |
| 133        | d16       | 0         | pre-drip duration for hot gas de-<br>frost              | 0 99 min   |
| 134        | d18       | 40        | adaptive defrost interval                               | 0 999 min  |
|            |           |           |   | if compressor on + evaporator                          |
|            |           |           |   | 0 = manual only  |
| 135        | d19       | 3.0       | adaptive defrost threshold (rela-                       | 0 40 °C/°F   |
|            |           |           | perature)   | ture - d19   |
| 136        | d20       | 180       | compressor-on consecutive time                          | 0 999 min  |
| 137        | d21       | 200       | compressor-on consecutive time                          | 0 999 min  |
|            |           |           | for defrost from power-on and                           | if (cabinet or product temper-                         |
|            |           |           | n om overcooling  | 0 = disabled   |
| 138        | d22       | -2.0      | evaporator temperature threshold                        | -10 10 °C/°F   |
|            |           |           | (relative to optimal evaporator                         | ture + d22   |
| 100        | 105       |           | temperature)  |  |
| 137        | u25       |           | probe for defrost in evaporator                         | 0 = 110 T = yes  |
| 140        | d26       | 6         | probe alarm<br>defrost interval in evaporator           | 0.99.b   |
|            | 420       |           | probe alarm   | 0 = manual only  |
| <br>NO     | DAD       | DEE       |   | if d25 = 1   |
| 141        | AO        | 0         | select value for high/low temper-                       | 0 = cabinet or product tem-                            |
|            |           |           | ature alarms  | perature<br>1 = evaporator temperature                 |
|            |           |           |   | 2 = critical temperature                               |
| 142<br>143 | A1<br>A2  | 0.0       | low temperature alarm threshold                         | -99 99 °C/°F<br>0 = disabled                           |
|            |           | -         | 31  | 1 = relative to setpoint (i.e.                         |
|            |           |           |   | setpoint + A1)<br>2 = absolute (A1)                    |
| 144        | A4        | 0.0       | high temperature alarm threshold                        | -99 99 °C/°F   |
| 145        | A5        | 0         | type of high temperature alarm                          | 0 = disabled<br>1 - relative to setpoint (i.e.         |
|            |           |           |   | setpoint + A4)   |
| 144        | A.4       | 120       | high tomporature clarm delay                            | 2 = absolute (i.e. A4)                                 |
| 140        | 70        | 120       | from power-on   | 0 240 min  |
| 147        | A7        | 15        | high/low temperature alarm delay                        | 0 240 min  |
| 148        | A8        | 15        | ter defrost   | 0 240 min  |
| 149        | A9        | 15        | high temperature alarm delay                            | 0 240 min  |
| 150        | A10       | 10        | duration of power failure for sav-                      | 0 240 min  |
| 151        | A11       | 2.0       | ing alarm<br>high/low_temperature_alarm                 | 0 = disabled<br>1 15 °C/°F                             |
| 191        |           | 2.0       | threshold differential (A1 and A4)                      |  |
| 152        | A12       | 1         | enable power failure alarm signal                       | 0 = no<br>1 - yes (label PF if FV/linking              |
|            |           |           |   | RS-485 EVIF23TSX,                                      |
|            |           |           |   | EVlinking BLE  |
|            |           |           |   | Wi-Fi EVIF25TWX is con-                                |
| 153        | A13       | 80        | high condensation signal thresh-                        | nected)<br>0 199 °C/°F                                 |
|            |           |           | old   | differential = 2 °C/4 °F                               |
| 154        | A14       | 90        | high condensation alarm thresh-<br>old                  | 0 199 °C/°F  |

|   |     |      |      | olu   |   |
|---|-----|------|------|---|---|
|   | 155 | A15  | 10   | high condensation alarm delay   | 0 15 min  |
|   | 156 | A16  | 0    | enable viewing of high/low tem-<br>perature alarms on remote dis-<br>play | 0 = no 1 = yes  |
|   | NO. | PAR. | DEF. | FANS  | MIN MAX.  |
| Ş | 157 | FO   | 1    | evaporator fan mode in normal<br>operation                                | <ul> <li>0 = off 1 = on</li> <li>2 = on if compressor on</li> <li>3 = thermostat controlled<br/>(with cabinet or product<br/>temperature + F1)</li> <li>4 = thermostat controlled<br/>(with cabinet or product<br/>temperature + F1) if<br/>compressor on</li> <li>5 = humidity levels function</li> <li>6 = thermostat controlled<br/>(with evaporator tem-<br/>perature + F1)</li> <li>7 = thermostat controlled<br/>(with evaporator tem-<br/>perature + F1) if com-<br/>pressor on</li> </ul> |
|   | 158 | F0b  | 1    | evaporator fan mode in normal<br>"b" mode operation                       | like FO   |
|   | 159 | F1   | -4.0 | evaporator fans regulation<br>threshold                                   | -99 99 °C/°F  |
|   | 160 | F2   | 0    | evaporator fan mode in defrost<br>and drip mode                           | 0 = off 	 1 = on 2 = function of F0   |
|   | 161 | F2b  | 0    | evaporator fan mode in "b" mode<br>defrost and drip                       | like F2   |

| , 5. |   |  |  |   |  |
|------|---|--|--|---|--|
|      | 162   | F3   | 2  | maximum time evaporator fans  | 0 15 min   |
|      | 163   | F3b  | 2  | maximum time evaporator fans  | 0 15 min   |
|      | 164   | F4   | 30   | time evaporator fans off in energy  | 0 240 s x 10   |
|      | 165   | F5   | 30   | saving<br>time evaporator fans on in energy   | if F0 ≠ 5<br>0 240 s x 10  |
|      | 166   | F7   | 5.0  | saving<br>evaporator fans on threshold from   | if F0 ≠ 5  |
|      | 100   |  | 5.0  | dripping (relative to setpoint)   | setpoint + F7  |
|      | 167   | F8   | 2.0  | evaporator fans regulation<br>threshold differential (F1)   | 1 15 °C/°F   |
|      | 168   | F9   | 10   | evaporator fans off delay from<br>compressor off  | 0 240 s<br>if F0 = 2 or 5  |
|      | 169   | F10  | 1  | condenser fan mode in normal op-<br>eration   | 0 = thermostat controlled<br>(with condenser temper-   |
|      |   |  |  |   | ature + F11)   |
|      |   |  |  |   | (with condenser temper-  |
|      |   |  |  |   | ature + F11) if compres-<br>sor off, on if compressor  |
|      |   |  |  |   | on<br>2 = thermostat controlled  |
|      |   |  |  |   | (with condenser temper-  |
|      |   |  |  |   | sor off, on if compressor  |
|      |   |  |  |   | on, off in defrost, pre-<br>drip and dripping  |
|      | 170   | F11  | 15.0   | condenser fans on threshold   | 0 99 °C/°F<br>differential = 2 °C/4 °F   |
|      | 171   | F12  | 30   | condenser fans off delay from   | 0 240 s  |
|      | 172   | F13  | 2  | condenser fans on threshold dif-  | 1 25 °C/°F   |
|      |   |  |  | ferential (F11)   | if Ao1 Ao3 = 2, condenser<br>fans proportional band (rela-   |
|      | 173   | F14  | 10   | 100 % start-up time for 0-10 V  | tive to F11, i.e. F11 + F13)<br>0 240 s  |
|      | 174   | F15  | 100  | condenser fans  | 0 100%   |
|      | 174   | F17  | 100  | denser fans in energy saving  | 0  |
|      | 175   | FI7  | 60   | pressor off   | if F0 and/or F0b = 0   |
|      | 176   | F18  | 10   | time evaporator fans on if com-<br>pressor off  | 0 240 s<br>if F0 and/or F0b = 0  |
|      | 177   | F19  | 0  | reversible condenser fans on in-<br>terval  | 0 240 h  |
|      | 178   | F20  | 0  | reversible condenser fans on time   | 0 240 min  |
|      | 179   | F30  | 0  | setting percentage 0-10 V evapo-  | 0 = touch SET key twice  |
|      |   |  |  | tion  | 2 = automatic with F1, F31,  |
|      | 180   | F31  | 50   | percentage 0-10 V evaporator  | F32 and F36<br>0 100%  |
|      | 181   | F32  | 100  | fans with minimum capacity<br>percentage 0-10 V evaporator  | if F31>F32, F32 is relevant<br>0 100%  |
|      | 100   | F22  | 100  | fans with maximum capacity  | if F32 < F31, F31 is relevant  |
|      | 102   | гээ  | 100  | fans in normal function   | F31 F32  |
|      | 183   | F34  | 10   | F35 start-up duration 0-10 V evaporator fans  | 0 240 s  |
|      | 184   | F35  | 100  | percentage 0-10 V evaporator<br>fans from power-on  | 0 100%   |
|      | 185   | F36  | 10   | 0-10 V evaporator fans<br>proportional band (relative to set-   | 1 25 °C/°F<br>setpoint+F36   |
|      | 186   | F37  | 0  | point)  | 0 100%   |
|      | 107   |  |  | evaporator fans in energy saving  |  |
|      | 187   |  | <b>^</b>   | succession from an elabor from  | 0 010 -  |
|      |   | F38  | 0  | evaporator fans on delay from<br>door closed  | 0 240 s  |
|      | 188   | F38  | 0  | evaporator fans on delay from<br>door closed<br>evaporator fan mode in phase 1<br>thawing   | 0 240 s<br>0 = on if cooling is on and on<br>if heating is on  |
|      | 188<br>189  | F38<br>F39<br>F40  | 0  | evaporator fans on delay from<br>door closed<br>evaporator fan mode in phase 1<br>thawing<br>evaporator fan mode in phase 2   | 0 240 s<br>0 = on if cooling is on and on<br>if heating is on<br>1 = on<br>like F39  |
|      | 188<br>189<br>190   | F38<br>F39<br>F40<br>F41   | 0<br>0<br>0<br>0   | evaporator fans on delay from<br>door closed<br>evaporator fan mode in phase 1<br>thawing<br>evaporator fan mode in phase 2<br>thawing<br>evaporator fan mode in phase 3  | 0 240 s<br>0 = on if cooling is on and on<br>if heating is on<br>1 = on<br>like F39<br>like F39  |
|      | 188<br>189<br>190   | F38<br>F39<br>F40<br>F41   | 0<br>0<br>0  | evaporator fans on delay from<br>door closed<br>evaporator fan mode in phase 1<br>thawing<br>evaporator fan mode in phase 2<br>thawing<br>evaporator fan mode in phase 3<br>thawing   | 0 240 s<br>0 = on if cooling is on and on<br>if heating is on<br>1 = on<br>like F39<br>like F39  |
|      | 188<br>189<br>190<br>191  | F38<br>F39<br>F40<br>F41<br>F42  | 0<br>0<br>0<br>0<br>0  | evaporator fans on delay from<br>door closed<br>evaporator fan mode in phase 1<br>thawing<br>evaporator fan mode in phase 2<br>thawing<br>evaporator fan mode in phase 3<br>thawing<br>evaporator fan mode in phase 4<br>thawing  | 0 240 s<br>0 = on if cooling is on and on<br>if heating is on<br>1 = on<br>like F39<br>like F39<br>like F39  |
|      | 188<br>189<br>190<br>191<br>192   | F38<br>F39<br>F40<br>F41<br>F42<br>F43   | 0<br>0<br>0<br>0<br>0  | evaporator fans on delay from<br>door closed<br>evaporator fan mode in phase 1<br>thawing<br>evaporator fan mode in phase 2<br>thawing<br>evaporator fan mode in phase 3<br>thawing<br>evaporator fan mode in phase 4<br>thawing<br>evaporator fan mode in phase 5<br>thawing   | 0 240 s<br>0 = on if cooling is on and on<br>if heating is on<br>1 = on<br>like F39<br>like F39<br>like F39<br>like F39  |
|      | 188<br>189<br>190<br>191<br>192<br>NO.                                    | F38<br>F39<br>F40<br>F41<br>F42<br>F43<br>PAR.   | 0<br>0<br>0<br>0<br>0<br>0   | evaporator fans on delay from<br>door closed<br>evaporator fan mode in phase 1<br>thawing<br>evaporator fan mode in phase 2<br>thawing<br>evaporator fan mode in phase 3<br>thawing<br>evaporator fan mode in phase 4<br>thawing<br>evaporator fan mode in phase 5<br>thawing<br>DIGITAL INPUTS   | 0 240 s<br>0 = on if cooling is on and on<br>if heating is on<br>1 = on<br>like F39<br>like F39<br>like F39<br>like F39<br>MIN MAX.  |
|      | 188<br>189<br>190<br>191<br>192<br>NO.<br>193                             | F38<br>F39<br>F40<br>F41<br>F41<br>F42<br>F43<br>F43<br>PAR.<br>i0                                   | 0<br>0<br>0<br>0<br>0<br>0<br>0<br>0<br>5                            | evaporator fans on delay from<br>door closed<br>evaporator fan mode in phase 1<br>thawing<br>evaporator fan mode in phase 2<br>thawing<br>evaporator fan mode in phase 3<br>thawing<br>evaporator fan mode in phase 4<br>thawing<br>evaporator fan mode in phase 5<br>thawing<br>DIGITAL INPUTS<br>door switch input function   | 0 240 s<br>0 = on if cooling is on and on<br>if heating is on<br>1 = on<br>like F39<br>like F39<br>like F39<br>MIN MAX.<br>0 = disabled  |
|      | 188<br>189<br>190<br>191<br>192<br><u>NO.</u><br>193                      | F38<br>F39<br>F40<br>F41<br>F42<br>F43<br>F43<br>PAR.<br>i0  | 0<br>0<br>0<br>0<br>0<br>0<br>0<br>5                                 | evaporator fans on delay from<br>door closed<br>evaporator fan mode in phase 1<br>thawing<br>evaporator fan mode in phase 2<br>thawing<br>evaporator fan mode in phase 3<br>thawing<br>evaporator fan mode in phase 4<br>thawing<br>evaporator fan mode in phase 5<br>thawing<br>DIGITAL INPUTS<br>door switch input function   | 0 240 s<br>0 = on if cooling is on and on<br>if heating is on<br>1 = on<br>like F39<br>like F39<br>like F39<br>like F39<br>MIN MAX.<br>0 = disabled<br>1 = compressor + evapora-<br>tor fans off   |
|      | 188<br>189<br>190<br>191<br>192<br>193                                    | F38<br>F39<br>F40<br>F41<br>F42<br>F43<br>F43<br>PAR.<br>i0  | 0<br>0<br>0<br>0<br>0<br>0<br>0<br>5                                 | evaporator fans on delay from<br>door closed<br>evaporator fan mode in phase 1<br>thawing<br>evaporator fan mode in phase 2<br>thawing<br>evaporator fan mode in phase 3<br>thawing<br>evaporator fan mode in phase 4<br>thawing<br>evaporator fan mode in phase 5<br>thawing<br>DIGITAL INPUTS<br>door switch input function   | 0 240 s<br>0 = on if cooling is on and on<br>if heating is on<br>1 = on<br>like F39<br>like F39<br>like F39<br>like F39<br>MIN MAX.<br>0 = disabled<br>1 = compressor + evapora-<br>tor fans off<br>2 = evaporator fans off<br>3 = cabinet light on  |
|      | 188<br>189<br>190<br>191<br>192<br><u>NO.</u><br>193                      | F38<br>F39<br>F40<br>F41<br>F42<br>F43<br>F43<br>PAR.<br>i0  | 0<br>0<br>0<br>0<br>0<br>0<br>0<br>5                                 | evaporator fans on delay from<br>door closed<br>evaporator fan mode in phase 1<br>thawing<br>evaporator fan mode in phase 2<br>thawing<br>evaporator fan mode in phase 3<br>thawing<br>evaporator fan mode in phase 4<br>thawing<br>evaporator fan mode in phase 5<br>thawing<br>DIGITAL INPUTS<br>door switch input function   | 0 240 s<br>0 = on if cooling is on and on<br>if heating is on<br>1 = on<br>like F39<br>like F39<br>like F39<br>like F39<br>like F39<br>MIN MAX.<br>0 = disabled<br>1 = compressor + evapora-<br>tor fans off<br>2 = evaporator fans off<br>3 = cabinet light on<br>4 = compressor + evapora-<br>tor fans off = compressor + evapora- |
|      | 188<br>189<br>190<br>191<br>192<br>193                                    | F38<br>F39<br>F40<br>F41<br>F42<br>F43<br>F43<br>i0  | 0<br>0<br>0<br>0<br>0<br>0<br>0<br>5                                 | evaporator fans on delay from<br>door closed<br>evaporator fan mode in phase 1<br>thawing<br>evaporator fan mode in phase 2<br>thawing<br>evaporator fan mode in phase 3<br>thawing<br>evaporator fan mode in phase 4<br>thawing<br>evaporator fan mode in phase 5<br>thawing<br>DIGITAL INPUTS<br>door switch input function   | 0 240 s<br>0 = on if cooling is on and on<br>if heating is on<br>1 = on<br>like F39<br>like F39<br>like F39<br>like F39<br>MIN MAX.<br>0 = disabled<br>1 = compressor + evapora-<br>tor fans off<br>2 = evaporator fans off<br>3 = cabinet light on<br>4 = compressor + evapora-<br>tor fans off, cabinet light<br>on  |
|      | 188<br>189<br>190<br>191<br>192<br>NO.<br>193                             | F38<br>F39<br>F40<br>F41<br>F42<br>F43<br>PAR.<br>i0   | 0<br>0<br>0<br>0<br>0<br>0<br>0<br>5                                 | evaporator fans on delay from<br>door closed<br>evaporator fan mode in phase 1<br>thawing<br>evaporator fan mode in phase 2<br>thawing<br>evaporator fan mode in phase 3<br>thawing<br>evaporator fan mode in phase 4<br>thawing<br>evaporator fan mode in phase 5<br>thawing<br>DIGITAL INPUTS<br>door switch input function   | 0 240 s<br>0 = on if cooling is on and on<br>if heating is on<br>1 = on<br>like F39<br>like F39<br>like F39<br>like F39<br>MIN MAX.<br>0 = disabled<br>1 = compressor + evapora-<br>tor fans off<br>2 = evaporator fans off<br>3 = cabinet light on<br>4 = compressor + evapora-<br>tor fans off, cabinet light<br>on<br>5 = evaporator fans off, cab-<br>inet light on  |
|      | 188<br>189<br>190<br>191<br>192<br>192<br>193                             | F38<br>F39<br>F40<br>F41<br>F42<br>F43<br>F43<br>PAR.<br>i0  | 0<br>0<br>0<br>0<br>0<br>0<br>0<br>5                                 | evaporator fans on delay from<br>door closed<br>evaporator fan mode in phase 1<br>thawing<br>evaporator fan mode in phase 2<br>thawing<br>evaporator fan mode in phase 3<br>thawing<br>evaporator fan mode in phase 3<br>thawing<br>evaporator fan mode in phase 5<br>thawing<br>DIGITAL INPUTS<br>door switch input function   | 0 240 s<br>0 = on if cooling is on and on<br>if heating is on<br>1 = on<br>like F39<br>like F39<br>like F39<br>like F39<br>MIN MAX.<br>0 = disabled<br>1 = compressor + evapora-<br>tor fans off<br>2 = evaporator fans off<br>3 = cabinet light on<br>4 = compressor + evapora-<br>tor fans off, cabinet light<br>on<br>5 = evaporator fans off, cab-<br>inet light on<br>0 = with contact closed<br>1 = with contact copen   |
|      | 188<br>189<br>190<br>191<br>192<br>192<br>193<br>193                      | F38<br>F39<br>F40<br>F41<br>F42<br>F43<br>F43<br>i0<br>i0<br>i1<br>i1                                | 0<br>0<br>0<br>0<br>0<br>0<br>0<br>5<br>5<br>30                      | evaporator fans on delay from<br>door closed<br>evaporator fan mode in phase 1<br>thawing<br>evaporator fan mode in phase 2<br>thawing<br>evaporator fan mode in phase 3<br>thawing<br>evaporator fan mode in phase 4<br>thawing<br>evaporator fan mode in phase 5<br>thawing<br>DIGITAL INPUTS<br>door switch input function   | <pre>0 240 s 0 = on if cooling is on and on     if heating is on 1 = on like F39 like F39 like F39 like F39 like F39 MIN MAX. 0 = disabled 1 = compressor + evapora- tor fans off 2 = evaporator fans off 3 = cabinet light on 4 = compressor + evapora- tor fans off, cabinet light on 5 = evaporator fans off, cabinet light on 0 = with contact closed 1 = with contact closed 1 = with contact open -1 120 min -1 = disabled</pre>   |
|      | 188<br>189<br>190<br>191<br>192<br>193<br>193<br>194<br>195<br>196        | F38<br>F39<br>F40<br>F41<br>F42<br>F43<br>F43<br>PAR.<br>i0<br>i0<br>i1<br>i1<br>i2<br>i3            | 0<br>0<br>0<br>0<br>0<br>0<br>0<br>0<br>5<br>5<br>30<br>30<br>15     | evaporator fans on delay from<br>door closed<br>evaporator fan mode in phase 1<br>thawing<br>evaporator fan mode in phase 2<br>thawing<br>evaporator fan mode in phase 3<br>thawing<br>evaporator fan mode in phase 3<br>thawing<br>evaporator fan mode in phase 4<br>thawing<br>DIGITAL INPUTS<br>door switch input function   | <ul> <li>0 240 s</li> <li>0 = on if cooling is on and on if heating is on</li> <li>1 = on</li> <li>1 = on</li> <li>1 ke F39</li> <li>1 = compressor + evaporator fans off</li> <li>2 = evaporator fans off</li> <li>3 = cabinet light on</li> <li>4 = compressor + evaporator fans off, cabinet light on</li> <li>5 = evaporator fans off, cabinet light on</li> <li>5 = evaporator fans off, cabinet light on</li> <li>0 = with contact closed</li> <li>1 = with contact open</li> <li>-1 120 min</li> <li>-1 = unit closed</li> </ul>  |
|      | 188<br>189<br>190<br>191<br>192<br>192<br>192<br>193<br>194<br>195<br>196 | F38<br>F39<br>F40<br>F41<br>F42<br>F43<br>F43<br>F43<br>i0<br>i0<br>i1<br>i1<br>i2<br>i3<br>i3<br>i4 | 0<br>0<br>0<br>0<br>0<br>0<br>0<br>0<br>5<br>5<br>0<br>30<br>15<br>0 | evaporator fans on delay from<br>door closed<br>evaporator fan mode in phase 1<br>thawing<br>evaporator fan mode in phase 2<br>thawing<br>evaporator fan mode in phase 3<br>thawing<br>evaporator fan mode in phase 3<br>thawing<br>evaporator fan mode in phase 5<br>thawing<br>DIGITAL INPUTS<br>door switch input function<br>door switch input function<br>door switch input activation<br>door open alarm delay<br>maximum compressor and evap-<br>orator fan off time with door open<br>enable door open alarm saving | <pre>0 240 s 0 = on if cooling is on and on</pre>  |

|            | 205  | i14  | 32   | door open consecutive time for  | 0 240 min  |   | NO.  | PAR.  | DEF.                                      | MOL   | 5005  |
|------------|--|--|--|---|--|---|--|---|---|---|---|
|            | 201  | :15  |  | defrost   | 0 = disabled   |   | 254  | LA  | 247                                       | MOI   | DBUS address  |
|            | 206  | i16  | 0  | multi-purpose input 2 runction  | like i6  |   | 255  | LD  | 3   | MOL   | JBD2 pang ta  |
|            | 207  | i18  | 0  | multi-purpose input 3 function  | like i5  | Id  |  |   |   |   |   |
|            | 200  | i19  | 0  | multi-purpose input 3 activation  | like i6  |   |  |   |   |   |   |
|            | 210  | i20  | 0  | multi-purpose input 4 function  | like i5  |   | 256  | LP  | 2   | MOI   | DBUS parity   |
|            | 211  | i21  | 0  | multi-purpose input 4 activation  | like i6  |   |  |   |   |   |   |
|            | NO.  | PAR.   | DEF.   | DIGITAL OUTPUTS   | MIN MAX.   |   | NO.  | PAR.  | DEF.                                      | MOI   | OBUS USE  |
|            | 212  | u1c  | 0  | K1 relay configuration  | 0 = compressor   |   | 257  | bLE   | 1   | type  | e of use of TTL   |
|            |  |  |  |   | 1 = compressor 2   |   |  |   |   |   |   |
|            |  |  |  |   | 2 = evaporator fans  |   |  |   |   |   |   |
|            |  |  |  |   | 3 = condenser fans   | A   |  |   |   |   |   |
|            |  |  |  |   | 4 = defrost  |   |  |   |   |   |   |
|            |  |  |  |   | 5 = cabinet light  |   |  |   |   |   |   |
|            |  |  |  |   | 6 = demisting  |   |  |   |   |   |   |
|            |  |  |  |   | <ul> <li>7 = door neaters</li> <li>8 = beaters for peutral zone</li> </ul>   |   |  |   |   |   |   |
|            |  |  |  |   | 9 - dripping beaters   |   |  |   |   |   |   |
|            |  |  |  |   | 10 = auxiliary load 1  |   | NO.  | PAR.  | DEF.                                      | OUT   | PUTS IN DIRE  |
|            |  |  |  |   | 11= auxiliary load 2   |   | 258  | OUT1  | 0   | out   | out configurat  |
|            |  |  |  |   | 12= alarm  |   |  |   |   | Vdc   |   |
|            |  |  |  |   | 13= on/stand-by  | t   |  |   |   |   |   |
|            |  |  |  |   | 14= evaporator fans 2  |   |  |   |   |   |   |
|            |  |  |  |   | 15= defrost 2  |   |  |   |   |   |   |
|            |  |  |  |   | 16= speed 2 evaporator fans  |   | 259  | OUT1  | 0   | out   | out configurat  |
|            |  |  |  |   | 17= reversible condenser   |   |  |   |   | Vdc   |   |
|            |  |  |  |   | fans   | 0   |  | 2140  |   |   |   |
|            | 212  |  |  |   | 18= speed 2 condenser fans   | 9   | ALA  | RMS   |   |   |   |
| 3.4        | 213  | u20  | 2  | K2 relay configuration  |  | 0 1   | View   | ing ac  | tivo ala                                  | rme   |   |
| X          | 214  | usc<br>u4c   | 1 <u>2</u>   | K4 relay configuration  |  | Check   | that th  | ne kevo   | ad is no                                  | nt lock   | ked.  |
|            | 215  | U40  | 3  |   | like utc   |   |  | A   |   |   |   |
|            | 210  | 450  | 12   |   | like utc   | 1.  |  | ∠!∖   |   | Tou   | ch the ALARM  |
|            | 217  | u00  | 10   |   | like utc   |   | 6  |   |   | Tou   | ch the UP or D  |
|            | 210  | u/c  | 10   |   |  | 2.  | Ý  | $\checkmark$  | Ì   | alar  | ms  |
|            | 219  | <u>uoc</u>   |  | Relay configuration   |  | -   |  | ZD  |   | Tou   | ch the ON/ST.   |
|            | 220  | uz   |  | load 1 and 2 in stand-by  | in manual mode   | 3.  |  | U   |   | the   | procedure   |
|            | 221  | 113  | 0  | alarm output activation   | 0 - with alarm not active  |   |  |   |   |   |   |
|            | 221  | 45   | ľ  |   | 1 = with alarm active  | 9.2   | Alarr  | ns  |   |   |   |
|            | 222  | u4   | 1  | enable deactivation alarm output  | 0 = no $1 = ves$   | ALAR  | Л  |   |   |   | DESCRIPTIO  |
|            |  |  |  | with silencing buzzer   |  | Cabin   | et Pr  | o. Failu  | ire                                       |   | cabinet   |
|            | 223  | u5   | -1.0   | door heaters on threshold   | -99 99 °C/°F   |   |  |   |   |   | alarm   |
|            | 224  | u5d  | 2.0  | door heaters on threshold differ-   | 1 25 °C/°F   | Evapo   | orator   | Prb. F  | ailure                                    |   | evaporator  |
|            |  |  |  | ential (u5)   |  |   |  |   |   |   |   |
|            | 225  | u6   | 5  | maximum duration demisting on   | 1 120 min  | Cond  | enser  | Prh F   | ailure                                    |   | condenser   |
|            |  |  |  |   | 1 = manual switch on/off   | oona  | chisch   | 110.1   | unure                                     |   | alarm   |
|            | 226  | u7   | -5.0   | neutral zone for heating threshold  | -99 99 °C/°F   | Critic  | al Ter   | np. Pri   | o. Failu                                  | re  | critical tem  |
|            |  |  |  | (relative to setpoint)  | differential = 2 °C/4 °F   |   |  |   |   |   | ture probe a  |
|            | 207  | 0  | -  |   | setpoint + u/  | Outgo   | oing A   | ir Prb.   | Failur                                    | е   | outgoing air  |
|            | 227  | U9   | 1  | enable alarm buzzer   | 0 = ho I = yes   |   | -  |   |   |   | perature  |
|            | 228  | u10  | 5  | duration alarm buzzer at end of   | 0 240 s  |   |  |   |   |   | alarm   |
|            | NO   | DAD  | DEE  |   |  | Evapo   | orator   | 2 Prb   | . Failur                                  | e   | evaporator  |
|            |  |  |  | ANALOOUL OUTFOID  | 0 = PWM compressor (r15)   |   |  |   |   |   | probe alarm   |
|            | 229  | Ao1  | 5  | analogue output configuration   |  |   | clock alarm  |   |   |   |   |
|            | 229  | Ao1  | 5  | analogue output configuration   | 1 = 0-10 V compressor  | RICE  | ailur  | 5   |   |   |   |
|            | 229  | Ao1  | 5  | analogue output configuration   | 1 = 0-10 V compressor<br>2 = 0-10 V condenser fans   | Low   | ailur<br>femp  | erature   | •   |   | low tempe   |
| <u> </u>   | 229  | Ao1  | 5  | analogue output configuration   | 1 = 0-10 V compressor<br>2 = 0-10 V condenser fans<br>3 = 0-10 V evaporator fans   | Low   | ailur<br>Tempo   | erature   | •   |   | low temper<br>alarm   |
| <u> </u>   | 229  | Ao1  | 5  | analogue output configuration   | 1 = 0-10 V compressor<br>2 = 0-10 V condenser fans<br>3 = 0-10 V evaporator fans<br>4 = disabled   | Low   | Tempo<br>Tempo<br>Temp   | erature<br>erature  | e   |   | low temper<br>alarm<br>high tempe   |
| <u>*</u> - | 229  | Ao1  | 5  | analogue output configuration   | 1 = 0-10 V compressor<br>2 = 0-10 V condenser fans<br>3 = 0-10 V evaporator fans<br>4 = disabled<br>5 = disabled   | Low T<br>High   | Tempo<br>Tempo<br>Tempo  | erature<br>erature  | e   |   | low temper<br>alarm<br>high temper<br>alarm   |
| 1/         | 229  | Ao1<br>Ao2   | 5  | analogue output configuration<br>analogue output 2 configuration  | 1         = 0-10 V compressor           2         = 0-10 V condenser fans           3         = 0-10 V evaporator fans           4         = disabled           5         = disabled           Ike Ao1   | Low 1<br>High   | Tempo<br>Tempo<br>Tempo<br>Open  | erature<br>erature  | e   |   | low temper<br>alarm<br>high temper<br>alarm<br>door open al   |
| ┢~_        | 229<br>230<br>231  | Ao1<br>Ao2<br>Ao3  | 5<br>5<br>5<br>5   | analogue output configuration<br>analogue output 2 configuration<br>analogue output 3 configuration   | 1         = 0-10 V compressor           2         = 0-10 V condenser fans           3         = 0-10 V evaporator fans           4         = disabled           5         = disabled           like Ao1           like Ao1   | Low 1<br>High<br>Door<br>Powe   | Temp<br>Temp<br>Temp<br>Open<br>r Fail   | erature<br>erature<br>ure   | e   |   | low temper<br>alarm<br>high tempe<br>alarm<br>door open al<br>power   |
|            | 229<br>230<br>231<br>NO.   | Ao1<br>Ao2<br>Ao3<br>PAR.  | 5<br>5<br>5<br>DEF.  | analogue output configuration<br>analogue output 2 configuration<br>analogue output 3 configuration<br>CLOCK  | 1         = 0-10 V compressor           2         = 0-10 V condenser fans           3         = 0-10 V evaporator fans           4         = disabled           5         = disabled           like Ao1           like Ao1           like Mo1  | Low T<br>High<br>Door<br>Powe   | Tempo<br>Tempo<br>Open<br>r Fail   | erature<br>erature<br>ure   | e   |   | low temper<br>alarm<br>high tempe<br>alarm<br>door open al<br>power<br>alarm  |
|            | 229<br>230<br>231<br>NO.<br>231  | Ao1<br>Ao2<br>Ao3<br>PAR.<br>Hr0   | 5<br>5<br>5<br>DEF.<br>1   | analogue output configuration<br>analogue output 2 configuration<br>analogue output 3 configuration<br>CLOCK<br>enable clock  | 1       = 0-10 V compressor         2       = 0-10 V condenser fans         3       = 0-10 V evaporator fans         4       = disabled         5       = disabled         like Ao1         like Ao1         MIN MAX.         0       = no         1       = yes   | Low T<br>High<br>Door<br>Powe   | Temp<br>Temp<br>Open<br>r Fail   | erature<br>erature<br>ure   | e   |   | low temper<br>alarm<br>high tempe<br>alarm<br>door open al<br>power t<br>alarm  |
|            | 229<br>230<br>231<br>NO.<br>231<br>NO.   | Ao1<br>Ao2<br>Ao3<br>PAR.<br>Hr0<br>PAR.   | 5<br>5<br>5<br>DEF.<br>1<br>DEF.   | analogue output configuration<br>analogue output 2 configuration<br>analogue output 3 configuration<br>CLOCK<br>enable clock<br>ENERGY SAVING (if r5 = 0)   | 1       = 0-10 V compressor         2       = 0-10 V condenser fans         3       = 0-10 V evaporator fans         4       = disabled         5       = disabled         like Ao1         like Ao1         MIN MAX.         0       = no         1       = yes         MIN MAX.  | High<br>Door<br>Powe  | Temp<br>Temp<br>Open<br>r Fail   | erature<br>erature<br>ure<br>heat   | e   |   | low temper<br>alarm<br>high tempe<br>alarm<br>door open al<br>power<br>alarm<br>high conden<br>signal   |
| ₽ <u>_</u> | 229<br>230<br>231<br>NO.<br>231<br>NO.<br>232  | Ao1<br>Ao2<br>Ao3<br>PAR.<br>Hr0<br>PAR.<br>HE2  | 5<br>5<br>5<br>DEF.<br>1<br>DEF.<br>0  | analogue output configuration<br>analogue output 2 configuration<br>analogue output 3 configuration<br>CLOCK<br>enable clock<br>ENERGY SAVING (if r5 = 0)<br>maximum duration energy saving   | 1       = 0-10 V compressor         2       = 0-10 V condenser fans         3       = 0-10 V evaporator fans         4       = disabled         5       = disabled         like Ao1         like Ao1         MIN MAX.         0       = no         1       = yes         MIN MAX.         0 999 min         0 999 min  | High<br>Door<br>Powe  | Temp<br>Temp<br>Open<br>r Fail   | erature<br>erature<br>ure<br>heat   | e   |   | low temper<br>alarm<br>high tempe<br>alarm<br>door open al<br>power<br>alarm<br>high conden<br>signal<br>high conden  |
| ₽ <u>_</u> | 229<br>230<br>231<br>NO.<br>232  | Ao1<br>Ao2<br>Ao3<br>PAR.<br>Hr0<br>PAR.<br>HE2  | 5<br>5<br>5<br>DEF.<br>1<br>DEF.<br>0  | analogue output configuration analogue output 2 configuration analogue output 3 configuration CLOCK enable clock ENERGY SAVING (if r5 = 0) maximum duration energy saving   | 1 = 0-10 V compressor<br>2 = 0-10 V condenser fans<br>3 = 0-10 V evaporator fans<br>4 = disabled<br>5 = disabled<br>like Ao1<br>like Ao1<br>MIN MAX.<br>0 = no 1 = yes<br>MIN MAX.<br>0 999 min<br>0 = until door opened   | High<br>Door<br>Powe  | Tempo<br>Tempo<br>Open<br>r Fail   | erature<br>erature<br>ure<br>heat<br>ked  | e<br>                                     |   | low temper<br>alarm<br>high tempe<br>alarm<br>door open al<br>power<br>alarm<br>high conden<br>signal<br>high conden<br>alarm   |
|            | 229<br>230<br>231<br>NO.<br>232<br>NO.   | Ao1<br>Ao2<br>Ao3<br>PAR.<br>Hr0<br>PAR.<br>HE2<br>PAR.  | 5<br>5<br>DEF.<br>1<br>DEF.<br>0<br>DEF.   | analogue output configuration<br>analogue output 2 configuration<br>analogue output 3 configuration<br>CLOCK<br>enable clock<br>ENERGY SAVING (if r5 = 0)<br>maximum duration energy saving<br>ENERGY SAVING IN REAL TIME (if<br>r5 = 0)  | 1       = 0-10 V compressor         2       = 0-10 V condenser fans         3       = 0-10 V evaporator fans         4       = disabled         5       = disabled         like Ao1       like Ao1         MIN MAX.       0         0       = no       1 = yes         MIN MAX.       0 999 min         0       = until door opened         MIN MAX.       0 949 min   | Low Thigh   | Temp<br>Open<br>or Fail  | erature<br>erature<br>ure<br>heat<br>ked  | e<br>                                     |   | low temper<br>alarm<br>high temper<br>alarm<br>door open al<br>power<br>alarm<br>high conden<br>signal<br>high conden<br>alarm  |
|            | 229<br>230<br>231<br>NO.<br>232<br>NO.<br>232<br>NO.<br>232  | Ao1<br>Ao2<br>Ao3<br>PAR.<br>Hr0<br>PAR.<br>HE2<br>PAR.  | 5<br>5<br>DEF.<br>1<br>DEF.<br>0<br>DEF.   | analogue output configuration<br>analogue output 2 configuration<br>analogue output 3 configuration<br>CLOCK<br>enable clock<br>ENERGY SAVING (if r5 = 0)<br>maximum duration energy saving<br>ENERGY SAVING IN REAL TIME (if<br>r5 = 0)<br>energy saving time  | 1 = 0-10 V compressor<br>2 = 0-10 V condenser fans<br>3 = 0-10 V evaporator fans<br>4 = disabled<br>5 = disabled<br>like Ao1<br>MIN MAX.<br>0 = no 1 = yes<br>MIN MAX.<br>0 999 min<br>0 = until door opened<br>MIN MAX.<br>0 23 b   | Low T<br>High<br>Door<br>Powe<br>Cond<br>Comp   | Temp<br>Open<br>r Fail<br>. Over   | erature<br>erature<br>ure<br>heat<br>ked  | e<br>                                     |   | low temper<br>alarm<br>high tempe<br>alarm<br>door open al<br>power<br>alarm<br>high conden<br>signal<br>high conden<br>alarm<br>multi-purpos   |
|            | 229<br>230<br>231<br>NO.<br>232<br>NO.<br>232<br>233<br>234  | Ao1<br>Ao2<br>Ao3<br>PAR.<br>Hr0<br>PAR.<br>HE2<br>PAR.<br>H01<br>H02  | 5<br>5<br>DEF.<br>1<br>DEF.<br>0<br>DEF.<br>0  | analogue output configuration<br>analogue output 2 configuration<br>analogue output 3 configuration<br>CLOCK<br>enable clock<br>ENERGY SAVING (if r5 = 0)<br>maximum duration energy saving<br>ENERGY SAVING IN REAL TIME (if<br>r5 = 0)<br>energy saving time<br>maximum duration energy caving  | 1       = 0-10 V compressor         2       = 0-10 V condenser fans         3       = 0-10 V evaporator fans         4       = disabled         5       = disabled         like Ao1       like Ao1         MIN MAX.       0         0       = no       1 = yes         MIN MAX.       0         0       = until door opened         MIN MAX.       0         0       23 h         0       24 h | Low T<br>High<br>Door<br>Powe<br>Cond<br>Comp   | Temp<br>Temp<br>Open<br>r Fail<br>. Over   | erature<br>erature<br>ure<br>heat<br>ked  | e<br>                                     |   | low temper<br>alarm<br>high temper<br>alarm<br>door open al<br>power<br>alarm<br>high conden<br>alarm<br>high conden<br>alarm<br>multi-purpos<br>put alarm  |
|            | 230<br>231<br>NO.<br>231<br>NO.<br>232<br>NO.<br>233<br>234<br>NO.   | Ао1<br>Ао2<br>Ао3<br>РАR.<br>НгО<br>РАR.<br>НЕ2<br>РАR.<br>Н01<br>Н02<br>РАР   | 5<br>5<br>DEF.<br>1<br>DEF.<br>0<br>DEF.<br>0<br>DEF.  | analogue output configuration<br>analogue output 2 configuration<br>analogue output 3 configuration<br>CLOCK<br>enable clock<br>ENERGY SAVING (if r5 = 0)<br>maximum duration energy saving<br>ENERGY SAVING IN REAL TIME (if<br>r5 = 0)<br>energy saving time<br>maximum duration energy saving<br>SWITCH ON/OFF IN PEAL TIME  | 1       = 0-10 V compressor         2       = 0-10 V condenser fans         3       = 0-10 V evaporator fans         4       = disabled         5       = disabled         like Ao1  | Low 1<br>High<br>Door<br>Powe<br>Cond<br>Comp   | Temp<br>Temp<br>Open<br>r Fail<br>. Over<br>. Locl   | erature<br>erature<br>ure<br>heat<br>ked<br>ose<br>ure  | e<br>                                     |   | low temper<br>alarm<br>high tempe<br>alarm<br>door open al<br>power<br>alarm<br>high conden<br>signal<br>high conden<br>alarm<br>multi-purpos<br>put alarm  |
|            | 229<br>230<br>231<br>NO.<br>232<br>NO.<br>232<br>233<br>234<br>NO.<br>233<br>234   | Ao1<br>Ao2<br>Ao3<br>PAR.<br>Hr0<br>PAR.<br>HE2<br>PAR.<br>H01<br>H02<br>PAR.<br>H01   | 5<br>5<br>DEF.<br>1<br>DEF.<br>0<br>DEF.<br>0<br>DEF.<br>h-  | analogue output configuration<br>analogue output 2 configuration<br>analogue output 3 configuration<br>CLOCK<br>enable clock<br>ENERGY SAVING (if r5 = 0)<br>maximum duration energy saving<br>ENERGY SAVING IN REAL TIME (if<br>r5 = 0)<br>energy saving time<br>maximum duration energy saving<br>SWITCH ON/OFF IN REAL TIME<br>time device switch-on   | 1       = 0-10 V compressor         2       = 0-10 V condenser fans         3       = 0-10 V evaporator fans         4       = disabled         5       = disabled         like Ao1  | Low 1<br>High<br>Door<br>Powe<br>Cond<br>Comp<br>Multi-   | Contraction Contra | erature<br>ure<br>heat<br>ked<br>ure  | e<br>e                                    |   | low temper<br>alarm<br>high tempe<br>alarm<br>door open al<br>power<br>alarm<br>high conden<br>signal<br>high conden<br>alarm<br>multi-purpos<br>put alarm<br>multi-purpos<br>put alarm   |
|            | 230<br>231<br>NO.<br>232<br>NO.<br>233<br>234<br>NO.<br>235  | Ao1<br>Ao2<br>Ao3<br>PAR.<br>HrO<br>PAR.<br>HE2<br>PAR.<br>HO1<br>HO2<br>PAR.<br>HO1   | 5<br>5<br>DEF.<br>1<br>DEF.<br>0<br>DEF.<br>0<br>DEF.<br>h-  | analogue output configuration<br>analogue output 2 configuration<br>analogue output 3 configuration<br>CLOCK<br>enable clock<br>ENERGY SAVING (if r5 = 0)<br>maximum duration energy saving<br>ENERGY SAVING IN REAL TIME (if<br>r5 = 0)<br>energy saving time<br>maximum duration energy saving<br>SWITCH ON/OFF IN REAL TIME<br>time device switch-on   | 1       = 0-10 V compressor         2       = 0-10 V condenser fans         3       = 0-10 V evaporator fans         4       = disabled         5       = disabled         like Ao1  | Low T<br>High<br>Door<br>Powe<br>Cond<br>Comp<br>Multi-<br>High   | Constant of the second  | erature<br>ure<br>heat<br>ked<br>ure<br>ure   | e<br>ck                                   |   | low temper<br>alarm<br>high tempe<br>alarm<br>door open al<br>power<br>alarm<br>high conden<br>alarm<br>multi-purpos<br>put alarm<br>multi-purpos<br>put alarm  |
|            | 229<br>230<br>231<br>NO.<br>232<br>NO.<br>233<br>234<br>NO.<br>235<br>236  | Ao1<br>Ao2<br>Ao3<br>PAR.<br>HrO<br>PAR.<br>HE2<br>PAR.<br>HO1<br>HO2<br>PAR.<br>HO1<br>HO2<br>PAR.<br>HO1   | 5<br>5<br>DEF.<br>1<br>DEF.<br>0<br>DEF.<br>0<br>DEF.<br>h-  | analogue output configuration<br>analogue output 2 configuration<br>analogue output 3 configuration<br>CLOCK<br>enable clock<br>ENERGY SAVING (if r5 = 0)<br>maximum duration energy saving<br>ENERGY SAVING IN REAL TIME (if<br>r5 = 0)<br>energy saving time<br>maximum duration energy saving<br>SWITCH ON/OFF IN REAL TIME<br>time device switch-on   | 1 = 0-10 V compressor     2 = 0-10 V condenser fans     3 = 0-10 V evaporator fans     4 = disabled     5 = disabled     like Ao1     like Ao1     like Ao1     like Ao1     MIN MAX.     0 = no 1 = yes     MIN MAX.     0 = until door opened     MIN MAX.     0 = until door opened     MIN MAX.     0 23 h     0 24 h     MIN MAX.     0 h     h = disabled     like HoF   | Low 1<br>High<br>Door<br>Powe<br>Cond<br>Comp<br>Multi<br>High  | <u>ailurd</u><br>Tempo<br>Dpen<br>r Fail<br>. Over<br>. Loci<br>. purp<br>Press  | erature<br>erature<br>ure<br>heat<br>ked<br>ose<br>ure<br>ure Lo  | e<br>ck                                   |   | low temper<br>alarm<br>high tempe<br>alarm<br>door open al<br>power<br>alarm<br>high conden<br>alarm<br>multi-purpos<br>put alarm<br>multi-purpos<br>put alarm<br>high pro<br>alarm   |
|            | 230<br>231<br>NO.<br>232<br>NO.<br>232<br>NO.<br>233<br>234<br>NO.<br>235<br>236<br>237  | A01<br>A02<br>A03<br>PAR.<br>Hr0<br>PAR.<br>HE2<br>PAR.<br>H01<br>H02<br>PAR.<br>H01<br>H02<br>PAR.<br>H01<br>H02<br>PAR.<br>H01   | 5<br>5<br>DEF.<br>1<br>DEF.<br>0<br>DEF.<br>0<br>DEF.<br>h-<br>h-  | analogue output configuration<br>analogue output 2 configuration<br>analogue output 3 configuration<br>CLOCK<br>enable clock<br>ENERGY SAVING (if $r5 = 0$ )<br>maximum duration energy saving<br>ENERGY SAVING IN REAL TIME (if<br>r5 = 0)<br>energy saving time<br>maximum duration energy saving<br>SWITCH ON/OFF IN REAL TIME<br>time device switch-on<br>time device switch-off<br>1 <sup>st</sup> time reversible condenser fans  | 1       = 0-10 V compressor         2       = 0-10 V condenser fans         3       = 0-10 V evaporator fans         4       = disabled         5       = disabled         like Ao1  | High<br>Door<br>Powe<br>Cond<br>Comp<br>Multi-<br>High  | <u>ailurd</u><br>Tempo<br><u>Open</u><br>r Fail<br>. Over<br>. Locl<br>-purpo<br>Press   | erature<br>eratur<br>ure<br>heat<br>ked<br>ose<br>ure<br>Lo   | 2<br>8<br>                                |   | low temper<br>alarm<br>high temper<br>alarm<br>door open al<br>power<br>alarm<br>high conden<br>alarm<br>multi-purpos<br>put alarm<br>multi-purpos<br>put alarm<br>high pre<br>alarm  |
|            | 230<br>231<br>NO.<br>232<br>NO.<br>232<br>NO.<br>233<br>234<br>NO.<br>235<br>236<br>237  | Ao1<br>Ao2<br>Ao3<br>PAR.<br>Hr0<br>PAR.<br>HE2<br>PAR.<br>H01<br>H02<br>PAR.<br>H01<br>H05<br>Hc1   | 5<br>5<br>DEF.<br>1<br>DEF.<br>0<br>DEF.<br>0<br>DEF.<br>h-<br>h-  | analogue output configuration<br>analogue output 2 configuration<br>analogue output 3 configuration<br>CLOCK<br>enable clock<br>ENERGY SAVING (if $r5 = 0$ )<br>maximum duration energy saving<br>ENERGY SAVING IN REAL TIME (if<br>r5 = 0)<br>energy saving time<br>maximum duration energy saving<br>SWITCH ON/OFF IN REAL TIME<br>time device switch-off<br>1 <sup>st</sup> time reversible condenser fans<br>on   | 1       = 0-10 V compressor         2       = 0-10 V condenser fans         3       = 0-10 V evaporator fans         4       = disabled         5       = disabled         like Ao1  | High<br>Door<br>Powe<br>Cond<br>Comp<br>High<br>High  | iailurd<br>Fempo<br>Tempo<br>Open<br>r Fail<br>. Over<br>. Loci<br>. Loci<br>Press<br>Press  | erature<br>erature<br>ure<br>heat<br>ked<br>ure<br>ure Lo   | e<br>e<br>ck                              |   | low temper<br>alarm<br>high temper<br>alarm<br>door open al<br>power<br>alarm<br>high conden<br>alarm<br>multi-purpos<br>put alarm<br>high pre<br>alarm   |
|            | 230<br>231<br>NO.<br>233<br>234<br>NO.<br>233<br>234<br>NO.<br>233<br>234<br>234<br>235<br>236<br>237  | Ao1<br>Ao2<br>Ao3<br>PAR<br>Hr0<br>PAR.<br>HE2<br>PAR.<br>H01<br>H02<br>PAR.<br>H01<br>H05<br>Hc1  | 5<br>5<br>DEF.<br>1<br>DEF.<br>0<br>DEF.<br>0<br>DEF.<br>h-<br>h-<br>h-  | analogue output configuration<br>analogue output 2 configuration<br>analogue output 3 configuration<br>CLOCK<br>enable clock<br>ENERGY SAVING (if r5 = 0)<br>maximum duration energy saving<br>ENERGY SAVING IN REAL TIME (if<br>r5 = 0)<br>energy saving time<br>maximum duration energy saving<br>SWITCH ON/OFF IN REAL TIME<br>time device switch-off<br>1st time reversible condenser fans<br>on  | 1       = 0-10 V compressor         2       = 0-10 V condenser fans         3       = 0-10 V evaporator fans         4       = disabled         5       = disabled         like Ao1       Ilike Ao1         MIN MAX.       0         0       = no       1 = yes         MIN MAX.       0 999 min         0       = until door opened         MIN MAX.         0 23 h         0 24 h         MIN MAX.         0 h         h = disabled         like HoF         0 h         h = disabled         fike HoF         0 h         h = disabled  | High<br>Door<br>Powe<br>Cond<br>Comp<br>Multi<br>High   | iailurd<br>Fempo<br>Tempo<br>Open<br>r Fail<br>. Over<br>. Loci<br>. Loci<br>Press<br>Press  | e<br>erature<br>ure<br>heat<br>ked<br>ure<br>ure<br>Lore  | e<br>ck                                   |   | low temper<br>alarm<br>high tempe<br>alarm<br>door open al<br>power<br>alarm<br>high conden<br>alarm<br>multi-purpos<br>put alarm<br>high pre<br>alarm  |
|            | 230<br>231<br>NO.<br>233<br>234<br>NO.<br>235<br>234<br>235<br>236<br>237<br>238   | Ao1<br>Ao2<br>Ao3<br>PAR<br>Hr0<br>PAR.<br>HE2<br>PAR.<br>H01<br>H02<br>PAR.<br>H01<br>H02<br>PAR.<br>H01<br>H05<br>Hc1<br>Hc2   | 5<br>5<br>DEF.<br>1<br>DEF.<br>0<br>DEF.<br>0<br>DEF.<br>h-<br>h-<br>h-  | analogue output configuration<br>analogue output 2 configuration<br>analogue output 3 configuration<br>CLOCK<br>enable clock<br>ENERGY SAVING (if r5 = 0)<br>maximum duration energy saving<br>ENERGY SAVING IN REAL TIME (if<br>r5 = 0)<br>energy saving time<br>maximum duration energy saving<br>SWITCH ON/OFF IN REAL TIME<br>time device switch-off<br>1 <sup>st</sup> time reversible condenser fans<br>on<br>2 <sup>nd</sup> time reversible condenser fans  | 1       = 0-10 V compressor         2       = 0-10 V condenser fans         3       = 0-10 V evaporator fans         4       = disabled         5       = disabled         like Ao1       Ilike Ao1         Ilike Ao1       Ilike Ao1         MIN MAX.       0         0       = no       1 = yes         MIN MAX.       0 999 min         0       = until door opened         MIN MAX.       0 23 h         0 24 h       MIN MAX.         0 h       h         h = disabled       Ilike HoF         0 h       h         h = disabled       for F20         like Hc1       U  | High<br>Door<br>Powe<br>Cond<br>Comp<br>High<br>High  | ailurd<br>Temp<br>Temp<br>Open<br>r Fail<br>. Over<br>. Locl<br>. Locl<br>Press<br>Press   | e<br>erature<br>ure<br>heat<br>ked<br>ure<br>ure<br>Lo  | e<br>ck                                   |   | low temper<br>alarm<br>high tempe<br>alarm<br>door open al<br>power<br>alarm<br>high conden<br>alarm<br>multi-purpos<br>put alarm<br>high pre<br>alarm  |
|            | 230           231           NO.           232           NO.           233           234           NO.           235           236           237           238           238  | A01<br>A02<br>A03<br>PAR.<br>Hr0<br>PAR.<br>HE2<br>PAR.<br>H01<br>H02<br>PAR.<br>H01<br>H02<br>PAR.<br>H01<br>H02<br>PAR.<br>H01<br>H02<br>PAR.<br>H01<br>H02<br>PAR.  | 5<br>5<br>DEF.<br>1<br>DEF.<br>0<br>DEF.<br>0<br>DEF.<br>h-<br>h-<br>h-  | analogue output configuration<br>analogue output 2 configuration<br>analogue output 3 configuration<br>CLOCK<br>enable clock<br>ENERGY SAVING (if r5 = 0)<br>maximum duration energy saving<br>ENERGY SAVING IN REAL TIME (if<br>r5 = 0)<br>energy saving time<br>maximum duration energy saving<br>SWITCH ON/OFF IN REAL TIME<br>time device switch-on<br>time device switch-off<br>1 <sup>st</sup> time reversible condenser fans<br>on<br>2 <sup>nd</sup> time reversible condenser fans<br>on   | 1       = 0-10 V compressor         2       = 0-10 V condenser fans         3       = 0-10 V evaporator fans         4       = disabled         5       = disabled         like Ao1       Iike Ao1         Iike Ao1       Iike Ao1         MIN MAX.       0         0       = no       1 = yes         MIN MAX.       0 999 min         0       = until door opened         MIN MAX.       0 23 h         0 23 h       0 24 h         MIN MAX.       0 h         h       = disabled         like HoF       0 h         h       = disabled         like HoF       0 h         h       = disabled         like HoF       0 h                         | High<br>Door<br>Powe<br>Cond<br>Comp<br>Multi<br>High<br>High   | ailurd<br>Femper<br>Temper<br>Open<br>Open<br>Press<br>Press<br>Press<br>Press<br>Press<br>Press<br>Press  | e<br>erature<br>ure<br>theat<br>ked<br>ure<br>ure<br>ure Lo<br>ure Lo   | e<br>e<br>cck                             |   | low temper<br>alarm<br>high tempe<br>alarm<br>door open al<br>power ta<br>alarm<br>high conden<br>signal<br>high conden<br>alarm<br>multi-purpos<br>put alarm<br>multi-purpos<br>put alarm<br>high pre<br>alarm<br>low pre<br>alarm   |
|            | 2230<br>231<br>NO.<br>232<br>NO.<br>233<br>234<br>NO.<br>235<br>236<br>237<br>238<br>NO.<br>238<br>NO.   | Ao1<br>Ao2<br>Ao3<br>PAR.<br>Hr0<br>PAR.<br>HE2<br>PAR.<br>H01<br>H02<br>PAR.<br>H01<br>H05<br>Hc1<br>Hc2<br>PAR.  | 5<br>5<br>DEF.<br>1<br>DEF.<br>0<br>DEF.<br>0<br>DEF.<br>h-<br>h-<br>h-<br>h-<br>h-  | analogue output configuration<br>analogue output 2 configuration<br>analogue output 3 configuration<br>CLOCK<br>enable clock<br>ENERGY SAVING (if r5 = 0)<br>maximum duration energy saving<br>ENERGY SAVING IN REAL TIME (if<br>r5 = 0)<br>energy saving time<br>maximum duration energy saving<br>SWITCH ON/OFF IN REAL TIME<br>time device switch-on<br>time device switch-off<br>1 <sup>st</sup> time reversible condenser fans<br>on<br>2 <sup>rd</sup> time reversible condenser fans<br>on<br>REAL-TIME DEFROST  | 1       = 0-10 V compressor         2       = 0-10 V condenser fans         3       = 0-10 V evaporator fans         4       = disabled         5       = disabled         like Ao1       Iike Ao1         like Ao1       Iike Ao1         MIN MAX.       0         0       = no       1 = yes         MIN MAX.       0 999 min         0       = until door opened         MIN MAX.       0 23 h         0 24 h       MIN MAX.         0 h       h         h = disabled       like HoF         0 h       h         h = disabled       for F20         like Hc1       MIN MAX.   | High<br>Door<br>Powe<br>Cond<br>Comp<br>Multi<br>High<br>High   | ailuri<br>Temp<br>Open<br>r Fail<br>. Over<br>. Loci<br>. Loci<br>Press<br>Press<br>Press  | erature<br>erature<br>ure<br>theat<br>ked<br>ure<br>ure<br>ure Lo   | e<br>e<br>cck                             |   | low temper<br>alarm<br>high tempe<br>alarm<br>door open al<br>power<br>alarm<br>high conden<br>signal<br>high conden<br>alarm<br>multi-purpos<br>put alarm<br>multi-purpos<br>put alarm<br>high pre<br>alarm<br>low pre<br>alarm<br>compressor<br>mal switch a  |
|            | 230<br>231<br>NO.<br>231<br>NO.<br>232<br>233<br>234<br>NO.<br>235<br>236<br>237<br>238<br>236<br>237<br>238<br>238<br>NO.<br>239  | A01<br>A02<br>A03<br>PAR.<br>Hr0<br>PAR.<br>H01<br>H02<br>PAR.<br>H01<br>H02<br>PAR.<br>H01<br>H05<br>Hc1<br>Hc2<br>PAR.<br>H07<br>Hc2<br>Hc2  | 5<br>5<br>DEF.<br>1<br>DEF.<br>0<br>DEF.<br>0<br>DEF.<br>h-<br>h-<br>h-<br>h-<br>h-<br>h-<br>h-  | analogue output configuration<br>analogue output 2 configuration<br>analogue output 3 configuration<br>CLOCK<br>enable clock<br>ENERGY SAVING (if r5 = 0)<br>maximum duration energy saving<br>ENERGY SAVING IN REAL TIME (if<br>r5 = 0)<br>energy saving time<br>maximum duration energy saving<br>SWITCH ON/OFF IN REAL TIME<br>time device switch-on<br>time device switch-on<br>time device switch-off<br>1 <sup>st</sup> time reversible condenser fans<br>on<br>2 <sup>nd</sup> time reversible condenser fans<br>on<br>REAL-TIME DEFROST<br>1 <sup>st</sup> daily defrost time   | 1       = 0-10 V compressor         2       = 0-10 V condenser fans         3       = 0-10 V evaporator fans         4       = disabled         5       = disabled         like Ao1  | High<br>Door<br>Powe<br>Cond<br>Comp<br>Multi<br>High<br>High<br>Low I  | ailur<br>Temp<br>Open<br>r Fail<br>. Over<br>. Locl<br>. Locl<br>Press<br>Press<br>Press   |   | e<br>e<br>cck                             |   | low temper<br>alarm<br>high tempe<br>alarm<br>door open al<br>power<br>alarm<br>high conden<br>signal<br>high conden<br>alarm<br>multi-purpos<br>put alarm<br>multi-purpos<br>put alarm<br>high pro-<br>alarm<br>low pre-<br>alarm  |
|            | 230           221           NO.           231           NO.           232           NO.           233           234           NO.           233           234           NO.           233           234           NO.           235           236           237           238           NO.           239           2           239  | A01<br>A02<br>A03<br>PAR.<br>Hr0<br>PAR.<br>H01<br>H02<br>PAR.<br>H01<br>H02<br>PAR.<br>H01<br>H02<br>PAR.<br>H01<br>H02<br>PAR.<br>H01<br>H02<br>PAR.<br>H01  | 5<br>5<br>DEF.<br>1<br>DEF.<br>0<br>DEF.<br>0<br>DEF.<br>h-<br>h-<br>h-<br>h-<br>h-<br>h-<br>h-  | analogue output configuration<br>analogue output 2 configuration<br>analogue output 3 configuration<br>CLOCK<br>enable clock<br>ENERGY SAVING (if r5 = 0)<br>maximum duration energy saving<br>ENERGY SAVING IN REAL TIME (if<br>r5 = 0)<br>energy saving time<br>maximum duration energy saving<br>SWITCH ON/OFF IN REAL TIME<br>time device switch-on<br>time device switch-on<br>1 <sup>st</sup> time reversible condenser fans<br>on<br>2 <sup>nd</sup> time reversible condenser fans<br>on<br>REAL-TIME DEFROST<br>1 <sup>st</sup> daily defrost time   | 1       = 0-10 V compressor         2       = 0-10 V condenser fans         3       = 0-10 V evaporator fans         4       = disabled         5       = disabled         like Ao1  | High       Door       High       Door       Cond       Comp       Multi       High       High       High       Therr       Therr  | ailur<br>Temp<br>Open<br>r Fail<br>. Over<br>. Loci<br>. Loci<br>Press<br>Press<br>Press   | e erature<br>erature<br>uure<br>wheat<br>ked<br>ure<br>ure Lo<br>ure Lo<br>ure Lo   | 2<br>2<br>2<br>2                          |   | low temper<br>alarm<br>high tempe<br>alarm<br>door open al<br>power<br>alarm<br>high conden<br>alarm<br>multi-purpos<br>put alarm<br>multi-purpos<br>put alarm<br>high pre<br>alarm<br>low pre<br>alarm<br>compressor<br>mal switch a<br>compressor<br>thermal  |
|            | 229<br>230<br>231<br>NO.<br>232<br>NO.<br>233<br>234<br>NO.<br>235<br>236<br>237<br>238<br>NO.<br>239<br>238<br>NO.<br>239   | Ao1<br>Ao2<br>Ao3<br>PAR.<br>HrO<br>PAR.<br>He2<br>PAR.<br>Ho1<br>HO2<br>PAR.<br>Hon<br>Hc1<br>Hc2<br>PAR.<br>HoF<br>Hc1<br>Hc2  | 5<br>5<br>DEF.<br>1<br>DEF.<br>0<br>DEF.<br>0<br>DEF.<br>h-<br>h-<br>h-<br>h-<br>h-<br>h-<br>h-  | analogue output configuration<br>analogue output 2 configuration<br>analogue output 3 configuration<br>CLOCK<br>enable clock<br>ENERGY SAVING (if r5 = 0)<br>maximum duration energy saving<br>ENERGY SAVING IN REAL TIME (if<br>r5 = 0)<br>energy saving time<br>maximum duration energy saving<br>SWITCH ON/OFF IN REAL TIME<br>time device switch-on<br>time device switch-onf<br>1 <sup>st</sup> time reversible condenser fans<br>on<br>2 <sup>nd</sup> time reversible condenser fans<br>on<br>REAL-TIME DEFROST<br>1 <sup>st</sup> daily defrost time  | 1       = 0-10 V compressor         2       = 0-10 V condenser fans         3       = 0-10 V evaporator fans         4       = disabled         5       = disabled         like Ao1  | High<br>Door<br>Powe<br>Cond<br>Comp<br>Multi-<br>High<br>High<br>Low I   | ailur<br>Temp<br>Open<br>r Fail<br>Over<br>r Fail<br>Over<br>press<br>Press<br>Press   | erature<br>erature<br>ure<br>heat<br>ked<br>ure<br>ure Lo<br>ure Lo<br>ure Lo   | e<br>e<br>cck                             |   | low temper<br>alarm<br>high temper<br>alarm<br>door open al<br>power<br>alarm<br>high conden<br>alarm<br>multi-purpos<br>put alarm<br>multi-purpos<br>put alarm<br>high pro-<br>alarm<br>low pre-<br>alarm<br>compressor<br>mal switch a<br>compressor<br>thermal   |
|            | NO.           2230           231           NO.           233           234           NO.           2332           234           NO.           233           234           NO.           233           234           NO.           235           236           237           238           NO.           239           240           241  | Ao1<br>Ao2<br>Ao3<br>PAR.<br>Hr0<br>PAR.<br>HC2<br>PAR.<br>H01<br>H02<br>PAR.<br>H01<br>H02<br>PAR.<br>H01<br>Hc2<br>Hc1<br>Hc2<br>Hc2<br>Hd1<br>Hc2   | 5<br>5<br>DEF.<br>1<br>DEF.<br>0<br>DEF.<br>0<br>DEF.<br>h-<br>h-<br>h-<br>h-<br>h-<br>h-<br>h-<br>h-<br>h-<br>h-<br>h-<br>h-<br>h-                              | analogue output configuration<br>analogue output 2 configuration<br>cLOCK<br>enable clock<br>ENERGY SAVING (if r5 = 0)<br>maximum duration energy saving<br>ENERGY SAVING IN REAL TIME (if<br>r5 = 0)<br>energy saving time<br>maximum duration energy saving<br>SWITCH ON/OFF IN REAL TIME<br>time device switch-on<br>time device switch-on<br>1 <sup>st</sup> time reversible condenser fans<br>on<br>2 <sup>nd</sup> time reversible condenser fans<br>on<br>REAL-TIME DEFROST<br>1 <sup>st</sup> daily defrost time<br>2 <sup>nd</sup> daily defrost time<br>3 <sup>rd</sup> daily defrost time  | 1       = 0-10 V compressor         2       = 0-10 V condenser fans         3       = 0-10 V evaporator fans         4       = disabled         5       = disabled         like Ao1  | High<br>Door<br>Powe<br>Cond<br>Comp<br>Multi-<br>High<br>High<br>High<br>Therr<br>Therr  | ailur<br>Temp<br>Open<br>r Fail<br>Over<br>r Fail<br>Over<br>o. Loci<br>Press<br>Press<br>Press  | erature<br>erature<br>ure<br>heat<br>ked<br>ure<br>ure Lo<br>ure Lo<br>vitch 1<br>witch 2   | e<br>e<br>                                |   | low temper<br>alarm<br>high temper<br>alarm<br>door open al<br>power<br>alarm<br>high conden<br>alarm<br>multi-purpos<br>put alarm<br>multi-purpos<br>put alarm<br>high pro-<br>alarm<br>low pre-<br>alarm<br>compressor<br>thermal<br>alarm<br>defrost tit   |
|            | NO.           229           230           231           NO.           231           NO.           233           234           NO.           235           236           237           238           NO.           239           240           241           242  | Ao1<br>Ao2<br>Ao3<br>PAR.<br>HrO<br>PAR.<br>HC2<br>PAR.<br>HO1<br>HO2<br>PAR.<br>HO1<br>HC2<br>PAR.<br>HC1<br>HC2<br>HC2<br>HC2<br>HC2<br>HC2<br>HC2<br>HC2<br>HC2<br>HC2<br>HC2   | 5<br>5<br>DEF.<br>1<br>DEF.<br>0<br>DEF.<br>0<br>DEF.<br>h-<br>h-<br>h-<br>h-<br>h-<br>h-<br>h-<br>h-<br>h-<br>h-  | analogue output configuration<br>analogue output 2 configuration<br>CLOCK<br>enable clock<br>ENERGY SAVING (If r5 = 0)<br>maximum duration energy saving<br>ENERGY SAVING IN REAL TIME (If<br>r5 = 0)<br>energy saving time<br>maximum duration energy saving<br>SWITCH ON/OFF IN REAL TIME<br>time device switch-on<br>1 <sup>st</sup> time reversible condenser fans<br>on<br>2 <sup>nd</sup> daily defrost time<br>3 <sup>rd</sup> daily defrost time<br>3 <sup>rd</sup> daily defrost time<br>4 <sup>th</sup> daily defrost time  | 1       = 0-10 V compressor         2       = 0-10 V condenser fans         3       = 0-10 V evaporator fans         4       = disabled         5       = disabled         like Ao1  | High<br>Door<br>Powe<br>Cond<br>Comp<br>Multi-<br>High<br>High<br>High<br>Therr<br>Therr  | ailur<br>Temp<br>Open<br>r Fail<br>Over<br>o. Loci<br>Press<br>Press<br>Press<br>Press<br>st Tir   | e erature<br>erature<br>ure<br>theat<br>ked<br>ure<br>ure<br>ure Lo<br>ure Lo<br>ure Lo<br>neout  | e<br>e<br>                                |   | low temper<br>alarm<br>high temper<br>alarm<br>door open al<br>power<br>alarm<br>high conden<br>alarm<br>multi-purpos<br>put alarm<br>multi-purpos<br>put alarm<br>high pro-<br>alarm<br>low pre-<br>alarm<br>compressor<br>mal switch a<br>compressor<br>mal switch a<br>compressor<br>thermal<br>alarm  |
|            | NO.           2230           231           NO.           233           234           235           236           237           238           NO.           239           240           241           242           243   | Ao1<br>Ao2<br>Ao3<br>PAR.<br>HrO<br>PAR.<br>HC2<br>PAR.<br>HO1<br>HO2<br>PAR.<br>HO1<br>HC2<br>PAR.<br>HC1<br>HC2<br>HC2<br>HC2<br>HC2<br>HC2<br>HC2<br>HC2<br>HC2<br>HC2<br>HC2   | 5<br>5<br>DEF.<br>1<br>DEF.<br>0<br>DEF.<br>0<br>DEF.<br>h-<br>h-<br>h-<br>h-<br>h-<br>h-<br>h-<br>h-<br>h-<br>h-<br>h-<br>h-<br>h-                              | analogue output configuration<br>analogue output 2 configuration<br>CLOCK<br>enable clock<br>ENERGY SAVING (If r5 = 0)<br>maximum duration energy saving<br>ENERGY SAVING IN REAL TIME (If<br>r5 = 0)<br>energy saving time<br>maximum duration energy saving<br>SWITCH ON/OFF IN REAL TIME<br>time device switch-on<br>time device switch-onf<br>1 <sup>st</sup> time reversible condenser fans<br>on<br>2 <sup>nd</sup> time reversible condenser fans<br>on<br>REAL-TIME DEFROST<br>1 <sup>st</sup> daily defrost time<br>3 <sup>rd</sup> daily defrost time<br>3 <sup>rd</sup> daily defrost time<br>4 <sup>th</sup> daily defrost time<br>5 <sup>th</sup> daily defrost time<br>5 <sup>th</sup> daily defrost time   | 1       = 0-10 V compressor         2       = 0-10 V condenser fans         3       = 0-10 V evaporator fans         4       = disabled         5       = disabled         like Ao1  | High<br>Door<br>Powe<br>Cond<br>Comp<br>Multi-<br>High<br>High<br>High<br>Therr<br>Therr  | ailuri<br>Temp<br>Open<br>r Fail<br>Over<br>. Over<br>. Loci<br>Press<br>Press<br>Press<br>Press<br>St Tir   | erature<br>erature<br>ure<br>wed<br>cose<br>ure<br>ure<br>ure<br>ure<br>ure<br>ure<br>ure<br>ure<br>ure<br>ur   | e<br>ck                                   |   | low temper<br>alarm<br>high temper<br>alarm<br>door open al<br>power<br>alarm<br>high conden<br>alarm<br>multi-purpos<br>put alarm<br>high conden<br>alarm<br>multi-purpos<br>put alarm<br>high pro<br>alarm<br>compressor<br>mal switch a<br>compressor<br>thermal<br>alarm  |
|            | NO.           2230           231           NO.           233           234           NO.           233           234           NO.           233           234           NO.           233           234           NO.           235           236           237           238           NO.           239           240           241           242           243           244   | A01<br>A02<br>A03<br>PAR.<br>Hr0<br>PAR.<br>H2<br>PAR.<br>H01<br>H02<br>PAR.<br>H01<br>H02<br>PAR.<br>H01<br>H02<br>PAR.<br>H01<br>H02<br>H03<br>H04<br>H04<br>H04<br>H04<br>H05   | 5<br>5<br>DEF.<br>1<br>DEF.<br>0<br>DEF.<br>0<br>DEF.<br>h-<br>h-<br>h-<br>h-<br>h-<br>h-<br>h-<br>h-<br>h-<br>h-<br>h-  | analogue output configuration<br>analogue output 2 configuration<br>CLOCK<br>enable clock<br>ENERGY SAVING (If r5 = 0)<br>maximum duration energy saving<br>ENERGY SAVING IN REAL TIME (If<br>r5 = 0)<br>energy saving time<br>maximum duration energy saving<br>SWITCH ON/OFF IN REAL TIME<br>time device switch-on<br>time device switch-on<br>time device switch-onf<br>1 <sup>st</sup> time reversible condenser fans<br>on<br>REAL-TIME DEFROST<br>1 <sup>st</sup> daily defrost time<br>3 <sup>rd</sup> daily defrost time<br>3 <sup>rd</sup> daily defrost time<br>5 <sup>th</sup> daily defrost time<br>5 <sup>th</sup> daily defrost time<br>5 <sup>th</sup> daily defrost time<br>6 <sup>th</sup> daily defrost time  | 1       = 0-10 V compressor         2       = 0-10 V condenser fans         3       = 0-10 V evaporator fans         4       = disabled         5       = disabled         like Ao1  | High<br>Door<br>Powe<br>Cond<br>Comp<br>Multi-<br>High<br>High<br>Low I<br>Therr<br>Therr   | ailuri<br>Tempi<br>Open<br>r Fail<br>Over<br>. Over<br>. Loci<br>. Loci<br>Press<br>Press<br>Press<br>Press<br>St Tir  | e<br>erature<br>ure<br>witch 1<br>ure<br>ure<br>ure<br>ure<br>ure<br>ure<br>ure<br>ure<br>ure   | e<br>e<br>ck                              |   | low tempe<br>alarm<br>high tempe<br>alarm<br>door open al<br>power<br>alarm<br>high conden<br>alarm<br>multi-purpos<br>put alarm<br>multi-purpos<br>put alarm<br>high pro<br>alarm<br>low pre<br>alarm<br>compressor<br>mal switch a<br>compressor<br>thermal<br>alarm  |
|            | NO.           230           231           NO.           233           234           NO.           233           234           NO.           235           236           237           238           NO.           239           230           231           232           NO.           235           236           237           238           NO.           240           241           242           243           244           NO.  | A01<br>A02<br>A03<br>PAR.<br>Hr0<br>PAR.<br>H01<br>H02<br>PAR.<br>H01<br>H02<br>PAR.<br>H01<br>H02<br>PAR.<br>H01<br>H02<br>H02<br>H03<br>H04<br>H05<br>H04<br>H04<br>H05<br>H04<br>PAR.<br>H01<br>PAR.  | 5<br>5<br>DEF.<br>1<br>DEF.<br>0<br>0<br>DEF.<br>h-<br>h-<br>h-<br>h-<br>h-<br>h-<br>h-<br>h-<br>h-<br>h-<br>h-<br>h-<br>h-                                      | analogue output configuration<br>analogue output 2 configuration<br>analogue output 3 configuration<br>CLOCK<br>enable clock<br>ENERGY SAVING (if r5 = 0)<br>maximum duration energy saving<br>ENERGY SAVING IN REAL TIME (if<br>r5 = 0)<br>energy saving time<br>maximum duration energy saving<br>SWITCH ON/OFF IN REAL TIME<br>time device switch-on<br>time device switch-onf<br>1 <sup>st</sup> time reversible condenser fans<br>on<br>2 <sup>nd</sup> time reversible condenser fans<br>on<br>2 <sup>nd</sup> time reversible condenser fans<br>on<br>REAL-TIME DEFROST<br>1 <sup>st</sup> daily defrost time<br>3 <sup>rd</sup> daily defrost time<br>3 <sup>rd</sup> daily defrost time<br>5 <sup>th</sup> daily DEFNENT<br>5 <sup>th</sup> | 1       = 0-10 V compressor         2       = 0-10 V condenser fans         3       = 0-10 V evaporator fans         4       = disabled         5       = disabled         like Ao1  | High<br>Door<br>Powe<br>Cond<br>Comp<br>Multii<br>High<br>High<br>Low I<br>Therr<br>Therr   | ailuri<br>Tempi<br>Open<br>r Fail<br>Over<br>. Over<br>. Loci<br>. Loci<br>Press<br>Press<br>Press<br>Press<br>st Tir  |   | e<br>e<br>ck                              |   | low temper<br>alarm<br>high temper<br>alarm<br>door open al<br>power<br>alarm<br>high conden<br>signal<br>high conden<br>alarm<br>multi-purpos<br>put alarm<br>multi-purpos<br>put alarm<br>high pre<br>alarm<br>compressor<br>mal switch a<br>compressor<br>thermal<br>alarm<br>defrost tin<br>alarm   |
|            | NO.           230           231           NO.           233           234           NO.           233           234           NO.           235           236           237           238           NO.           239           240           241           242           243           244           NO.           245  | Ao1<br>Ao2<br>Ao3<br>PAR.<br>Hr0<br>PAR.<br>HC2<br>PAR.<br>H01<br>H02<br>PAR.<br>H01<br>H02<br>PAR.<br>H01<br>H02<br>H02<br>H03<br>H04<br>H05<br>H04<br>H04<br>H05<br>H04<br>H05<br>H04<br>H05<br>H04<br>H05<br>H04<br>H05<br>H04<br>H05<br>H05<br>H05<br>H05<br>H05<br>H05<br>H05<br>H05<br>H05<br>H05  | 5<br>5<br>DEF.<br>1<br>DEF.<br>0<br>DEF.<br>0<br>DEF.<br>h-<br>h-<br>h-<br>h-<br>h-<br>h-<br>h-<br>h-<br>h-<br>h-<br>DEF.<br>1<br>1                              | analogue output configuration<br>analogue output 2 configuration<br>analogue output 3 configuration<br>CLOCK<br>enable clock<br>ENERGY SAVING (if r5 = 0)<br>maximum duration energy saving<br>ENERGY SAVING IN REAL TIME (if<br>r5 = 0)<br>energy saving time<br>maximum duration energy saving<br>SWITCH ON/OFF IN REAL TIME<br>time device switch-on<br>time device switch-on<br>time device switch-onf<br>1st time reversible condenser fans<br>on<br>2 <sup>nd</sup> time reversible condenser fans<br>on<br>2 <sup>nd</sup> time reversible condenser fans<br>on<br><b>REAL-TIME DEFROST</b><br>1st daily defrost time<br>3 <sup>rd</sup> daily defrost time<br>3 <sup>rd</sup> daily defrost time<br>4 <sup>th</sup> daily defrost time<br>5 <sup>th</sup> daily defrost time  | 1       = 0-10 V compressor         2       = 0-10 V condenser fans         3       = 0-10 V evaporator fans         4       = disabled         5       = disabled         like Ao1  | High<br>Door<br>Powe<br>Cond<br>Comp<br>Multii<br>High<br>High<br>Low I<br>Therr<br>Therr<br>Defro  | ailur<br>ailur<br>Temp<br>Open<br>r Fail<br>Over<br>Press<br>Press<br>Press<br>Press<br>St Tir<br>St Tir<br>TEC  | a<br>erature<br>erature<br>ure<br>witeh 1<br>witch 1<br>witch 1<br>meout<br>HNICA   | e<br>e<br>ck<br>:<br>:                    | :IFIC   | low temper<br>alarm<br>high temper<br>alarm<br>door open al<br>power<br>alarm<br>high conden<br>signal<br>high conden<br>alarm<br>multi-purpos<br>put alarm<br>multi-purpos<br>put alarm<br>multi-purpos<br>put alarm<br>digh pre<br>alarm<br>compressor<br>mal switch a<br>compressor<br>thermal<br>alarm<br>defrost tin<br>alarm              |
|            | NO.           230           231           NO.           233           234           NO.           233           234           NO.           235           236           237           238           NO.           239           240           241           242           243           244           NO.           2445           2446  | A01<br>A02<br>A03<br>PAR.<br>Hr0<br>PAR.<br>H01<br>H02<br>PAR.<br>H01<br>H02<br>PAR.<br>H01<br>H02<br>H41<br>H05<br>H41<br>H41<br>H42<br>H43<br>H44<br>H43<br>H44<br>H43<br>H44<br>H45<br>H46<br>PAR.  | 5<br>5<br>DEF.<br>1<br>DEF.<br>0<br>DEF.<br>0<br>DEF.<br>h-<br>h-<br>h-<br>h-<br>h-<br>h-<br>h-<br>h-<br>h-<br>h-<br>h-<br>1<br>1<br>1                           | analogue output configuration<br>analogue output 2 configuration<br>CLOCK<br>enable clock<br>ENERGY SAVING (if r5 = 0)<br>maximum duration energy saving<br>ENERGY SAVING IN REAL TIME (if<br>r5 = 0)<br>energy saving time<br>maximum duration energy saving<br>SWITCH ON/OFF IN REAL TIME<br>time device switch-on<br>time device switch-on<br>time device switch-onf<br>1 <sup>st</sup> time reversible condenser fans<br>on<br>2 <sup>nd</sup> time reversible condenser fans<br>on<br>2 <sup>nd</sup> time reversible condenser fans<br>on<br>2 <sup>nd</sup> daily defrost time<br>3 <sup>rd</sup> daily defrost time<br>3 <sup>rd</sup> daily defrost time<br>5 <sup>th</sup> daily defrost time   | 1       = 0-10 V compressor         2       = 0-10 V condenser fans         3       = 0-10 V evaporator fans         4       = disabled         5       = disabled         like Ao1  | RTC F         Low T         High         Door         Powe         Cond         Comp         Multi         High         High         High         High         High         High         High         Defro         10         Purpo         Const                        | ailur<br>ailur<br>Temp<br>Open<br>r Fail<br>Open<br>r Fail<br>Open<br>r Fail<br>Open<br>Press<br>Press<br>Press<br>Press<br>Press<br>Tress<br>Tress<br>Tress<br>Tress  |   | e<br>ck<br>ck                             | EIFIC<br>ice:   | low tempe<br>alarm<br>high tempe<br>alarm<br>door open al<br>power<br>alarm<br>high conden<br>signal<br>high conden<br>alarm<br>multi-purpos<br>put alarm<br>multi-purpos<br>put alarm<br>high pro<br>alarm<br>compressor<br>mal switch a<br>compressor<br>thermal<br>alarm<br>defrost tii<br>alarm   |
|            | NO.           2230           231           NO.           231           NO.           233           234           NO.           2335           236           237           238           NO.           238           239           240           241           242           244           NO.           2445           2446           247  | A01<br>A02<br>A03<br>PAR.<br>Hr0<br>PAR.<br>H01<br>H02<br>PAR.<br>H01<br>H02<br>PAR.<br>H01<br>H02<br>PAR.<br>H01<br>H02<br>H03<br>H04<br>H05<br>H04<br>H04<br>H04<br>H04<br>H04<br>H04<br>H04<br>H04<br>H04<br>Sen  | 5<br>5<br>DEF.<br>1<br>DEF.<br>0<br>DEF.<br>0<br>DEF.<br>h-<br>h-<br>h-<br>h-<br>h-<br>h-<br>h-<br>h-<br>h-<br>h-<br>h-<br>h-<br>1<br>DEF.<br>1<br>1<br>80       | analogue output configuration<br>analogue output 2 configuration<br>analogue output 3 configuration<br>CLOCK<br>enable clock<br>ENERGY SAVING (If r5 = 0)<br>maximum duration energy saving<br>ENERGY SAVING IN REAL TIME (If<br>r5 = 0)<br>energy saving time<br>maximum duration energy saving<br>SWITCH ON/OFF IN REAL TIME<br>time device switch-on<br>time device switch-onf<br>1 <sup>st</sup> time reversible condenser fans<br>on<br>2 <sup>nd</sup> time reversible condenser fans<br>on<br>2 <sup>nd</sup> time reversible condenser fans<br>on<br>2 <sup>nd</sup> daily defrost time<br>3 <sup>st</sup> daily defrost time<br>3 <sup>st</sup> daily defrost time<br>5 <sup>th</sup> daily def  | 1       = 0-10 V compressor         2       = 0-10 V condenser fans         3       = 0-10 V evaporator fans         4       = disabled         5       = disabled         like Ao1  | RTC F         Low T         High         Door         Cond         Comp         Multi         High         High         High         Low I         Therr         Therr         Defro         10         Purpo         Const         Housing                               | ailur<br>ailur<br>Temp<br>Open<br>r Fail<br>Open<br>r Fail<br>Open<br>r Fail<br>Over<br>Deress<br>Press<br>Press<br>Press<br>Press<br>raal S<br>St Tir<br>TEC  | erature<br>erature<br>ure<br>heat<br>ked<br>ure<br>ure Lo<br>ure Lo<br>ure Lo<br>vitch 1<br>meout   | e cck L SPEC                              | :IFIC<br>ice:<br>idevii                               | low temper<br>alarm<br>high tempe<br>alarm<br>door open al<br>power<br>alarm<br>high conden<br>signal<br>high conden<br>alarm<br>multi-purpos<br>put alarm<br>multi-purpos<br>put alarm<br>high pro-<br>alarm<br>compressor<br>mal switch a<br>compressor<br>thermal<br>alarm<br>defrost tii<br>alarm   |
|            | NO.           2230           231           NO.           231           NO.           233           234           NO.           233           234           NO.           233           234           NO.           233           234           NO.           237           238           239           240           241           242           244           NO.           2445           2446           2447  | A01<br>A02<br>A03<br>PAR.<br>HT0<br>PAR.<br>H01<br>H02<br>PAR.<br>H01<br>H02<br>PAR.<br>H01<br>H02<br>PAR.<br>H01<br>H02<br>PAR.<br>H01<br>H02<br>PAR.<br>H05<br>H05<br>H05<br>H04<br>H05<br>H02<br>Sen  | 5<br>5<br>DEF.<br>1<br>DEF.<br>0<br>DEF.<br>0<br>DEF.<br>h-<br>h-<br>h-<br>h-<br>h-<br>h-<br>h-<br>h-<br>h-<br>h-<br>h-<br>h-<br>1<br>DEF.<br>1<br>1<br>1<br>380 | analogue output configuration<br>analogue output 2 configuration<br>CLOCK<br>enable clock<br>ENERGY SAVING (If r5 = 0)<br>maximum duration energy saving<br>ENERGY SAVING IN REAL TIME (If<br>r5 = 0)<br>energy saving time<br>maximum duration energy saving<br>SWITCH ON/OFF IN REAL TIME<br>time device switch-on<br>time device switch-on<br>1 <sup>st</sup> time reversible condenser fans<br>on<br>2 <sup>nd</sup> time reversible condenser fans<br>on<br>2 <sup>nd</sup> diny defrost time<br>3 <sup>rd</sup> daily defrost time<br>3 <sup>rd</sup> daily defrost time<br>5 <sup>th</sup> daily defrost time<br>6 <sup>th</sup> daily defrost time<br>6 <sup>th</sup> daily defrost time<br>5 <sup>th</sup> daily defrost time<br>6 <sup>th</sup> daily defrost time<br>6 <sup>th</sup> daily defrost time<br>6 <sup>th</sup> daily defrost time<br>5 <sup>th</sup> daily defrost time<br>6 <sup>th</sup> daily defrost time<br>6 <sup>th</sup> daily defrost time<br>5 <sup>th</sup> daily defrost time<br>6 <sup>th</sup> daily defrost time<br>6 <sup>th</sup> daily defrost time<br>5 <sup>th</sup> daily defrost time<br>6 <sup>th</sup> daily defrost time<br>5 <sup>th</sup> daily defrost time<br>6 <sup>th</sup> daily defrost time  | 1       = 0-10 V compressor         2       = 0-10 V condenser fans         3       = 0-10 V evaporator fans         4       = disabled         5       = disabled         like Ao1  | RTC F         Low T         High         Door         Powee         Cond         Comp         Multi         High         High         High         High         High         High         High         Hourpo         Consti         Consti         Consti         Catead | ailur<br>ailur<br>Temp<br>Open<br>r Fail<br>Open<br>r Fail<br>Over<br>o Ver<br>Press<br>Press<br>Press<br>Press<br>Press<br>Strir<br>TEC   | erature<br>erature<br>ure<br>heat<br>ked<br>ure<br>ure Lo<br>ure Lo<br>ure Lo<br>heat a<br>he cont<br>he cont   | e<br>e<br>cck<br>L SPEC                   | EIFIC<br>ice:<br>I devii<br>esista                    | low tempe<br>alarm<br>high tempe<br>alarm<br>door open al<br>power<br>alarm<br>high conden<br>signal<br>high conden<br>alarm<br>multi-purpos<br>put alarm<br>multi-purpos<br>put alarm<br>high pro<br>alarm<br>low pro<br>alarm<br>compressor<br>mal switch a<br>compressor<br>thermal<br>alarm<br>defrost tii<br>alarm                         |
|            | NO.           2230           231           NO.           231           NO.           233           234           NO.           233           234           NO.           233           234           NO.           233           234           NO.           235           236           237           238           NO.           239           240           241           242           243           244           NO.           2445           2446           247           248   | Ao1<br>Ao2<br>Ao3<br>PAR.<br>Hr0<br>PAR.<br>He2<br>PAR.<br>Ho1<br>Ho2<br>PAR.<br>Ho1<br>Ho2<br>PAR.<br>Ho1<br>Hc2<br>Hd3<br>Hd4<br>Hd5<br>Hd5<br>Hd6<br>Hd5<br>Hd6<br>PAR.<br>Hd5<br>Hd5<br>Hd5<br>Hd5<br>Hd5<br>Hd5<br>Hd5<br>Hd5<br>Hd5<br>Hd5   | 5<br>5<br>DEF.<br>1<br>DEF.<br>0<br>DEF.<br>0<br>DEF.<br>h-<br>h-<br>h-<br>h-<br>h-<br>h-<br>h-<br>h-<br>h-<br>h-<br>h-<br>h-<br>1<br>1<br>1<br>380              | analogue output configuration<br>analogue output 2 configuration<br>CLOCK<br>enable clock<br>ENERGY SAVING (if r5 = 0)<br>maximum duration energy saving<br>ENERGY SAVING IN REAL TIME (if<br>r5 = 0)<br>energy saving time<br>maximum duration energy saving<br>SWITCH ON/OFF IN REAL TIME<br>time device switch-on<br>time device switch-on<br>1 <sup>st</sup> time reversible condenser fans<br>on<br>2 <sup>nd</sup> time reversible condenser fans<br>on<br>2 <sup>nd</sup> dime reversible condenser fans<br>on<br>2 <sup>nd</sup> dime reversible condenser fans<br>on<br>2 <sup>nd</sup> daily defrost time<br>3 <sup>rd</sup> daily defrost time<br>3 <sup>rd</sup> daily defrost time<br>5 <sup>th</sup> daily defrost time<br>5 <sup>th</sup> daily defrost time<br>5 <sup>th</sup> daily defrost time<br>6 <sup>th</sup> daily defrost time<br>6 <sup>th</sup> daily defrost time<br>5 <sup>th</sup> daily defrost time<br>6 <sup>th</sup> daily defrost time   | 1       = 0-10 V compressor         2       = 0-10 V condenser fans         3       = 0-10 V evaporator fans         4       = disabled         5       = disabled         like Ao1  | High<br>Door<br>Powe<br>Cond<br>Comp<br>Multi-<br>High<br>High<br>High<br>High<br>Therr<br>Therr<br>Therr<br>Therr<br>Therr<br>Therr<br>Therr   | ailur<br>ailur<br>Temp<br>Open<br>r Fail<br>Open<br>r Fail<br>Over<br>o. Loci<br>Over<br>Press<br>Press<br>Press<br>Press<br>Se of 1<br>st Tir<br>TEC  | erature<br>erature<br>ure<br>heat<br>ked<br>ure<br>ure Lo<br>ure Lo<br>ure Lo<br>heat an<br>heat an<br>heat an<br>heat an<br>heat an                                    | e ck LSPEC trol dev control dev dd fire r | EIFIC<br>ice:<br>I devia                              | low tempe<br>alarm<br>high tempe<br>alarm<br>door open al<br>power<br>alarm<br>high conden<br>signal<br>high conden<br>alarm<br>multi-purpos<br>put alarm<br>multi-purpos<br>put alarm<br>high pro<br>alarm<br>low pro<br>alarm<br>compressor<br>mal switch a<br>compressor<br>thermal<br>alarm<br>defrost tii<br>alarm                         |
|            | NO.           2230           231           NO.           233           234           NO.           233           234           NO.           233           234           NO.           233           234           NO.           235           236           237           238           NO.           239           240           241           242           243           244           NO.           244           244           2446           2477           248   | Ao1<br>Ao2<br>Ao3<br>PAR.<br>Hr0<br>PAR.<br>Hc2<br>PAR.<br>Ho1<br>Hc2<br>PAR.<br>Ho1<br>Hc2<br>Hd3<br>Hd4<br>Hd5<br>Hd5<br>Hd5<br>Hd5<br>Hd5<br>Hd5<br>Hd5<br>Hd5<br>Hd5<br>Hd5  | 5<br>5<br>DEF.<br>1<br>DEF.<br>0<br>DEF.<br>h-<br>h-<br>h-<br>h-<br>h-<br>h-<br>h-<br>h-<br>h-<br>h-<br>h-<br>h-<br>h-   | analogue output configuration<br>analogue output 2 configuration<br>CLOCK<br>enable clock<br>ENERGY SAVING (If r5 = 0)<br>maximum duration energy saving<br>ENERGY SAVING IN REAL TIME (If<br>r5 = 0)<br>energy saving time<br>maximum duration energy saving<br>SWITCH ON/OFF IN REAL TIME<br>time device switch-on<br>time device switch-on<br>1 <sup>st</sup> time reversible condenser fans<br>on<br>2 <sup>nd</sup> time reversible condenser fans<br>on<br>2 <sup>nd</sup> time reversible condenser fans<br>on<br>2 <sup>nd</sup> daily defrost time<br>3 <sup>rd</sup> daily defrost time<br>3 <sup>rd</sup> daily defrost time<br>3 <sup>rd</sup> daily defrost time<br>3 <sup>rd</sup> daily defrost time<br>5 <sup>th</sup> daily defrost time<br>5 <sup>th</sup> daily defrost time<br>6 <sup>th</sup> daily defrost time<br>SECURITY<br>enable ON/STAND-BY key<br>enable keypad lock<br>keypad sensitivity<br>password to access settings from<br>keypad   | 1       = 0-10 V compressor         2       = 0-10 V condenser fans         3       = 0-10 V evaporator fans         4       = disabled         5       = disabled         like Ao1  | High<br>Door<br>Powe<br>Cond<br>Comp<br>Multi-<br>High<br>High<br>High<br>High<br>Therr<br>Therr<br>Therr<br>Therr<br>Therr<br>Therr<br>Defro   | ailur<br>ailur<br>Temp<br>Open<br>r Fail<br>Open<br>r Fail<br>Over<br>Press<br>Press<br>Press<br>Press<br>Press<br>St Tir<br>TEC<br>se of f  | erature<br>erature<br>ure<br>theat<br>ked<br>ure<br>ure<br>Lo<br>ure<br>Lo<br>ure<br>Lo<br>ure<br>Lo<br>heat a<br>heat ar<br>heat ar<br>heat ar                         | e ck ck L SPEC trol dev contro dfire r    | Ciffice:<br>I devia                                   | low tempe<br>alarm<br>high tempe<br>alarm<br>door open al<br>power<br>alarm<br>high conden<br>alarm<br>multi-purpos<br>put alarm<br>multi-purpos<br>put alarm<br>high conden<br>alarm<br>low pre<br>alarm<br>compressor<br>mal switch a<br>compressor<br>mal switch a<br>compressor<br>thermal<br>alarm<br>defrost tii<br>alarm                 |
|            | NO.           2230           231           NO.           233           234           NO.           233           234           NO.           233           234           NO.           233           234           NO.           235           236           237           238           NO.           239           240           241           242           244           NO.           244           NO.           2446           2447           2448           2429   | Ao1<br>Ao2<br>Ao3<br>PAR.<br>HrO<br>PAR.<br>HC2<br>PAR.<br>Ho1<br>Ho2<br>PAR.<br>Ho1<br>Hc1<br>Hc2<br>Hd3<br>Hd4<br>Hd5<br>Hd2<br>Hd3<br>Hd4<br>Hd5<br>PAR.<br>Hd1<br>Sen<br>Loc<br>Sen<br>PAS   | 5<br>5<br>DEF.<br>1<br>DEF.<br>0<br>DEF.<br>0<br>DEF.<br>h-<br>h-<br>h-<br>h-<br>h-<br>h-<br>h-<br>DEF.<br>h-<br>1<br>1<br>1<br>380<br>2-19                      | analogue output configuration<br>analogue output 2 configuration<br>CLOCK<br>enable clock<br>ENERGY SAVING (If r5 = 0)<br>maximum duration energy saving<br>ENERGY SAVING IN REAL TIME (If<br>r5 = 0)<br>energy saving time<br>maximum duration energy saving<br>SWITCH ON/OFF IN REAL TIME (If<br>r5 = 0)<br>energy saving time<br>maximum duration energy saving<br>SWITCH ON/OFF IN REAL TIME<br>time device switch-on<br>1 <sup>s1</sup> time reversible condenser fans<br>on<br>2 <sup>nd</sup> time reversible condenser fans<br>on<br>2 <sup>nd</sup> time reversible condenser fans<br>on<br>2 <sup>nd</sup> daily defrost time<br>3 <sup>rd</sup> daily defrost time<br>3 <sup>rd</sup> daily defrost time<br>3 <sup>rd</sup> daily defrost time<br>5 <sup>th</sup> daily defrost time<br>SECURIY<br>enable ON/STAND-BY key<br>enable keypad lock<br>keypad sensitivity<br>password to access settings from<br>keypad  | 1       = 0-10 V compressor         2       = 0-10 V condenser fans         3       = 0-10 V evaporator fans         4       = disabled         5       = disabled         like Ao1  | High<br>Door<br>Powe<br>Cond<br>Comp<br>Multi<br>High<br>High<br>High<br>High<br>Therr<br>Therr<br>Therr<br>Therr<br>Defro<br>Const<br>Housi<br>Categ<br>Measu<br>Mount   | ailur<br>ailur<br>Temp<br>Open<br>r Fail<br>o Over<br>press<br>Press<br>Press<br>Press<br>Press<br>st Tir<br>TEC   | erature<br>erature<br>ure<br>theat<br>ked<br>ure<br>ure<br>ure<br>Lo<br>ure<br>Lo<br>ure<br>Lo<br>ure<br>Lo<br>heat a<br>heat a<br>heat a<br>heat a<br>heat a<br>heat a | e ck LSPEC                                | EIFIC<br>ice:<br>I devin<br>esista                    | low tempe<br>alarm<br>high tempe<br>alarm<br>door open al<br>power<br>alarm<br>high conden<br>alarm<br>multi-purpos<br>put alarm<br>multi-purpos<br>put alarm<br>high pro<br>alarm<br>low pre<br>alarm<br>compressor<br>mal switch a<br>compressor<br>thermal<br>alarm<br>defrost tii<br>alarm<br>defrost tii<br>alarm                          |
|            | NO.           2230           231           NO.           233           234           NO.           233           234           NO.           233           234           NO.           233           234           NO.           235           236           237           238           NO.           239           240           241           242           243           244           NO.           244           244           244           244           244           244           244           244           244           244           244           244           244 | Ao1<br>Ao2<br>Ao3<br>PAR.<br>HrO<br>PAR.<br>HC1<br>HO1<br>HO2<br>PAR.<br>HO1<br>HC2<br>PAR.<br>HC1<br>HC1<br>HC2<br>HC3<br>HC2<br>HC3<br>HC2<br>HC3<br>HC4<br>HC3<br>HC4<br>HC3<br>HC4<br>HC3<br>HC4<br>HC3<br>HC4<br>HC3<br>HC4<br>HC3<br>HC4<br>HC3<br>HC4<br>HC3<br>HC4<br>HC3<br>HC4<br>HC3<br>HC4<br>HC4<br>HC5<br>HC4<br>HC4<br>HC5<br>HC4<br>HC4<br>HC5<br>HC4<br>HC4<br>HC5<br>HC4<br>HC4<br>HC5<br>HC4<br>HC4<br>HC5<br>HC4<br>HC4<br>HC5<br>HC4<br>HC4<br>HC5<br>HC4<br>HC4<br>HC5<br>HC4<br>HC4<br>HC5<br>HC4<br>HC5<br>HC4<br>HC5<br>HC5<br>HC5<br>HC5<br>HC5<br>HC5<br>HC5<br>HC5<br>HC5<br>HC5 | 5<br>5<br>DEF.<br>1<br>DEF.<br>0<br>DEF.<br>0<br>DEF.<br>h-<br>h-<br>h-<br>h-<br>h-<br>h-<br>h-<br>1<br>DEF.<br>1<br>1<br>380<br>2-19                            | analogue output configuration<br>analogue output 2 configuration<br>CLOCK<br>enable clock<br>ENERGY SAVING (If r5 = 0)<br>maximum duration energy saving<br>ENERGY SAVING IN REAL TIME (If<br>r5 = 0)<br>energy saving time<br>maximum duration energy saving<br>SWITCH ON/OFF IN REAL TIME<br>time device switch-on<br>time device switch-off<br>1 <sup>s1</sup> time reversible condenser fans<br>on<br>2 <sup>nd</sup> time reversible condenser fans<br>on<br>2 <sup>nd</sup> time reversible condenser fans<br>on<br>2 <sup>nd</sup> daily defrost time<br>3 <sup>rd</sup> daily defrost time<br>3 <sup>rd</sup> daily defrost time<br>3 <sup>rd</sup> daily defrost time<br>5 <sup>th</sup> daily defrost time<br>6 <sup>th</sup> daily defrost time<br>5 <sup>th</sup> daily defrost time<br>5 <sup>th</sup> daily defrost time<br>6 <sup>th</sup> daily defrost time<br>5 <sup>th</sup> daily defrost time<br>5 <sup>th</sup> daily defrost time<br>6 <sup>th</sup> daily dafrost time<br>6 <sup></sup>     | 1       = 0-10 V compressor         2       = 0-10 V condenser fans         3       = 0-10 V evaporator fans         4       = disabled         5       = disabled         like Ao1  | High<br>Door<br>Powe<br>Cond<br>Comp<br>Multi-<br>High<br>High<br>High<br>High<br>Therr<br>Therr<br>Therr<br>Therr<br>Therr<br>Defro<br>Const<br>Housi<br>Categ<br>Measu  | ailur<br>ailur<br>Temp<br>Open<br>r Fail<br>Over<br>purp<br>Press<br>Press<br>Press<br>Press<br>St Tir<br>TEC<br>Se of f<br>ruction<br>'g:<br>ory of<br>irreme   | erature<br>erature<br>ure<br>witch 1<br>witch 2<br>neout<br>HNICA<br>he coni<br>n of the<br>heat ai<br>heat ai  | e ck LSPEC                                | SIFIC<br>ice:<br>I devin<br>resista                   | low tempe<br>alarm<br>high tempe<br>alarm<br>door open al<br>power<br>alarm<br>high conden<br>signal<br>high conden<br>alarm<br>multi-purpos<br>put alarm<br>multi-purpos<br>put alarm<br>high pro<br>alarm<br>low pre<br>alarm<br>compressor<br>mal switch a<br>compressor<br>thermal<br>alarm<br>defrost ti<br>alarm<br>defrost ti<br>alarm   |
|            | NO.           2230           231           NO.           233           234           NO.           233           234           NO.           233           234           NO.           233           234           NO.           235           236           237           238           NO.           239           240           241           242           244           NO.           244           NO.           2446           2447           248           249           250   | Ao1<br>Ao2<br>Ao3<br>PAR.<br>HrO<br>PAR.<br>HC2<br>PAR.<br>Ho1<br>Ho2<br>PAR.<br>Ho1<br>Hc1<br>Hc2<br>Hd3<br>Hd4<br>Hd5<br>PAR.<br>Hd1<br>Hc2<br>Hd3<br>Hd4<br>Hd5<br>PAR.<br>Hd1<br>Sen<br>Sen<br>PAS<br>Sen<br>PAS   | 5<br>5<br>DEF.<br>1<br>DEF.<br>0<br>0<br>DEF.<br>h-<br>h-<br>h-<br>h-<br>h-<br>h-<br>h-<br>1<br>1<br>80<br>-19<br>426<br>824                                     | analogue output configuration<br>analogue output 2 configuration<br>CLOCK<br>enable clock<br>ENERGY SAVING (If r5 = 0)<br>maximum duration energy saving<br>ENERGY SAVING IN REAL TIME (If<br>r5 = 0)<br>energy saving time<br>maximum duration energy saving<br>SWITCH ON/OFF IN REAL TIME<br>time device switch-on<br>time device switch-on<br>1 <sup>st</sup> time reversible condenser fans<br>on<br>2 <sup>nd</sup> time reversible condenser fans<br>on<br>2 <sup>nd</sup> time reversible condenser fans<br>on<br>2 <sup>nd</sup> daily defrost time<br>3 <sup>rd</sup> daily defrost time<br>3 <sup>rd</sup> daily defrost time<br>3 <sup>rd</sup> daily defrost time<br>3 <sup>rd</sup> daily defrost time<br>5 <sup>th</sup> daily defrost time<br>6 <sup>th</sup> daily defrost time<br>5 <sup>th</sup> daily defrost time<br>5 <sup>th</sup> daily defrost time<br>6 <sup>th</sup> daily defrost time<br>5 <sup>th</sup> daily defrost time<br>5 <sup>th</sup> daily defrost time<br>6 <sup>th</sup> daily defrost time<br>5 <sup>th</sup> daily defrost time<br>6 <sup>th</sup> daily defrost time<br>5 <sup>th</sup> daily defrost time<br>6 <sup>th</sup> daily defrost time<br>6 <sup>th</sup> daily defrost time<br>5 <sup>th</sup> daily defrost time<br>6 <sup>th</sup> daily dafrost time<br>6 <sup>t</sup>     | 1       = 0-10 V compressor         2       = 0-10 V condenser fans         3       = 0-10 V evaporator fans         4       = disabled         5       = disabled         like Ao1  | High<br>Door<br>Powe<br>Cond<br>Comp<br>Multi<br>High<br>High<br>High<br>High<br>High<br>Houst<br>Therr<br>Therr<br>Therr<br>Therr<br>Defro<br>Const<br>Houst<br>Const<br>Houst<br>Const<br>Degre   | ailuri<br>ailuri<br>Tempi<br>Open<br>r Fail<br>Over<br>purpi<br>Press<br>Press<br>Press<br>Press<br>st Tir<br>TEC<br>Se of 1<br>ruction<br>g:<br>ory of<br>rremei<br>ing m<br>e of p   | erature<br>erature<br>ure<br>witch 1<br>witch 1<br>witch 1<br>heat a<br>neout<br>heat a<br>heat a<br>heat a<br>heat a<br>heat a   | e ck LSPEC                                | EIFIC<br>ice:<br>I devin<br>resista<br>contr<br>ded b | low tempe<br>alarm<br>high tempe<br>alarm<br>door open al<br>power<br>alarm<br>high conden<br>signal<br>high conden<br>alarm<br>multi-purpos<br>put alarm<br>multi-purpos<br>put alarm<br>high pro<br>alarm<br>low pre<br>alarm<br>compressor<br>mal switch a<br>compressor<br>thermal<br>alarm<br>defrost tii<br>alarm<br>defrost tii<br>alarm |

| - 1 |                | NO.     | PAR.         | DEE.       | мог           | DBUS  |                 |               | MIN   | MAX.  |  |  |  |
|-----|----------------|---------|--------------|------------|---------------|---|-----------------|---------------|---|---|--|--|--|
| _   |                | 254     | LA           | 247        | MOL           | DBUS address                                  |                 |               |   | 1 247   |  |  |  |
| -   | _              | 255     | Lb           | 3          | MO            | BUS baud rate                                 |                 |               | 0 = 2,400 baud<br>1 = 4,800 baud              |   |  |  |  |
| -   | ld             |         |              |            |               |   |                 |               | 1 =<br>2 =                                    | 4,800 baud  |  |  |  |
| -   |                |         |              |            |               |   |                 |               | 3 =   | 19,200 baud   |  |  |  |
| _   |                | 256     | LP           | 2          | MO            | BUS parity                                    |                 | _             | 0 =   | none 1 = odd  |  |  |  |
| -   |                | NO.     | PAR.         | DEF.       | MOL           | BUS USE                                       |                 |               | 2 =<br>MIN                                    | even<br>MAX.  |  |  |  |
|     |                | 257     | bLE          | 1          | type          | of use of TTL N                               | /ODE            | BUS port      | 0 =   | for EVIF23TSX or third-                                   |  |  |  |
|     |                |         |              |            |               |   |                 |               |   | party MODBUS TCP sys-                                     |  |  |  |
|     | -              |         |              |            |               |   |                 |               | 1 =   | tem (via EVIF24TSX)<br>for FVconnect (via                 |  |  |  |
|     |                |         |              |            |               |   |                 |               |   | EVIF25TBX) or EPoCA                                       |  |  |  |
|     | ~              |         |              |            |               |   |                 |               |   | (via EVIF25TWX)   |  |  |  |
|     |                |         |              |            |               |   |                 |               | 2   | FVIF24TSX and IoT   |  |  |  |
|     |                |         |              |            |               |   |                 |               |   | EV3 Web gateway   |  |  |  |
|     |                | NO      | DAD          | DEE        |               |   | TCU             | DDENT         | MIN   | or EVD Web)   |  |  |  |
|     |                | 258     | OUT1         | DEF.       | out           | out configuratio                              | n 1             | 12 24         | 0 =   | disabled  |  |  |  |
|     |                |         |              |            | Vdc           | 0   |                 |               | 1 =   | cabinet light   |  |  |  |
|     |                |         |              |            |               |   |                 |               | 2 =   | evaporator fans   |  |  |  |
|     |                |         |              |            |               |   |                 |               | 4 =   | condenser fans  |  |  |  |
|     |                | 259     | OUT1         | 0          | outp          | out configuratio                              | n 2             | 12 24         | like  | OUT2  |  |  |  |
|     |                | I       |              |            | Vdc           |   |                 |               |   |   |  |  |  |
|     | 9              | ALA     | RMS          |            |               |   |                 |               |   |   |  |  |  |
| -   | ~ -            |         |              |            |               |   |                 |               |   |   |  |  |  |
| -   | 9.1<br>Check t | hat th  | ne keyp      | ad is no   | rms<br>t lock | ed.   |                 |               |   |   |  |  |  |
| -   | 1.             |         | $\Lambda$    |            | Точ           | ch the ALARM k                                | ey              |               |   |   |  |  |  |
| -   |                |         |              |            | Terr          |   | N/N             | OV within     | 15 c *  | a scrall through the astro-                               |  |  |  |
| -   | 2.             | Ý       | $\checkmark$ |            | alar          | ms  | vv N K          | ey within     | 10 S t  | lo scroir through the active                              |  |  |  |
| -   | 3.             |         | (I)          |            | Tou           | ch the ON/STAN                                | ND-B            | Y key (or t   | take i  | no action for 60 s) to exit                               |  |  |  |
| _   |                | I       | $\smile$     |            | the           | procedure                                     |                 |               |   |   |  |  |  |
|     | 9.2            | Aları   | ns           |            |               |   |                 |               |   |   |  |  |  |
| -   | ALARM          | 1       |              |            |               | DESCRIPTION                                   |                 | RESET         |   | TO CORRECT  |  |  |  |
| _   | Cabin          | et Pr   | b. Failu     | ire        |               | cabinet pr<br>alarm                           | obe             | automati      | Ċ   | <ul> <li>check P0</li> <li>check the integrity</li> </ul> |  |  |  |
| -   | Evapo          | rato    | r Prb. F     | ailure     |               | evaporator pr                                 | obe             | automati      | с   | of the probe  |  |  |  |
|     |                |         |              |            |               | alarm   |                 |               |   | - check electrical con-                                   |  |  |  |
| _   | Conde          | enser   | Prb E        | ailure     |               | condenser pr                                  | obe             | automati      | r   | nection   |  |  |  |
| -   |                |         |              | unuro      |               | alarm   | 0.00            | datomati      |   |   |  |  |  |
|     | Critica        | al Tei  | mp. Prl      | b. Failu   | re            | critical temp                                 | era-            | automatic     |   |   |  |  |  |
| _   | Outac          | ina A   | Air Prb.     | Failure    | <i>,</i>      | ture probe alarm<br>outgoing air tem- automat |                 |               | c   |   |  |  |  |
| -   |                |         |              |            | -             | perature pr                                   | obe             |               | -   |   |  |  |  |
|     |                | roto    | 2 Deb        | Failur     |               | alarm   | 2               | outomoti      |   |   |  |  |  |
|     | Evapo          | rato    |              | . Fallure  | e             | probe alarm                                   | 2               | automati      | C   |   |  |  |  |
|     | RTC F          | ailur   | e            |            |               | clock alarm                                   | manual          |               |   | set the date and time                                     |  |  |  |
|     | Low T          | emp     | erature      | 9          |               | low tempera<br>alarm                          | ture            | ure automatic |   | check A0, A1 and A2                                       |  |  |  |
|     | High           | Гетр    | eratur       | e          |               | high tempera                                  | ture            | automati      | c   | check A0, A4 and A5                                       |  |  |  |
|     |                |         |              |            |               | alarm   |                 |               |   |   |  |  |  |
| -   | Door           | Open    |              |            |               | door open alar                                | m<br>ilure      | automati      | c   | check i0 and i1   |  |  |  |
| -   | FUWE           | rail    | are          |            |               | alarm   | ure             | manuar        |   | - check electrical con-                                   |  |  |  |
|     |                |         |              |            |               |   |                 |               |   | nection   |  |  |  |
|     | Cond.          | Ove     | rheat        |            |               | high condensa<br>signal                       | ition automatic |               |   | check A13   |  |  |  |
|     | Comp           | . Loc   | ked          |            |               | high condensa                                 | ition           | manual        |   | - switch the device off                                   |  |  |  |
| -   |                |         |              |            |               | alarm   |                 |               |   | and on  |  |  |  |
|     | Multi-         | purp    | ose          |            |               | multi-purpose                                 | in-             | automati      | - check A14<br>ic check i5, i6, i15, i16, i11 |   |  |  |  |
| -   |                | P       |              |            |               | put alarm                                     |                 |               |   | i19, i20 and i21  |  |  |  |
| -   | High I         | Press   | ure          |            |               | multi-purpose                                 | in-             | automati      | c   | check i5, i6, i15, i16, i18,                              |  |  |  |
|     | Hiah F         | Press   | ure Lo       | ck         |               | high pres                                     | sure            | manual        |   | switch the device off and                                 |  |  |  |
| -   | 5              |         | 2            |            |               | alarm   | -               |               |   | on  |  |  |  |
| -   |                |         |              |            |               |   |                 |               |   | - check i5, i6, i8, i9, i15,                              |  |  |  |
|     | _              | _       |              | _          |               |   | _               |               | _   | i21   |  |  |  |
| -   | Low P          | ress    | ure          |            |               | low press                                     | sure            | automati      | с   | check i5, i6, i15, i16, i18,                              |  |  |  |
|     | Thorn          | 121 C   | Nitch 1      | 1          |               | alarm   | her             | automoti      |   | i19, i20 and i21  |  |  |  |
|     |                | ai 31   |              |            |               | mal switch ala                                | rm              |               |   | i19, i20 and i21  |  |  |  |
|     | Therm          | nal Sv  | witch 2      | 2          |               | compressor                                    | 2               | automati      | С   | check i5, i6, i15, i16, i18,                              |  |  |  |
| -   |                |         |              |            |               | thermal sw<br>alarm                           | /itch           |               |   | i19, i20 and i21  |  |  |  |
| -   | Defro          | st Tir  | neout        |            |               | defrost time                                  | eout            | manual        |   | - touch a key   |  |  |  |
| _   | -              | -       |              |            |               | alarm   | -               |               |   | - check d2, d2b, d3, d3b                                  |  |  |  |
| -   |                |         |              |            |               | l   |                 | I             |   | and d11   |  |  |  |
| -   | 10             | TEC     | HNICA        | L SPEC     | IFIC          | ATIONS  |                 |               |   |   |  |  |  |
| ]   |                |         |              |            |               |   | <i>c</i>        |               |   |   |  |  |  |
|     | Constr         | se of t | ne cont      | control    | ce:<br>devi   |   | tuno            | uon contro    | oiler<br>mic d                                | evice   |  |  |  |
| -   | Housir         | ng:     | 5. 110       | - 5.111 01 |               |   | blac            | k, self-ext   | inguis  | shing   |  |  |  |
| _   | Catego         | ory of  | heat ar      | nd fire r  | esista        | ince:   | D               |               |   |   |  |  |  |
|     | Measu          | reme    | nts:         |            |               |   | 193             | .0 x 59.0 x   | к 73.0  | 0 mm (7 5/8 x 2 5/16 x 2                                  |  |  |  |

| 190 | 6     | 13 | 15  | maximum compressor and evap-       | -1 120 min<br>-1 – until closed    | ~    | 248 | PAS  | -19  | password to access settings from<br>keynad | -99 999  | weasurements    | i.                                 | 7/8 in)   |
|-----|-------|----|-----|------------------------------------|------------------------------------|------|-----|------|------|--|--|-----------------|------------------------------------|---|
| 19  | 7     | i4 | 0   | enable door open alarm saving      | $0 = p_0$ $1 = ves$                |      | 249 | PA1  | 426  | level 1 password to access set-            | -99 999  | Mounting met    | nods for the control device:       | front installation on a plastic or metal panel              |
|     |       |    | •   | shabis door opoir diarri saving    | if i2 $\neq$ -1 and after i2       |      |     |      |      | tings from EVconnect and EPoCA             |  | 0               |                                    | (with elastic holding flaps).                               |
| 19  | 8     | i5 | 0   | multi-purpose input function       | 0 = disabled                       |      | 250 | PA2  | 824  | level 2 password to access set-            | -99 999  | Degree of pro   | ection provided by the casing:     | IP65 (front), provided that the device is in-               |
|     |       |    |     |                                    | 1 = energy saving                  |      |     |      |      | tings from EVconnect and EPoCA             |  |                 |                                    | stalled on a metal panel 0.8 mm (1/32 in)                   |
|     |       |    |     |                                    | 2 = multi-purpose input            | -    | NO. | PAR. | DEF. | DATA-LOGGING                               | MIN MAX.   |                 |                                    | thick   |
|     |       |    |     |                                    | alarm                              |      | 251 | rEO  | 15   | EVlinking data logger sampling in-         | 0 240 min  | Connection m    | ethod:                             |   |
|     |       |    |     |                                    | 3 = high pressure alarm            |      |     |      |      | terval                                     |  | plug-in screw   | erminal blocks for wires up to 1.5 | 5 mm² (analogue inputs, digital inputs, analogue            |
|     |       |    |     |                                    | 4 = auxiliary load 1 on            |      | 252 | rE1  | 1    | select temperature for EVlinking           | 0 = none 1 = cabinet   | outputs and p   | ort for remore indicator) and wire | es up to 2.5 mm <sup>2</sup> (power supply, digital outputs |
|     |       |    |     |                                    | 5 = auxiliary load 2 on            |      |     |      |      | data logger                                | 2 = evaporator   | and outputs 1   | 2 24 Vdc)                          |   |
|     |       |    |     |                                    | 6 = switch device on/off           |      |     |      |      |  | 3 = condenser  | Pico-Blade cor  | nector (TTL MODBUS port)           |   |
|     |       |    |     |                                    | 7 = low pressure alarm             |      |     |      |      |  | 4 = critical   | Maximum per     | nitted length for connection cabl  | es:   |
|     |       |    |     |                                    | 8 = compressor thermal             |      |     |      |      |  | 5 = outgoing air   | power supply:   | 10 m (32.8 ft)                     | analogue inputs: 10 m (32.8 ft)                             |
|     |       |    |     |                                    | switch alarm                       |      |     |      |      |  | 6 = evaporator 2   | digital inputs: | 10 m (32.8 ft)                     | analogue outputs: 3 m (9.84 ft)                             |
|     |       |    |     |                                    | 8 = compressor 2 thermal           |      |     |      |      |  | 7 = product  | digital outputs | : 10 m (32.8 ft)                   | outputs 12 24 Vdc: 10 m (32.8 ft)                           |
|     | _     |    |     |                                    | switch alarm                       |      |     |      |      |  | 8 = cabinet + evaporator +                                       | port for remot  | e indicator: 3 m (9.84 ft)         |   |
| 199 | 9     | i6 | 0   | multi-purpose input activation     | 0 = with contact closed            |      |     |      |      |  | condenser  | Operating tem   | perature:                          | from -5 to 60 °C (from 23 to 140 °F)                        |
| -   |       |    |     |                                    | 1 = with contact open              |      |     |      |      |  | 5 = all  | Storage temp    | erature:                           | from -25 to 70 °C (from -13 to 158 °F)                      |
| 200 | 0     | 17 | 0   | multi-purpose input alarm delay    | 0 120 min                          |      | 253 | rEt  | 0    | select temperature for data logger         | 0 = cabinet or product (not                                      | Operating hur   | hidity:                            | relative humidity without condensate from 10                |
|     |       |    |     |                                    | If 15, 115 or 118 or 120 = 3 or 7, |      |     |      |      | device in last 72 hours                    | during defrost, pre-drip-  |                 |                                    | to 90 %   |
|     |       |    |     |                                    | compressor on delay from           | नियो |     |      |      |  | ping, dripping and fan   | Pollution statu | s of the control device:           | 2   |
| 20  | 1     | :0 | 0   | number of multi-nurness input      |                                    |      |     |      |      |  | stop)  |                 |                                    |   |
| 20  | 'I '  | 10 | 0   | activations for high prossure      | 0 = disabled                       |      |     |      |      |  | <pre>1 = Cabinet of product (also during defrect, pro drip</pre> | Compliance:     |                                    |   |
|     |       |    |     | alarm                              |                                    |      |     |      |      |  | ning dripping and fan  | RoHS 2011/65    | /EC                                | WEEE 2012/19/EU   |
| 201 | 2     | iO | 240 | consecutive time if there are no   | 1 000 min                          |      |     |      |      |  | ston)  | REACH (EC) R    | egulation no. 1907/2006            | LVD 2014/35/EU  |
| 20. | 2     | 17 | 240 | multi-purpose input activations to | 1 777 11111                        |      |     |      |      |  | 2 - critical (not during de-                                     | Power supply:   |                                    | 12 24 Vdc (+10 % -15 %), max. 3 W                           |
|     |       |    |     | reset counter due to high pres-    |                                    |      |     |      |      |  | frost, pre-dripping, drip-                                       | Earthing meth   | ods for the control device:        | none  |
|     |       |    |     | sure alarm                         |                                    |      |     |      |      |  | ping and fan stop)   |                 |                                    |   |
| 20  | 3 i   | 10 | 0   | door closed consecutive time for   | 0 999 min                          |      |     |      |      |  | 3 = critical (also during de-                                    | Rated impulse   | withstand voltage:                 | 4 kV  |
| -   | · [ · | -  | -   | energy saving                      | after cabinet or product tem-      |      |     |      |      |  | frost, pre-dripping, drip-                                       | Overvoltage c   | ategory:                           | 111   |
|     |       |    |     |                                    | perature < SP                      |      |     |      |      |  | ping and fan stop)   | Software class  | and structure:                     | A   |
|     |       |    |     |                                    | 0 = disabled                       |      |     |      |      |  | 4 = cabinet or product (only                                     | Analogue inpu   | ts:                                | 3 for configurable PTC, NTC or Pt 1000 probes               |
| 20  | 4 i   | 13 | 180 | number of door openings for de-    | 0 240                              |      |     |      |      |  | during defrost, pre-drip-  |                 |                                    |   |
|     |       |    |     | frost                              | 0 = disabled                       |      |     |      |      |  | ping, dripping and fan   | PTC probes:     | Type of sensor:                    | KTY 81-121 (990 Ω @ 25 °C, 77 °F)                           |
| L   |       | l  |     |                                    |                                    |      |     |      |      |  | stop)  |                 | Measurement field:                 | from -50 to 150 °C (from -58 to 302 °F)                     |
|     |       |    |     |                                    |                                    |      |     |      |      |  |  |                 | Resolution:                        | 0.1 °C (1 °F)   |

| EVCO S.p.A. | EVY Col | d MEDIUM | Instruction sheet | ver. 1.0 | Code | 104YCM12E | 103 | Page5 of 6 | PT 18/2 | 4 |
|-------------|---------|----------|-------------------|----------|------|-----------|-----|------------|---------|---|
|             |         | -        |                   | 1        |      |           |     |            |         | 1 |

| EV00 3.p.A.   EV |                   | matraction sheet t | 00000  | 5410M12E105   14ge5 010   11 10/2 |  |  |
|------------------|-------------------|--------------------|--|-----------------------------------|--|--|
| NTC probes:      | Type of sensor    | :                  | ß3435 (10 kΩ @ 25 °C, 77 °F)                   |                                   |  |  |
| Measurement f    |                   | field:             | from -40 to 105 °C (from -40 to 221 °F)        |                                   |  |  |
|                  | Resolution:       |                    | 0.1 °C (1 °F)                                  |                                   |  |  |
| Probes           | Type of sensor    | :                  | 1 kΩ @ 0 °C, 32 °F                             |                                   |  |  |
| Pt 1000:         | Measurement f     | field:             | from -99 to 199 °C (from -146 to 390 °F)       |                                   |  |  |
|                  | Resolution:       |                    | 0.1 °C (1 °F)                                  |                                   |  |  |
| Digital inputs:  | •                 |                    | 5 voltage-free                                 | e (door switch and multi-pur-     |  |  |
|                  |                   |                    | pose)  |                                   |  |  |
| Voltage-free:    |                   | Type of contact    | :  | 3.3 Vdc, 1 mA                     |  |  |
|                  |                   | Power supply:      |  | none                              |  |  |
|                  |                   | Protection:        |  | none                              |  |  |
| Analogue outp    | uts:              |                    | 3 configurable                                 | PWM or 0-10 V output              |  |  |
| PWM output:      | Output:           |                    | 11 Vdc (±15%                                   | ), 10 mA max                      |  |  |
|                  | Frequency:        |                    | 0 150 Hz                                       |                                   |  |  |
|                  | Protection:       |                    | none   |                                   |  |  |
| 0-10 V           | Minimum app       | licable imped-     | 1 kΩ   |                                   |  |  |
| output:          | ance:             |                    |  |                                   |  |  |
|                  | Resolution:       |                    | 0.01 V   |                                   |  |  |
| Digital outputs  |                   | 8 with sealed el   | ectro-mechanic                                 | al relays in compliance with the  |  |  |
| · ·              |                   | EN 60079-15 st     | tandard  |                                   |  |  |
| K1 relay:        |                   | •                  | SPST, 16 A res                                 | s. @ 250 Vac (30 A res. @ 250     |  |  |
| -                |                   |                    | Vac in the EVY238DN3 model)                    |                                   |  |  |
| K2 relay:        |                   |                    | SPDT, 8 A res. @ 250 Vac                       |                                   |  |  |
| K3 relay:        |                   |                    | SPST, 8 A res. @ 250 Vac                       |                                   |  |  |
| K4 relay:        |                   |                    | SPST, 8 A res. @ 250 Vac                       |                                   |  |  |
| K5 relay:        |                   |                    | SPDT, 8 A res. @ 250 Vac                       |                                   |  |  |
| K6 relay:        |                   |                    | SPST, 16 A res. @ 250 Vac                      |                                   |  |  |
| K7 relay:        |                   |                    | SPDT, 16 A res. @ 250 Vac                      |                                   |  |  |
| K8 relay:        |                   |                    | SPDT, 8 A res. @ 250 Vac                       |                                   |  |  |
| The device gu    | arantees reinfor  | ced insulation be  | etween the digital outputs (electro-mechanical |                                   |  |  |
| relays) and the  | e SELV (Safety E  | xtra Low Voltage   | ) circuits, as we                              | Il as between the digital output  |  |  |
| groups           |                   |                    |  |                                   |  |  |
| Outputs 12 2     | 4 Vdc:            |                    | two, 2.5 A ma                                  | x. each                           |  |  |
| If the device h  | as a power supp   | oly of 12 Vdc, the | e outputs 12 :                                 | 24 Vdc will each deliver 12 Vdc   |  |  |
| max. 2.5 A; if   | the device has    | a power supply     | of 24 Vdc, the                                 | outputs 12 24 Vdc will each       |  |  |
| deliver 24 Vdc   | max. 2.5 A        |                    |  |                                   |  |  |
| Type 1 or Type   | e 2 actions:      |                    | type 1   |                                   |  |  |
| Additional feat  | ures of Type 1 or | Type 2 actions:    | С  |                                   |  |  |
| Displays:        |                   |                    | 2.4 inch LCD colour graphic display            |                                   |  |  |
| Alarm buzzer:    |                   |                    | built-in                                       |                                   |  |  |
| Communication    | ns ports:         |                    |  |                                   |  |  |
| 1 x TTL MODB     | US slave port fo  | r the EVconnect    | 1 x type C USI                                 | 3 port                            |  |  |
| app or FPoCA     | emote monitori    | na system          |  |                                   |  |  |

1 x remote indicator (according to the model)

## N.B. $\mathbf{X}$

The device must be disposed of according to local regulations governing the collection of electrical and electronic equipment.

This document and the solutions contained therein are the intellectual property of EVCO and thus protected by the Italian Intellectual Property Rights Code (CPI). EVCO forbids the reproduction and distribution, even in part, of the contents, unless express authorisation is obtained directly from EVCO. The customer (manufacturer, installer or end user) assumes all responsibility for the configuration of the device. EVCO accepts no liability for any possible errors in this document and reserves the right to make any changes at any time without prejudice to the essential functional and safety features of the equipment.



EVCO S.p.A. EVCO S.p.A. Via Feltre 81, 32036 Sedico (BL) ITALY tel. +39 0437 8422 | fax +39 0437 83648  $\textbf{email} \text{ info} @evco.it \mid \textbf{web} www.evco.it \\$