

# CAREL

## ir33 platform

Integrated Electronic  
Microprocessor Controller



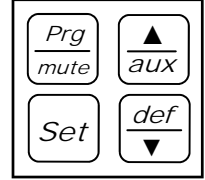
### Programming The Instrument

#### To Modify The Setpoint

**Set** Press and hold the "SET" key for at least 1 second.

**▲/aux** **def/▼** 2. Use arrow keys ▲ ▼ on temperature controller to increase (or decrease) the setpoint.

**Set** 3. Quickly press and release the "SET" key again.



#### To Modify Defrost, Differential or Other Parameters

**Prg/mute** **Set** 1. Press & hold "Prg" & "SET" keys together for five (5) seconds; display will flash "0", representing password prompt.

**Set** 2. Confirm by pressing "SET" key.

**▲/aux** **def/▼** 3. Press ▲ or ▼ to reach the category to be modified.

**Set** 4. Press "SET" to modify this selected parameter.

**▲/aux** **def/▼** 5. Increase or decrease the value using the ▲ or ▼ button respectively.

**Set** 6. Press the "SET" key to temporarily save the new value and return to the display of the parameter.

**Prg/mute** 7. Press & hold the "Prg" key for at least 5 seconds to save changes. This action will also mute the audible alarm (buzzer) & deactivate the alarm relay.

#### How To Change Reading From Fahrenheit (°F) To Celsius (°C)

**Prg/mute** **Set** 1. Press and hold "Prg" and "SET" keys together for at least 5 seconds; display will show "0", representing password prompt.

**Set** 2. Confirm by pressing "SET" key.

**▲/aux** **def/▼** 3. Press ▲ or ▼ until reaching the parameter "15".

**Set** 4. Press "SET" to modify this selected parameter.

**▲/aux** **def/▼** 5. Press ▲ or ▼ to change value to desired setting: "0" for Celsius (°C) or "1" for Fahrenheit (°F).

**Set** 6. Press "SET" key to temporarily save the new value and return to the display of the parameter.

**Prg/mute** 7. Press & hold "Prg" key for at least 5 seconds to save changes. **Note! All values will automatically convert to new scale. No conversion is required.**

#### Warning! Save Your Parameter Settings!

1. To store the new parameter values, PRESS and HOLD the "Prg" key for at least 5 seconds.
2. All modifications made to parameters will be lost if you do NOT press a button within 60 seconds. Should this "timeout" occur, normal operational settings (prior to modifications being made) will resume.
3. If the instrument is switched off before pressing the "Prg" key, all modifications to parameters will be lost.

**def/▼** **To Activate Manual Defrost**  
Press and hold the "def" key for at least 5 seconds.

**▲/aux** **To Activate / Deactivate Auxiliary Output**  
Press and hold the "aux" key for 1 second.

**Prg/mute** **▲/aux** **To Reset Any Alarms With Manual Reset**  
Press and hold the "Prg" and "aux" key for at least 1 second.

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## User Interface - Display

| ICON       | FUNCTION         | DESCRIPTION   | ON  | Normal operation<br>OFF                 | BLINK   | Start up                      |
|------------|------------------|---|---|---|---|-------------------------------|
|            | COMPRESSOR       | ON when the compressor starts. Flashes when the activation of the compressor is delayed by safety times.  | Compressor on   | Compressor off                          | awaiting activation   |                               |
|            | FAN              | ON when the fan starts. Flashes when the activation of the fan is prevented due to external disabling or procedures in progress.  | Fan on  | Fan off                                 | awaiting activation   |                               |
|            | DEFROST          | ON when the defrost is activated. Flashes when the activation of the defrost is prevented due to external disabling or procedures in progress.  | Defrost in progress   | Defrost not in progress                 | awaiting activation   |                               |
| <b>AUX</b> | AUX              | Flashes if the anti-sweat heater function is active, ON when the auxiliary output (1 and/or 2) selected as AUX (or LIGHT in firmware version 3.6) is activated.   | AUX auxiliary output active (version 3.6 light auxiliary output active)   | AUX auxiliary output not active         | Anti-sweat heater function active   |                               |
|            | ALARM            | ON following pre-activation of the delayed external digital input alarm. Flashes in the event of alarms during normal operation (e.g. high/low temperature) or in the event of alarms from an immediate or delayed external digital input.            | Delayed external alarm (before the time 'A7' elapses)                     | No alarm present                        | Alarms in norm. operation (e.g. High/low temperature) or immediate or delayed alarm from external digital input |                               |
|            | CLOCK            | ON if at least one timed defrost has been set. At start-up, comes ON for a few seconds to indicate that the Real Time Clock is fitted.  | If at least 1 timed defrost event has been set                            | No timed defrost event set              | Alarm clock   | ON if real-time clock present |
|            | LIGHT            | Flashes if the anti-sweat heater function is active, ON when the auxiliary output (1 and/or 2) selected as LIGHT is activated (in firmware version 3.6 it does not flash in anti-sweat heater mode and comes on when the dead band output is active). | Light auxiliary output on (version 3.6 dead band auxiliary output active) | Light auxiliary output off              | Anti-sweat heater function active (version 3.6 does not flash in anti-sweat heater mode)                        |                               |
|            | SERVICE          | Flashes in the event of malfunctions, for example E2PROM errors or probe faults.  |   | No malfunction                          | Malfunction (e.g. E2PROM error or probe fault). Contact service   |                               |
|            | CONTINUOUS CYCLE | ON when the CONTINUOUS CYCLE function is activated. Flashes if the activation of the function is prevented due to external disabling or procedures in progress (E.g.: minimum compressor OFF time).   | CONTINUOUS CYCLE operation activated                                      | CONTINUOUS CYCLE function not activated | CONTINUOUS CYCLE operation requested  |                               |

## Summary Table of Alarm and Signals: Display, Buzzer and Relay

| Code | Icon on the display | Alarm relay | Buzzer | Reset            | Description   |
|------|---------------------|-------------|--------|------------------|---|
| rE   | flashing            | on          | on     | automatic        | virtual control probe fault   |
| E0   | flashing            | off         | off    | automatic        | room probe S1 fault   |
| E1   | flashing            | off         | off    | automatic        | defrost probe S2 fault  |
| E2   | flashing            | off         | off    | automatic        | probe S3 fault  |
| E3   | flashing            | off         | off    | automatic        | probe S4 fault  |
| E4   | flashing            | off         | off    | automatic        | probe S5 fault  |
| '    | No                  | off         | off    | automatic        | probe not enabled   |
| LO   | flashing            | on          | on     | automatic        | low temperature alarm   |
| HI   | flashing            | on          | on     | automatic        | high temperature alarm  |
| AFr  | flashing            | on          | on     | manual           | antifreeze alarm  |
| IA   | flashing            | on          | on     | automatic        | immediate alarm from external contact                                     |
| dA   | flashing            | on          | on     | automatic        | delayed alarm from external contact                                       |
| dEF  | on                  | off         | off    | automatic        | defrost running   |
| Ed1  | No                  | off         | off    | automatic/manual | defrost on evaporator 1 ended by timeout                                  |
| Ed2  | No                  | off         | off    | automatic/manual | defrost on evaporator 2 ended by timeout                                  |
| Pd   | flashing            | on          | on     | automatic/manual | maximum pump down time alarm  |
| LP   | flashing            | on          | on     | automatic/manual | low pressure alarm  |
| AtS  | flashing            | on          | on     | automatic/manual | autostart in pump down  |
| cht  | No                  | off         | off    | automatic/manual | high condenser temperature pre-alarm                                      |
| CHT  | flashing            | on          | on     | manual           | high condenser temperature alarm  |
| dor  | flashing            | on          | on     | automatic        | door open too long alarm  |
| EE   | flashing            | off         | off    | automatic        | E2prom error, unit parameters   |
| EF   | flashing            | off         | off    | automatic        | E2prom error, operating parameters  |
| ccb  | Signal              |             |        |                  | start continuous cycle request  |
| ccE  | Signal              |             |        |                  | end continuous cycle request  |
| dFb  | Signal              |             |        |                  | start defrost call  |
| dFE  | Signal              |             |        |                  | end defrost call  |
| On   | Signal              |             |        |                  | switch ON   |
| off  | Signal              |             |        |                  | switch OFF  |
| rES  | Signal              |             |        |                  | reset alarms w/manual reset / reset HACCP alarms / reset temp. monitoring |

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## Summary Table of Operating Parameters

| CODE | PARAMETER                              | UOM*  | TYPE | MINIMUM | MAXIMUM | DEFAULT  |
|------|--|-------|------|---------|---------|--|
| /5   | Select Celcius (°C) or Fahrenheit (°F) | flag  | C    | 0       | 1       | For Case Specific Defaults See Serial Label Located Near Electrical Access On Your Case.<br><br>For Additional Technical Information Call Structural Concepts Technical Service Dept. at 1(800) 433.9489 |
| /c1  | Calibration of probe 1                 | °C/°F | C    | -20     | 20      |  |
| /c2  | Calibration of probe 2                 | °C/°F | C    | -20     | 20      |  |
| St   | Temperature set point                  | °C/°F | F    | r2      | r1      |  |
| rd   | Control delta                          | °C/°F | F    | 20      | 0.1     |  |
| dl   | Interval between defrosts              | hours | F    | 0       | 250     |  |
| dt1  | End defrost temperature, evaporator    | °C/°F | F    | -50     | 200     |  |
| dP1  | Maximum defrost duration, evaporator   | min   | F    | 1       | 250     |  |
| d6   | Display on hold during defrost         | -     | C    | 0       | 2       |  |
| dd   | Dripping time after defrost            | min   | F    | 0       | 15      |  |
| d/1  | Display of defrost probe 1             | °C/°F | F    | -       | -       |  |

\* Unit Of Measure