# MX30****** - MPXPRO显示、功能、参数和报警/ *Display, functions, parameters and alarms*

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THESE INSTRUCTIONS

CAREL

## 概述

MPXPRO (MX30*)是CAREL推出的一款冷冻机组的自动控制设备，其所采用的界面如下所示：



图1

- CAREL IR00UG*300终端（3位数字显示的小型显示屏和4个按钮）
- CAREL IR00XG*300显示屏（3位数显示的小型显示屏）

显示屏温度：-50到150 ℃（十进制的精确范围为-19.9到19.9，见参数/6），运行温度范围为0到30 ℃，无凝露。

**表1：显示**

| 图标 | 功能 | 描述 | 图标的含义/功能状态 | | |
|---|---|---|---|---|---|
| | | | 开 | 关 | 闪烁 |
| | 压缩机 | 压缩机/电磁阀输出的状态 | 激活 | 未激活 | 保护次数所造成的激活延时 |
| | 风机 | 风扇输出的状态 | 激活 | 未激活 | 外部或运行中程序所造成的激活禁用 |
| | 除霜 | 除霜输出的状态 | 激活 | 未激活 | 外部或运行中程序所造成的激活禁用 |
| AUX | （辅助输出） | 辅助输出的状态 | 激活 | 未激活 | |
| | 报警 | 正常运行中或来自开关量输入的报警状态 | 外部延时开关量报警的预激活 | 没有激活的报警 | 激活的报警 |
| | 时钟 | RTC选择，启动时开始显示可选选项 | 夜间运行控制 | 日间运行控制 | 时钟报警 |
| | 灯光 | 本地或网络灯光的输出状态 | 激活 | 未激活 | |
| | 服务 | 一般服务信号 | 在主控机上表示正在往从控机上发送参数 | 无故障 | 故障（系统错误）。联系服务人员 |
| HACCP | HACCP | HACCP报警信号 | 功能启用 | 功能禁用 | HACCP报警激活，显示出HA/HF信号 |
| | 连续循环 | 连续循环功能的状态 | 运行中 | 未运行 | 要求暂停 |

表1

**表2：MPXPRO的小键盘和主要功能**

用户终端（代码IR**X*****）带有多种功能，包括显示功能，可使用显示屏边上的小键盘来访问MPXPRO参数配置菜单。根据连接类型和局域网的配制，可以从一点上控制整个网络。

| 类型 | 功能 | 前置键盘功能 | | 显示 / 备注 |
|---|---|---|---|---|
| | | 按钮 | 持续时间 | |
| 设定值 | 温度设定值 | **Set** | | 设定值闪烁 |
| | | ▲ aux 或 def ▼ | | 修改设定值 |
| | | **Set** | | 存储设定值并返回到初始显示 |
| 访问参数 | F 类参数（频率） | **Prg** mute | 5 s | 显示第一个F 类参数 |
| | C / A 类参数（配置/高级） | **Prg** mute & **Set** | 5 s | |
| | | ▲ aux 或 def ▼ | | 输入密码 (默认C=22, A=33) |
| | | **Set** | | 确认密码，显示第一个C 或 A 类参数 |
| | 退出 | **Prg** mute | 5 s | |
| 网络功能，仅主机 | 从主机复制参数到从机 | **Prg** mute & **Set** | 5 s | |
| | | ▲ aux 或 def ▼ | | 输入密码 (默认66) |
| | | **Set** | | 详情请参考MPXPRO手册+03C220186“从主机复制参数到从机”。 |
| | 从主机（虚拟控制台 ）显示设备网络状态 | **Prg** mute & **Set** & def ▼ | | 选择从机设备 (详情请参考MPXPRO手册+03C220186中小节“通过主机（虚拟控制台 ）显示设备网络状态 ” |
| 默认 | 复位默认参数 | 启动时按下 **Prg** mute | | |

表2

**表3：小键盘控制的主要功能**

| 类型 | 功能 | 前置键盘功能 | | 显示 / 备注 |
|---|---|---|---|---|
| | | 按钮 | 持续时间 | |
| 除霜 | 本地除霜 | def ▼ | | dFb: 启动除霜需求<br>dFE: 结束除霜需求 |
| | 多路除霜<br>仅从主机上 | **Set** & def ▼ | 5 s | dFb: 启动除霜需求<br>dFE: 结束除霜需求 |
| 辅助 | 连续循环 | ▲ aux & def ▼ | 5 s | ccb: 启动连续循环需求<br>ccE: 结束连续循环需求 |
| | 辅助输出 | ▲ aux | | |
| 报警 | 报警记录 | **Prg** mute & **Set** | 5 s | |
| | | ▲ aux 或 def ▼ | | 输入口令（默认为44） |
| | | **Set** | | 更多信息，参考MPXPRO说明书中的“报警记录”部分 |
| | 手动报警的复位 | **Prg** mute & ▲ aux | 5 s | rES: 表示手动设置的报警已经复位。 |
| | 蜂鸣器静音和禁用报警继电器 (1) | **Prg** mute | | |
| HACCP | HACCP菜单 | **Prg** mute & def ▼ | | 更多信息，参考MPXPRO说明书中的“HACCP报警”部分 |

表3

重要：

- 按下SET键3秒钟，可以对所有更改过的值进行永久保存并退出参数菜单。
- 如果不想保存任何更改而退出菜单，则在60秒内不要按任何键（超时退出）。

**注意：**(1)禁用从机脱机信号一分钟。

**表4：运行参数**

表中的关键词：

**编码：** 参数编码如显示屏上所示
**参数：** 参数名称和任何可能的值
**类型：** 参数的类型，C类 (基础应用, 密码22), F 类 (频繁使用的)， A 类 (高级应用, 密码33), NV 类 (终端上无显示，仅适用于编程钥匙，调试工具和监控程序)
**注意：** “A”参数都用粗体字体突出标示
U.M.：测量值单位
Min, max 或 Def: 最小值, 最大值, 或默认值
Note: 必须记录下的新值

| | 编码 | 参数 | 单位 | 类型 | 默认 | 最小 | 最大 | 备注 |
|---|---|---|---|---|---|---|---|---|
| **温度控制参数** (CtL) | | | | | | | | |
| CtL | OFF | ON/OFF 0: ON, 1: OFF | - | A | 0 | 0 | 1 | |
| | St | 机组设定点 | °C/°F | F | 50 | r1 | r2 | |
| | St2 | 带“双恒温器”的入口传感器设定点 | °C/°F | A | 50 | r1 | r2 | |
| | rd | 温度设定点的偏差 | °C/°F | F | 2 | 0.1 | 20 | |
| | rd2 | “双恒温器”的设定点St2偏差 0.0: 功能无效 | °C/°F | A | 0 | 0 | 20 | |
| | r1 | 设定点最小值 | °C/°F | A | -50 | -50 | r2 | |
| | r2 | 设定点最大值 | °C/°F | A | 50 | r1 | 50 | |
| | r3 | 超时则启用结束除霜信号 0: 信号无效；1: 信号有效 | - | A | 0 | 0 | 1 | |
| | r4 | 夜间设定点的自动变动 | °C/°F | C | 0 | -50 | 50 | |
| | r5 | 选择最大和最小的温度监测传感器。<br>0：禁用监控； 6：吸气温度传感器(tGs)；<br>1：控制传感器（Sreg）； 7：饱和蒸发传感器(tEu)；<br>2：虚拟传感器（Sv）； 8：辅助除霜传感器(Sd2)；<br>3：出口传感器（Sm）； 9：辅助传感器(Saux)；<br>4：除霜传感器（Sd）； 10：辅助传感器2(Saux2)。<br>5：入口传感器（Sr）； | - | A | 0 | 0 | 10 | |
| | rt | 温度监测期间的最大和最小的电流持续时间 | 小时 | A | - | 0 | 999 | |
| | rH | 监测期间获得的最高温度 | °C/°F | A | - | - | - | |
| | rL | 监测期间获得的最低温度 | °C/°F | A | - | - | - | |
| | r6 | 用于夜间控制的传感器<br>0: 虚拟传感器(Sv)<br>1: 入口传感器的(Sr) | - | C | 0 | 0 | 1 | |
| | ro | 传感器发生错误时的控制偏移 | °C/°F | A | 0.0 | 0.0 | 20 | |
| | r7 | 主机电磁阀设置<br>0: 本地阀<br>1: 网络阀（连接到主机） | - | C | 0 | 0 | 1 | |
| | rSu | 正常控制时吸气阀关闭延迟 | 秒 | C | 0 | 0 | 999 | |
| **压缩机管理参数** (CMP) | | | | | | | | |
| CMP | c0 | 上电时启用压缩机和风扇延迟 | 分钟 | A | 0 | 0 | 240 | |
| | c1 | 两个连续启动的最短间隔时间 | 分钟 | A | 0 | 0 | 15 | |
| | c2 | 最短关机时间 | 分钟 | A | 0 | 0 | 15 | |
| | c3 | 最短开机时间 | 分钟 | A | 0 | 0 | 15 | |
| | c4 | 轮值设置中的运行时间 (Toff = 15分钟，固定的)<br>0: 压缩机 / 阀一直关闭；100: 压缩机 / 阀一直运行； | 分钟 | A | 0 | 0 | 100 | |
| | cc | 连续循环中的运行持续时间 | 小时 | A | 1 | 0 | 15 | |
| | c6 | 连续循环后低温报警延迟时间 | 分钟 | A | 60 | 0 | 240 | |
| | c7 | 除霜优先于连续循环（0: 是；1: 否） | - | A | 0 | 0 | 1 | |
| **除霜管理参数** (dEF) | | | | | | | | |
| dEF | d0 | 选择除霜类型<br>0: 根据温度用加热器除霜；1:根据温度用热气除霜<br>2: 根据时间用加热器除霜；3:根据时间用热气除霜<br>4: 根据温度和时间用加热器除霜<br>5: 根据温度复合热气除霜<br>6: 根据时间复合热气除霜 | - | C | 0 | 0 | 6 | |
| | d2 | 主机同步启用结束除霜<br>0:结束除霜不同步；1:结束除霜同步 | - | A | 1 | 0 | 1 | |
| | dI | 连续除霜间的最长间隔 | 小时 | C | 8 | 0 | 240 | |
| | dt1 | 结束除霜的温度 (通过Sd读取) | °C/°F | F | 8.0 | -50 | 50 | |
| | dt2 | 结束除霜的温度 (通过Sd2读取) | °C/°F | A | 8.0 | -50 | 50 | |
| | dP1 | 除霜的最长持续时间 | 分钟 | F | 45 | 1 | 240 | |
| | dP2 | 辅助蒸发器的最长除霜持续时间 | 分钟 | A | 45 | 1 | 240 | |
| | d4 | 启用开机时除霜 0: 禁用；1: 启用<br>（主机：网络除霜；从机：本地除霜） | - | A | 0 | 0 | 1 | |
| | d5 | 开机时除霜延迟（如果d4=1），0: 延迟被禁用 | 分钟 | A | 0 | 0 | 240 | |
| | d6 | 除霜期间，终端的显示<br>0: 除霜期间，温度和'dEF'交替显示<br>1: 显示屏是关闭的<br>2: 'dEF' | - | C | 1 | 0 | 2 | |
| | dd | 除霜后滴水时间（风扇关闭）<br>0: 无滴水 | 分钟 | A | 2 | 0 | 15 | |
| | d7 | 跳过除霜 0: 禁用；1: 启用 | - | A | 0 | 0 | 1 | |
| | d8 | 除霜和开门后，高温报警旁通时间 | 分钟 | C | 30 | 1 | 240 | |
| | d9 | 除霜优先于压缩机保护时间<br>0: 考虑到压缩机保护时间；1: 忽略保护 | - | A | 1 | 0 | 1 | |
| | Sd1 | 除霜传感器 | °C/°F | F | - | - | - | |
| | Sd2 | 辅助蒸发器除霜传感器 | °C/°F | A | - | - | - | |
| | dC | 除霜时间表示<br>0:'dI'用小时表示，'dP1','dP2'和'ddP'用分钟表示<br>1:'dI'用分钟表示，'dP1','dP2'和'ddP'用秒钟表示 | - | A | 0 | 0 | 1 | |
| | d10 | “运行时间”中的除霜时间<br>0: 功能禁用 | 分钟 | A | 0 | 0 | 240 | |
| | d11 | “运行时间”中除霜的温度阈值 | °C/°F | A | -30 | -50 | 50 | |
| | d12 | 除霜期间，压力传感器的报警管理<br>0: 传感器错误被禁用，在监控器启用后更新<br>1: 传感器错误被启用，在监控器启用后更新<br>2: 传感器错误被禁用，在监控器禁用后更新<br>3: 传感器错误被启用，在监控器禁用后更新 | - | A | 0 | 0 | 3 | |
| | dS1 | 用于“有序停机”除霜的压缩机关机时间<br>0: 功能禁用 | 分钟 | A | 0 | 0 | 45 | |
| | dS2 | 用于“有序停机”除霜的压缩机运行时间 | 分钟 | A | 120 | 0 | 240 | |
| | ddt | 用于“电源除霜”方式的附加的结束除霜温度变量 | °C/°F | A | 0.0 | -20.0 | 20.0 | |
| | ddP | 用于“电源除霜”方式的附加的结束除霜时间的最大变量 | 分钟 | A | 0 | 0 | 60 | |
| | dn | “跳过除霜”的除霜标称持续时间 | % | A | 75 | 0 | 100 | |
| | d1S | 每日除霜的数量(td1) | - | C | 0 | 0 | 14 | |
| | d2S | 每日除霜的数量(td2) | - | C | 0 | 0 | 14 | |
| | dH1 | 泵极持续时间（0: 泵极被禁用） | 秒 | A | 0 | 0 | 999 | |
| | dHG | 复合热气除霜的类型<br>0: 平衡阀常闭 1: 平衡阀常开 | - | A | 0 | 0 | 1 | |
| **报警管理参数** (ALM) | | | | | | | | |
| ALM | AA | 向高低温度 (AH)报警分配传感器<br>1：控制；4：除霜； 7：饱和蒸发温度；<br>2：虚拟；5：回风； 8：辅助除霜；<br>3：出风；6：过热气体； 9：辅助；10：辅助2。<br>11：房间温度；12：房间湿度；13：玻璃温度；14：露点； | - | F | 1 | 1 | 14 | |
| | AA2 | 向高低温度 (AH2)报警分配传感器(参考AA) | - | A | 5 | 1 | 14 | |
| | A0 | 复位高低温度报警的偏差 | °C/°F | F | 2.0 | 0.1 | 20.0 | |
| | A1 | 设定点(St)报警阈值(AL, AH)的绝对值或相对值<br>0: 相对阈值 1: 绝对阈值 | - | F | 0 | 0 | 1 | |
| | A2 | 设定点(St2)报警阈值(AL2, AH2)的绝对值或相对值 | - | A | 0 | 0 | 1 | |
| | AL | 低温报警阈值 | °C/°F | F | 4.0 | -50.0 | 50.0 | |
| | AH | 高温报警阈值 | °C/°F | F | 10.0 | -50.0 | 50.0 | |
| | AL2 | 低温报警阈值2 | °C/°F | A | 0.0 | -50.0 | 50.0 | |
| | AH2 | 高温报警阈值2 | °C/°F | A | 0.0 | -50.0 | 50.0 | |
| | Ad | 高、低温报警的延迟时间 | 分钟 | F | 120 | 0 | 240 | |
| | A4 | 配置S4上的开关量输入端DI1的功能<br>0: 输入未激活 1: 即时外部报警<br>2: 延迟外部报警/仅显示 3: 启用除霜<br>4: 开始除霜 5: 门开关（压缩机和风扇关闭）<br>6: 远程开/关 7: 门帘开关 8: 持续循环 9: 灯光传感器 | - | C | 0 | 0 | 9 | |
| | A5 | 设置S5 上的开关量输入端DI2的功能 (参考'A4') | - | C | 0 | 0 | 9 | |
| | A6 | 外部报警期间设置电磁阀/压缩机的控制（即时或延时），固定15分钟关闭期间<br>0: 一直关闭；100: 一直运行 | 分钟 | A | 0 | 0 | 100 | |
| | A7 | 延迟的外部报警的延迟时间 | 分钟 | C | 0 | 0 | 240 | |
| | A8 | 设置开关量虚拟输入端的功能 (参考'A4') | - | A | 0 | 0 | 8 | |
| | A9 | 选择从主机传送到从机的开关量输入（仅在主机上）<br>0: 从监控器传送 3: DI3被传送<br>1: DI1 被传送 4: DI4被传送<br>2: DI2被传送 5: DI5被传送 | - | A | 0 | 0 | 5 | |
| | A10 | 配置S6 上的开关量输入端DI3的功能 (参考'A4') | - | C | 0 | 0 | 9 | |
| | A11 | 配置S7 上的开关量输入端DI4的功能 (参考'A4') | - | C | 0 | 0 | 9 | |
| | A12 | 配置开关量输入端DI5的功能 (参考A4) | - | C | 0 | 0 | 8 | |
| | Ar | 启用从机到主机的报警发送<br>0: 报警被禁用 1: 报警被激活 | - | A | 1 | 0 | 1 | |
| | A13 | 因为从机掉线，启用热气除霜<br>0: 启用；1: 禁用 | - | A | 0 | 0 | 1 | |
| **蒸发器风扇的管理参数** (FAn) | | | | | | | | |
| FAn | F0 | 设置风扇管理<br>0: 风扇保持运行；<br>1: 根据Sd-Sv (或双恒温器中的Sd-Sm）（虚拟传感器与蒸发器温度之间）的温差来控制的风扇；<br>2: 根据蒸发器（Sd）温差来控制风扇。 | - | C | 0 | 0 | 2 | |
| | F1 | 风扇温度的控制阈值(仅当F0=1或2) | °C/°F | F | -5.0 | -50.0 | 50.0 | |
| | F2 | 启用当控制器关闭时停止风扇；0: 参考F0；1: 一直关 | - | C | 1 | 0 | 1 | |
| | F3 | 除霜期间，蒸发器风扇状态<br>0: 风扇打开； 1: 风扇关闭 | - | C | 1 | 0 | 1 | |
| | Fd | 除霜后的后滴水时间（控制器和风扇都打开） | 分钟 | C | 1 | 0 | 15 | |
| | Frd | 风扇启用偏差（包括变速） | °C/°F | F | 2.0 | 0.1 | 20.0 | |
| | F5 | 风扇关机温度 (迟滞1°C) | °C/°F | F | 50.0 | F1 | 50.0 | |
| | F6 | 最大蒸发器风扇转速 | % | A | 100 | F7 | 100 | |
| | F7 | 最小蒸发器风扇转速 | % | A | 0 | 0 | F6 | |
| | F8 | 风扇启动时间 0: 功能被禁用 | 秒 | A | 0 | 0 | 240 | |
| | F9 | 选择用PWM1/2输出对风扇进行控制（通过相位来调整速度）<br>0: 持续；1: 脉冲 | - | A | 1 | 0 | 1 | |
| | F10 | 强制风扇以最快速度运行的期间 | 分钟 | A | 0 | 0 | 240 | |
| **阀的管理参数** (Evd) | | | | | | | | |
| EVd | P1 | 选择电子阀类型<br>0: 阀不存在； 1: PWM阀；2: CAREL E²V阀 | - | A | 0 | 0 | 2 | |
| | P3 | 过热设定点 | K | F | 10.0 | 0.0 | 25.0 | |
| | P4 | 比例增益 | - | A | 15.0 | 0.0 | 100.0 | |
| | P5 | 积分时间 0: 功能禁用 | 秒 | A | 150 | 0 | 900 | |
| | P6 | 微分时间 0: 功能禁用 | 秒 | A | 5.0 | 0.0 | 100.0 | |
| | P7 | LSH 低过热阈值 | K | F | 7.0 | -10.0 | P3 | |
| | P8 | LSH 低过热积分时间 0: 功能禁用 | 秒 | A | 15.0 | 0.0 | 240 | |
| | P9 | LSH 低过热报警延迟 0: 功能禁用 | 秒 | A | 600 | 0 | 999 | |
| | P10 | 因低过热(LowSH)和/或低吸气温度(LowSA)，启用关闭电磁阀 | - | A | 0 | 0 | 1 | |
| | P11 | LSA 低吸气温度阈值 | °C/°F | A | -45.0 | -50.0 | 50.0 | |
| | P12 | LSA 低吸气温度报警延迟 0: 禁用报警 | 秒 | A | 600 | 0 | 999 | |
| | P13 | LSA 低吸气温度报警偏差 (°C)<br>0.0: 一直自动复位 | °C/°F | A | 10.0 | 0.0 | 60.0 | |
| | P14 | 启用阀移动结束时报警（'blo'），1: 信号被启用 | - | A | 1 | 0 | 1 | |
| | P15 | 压力传感器错误的情况下支持的饱和温度 | °C/°F | A | -15.0 | -50.0 | 50.0 | |
| | PH | 制冷剂的类型<br>1: R22 3: R404A 5: R410A 7: R290 9: R600a 11: R744 13: R1270<br>2: R134a 4: R407C 6: R507A 8: R600 10: R717 12: R728 14: R417A | - | A | 3 | 1 | 14 | |
| | OSH | 为温度调节器设置的过热偏移量 0: 功能禁用 | K | A | 0.0 | 0.0 | 60.0 | |
| | Phr | 启用阀时，对应监控器的阀参数快速更新<br>0: 快速更新禁用 | - | A | 0 | 0 | 1 | |
| | PM1 | MOP: 最大饱和蒸发温度阈值 | °C/°F | A | 50.0 | -50.0 | 50.0 | |
| | PM2 | MOP: MOP积分时间 | 秒 | A | 10 | 0 | 240 | |
| | PM3 | MOP: MOP报警延迟 0: 功能禁用 | 秒 | A | 0 | 0 | 999 | |
| | PM4 | MOP: 开始进行控制时功能延迟 | 秒 | A | 2 | 0 | 240 | |
| | PM5 | MOP: MOP报警时，启用关闭本地电磁阀 | - | A | 0 | 0 | 1 | |
| | PL1 | LOP: 最小饱和蒸发温度阈值 | °C/°F | A | -50.0 | -50.0 | 50.0 | |
| | PL2 | LOP: 积分时间 | 秒 | A | 0 | 0 | 240 | |
| | PL3 | LOP: 报警延迟 0: 禁用报警 | 秒 | A | 0 | 0 | 240 | |
| | 编码 | 参数 | U.M. | Tipo | Def. | Min | Max | Note |
| | SH | 过热 | K | F | - | - | - | |
| | PPU | 阀开度比率 | % | F | - | - | - | |
| | tGS | 吸气温度 | °C/°F | F | - | - | - | |
| | tEu | 饱和蒸发温度 | °C/°F | F | - | - | - | |
| | /cE | 饱和蒸发温度校准 | °C/°F | A | 0.0 | -20.0 | 20.0 | |
| | Po6 | PWM膨胀阀Ton + Toff | 秒 | A | 6 | 1 | 20 | |
| | cP1 | 开始控制时的初始阀位 | % | A | 30 | 0 | 100 | |
| | Pdd | 除霜后的初始阀位维持时间 | 分钟 | A | 10 | 0 | 30 | |
| | Psb | 阀待用位置 | 步 | A | 0 | 0 | 400 | |
| | PF | 阀打开步数（监控器） | 步 | NV | - | 0 | - | |
| | PMP | 启用手动膨胀阀定位 0: 禁用 1: 启用 | - | A | 0 | 0 | 1 | |
| | PMu | 手动定位阀 | 步 | A | - | 0 | 600 | |
| | Phc | 启用高电流E2V阀阀驱动 | - | A | 0 | 0 | 1 | |
| | PSM | 平滑回路–启用功能 | - | A | 0 | 0 | 1 | |
| | PLt | 平滑回路 – 在设点以下停止控制的偏移量 | °C/°F | A | 2.0 | 0.0 | 10.0 | |
| | PHS | 平滑回路 – 最大过热度偏移量 | K | A | 15.0 | 0.0 | 50.0 | |
| **一般设置参数 (CnF)** | | | | | | | | |
| CnF | In | 选择机组类型，主机或从机<br>0: 从机 1: 主机 | - | C | 0 | 0 | 1 | |
| | Sn | 局域网中的从机数量 0: 无从机 | - | C | 0 | 0 | 5 | |
| | H0 | 主从网络通讯地址 | - | C | 199 | 0 | 199 | |
| | H1 | 设置AUX1输出的功能<br>0: 没有与输出关联的功能； 5: 灯光输出<br>1: 报警输出未激活； 6: 从机上从属于主机的灯光<br>2: 报警输出被激活； 7: 辅助蒸发器除霜输出；<br>3: 辅助输出； 8: 蒸发器风扇输出；<br>4: 从机上从属于主机的辅助功能； 9: 防露加热器<br>10: 吸气阀 11: 平衡阀 12: 电磁阀 | - | C | 8 | 0 | 12 | |
| | H2 | 禁用小键盘和遥控器功能<br>1: 启用小键盘和遥控器 | - | A | 1 | 0 | 5 | |
| | H3 | 遥控器启用编码<br>00: 不用编码通过遥控器编辑 | - | A | 0 | 0 | 255 | |
| | H4 | 终端蜂鸣器（如果有） 0: 启用蜂鸣器 1: 禁用 | - | A | 0 | 0 | 1 | |
| | H5 | 设置AUX2输出的功能 (参考'H1') | - | C | 2 | 0 | 12 | |
| | H6 | 设置终端小键盘的锁定 | - | A | 0 | 0 | 15 | |
| | H7 | 设置AUX3输出的功能 (参考'H1') | - | C | 5 | 0 | 12 | |
| | H8 | 时间段0对应的输出开关 0: 灯光；1: AUX。 | - | C | 0 | 0 | 1 | |
| | H9 | 选择与用户终端AUX按钮关联的功能<br>0: 灯光；1: AUX。 | - | C | 0 | 0 | 1 | |
| | H10 | 设置压缩机数字输出逻辑<br>0: 正向逻辑；1: 反向逻辑 | - | A | 0 | 0 | 1 | |
| | H11 | 设置风机数字输出逻辑<br>0: 正向逻辑；1: 反向逻辑 | - | A | 0 | 0 | 1 | |
| | H12 | 灯光传感器阈值 | lux | A | 25 | 10 | 100 | |
| | H13 | AUX4输出功能设置(参考'H1') | - | C | 12 | 0 | 12 | |
| | Hdn | 参数组的数量 | - | NV | 0 | 0 | 6 | |
| | Htc | 时钟选择 0: 无时钟 | - | A | 0 | 0 | 1 | |
| | rHu | 防露加热器手动启用比率（rHt的百分比）<br>0: 禁用此功能 | % | A | 70 | 0 | 100 | |
| | rHt | 防露加热器启用时间 0: 禁用此功能 | 分钟 | A | 5 | 0 | 180 | |
| | rHo | 防露加热器调节偏移量 | °C/°F | A | 2.0 | -20.0 | 20.0 | |
| | rHd | 防露加热器调节偏差 | °C/°F | A | 0.0 | 0 | 20.0 | |
| | rHL | 防露加热器PWM输出的负载类型 0: 阻性；1: 感应 | - | A | 0 | 0 | 1 | |
| | rHA | 玻璃温度传感器估算的系数A | °C | NV | 2 | -20 | 20 | |
| | rHb | 玻璃温度传感器估算的系数B | % | NV | 22 | 0 | 100 | |
| **报警纪录参数(HSt)** | | | | | | | | |
| HSt AUX | HS0...9 | 报警事件 0…9（按Set按钮） | - | A | - | - | - | |
| | __ | 报警事件0…9 - 编码 | - | * | - | - | - | |
| | h__ | 报警事件0…9- 小时 | 小时 | * | - | 0 | 23 | |
| | m__ | 报警事件0…9- 分钟 | 分钟 | * | - | 0 | 59 | |
| | t__ | 报警事件0…9- 持续时间 | 分钟 | * | - | 0 | 999 | |
| **HACCP报警管理参数 (HcP)** | | | | | | | | |
| Hcp HACCP | Ht0 | HACCP报警被激活 | - | NV | 0 | 0 | 1 | |
| | HAn | 纪录的HA事件数量 | - | A | 0 | 0 | 15 | |
| | HA...HA2 | 发生的HA HACCP事件数量（按Set按钮） | - | A | - | - | - | |
| | y__ | HACCP报警 1…3 - 年 | 年 | * | - | 0 | 99 | |
| | M__ | HACCP报警1…3 - 月 | 月 | * | - | 1 | 12 | |
| | d__ | HACCP报警1…3 - 日 | 日 | * | - | 1 | 31 | |
| | h__ | HACCP报警1…3 - 小时 | 小时 | * | - | 0 | 23 | |
| | n__ | HACCP报警1…3 - 分钟 | 分钟 | * | - | 0 | 59 | |
| | t__ | HACCP报警1…3 - 持续时间 | 分钟 | * | - | 0 | 240 | |
| | HFn | 纪录的HF事件数量 | - | A | 0 | 0 | 15 | |
| | HF...HF3 | 发生的HACCP事件数量（按Set按钮） | - | A | - | - | - | |
| | y__ | HACCP报警1…3 - 年 | 年 | * | - | 0 | 99 | |
| | M__ | HACCP报警1…3 - 月 | 月 | * | - | 1 | 12 | |
| | d__ | HACCP报警1…3 - 日 | 日 | * | - | 1 | 31 | |
| | h__ | HACCP报警1…3 - 小时 | 小时 | * | - | 0 | 23 | |
| | n__ | HACCP报警1…3 - 分钟 | 分钟 | * | - | 0 | 59 | |
| | t__ | HACCP报警1…3 - 持续时间 | 分钟 | * | - | 0 | 240 | |
| | Htd | HACCP报警延迟 0: 禁用监控 | 分钟 | A | - | 0 | 240 | |
| **RTC (实时钟)和定时除霜(rtc)参数** | | | | | | | | |
| rtc | td1…8 | 除霜事件1…8（按Set按钮） | - | C | - | - | - | |
| | d__ | 除霜1…8 - 星期<br>0: 事件禁用； 9: 星期一到星期六；<br>1…7: 星期一到星期天； 10: 星期六和星期天；<br>8: 星期一到星期五； 11: 每天 | 星期 | * | 0 | 0 | 11 | |
| | h__ | 除霜1…8 - 小时 | 小时 | * | 0 | 0 | 23 | |
| | m__ | 除霜1…8 - 分钟 | 分钟 | * | 0 | 0 | 59 | |
| | P__ | 除霜1 - 启用电源除霜（除霜型号）<br>0: 正常；1: 电源除霜 | 标识 | * | 0 | 0 | 1 | |
| | tS1…8 | 时段1…8的启动详情 - 时间： | - | C | - | - | - | |
| | d__ | 时段1…8的启动详情 - 时间：日 | 日 | * | 0 | 0 | 11 | |
| | h__ | 时段1…8的启动详情 - 时间：小时 | 小时 | * | 0 | 0 | 23 | |
| | m__ | 时段1…8的启动详情 - 时间：分钟 | 分钟 | * | 0 | 0 | 59 | |
| | tE1…8 | 时段1…8的结束详情 - 时间：日 | - | C | - | - | - | |
| | d__ | 时段1…8的启结束详情 - 时间：星期 | 星期 | * | 0 | 0 | 11 | |
| | h__ | 时段1…8的结束详情 - 时间：小时 | 小时 | * | 0 | 0 | 23 | |
| | m__ | 时段1…8的结束详情 - 时间：分钟 | 分钟 | * | 0 | 0 | 59 | |
| | tc | 设置RTC时间/日期 （按Set按钮） | - | C | - | - | - | |
| | y__ | 时间/日期：年 | 年 | * | 0 | 0 | 99 | |
| | M__ | 时间/日期：月 | 月 | * | 1 | 1 | 12 | |
| | d__ | 时间/日期：日 | 日 | * | 1 | 1 | 31 | |
| | u__ | 时间/日期：星期 | 星期 | * | 6 | 1 | 7 | |
| | h__ | 时间/日期：小时 | 小时 | * | 0 | 0 | 23 | |
| | m__ | 时间/日期：分钟 | 分钟 | * | 0 | 0 | 59 | |
| **编程钥匙及调试工具的参数** | | | | | | | | |
| | PS | 显示配置参数的口令 | - | NV | 22 | 0 | 200 | |
| | PSA | 访问高级参数的口令 | - | NV | | PS + 11 | | |
| | PSS | 进入报警日志的口令 | - | NV | | PS + 22 | | |
| | PSU | 进入参数上传的口令 | - | NV | | PS + 44 | | |

表4

**表5: 报警和信号：显示屏，蜂鸣器和继电器**

**注意：** 如果由参数'H4'启用，则蜂鸣器是动作的。

如果辅助1、辅助2或辅助3（'H1','H5'和'H7'）的其中一个输出已经分配给报警继电器功能（常闭或常开），就可以激活报警继电器。

| 编码 | 描述 | 闪烁的图标 | 报警继电器 | 蜂鸣器 | 复位 |
|---|---|---|---|---|---|
| rE | 虚拟控制传感器故障 | | ON | ON | 自动 |
| E1 | 传感器S1故障 | | OFF | OFF | 自动 |
| E2 | 传感器S2故障 | | OFF | OFF | 自动 |
| E3 | 传感器S3故障 | | OFF | OFF | 自动 |
| E4 | 传感器S4故障 | | OFF | OFF | 自动 |
| E5 | 传感器S5故障 | | OFF | OFF | 自动 |
| E6 | 传感器S6故障 | | OFF | OFF | 自动 |
| E7 | 传感器S7故障 | | OFF | OFF | 自动 |
| E8 | 虚拟传感器S8未更新 | | OFF | OFF | 自动 |
| E9 | 虚拟传感器S9未更新 | | OFF | OFF | 自动 |
| E10 | 虚拟传感器S10未更新 | | OFF | OFF | 自动 |
| E11 | 虚拟传感器S11未更新 | | OFF | OFF | 自动 |
| *__* | 未启用的传感器 | - | OFF | OFF | 自动 |
| LO | 低温报警 | ▲ | ON | ON | 自动 |
| HI | 高温报警 | ▲ | ON | ON | 自动 |
| LO2 | 低温报警 | ▲ | ON | ON | 自动 |
| HI2 | 高温报警 | ▲ | ON | ON | 自动 |
| IA | 来自外部触点的即时报警 | ▲ | ON | ON | 自动 |
| dA | 来自外部触点的延时报警 | ▲ | ON | ON | 自动 |
| dEF | 除霜运行 | 一直 | OFF | OFF | 自动 |
| Ed1 | 超时则结束蒸发器1的除霜 | - | OFF | OFF | 自动 |
| Ed2 | 超时则结束蒸发器2的除霜 | - | OFF | OFF | 自动 |
| dor | 门打开时间过长报警 | ▲ | ON | ON | 自动 |
| Etc | 实时时钟故障 | | OFF | OFF | 自动 |
| LSH | 低过热报警 | ▲ | OFF | OFF | 自动 |
| LSA | 低吸气温度报警 | ▲ | OFF | OFF | 自动/手动 |
| MOP | 最大运行压力报警 | ▲ | OFF | OFF | 自动 |
| LOP | 低吸气压力报警 | ▲ | OFF | OFF | 自动 |
| bLo | 阀堵塞报警 | ▲ | ON | OFF | 手动 |
| Edc | 与步进驱动器的通讯错误 | | ON | ON | 自动 |
| EFS | 步进驱动器控制的电动机损坏或未连接 | | ON | ON | 自动 |
| EE | 机组参数闪烁错误 | | OFF | OFF | 自动 |
| EF | 运行参数Eeprom错误 | | OFF | OFF | 自动 |
| HA | HACCP报警类型'HA' | HACCP | OFF | OFF | 手动 |
| HF | HACCP报警类型'HF' | HACCP | OFF | OFF | 手动 |
| rct | 连接到IR的远程控制有效 | - | - | - | – |
| rcE | 连接到IR的远程控制无效 | - | - | - | – |
| Add | 进行中的自动地址分配过程 | - | - | - | – |
| ccb | 开始连续循环 | - | - | - | - |
| ccE | 结束连续循环 | - | - | - | - |
| dFb | 开始除霜 | - | - | - | - |
| dFE | 结束除霜 | - | - | - | - |
| On | 接通开关 | - | - | - | - |
| OFF | 断开开关 | - | - | - | - |
| rES | 手动复位报警，复位HACCP报警，复位温度监控 | - | - | - | - |
| AcE | 由于没有传感器或传感器故障，热丝切换到ON-OFF工作方式，作为PI导柜的除霜逻辑 | ▲ | - | - | – |
| Act | 通过tLAN从机根据主机被控制 | - | - | - | – |
| MA | 与主机的通讯错误（仅在从机上） | | ON | ON | 自动 |
| u1-u5 | 与从机1-5的通讯错误（仅在主机上） | | ON | ON | 自动 |
| n1-n5 | 局域网中的机组1-5上的报警 | ▲ | ON | ON | 自动 |
| upL | 上载程序进行中 | - | | | - |
| up1-up5 | 上载程序时，机组1-5上有故障 | ▲ | OFF | OFF | - |
| uS_ | 未配置的从机 | - | OFF | OFF | 自动 |

表5

## General description

MPXPRO (MX30*) is a CAREL device for the automatic control of refrigeration units, which uses the following interfaces:

- CAREL IR00UG*300 terminal (small display, 3 digits and 4 but
- CAREL IR00XG*300 display (small display with 3 digits)



Fig. 1

Display temperature: -50T150 °C (with possibility of decimal resolution in the range -19.9T19.9 °C, see parameter /6), operating temperature -10T60°C, humidity < 80% non-condensing.

### Table 1: display

| Icon | Function | Description | Meaning of icons/Status of function | | |
|---|---|---|---|---|---|
| | | | On | Off | Flashing |
| | COMPRESSOR | Status of compressor/ solenoid valve output | Active | Inactive | Activation delayed by protection times |
| | FAN | Status of fan output | Active | Inactive | Activation disabled externally or due to procedure in progress |
| | DEFROST | Status of defrost output | Active | Inactive | Activation disabled externally or due to procedure in progress |
| AUX | AUX (auxiliary output) | Status of auxiliary output | Active | Inactive | |
| | ALARM | Alarm status during normal operation or from digital input | Pre-activation of a external delayed digital alarm | No active alarm | Active alarms |
| | OROLOGIO | RTC option, at start-up comes on to indicate the option is available | Control in night-time operation | Control in daytime operation | Clock alarm |
| | LIGHT | Status of local or network light output | Active | Inactive | |
| | SERVICE | General service signals | On the master indicates that the parameters are being sent to the slaves | No malfunction | Malfunction (System error). Contact service. |
| HACCP | HACCP | HACCP alarm signal | Function enabled | Function disabled | HACCP alarm active, HA/HF signal on display |
| | CONTINUOUS CYCLE | Status of continuous cycle function. | Operating | Not operating | Call pending |

Tab. 1

### Table 2: MPXPRO keypad and main functions

The user terminal (code IR00UG*300) is an interface that in addition to the display functions, allows access to the MPXPRO parameter configuration menu using the keypad next to the display. Depending on the connection and the configuration of the local network, the entire network can be managed from just one point.

| Category | Function | Front keypad functions | | Display / Notes |
|---|---|---|---|---|
| | | Button | Duration | |
| Set point | Temperature set point | **Set** | | Set point value flashing |
| | | ▲ aux or def ▼ | | Modify the set point |
| | | **Set** | | Save set point and return to initial display |
| Access parameters | Type F parameters (frequent | **Prg** mute | 5 s | The first type F parameter is displayed |
| | Type C or A parameters (configuration | **Prg** mute & **Set** | 5 s | |
| | | ▲ aux or def ▼ | | Enter password (default C= 22, A= 33) |
| | | **Set** | | Confirm the password, the first type C (or A)parameter is displayed |
| | Exit | **Prg** mute | 5 s | |
| Network functions, Master only | Copy parameters from Master to Slave | **Prg** mute & **Set** | 5 s | |
| | | ▲ aux or def ▼ | | Enter password (default 66) |
| | | **Set** | | For further info see the MPXPRO manual |
| | Display unit network status from Master (Virtual Console) | **Prg** mute & **Set** & def ▼ | | Select Slave unit (for further info see the MPXPRO manual "Display unit network status from Master" |
| Default | Reset default parameters | **Prg** Press mute at start-up | | |

Tab. 2

### Table 3: main functions available on the keypad

| Category | Function | Front keypad functions | | Display / Notes |
|---|---|---|---|---|
| | | Button | Duration | |
| Defrost | Local defrost | def ▼ | | dFb: start defrost call<br>dFE: end defrost call |
| | Multiplexed defrost From master only | **Set** & def ▼ | 5 s | dFb: start defrost call<br>dFE: end defrost call. |
| Auxiliaries | Continuous cycle | ▲ aux & def ▼ | 5 s | ccb: start continuous cycle call<br>ccE: end continuous cycle call |
| | AUX output | ▲ aux | | |
| Alarms | Alarm log | **Prg** mute & **Set** | 5 s | |
| | | ▲ aux or def ▼ | | Enter password (default 44) |
| | | **Set** | | for further info see the MPXPRO manual, paragraph "Alarm log". |
| | Manual alarm reset | **Prg** mute & ▲ aux | 5 s | rES: indicates the alarms with manual reset have been reset. |
| | Mute buzzer and disable alarm relay (1) | **Prg** mute | | |
| HACCP | HACCP menu | **Prg** mute & def ▼ | | for further info see the MPXPRO manual, paragraph "HACCP alarms" |

Tab. 3

**Important:** • to permanently save all the changed values and exit the parameter menu, press PRG/mute for 5 s;
• to exit without saving the values (exit by TIMEOUT) do not press any button for at least 60 s

**Note:** (1) disables the slave offline signals for one minute.

### Table 4: Operating parameters

**Key to the table:**
**Code:** code of the parameter as shown on the display
**Parameter:** parameter name and possible values
Type:parameter type, C (basic applications, PW 22), F (frequent), A (advanced applications, PW 33), NV (not visible from terminal, programming key, commissioning tool and supervisor only)
**N.B.:** "A" parameter codes are shown in bold
**UOM:** unit of measure
Min, max, Def: Minimum, maximum, default
Note: write the new values down

| | Code | Parameter | UOM | Type | Def. | Min | Max | Note |
|---|---|---|---|---|---|---|---|---|
| **Temperature probe management parameters (/Pro)** | | | | | | | | |
| /Pro | /2 | Analogue probe measurement stability | - | A | 4 | 1 | 15 | |
| | /4 | Virtual probe composition; 0: outlet probe Sm; 100: intake probe Sr | % | C | 0 | 0 | 100 | |
| | /5 | Temperature unit of measure; 0: °C/barg, 1: °F/psig | - | A | 0 | 0 | 1 | |
| | /6 | Display decimal point | - | A | 0 | 0 | 1 | |
| | rHS | 0: enabled, 1: disabled | % | NV | 20 | 0 | 100 | |
| | /t | Makeup of glass temperature sensor estimate | - | A | 0 | 0 | 1 | |
| | /t1 | 0: outlet probe Sm; 100: intake probe Sr | - | C | 12 | 0 | 14 | |
| | /t2 | Display alarms/signals on remote terminal | - | A | 12 | 0 | 14 | |
| | /t0 | 0: disabled, 1: enabled | - | A | 3 | 0 | 3 | |
| | /P1 | Select type of probe, Group 1 (S1, S2, S3)<br>0: Standard NTC range –50T90°C; 2: Stand. PT1000 –50T150°C<br>1: Standard PTC range –50T150°C; 3: Stand. NTC L243 -50T90°C | - | A | 0 | 0 | 3 | |
| | /P2 | Select type of probe, Group 2 (S4, S5) (See /P1) | - | A | 0 | 0 | 3 | |
| | /P3 | Select type of probe, Group 3 (S6)<br>0 to 3: (See /P1); 4: 0 to 5 V ratiometric probe | - | A | 0 | 0 | 4 | |
| | /P4 | Select type of probe Group 4 (S7)<br>0 to 4: (See /P1); 5: 0 to 10 V input; 6: 4 to 20 mA input | - | A | 0 | 0 | 6 | |
| | /P5 | Select type of probe, Group 5, serial probes (S8 to S11) | - | A | 0 | 0 | 15 | |
| | /FA | Assign outlet temperature probe (Sm)<br>0: Function disabled; 1-7: S1 to S7; 8-11 serial probe S8 to S11 | - | C | 1 | 0 | 11 | |
| | /Fb | Assign defrost temperature probe (Sd) (See /FA) | - | C | 2 | 0 | 11 | |
| | /Fc | Assign intake temperature probe (Sr) (See /FA) | - | C | 3 | 0 | 11 | |
| | /Fd | Assign superheated gas temp. probe (tGs) (See /FA) | - | A | 0 | 0 | 11 | |
| | /Fe | Assign saturated evap. press./temp. probe (PEu/tEu) (See /FA) | - | A | 0 | 0 | 11 | |
| | /FF | Assign defrost temperature probe 2 (Sd2) (See /FA) | - | A | 0 | 0 | 11 | |
| | /FG | Assign auxiliary temperature probe 1 (Saux1) (See /FA) | - | A | 0 | 0 | 11 | |
| | /FH | Assign auxiliary temperature probe 2 (Saux2) (See /FA) | - | A | 0 | 0 | 11 | |
| | /FI | Assign room temperature probe (SA) (See /FA) | - | A | 0 | 0 | 11 | |
| | /FL | Assign room humidity probe (SU) (See /FA) | - | A | 0 | 0 | 11 | |
| | /FM | Assign glass temperature probe (Svt) (See /FA) | - | A | 0 | 0 | 11 | |
| | /Fn | Assign dewpoint value (Sdp) (See /FA) | - | A | 0 | 0 | 4 | |
| | /c1 | Probe 1 calibration | °C, °F | F | 0.0 | -20.0 | 20.0 | |
| | /c2 | Probe 2 calibration | °C, °F | F | 0.0 | -20.0 | 20.0 | |
| | /c3 | Probe 3 calibration | °C, °F | F | 0.0 | -20.0 | 20.0 | |
| | /c4 | Probe 4 calibration | °C, °F | A | 0.0 | -20.0 | 20.0 | |
| | /c5 | Probe 5 calibration | °C, °F | A | 0.0 | -20.0 | 20.0 | |
| | /c6 | Probe 6 calibration | °C, °F or barg | A | 0.0 | -20.0 | 20.0 | |
| | /c7 | Probe 7 calibration | °C, °F or barg | A | 0.0 | -20.0 | 20.0 | |
| | /U6 | Maximum value of sensor 6 | barg,rH | A | 9.3 | /L6 | 160 if /5=0<br>800 if /5=1 | |
| | /L6 | Minimum value of sensor 6 | barg,rH | A | -1.0 | -20 if /5=0<br>-90 if /5=1 | /U6 | |
| | /U7 | Maximum value of sensor 7 | barg,rH | A | 9.3 | /L7 | 160 if /5=0<br>800 if /5=1 | |
| | /L7 | Minimum value of sensor 7 | barg,rH | A | -1.0 | -20 if /5=0<br>-90 if /5=1 | /U7 | |

| | Code | Parameter | UOM | Type | Def. | Min | Max | Note |
|---|---|---|---|---|---|---|---|---|
| **Temperature control parameters (CtL)** | | | | | | | | |
| CtL | OFF | ON/OFF 0: ON, 1: OFF | - | A | 0 | 0 | 1 | |
| | St | Unit set point | °C/°F | F | 50 | r1 | r2 | |
| | St2 | Intake probe set point with "Double thermostat" | °C/°F | A | 50 | r1 | r2 | |
| | rd | Temperature set point differential | °C/°F | F | 2 | 0.1 | 20 | |
| | rd2 | Set point St2 differential with "Double thermostat" 0.0: function disabled | °C/°F | A | 0 | 0 | 20 | |
| | r1 | Minimum set point | °C/°F | A | -50 | -50 | r2 | |
| | r2 | Maximum set point | °C/°F | A | 50 | r1 | 50 | |
| | r3 | Enable end defrost signal by timeout<br>0: signals disabled | - | A | 0 | 0 | 1 | |
| | r4 | Automatic night-time set point variation | °C/°F | C | 0 | -50 | 50 | |
| | r5 | Select maximum and minimum temperature monitoring probe.<br>0: disabled; 6: superheated gas probe;<br>1: control probe (Sreg); 7: saturated evaporation probe;<br>2: virtual probe (Sv); 8: auxiliary defrost probe;<br>3: outlet probe (Sm); 9: auxiliary probe;<br>4: defrost probe (Sd); 10: auxiliary probe 2.<br>5: intake probe (Sr); | - | A | 0 | 0 | 10 | |
| | rt | Duration of current max. and min. temperature monitoring session | hours | A | - | 0 | 999 | |
| | rH | Maximum temperature acquired in the session | °C/°F | A | - | - | - | |
| | rL | Minimum temperature acquired in the session | °C/°F | A | - | - | - | |
| | r6 | Probe for night-time control<br>0: virtual probe (Sv); intake probe (Sr) | - | C | 0 | 0 | 1 | |
| | ro | Control offset in the event of probe error | °C/°F | A | 0.0 | 0.0 | 20 | |
| | r7 | Master solenoid valve configuration<br>0: local valve; 1: network valve (connected to Master) | - | C | 0 | 0 | 1 | |
| | rSu | Delay in closing suction valve during normal control | sec | C | 0 | 0 | 999 | |
| **Compressor management parameters (CMP)** | | | | | | | | |
| CMP | c0 | Compressor and fan start delay on power-up | min | A | 0 | 0 | 240 | |
| | c1 | Minimum time between successive starts | min | A | 0 | 0 | 15 | |
| | c2 | Minimum off time | min | A | 0 | 0 | 15 | |
| | c3 | Minimum on time | min | A | 0 | 0 | 15 | |
| | c4 | ON time for operation in duty setting (Toff = 15 minutes fixed) | min | A | 0 | 0 | 100 | |
| | cc | 0: compressor/valve always OFF; 100: compressor/valve always ON | min | A | 0 | 0 | 100 | |
| | c6 | Duration of operation in continuous cycle | hour | A | 1 | 0 | 15 | |
| | c7 | Low temperature alarm bypass time after continuous cycle | min | A | 60 | 0 | 240 | |
| **Defrost management parameters (dEF)** | | | | | | | | |
| dEF | d0 | Select type of defrost<br>0: heater by temperature; 4: heater by time w/ temp. control<br>1: hot gas by temperature; 5: multiplexed hot gas by temp.<br>2: heater by time; 6: multiplexed hot gas by time<br>3: hot gas by time | - | C | 0 | 0 | 6 | |
| | d2 | End defrost synchronised by Master<br>0: not synchronised; 1: synchronised | - | A | 1 | 0 | 1 | |
| | dI | Maximum interval between consecutive defrosts | hour | C | 8 | 0 | 240 | |
| | dt1 | End defrost temperature (read by Sd) | °C/°F | F | 8.0 | -50 | 50 | |
| | dt2 | End defrost temperature (read by Sd2) | °C/°F | A | 8.0 | -50 | 50 | |
| | dP1 | Maximum defrost duration | min | F | 45 | 1 | 240 | |
| | dP2 | Maximum defrost duration on second evaporator | min | A | 45 | 1 | 240 | |
| | d4 | Defrost on start-up 0: disabled; 1: enabled<br>(Master: network defrost; Slave: local defrost) | - | A | 0 | 0 | 1 | |
| | d5 | Defrost delay on start-up if enabled | min | A | 0 | 0 | 240 | |
| | d6 | Display on terminal during defrost<br>0: temperature alternating with 'dEF'; 1: display frozen; 2 'dEF' | - | C | 1 | 0 | 2 | |
| | dd | Dripping time after defrosting (fans off) 0: no dripping | min | A | 2 | 0 | 15 | |
| | d7 | Skip defrost 0: disabled; 1: enabled | - | A | 0 | 0 | 1 | |
| | d8 | High temperature alarm bypass time after defrost and door open | min | C | 30 | 1 | 240 | |
| | d9 | Defrost priority over compressor protection times<br>0: protection times respected; 1: protection times ignored | - | A | 1 | 0 | 1 | |
| | Sd1 | Defrost probe display | °C/°F | F | - | - | - | |
| | Sd2 | Second evaporator defrost probe display | °C/°F | A | - | - | - | |
| | dC | Time base for defrost<br>0: 'dI' expressed in hours, 'dP1', 'dP2' and 'ddP' in minutes<br>1: 'dI' expressed in minutes ,'dP1', 'dP2' and 'ddP' in seconds | - | A | 0 | 0 | 1 | |
| | d10 | Defrost time in "Running time" 0: function disabled | min | A | 0 | 0 | 240 | |
| | d11 | Temperature threshold for "running time" defrost | °C/°F | A | -30 | -50 | 50 | |
| | d12 | Manage pressure sensor during defrost<br>0: probe error disabled, updating after supervisor enabling<br>1: probe error enabled, updating after supervisor enabling<br>2: errore sonda disabilitato, updating after supervisor disabling<br>3: probe error enabled, updating after supervisor disabling | - | A | 0 | 0 | 3 | |
| | dS1 | Compressor off time for "sequential stop" defrost<br>0: function disabled | min | A | 0 | 0 | 45 | |
| | dS2 | Compressor operating time for "sequential stop" defrost | min | A | 120 | 0 | 240 | |
| | ddt | Additional end defrost temperature delta for "power defrost" | °C/°F | A | 0.0 | -20.0 | 20.0 | |
| | ddP | Additional maximum end defrost time delta for "power defrost" | min | A | 0 | 0 | 60 | |
| | dn | Nominal duration of the defrost for "skip defrost" | % | A | 75 | 0 | 100 | |
| | d1S | Number of daily defrosts (td1) | - | C | 0 | 0 | 14 | |
| | d2S | Number of daily defrosts (td2) | - | C | 0 | 0 | 14 | |
| | dH1 | Pump down duration (0: pump down disabled) | s | A | 0 | 0 | 999 | |
| | dHG | Type of multiplexed hot gas defrost<br>0: equalising valve normally closed<br>1: equalising valve normally open | - | A | 0 | 0 | 1 | |
| **Alarm management parameters (ALM)** | | | | | | | | |
| ALM | AA | Assign probe for high (AH) and low (AL) temperature alarm<br>1: Control; 5: Intake; 9: Auxiliary; 13: Glass temp.<br>2: Virtual; 6: Sup. gas.; 10: Auxiliary 2; 14: Dew point<br>3: Outlet; 7: Saturated evap.; 11: Room temp.;<br>4: Defrost; 8: Aux.defrost; 12: Room humidity; | - | F | 1 | 1 | 14 | |
| | AA2 | Assign probe for high (AH2) and low (AL2) temperature alarm (see AA) | - | A | 5 | 1 | 14 | |
| | A0 | Reset high and low temperature alarm differential | °C/°F | F | 2.0 | 0.1 | 20.0 | |
| | A1 | Alarm thresholds (AL, AH) relative to set point (St) or absolute<br>0: relative; 1: absolute | - | F | 0 | 0 | 1 | |
| | A2 | Alarm thresholds (AL2,AH2) relative to set point (St2) or absolute<br>0: relative; 1: absolute | - | A | 0 | 0 | 1 | |
| | AL | Low temperature alarm threshold | °C/°F | F | 4.0 | -50.0 | 50.0 | |
| | AH | High temperature alarm threshold | °C/°F | F | 10.0 | -50.0 | 50.0 | |
| | AL2 | Low temperature alarm threshold 2 | °C/°F | A | 0.0 | -50.0 | 50.0 | |
| | AH2 | High temperature alarm threshold 2 | °C/°F | A | 0.0 | -50.0 | 50.0 | |
| | Ad | Delay time for high and low temperature alarms | min | F | 120 | 0 | 240 | |
| | A4 | Configure function of digital input DI1 on S4<br>0: input not active 6: remote on/off<br>1: immediate external alarm 7: curtain switch<br>2: delayed external alarm 8: start/stop continuous cycle<br>3: enable defrost 9: light sensor<br>4: start defrost<br>5: door switch with comp. and fans OFF | - | C | 0 | 0 | 9 | |
| | A5 | Configure function of digital input DI2 on S5 (see 'A4') | - | C | 0 | 0 | 9 | |
| | A6 | Configure solenoid/compressor control during external alarm (immediate or delayed) with 15 min. fixed OFF period<br>0: always OFF; 100: always ON | min | A | 0 | 0 | 100 | |
| | A7 | Delay time for delayed external alarm | min | C | 0 | 0 | 240 | |
| | A8 | Configure function of digital virtual input (see 'A4') | - | A | 0 | 0 | 8 | |
| | A9 | Digital input propagated from Master to Slave (on Master only)<br>0: from supervisor; 3: DI3;<br>1: DI1; 4: DI4;<br>2: DI2; 5: DI5. | - | A | 0 | 0 | 5 | |
| | A10 | Configure function of digital input DI3 on S6 (see A4) | - | C | 0 | 0 | 9 | |
| | A11 | Configure function of digital input DI4 on S7 (see A4) | - | C | 0 | 0 | 9 | |
| | A12 | Configure function of digital input DI5 (see A4) | - | C | 0 | 0 | 8 | |
| | Ar | Enable send alarms from Slave to Master<br>1: alarm signals enabled | - | A | 1 | 0 | 1 | |
| | A13 | Enable hot gas safety procedure for Slave offline<br>0: disabled; 1: enabled | - | A | 0 | 0 | 1 | |
| **Evaporator fan management parameters (FAn)** | | | | | | | | |
| FAn | F0 | Configure fan management<br>0: fans always on;<br>1: controlled based on Sd-Sv (or Sd-Sm in double thermostat);<br>2: controlled based on Sd. | - | C | 0 | 0 | 2 | |
| | F1 | Fan temperature control threshold (only if F0=1 or 2) | °C/°F | F | -5.0 | -50.0 | 50.0 | |
| | F2 | Evaporator fans with compressor off 0: see F0; 1: always off | - | C | 1 | 0 | 1 | |
| | F3 | Evaporator fans during defrost 0: on; 1: off | - | C | 1 | 0 | 1 | |
| | Fd | Post-dripping time after defrost (fans off with controller on) | min | C | 1 | 0 | 15 | |
| | Frd | Fan activation differential (including variable speed) | °C/°F | F | 2.0 | 0.1 | 20.0 | |
| | F5 | Evaporator fan cut-off temperature (hysteresis 1°C) | °C/°F | F | 50.0 | F1 | 50.0 | |
| | F6 | Maximum evaporator fan speed | % | A | 100 | F7 | 100 | |
| | F7 | Minimum evaporator fan speed | % | A | 0 | 0 | F6 | |
| | F8 | Evaporator fan start-up time 0: function disabled | s | A | 0 | 0 | 240 | |
| | F9 | Select fan control with PWM1/2 output (with speed control by phase cutting) 0: pulse; 1: duration | - | A | 1 | 0 | 1 | |
| | F10 | Force evaporator fan period at maximum speed<br>0: function disabled | min | A | 0 | 0 | 240 | |
| **Valve management parameters (Evd)** | | | | | | | | |
| EVd | P1 | Electronic valve<br>0: not present; 1: PWM valve; 2: CAREL E2V valve. | - | A | 0 | 0 | 2 | |
| | P3 | Superheat set point | K | F | 10.0 | 0.0 | 25.0 | |
| | P4 | Proportional gain | - | A | 15.0 | 0.0 | 100.0 | |
| | P5 | Integral time 0: function disabled | s | A | 150 | 0 | 900 | |
| | P6 | Derivative time 0: function disabled | s | A | 5.0 | 0.0 | 100.0 | |
| | P7 | LowSH: low superheat threshold | K | F | 7.0 | -10.0 | P3 | |
| | P8 | LowSH: integral time 0: function disabled | s | A | 15.0 | 0.0 | 240 | |
| | P9 | LowSH: alarm delay 0: alarm disabled | s | A | 600 | 0 | 999 | |
| | P10 | Enable close solenoid valve for low superheat (LowSH) and/or low suction temperature (LowSA) 1: closing enabled | - | A | 1 | 0 | 1 | |
| | P11 | LSA: low suction temperature threshold | °C/°F | A | -45.0 | -50.0 | 50.0 | |
| | P12 | LSA: alarm delay 0: alarm disabled | s | A | 600 | 0 | 999 | |
| | P13 | LSA: alarm differential (°C) 0: always automatic reset | °C/°F | A | 10.0 | 0.0 | 60.0 | |
| | P14 | Enable valve at end travel alarm ('blo') 1: signal enabled | - | A | 1 | 0 | 1 | |
| | P15 | Support saturated temp. in the event of pressure probe error | °C/°F | A | -15.0 | -50.0 | 50.0 | |
| | PH | Type of refrigerant<br>1: R22 3: R404A 5: R410A 7: R290 9: R600a 11: R744 13: R1270<br>2: R134a 4: R407C 6: R507A 8: R600 10: R717 12: R728 14: R417A<br>15: R422D 16: R413A 17: R422A 18: R423A 19: R407A 20: R427A<br>21: R245FA 22: R407F | - | A | 3 | 1 | 14 | |
| | OSH | Superheat offset for modulating thermostat<br>0: function disabled | K | A | 0.0 | 0.0 | 60.0 | |
| | Phr | Enable fast update of the valve parameters to supervisor<br>0: fast update disabled | - | A | 0 | 0 | 1 | |
| | PM1 | MOP: maximum saturated evaporation temperature threshold | °C/°F | A | 50.0 | -50.0 | 50.0 | |
| | PM2 | MOP: integral time | s | A | 10 | 0 | 240 | |
| | PM3 | MOP: alarm delay 0: function disabled | s | A | 0 | 0 | 999 | |
| | PM4 | MOP: function delay when starting control | s | A | 2 | 0 | 240 | |
| | PM5 | MOP: enable close solenoid valve<br>0: closing diabled; 1: closing enabled | - | A | 0 | 0 | 1 | |
| | PL1 | LOP: minimum saturated evaporation temperature threshold | °C/°F | A | -50.0 | -50.0 | 50.0 | |
| | PL2 | LOP: integral time | s | A | 0 | 0 | 240 | |
| | PL3 | LOP: alarm delay 0: funcrion disabled | s | A | 0 | 0 | 240 | |
| | SH | Superheat | K | F | - | - | - | |
| | PPU | Valve opening percentage | % | F | - | - | - | |
| | tGS | Superheated gas temperature | °C/°F | F | - | - | - | |
| | tEu | Saturated evaporation temperature | °C/°F | F | - | - | - | |
| | /cE | Saturated evaporation temperature calibration | °C/°F | A | 0.0 | -20.0 | 20.0 | |
| | Po6 | PWM expansion valve Ton + Toff | s | A | 6 | 1 | 20 | |
| | cP1 | Initial valve position at start control | % | A | 30 | 0 | 100 | |
| | Pdd | Initial valve position maintenance time after defrost | min | A | 10 | 0 | 30 | |
| | Psb | Valve standby position | steps | A | 0 | 0 | 400 | |
| | PF | Valve opening steps (supervisor) | steps | NV | - | 0 | - | |
| | PMP | Enable manual expansion valve positioning<br>0: disabled; 1: enabled | - | A | 0 | 0 | 1 | |
| | PMu | Manual valve position | steps | A | - | 0 | 600 | |
| | Phc | Enable high current E2V valve driving | - | A | 0 | 0 | 1 | |
| | PSM | Smooth Lines - Enable function | - | A | 0 | 0 | 1 | |
| | PLt | Smooth Lines - Offset to stop control below set point | °C/°F | A | 2.0 | 0.0 | 10.0 | |
| | PHS | Smooth Lines - Maximum superheat offset | K | A | 15.0 | 0.0 | 50.0 | |

| | Code | Parameter | UOM | Type | Def. | Min | Max | Note |
|---|---|---|---|---|---|---|---|---|
| **General configuration parameters (CnF)** | | | | | | | | |
| CNF | In | Type of unit 0: Slave 1: Master | - | C | 0 | 0 | 1 | |
| | Sn | Number of slaves in the local network 0: no slaves | - | C | 0 | 0 | 5 | |
| | H0 | Serial or Master-Slave network address | - | C | 199 | 0 | 199 | |
| | H1 | Configure function of output AUX1<br>0: No function; 7: Aux evaporator defrost;<br>1: Alarm norm. deenergized; 8: Evaporator fan;<br>2: Alarm normally energized; 9: Anti-sweat heaters.<br>3: Auxiliary; 10: Suction valve<br>4: Aux. slaved to MASTER on SLAVES; 11: Equalising valve<br>5: Light; 12 solenoid valve<br>6: Light slaved to MAST. on SL. | - | C | 8 | 0 | 12 | |
| | H2 | Disable keypad and remote control functions<br>1: keypad and remote control enabled | - | A | 1 | 0 | 5 | |
| | H3 | Remote control enabling code<br>00: programming from the remote control without code | - | A | 0 | 0 | 255 | |
| | H4 | Terminal buzzer (if present) 0: enabled; 1: disabled | - | A | 0 | 0 | 1 | |
| | H5 | Configure function of output AUX2 (see 'H1') | - | C | 2 | 0 | 12 | |
| | H6 | Configure terminal keypad lock | - | A | 0 | 0 | 15 | |
| | H7 | Configure function of output AUX3 (see 'H1') | - | C | 5 | 0 | 12 | |
| | H8 | Output switched with time bands 0: LIGHT; 1: AUX. | - | C | 0 | 0 | 1 | |
| AUX | H9 | Select function associated with user terminal AUX button<br>0: LIGHT; 1: AUX | - | C | 0 | 0 | 1 | |
| | H10 | Configure compressor digital output logic<br>0: direct logic; 1: reverse logic | - | A | 0 | 0 | 1 | |
| | H11 | Configure fan digital output logic<br>0: direct logic; 1: reverse logic | - | A | 0 | 0 | 1 | |
| | H12 | Light sensor threshold | lux | A | 25 | 10 | 100 | |
| | H13 | AUX4 output function configuration (see 'H1') | - | C | 12 | 0 | 12 | |
| | Hdn | Number of sets of default parameters available | - | NV | 0 | 0 | 6 | |
| | Htc | Clock option 0: clock absent | - | A | 0 | 0 | 1 | |
| | rHu | Antisweat heater manual activation percentage (of rHt)<br>0: function disabled | % | A | 70 | 0 | 100 | |
| | rHt | Antisweat heater manual activation time 0: function disabled | min. | A | 5 | 0 | 180 | |
| | rHo | Antisweat heater modulation offset | °C/°F | A | 2.0 | -20.0 | 20.0 | |
| | rHd | Antisweat heater modulation differential | °C/°F | A | 0.0 | 0 | 20.0 | |
| | rHL | Type of load for antisweat heater PWM outputs<br>0: resistive, 1: inductive | - | A | 0 | 0 | 1 | |
| | rHA | Coefficient A for glass temp. sensor estimate | °C | NV | 2 | -20 | 20 | |
| | rHb | Coefficient B for glass temp. sensor estimate | % | NV | 22 | 0 | 100 | |
| **Alarm log parameters (HSt)** | | | | | | | | |
| HSt AUX | HS0..9 | Alarm 0 to 9 (press Set) | - | A | - | - | - | |
| | ___ | Alarm 0 to 9 - Code | - | * | - | - | - | |
| | h__ | Alarm 0 to 9- Hours | Hour | * | - | 0 | 23 | |
| | m__ | Alarm 0 to 9- Minutes | Min. | * | - | 0 | 59 | |
| | t__ | Alarm 0 to 9- Duration | Min. | * | - | 0 | 999 | |
| **HACCP alarm management parameters (HcP)** | | | | | | | | |
| HACCP Hc | Ht0 | HACCP alarms active | - | NV | 0 | 0 | 1 | |
| | HAn | Number of HA events | - | A | 0 | 0 | 15 | |
| | HA.. HA2 | Number of HA HACCP events occurred (press Set) | - | A | - | - | - | |
| | y__ | HACCP alarm 1 to 3 - Year | Year | * | - | 0 | 99 | |
| | M__ | HACCP alarm 1 to 3 - Month | Month | * | - | 1 | 12 | |
| | d__ | HACCP alarm 1 to 3 - Day of month | Day | * | - | 1 | 31 | |
| | h__ | HACCP alarm 1 to 3 - Hours | Hour | * | - | 0 | 23 | |
| | n__ | HACCP alarm 1 to 3 - Minutes | Min. | * | - | 0 | 59 | |
| | t__ | HACCP alarm 1 to 3 - Duration | Min. | * | - | 0 | 240 | |
| | HFn | Number of HF events recorded | - | A | 0 | 0 | 15 | |
| | HF1...3 | Number of HF HACCP events occurred (press Set) | - | A | - | - | - | |
| | y__ | HACCP alarm 1 to 3 - Year | Year | * | 0 | 0 | 99 | |
| | M__ | HACCP alarm 1 to 3 - Month | Month | * | 0 | 1 | 12 | |
| | d__ | HACCP alarm 1 to 3 - Day of month | Days | * | 0 | 1 | 31 | |
| | h__ | HACCP alarm 1 to 3 - Hours | Hour | * | 0 | 0 | 23 | |
| | n__ | HACCP alarm 1 to 3 - Minutes | Min. | * | 0 | 0 | 59 | |
| | t__ | HACCP alarm 1 to 3 - Duration | Min. | * | 0 | 0 | 240 | |
| | Htd | HACCP alarm delay 0: monitoring disabled | Min. | A | 0 | 0 | 240 | |
| **RTC (Real Time Clock) and Timed defrosts (rtc) management parameters** | | | | | | | | |
| rtc | td1...8 | Defrost event 1 to 8 (press Set) | - | C | - | - | - | |
| | d__ | Defrost 1 to 8 - Day<br>0: event disabled; 9: Monday to Saturday;<br>1 to 7: Monday to Sunday; 10: Saturday & Sunday;<br>8: Monday to Friday; 11: every day. | Days | * | 0 | 0 | 11 | |
| | h__ | Defrost 1 to 8 - Hours | Hour | * | 0 | 0 | 23 | |
| | m__ | Defrost 1 to 8 - Minutes | Min. | * | 0 | 0 | 59 | |
| | P__ | Defrost 1 - Enable Power defrost<br>0: normal; 1: power defrost | - | * | 0 | 0 | 1 | |
| | tS1...8 | Start time band 1 to 8 - day | - | C | - | - | - | |
| | d__ | Start time band 1 to 8 - day: Day | Day | * | 0 | 0 | 11 | |
| | h__ | Start time band 1 to 8 - day: Hours | Hour | * | 0 | 0 | 23 | |
| | m__ | Start time band 1 to 8 - day: Minutes | Min. | * | 0 | 0 | 59 | |
| | tE1...8 | End time band 1 to 8 - day | - | C | - | - | - | |
| | d | End time band 1 to 8 - day: Day | Day | * | 0 | 0 | 11 | |
| | h__ | End time band 1 to 8 - day: Hour | Hour | * | 0 | 0 | 23 | |
| | m__ | End time band 1 to 8 - day: Minute | Min. | * | 0 | 0 | 59 | |
| | tc | Time/date (press Set) | - | C | - | - | - | |
| | y__ | Time/date: year | Year | * | 0 | 0 | 99 | |
| | M__ | Time/date: month | Month | * | 1 | 1 | 12 | |
| | d__ | Time/date: day of month | Day | * | 1 | 1 | 31 | |
| | u__ | Time/date: day of the week | Day | * | 6 | 1 | 7 | |
| | h__ | Time/date: hours | Hour | * | 0 | 0 | 23 | |
| | m | Time/date: minutes | Min. | * | 0 | 0 | 59 | |
| **Parameters from programming key and/or commissioning tools** | | | | | | | | |
| | PS | Password to display configuration parameters | - | NV | 22 | 0 | 200 | |
| | PSA | Password to access advanced parameters | - | NV | PS + 11 | | | |
| | PSS | Password to enter alarm log | - | NV | PS + 22 | | | |
| | PSU | Password to enter parameter upload | - | NV | PS + 44 | | | |

Tab. 4

### Table 5: alarms and signals: display, buzzer and relay

Note: The buzzer is activated if enabled by parameter 'H4'. The alarm relay is activated if one of the outputs, auxiliary 1, auxiliary 2 or auxiliary 3 ('H1', 'H5' and 'H7') has been assigned to the alarm relay function (normally closed or normally open).

| Code | Description | Icon flashing | Alarm relay | Buzzer | Reset |
|---|---|---|---|---|---|
| rE | Control probe fault | | ON | ON | AUTO |
| E1 | Probe S1 fault | | OFF | OFF | AUTO |
| E2 | Probe S2 fault | | OFF | OFF | AUTO |
| E3 | Probe S3 fault | | OFF | OFF | AUTO |
| E4 | Probe S4 fault | | OFF | OFF | AUTO |
| E5 | Probe S5 fault | | OFF | OFF | AUTO |
| E6 | Probe S6 fault | | OFF | OFF | AUTO |
| E7 | Probe S7 fault | | OFF | OFF | AUTO |
| E8 | Serial probe S8 not updated | | OFF | OFF | AUTO |
| E9 | Serial probe S9 not updated | | OFF | OFF | AUTO |
| E10 | Serial probe S10 not updated | | OFF | OFF | AUTO |
| E11 | Serial probe S11 not updated | | OFF | OFF | AUTO |
| "___" | Probe not enabled | - | OFF | OFF | AUTO |
| LO | Low temperature alarm | ▲ | ON | ON | AUTO |
| HI | High temperature alarm | ▲ | ON | ON | AUTO |
| LO2 | Low temperature alarm | ▲ | ON | ON | AUTO |
| HI2 | High temperature alarm | ▲ | ON | ON | AUTO |
| IA | Immediate alarm from external contact | ▲ | ON | ON | AUTO |
| dA | Delayed alarm from external contact | ▲ | ON | ON | AUTO |
| dEF | Defrost running | always | OFF | OFF | AUTO |
| Ed1 | Defrost on evaporator 1 ended by timeout | - | OFF | OFF | AUTO |
| Ed2 | Defrost on evaporator 2 ended by timeout | - | OFF | OFF | AUTO |
| dor | Door open for too long alarm | ▲ | ON | ON | AUTO |
| Etc | Real time clock fault | | OFF | OFF | AUTO |
| LSH | Low superheat alarm | ▲ | OFF | OFF | AUTO |
| LSA | Low suction temperature alarm | ▲ | OFF | OFF | AUTO/ MAN |
| MOP | Maximum operating pressure alarm | ▲ | OFF | OFF | AUTO |
| LOP | Low suction pressure alarm | ▲ | OFF | OFF | AUTO |
| bLo | Blocked valve alarm | ▲ | ON | OFF | MAN |
| Edc | Communication error with stepper driver | | ON | ON | AUTO |
| EFS | Motor controlled by the stepper driver broken or not connected | | ON | ON | AUTO |
| EE | Unit parameter flash error | | OFF | OFF | AUTO |
| EF | Operating parameter EEPROM error | | OFF | OFF | AUTO |
| HA | HACCP alarm type 'HA' | HACCP | OFF | OFF | MAN |
| HF | HACCP alarm type 'HF' | HACCP | OFF | OFF | MAN |
| rct | Connection to IR remote control active | - | - | - | - |
| rcE | Connection to IR remote control disabled | - | - | - | - |
| Add | Automatic address assignment procedure in progress | - | - | - | - |
| ccb | Start continuous cycle call | - | - | - | - |
| ccE | End continuous cycle call | - | - | - | - |
| dFb | Start defrost call | - | - | - | - |
| dFE | End defrost call | - | - | - | - |
| On | Switch ON | - | - | - | - |
| OFF | Switch OFF | - | - | - | - |
| rES | Reset alarms with MAN reset, reset HACCP alarms, reset temp. monitoring | - | - | - | - |
| AcE | Hot wires swit