Installation and Operations Manual For

SciPak™ Self-Contained Refrigeration Systems Control Panel with LogiTemp® Plus Reverse Cycle Defrost

Contents

Installation

The control panel should be installed at the most convenient location on the exterior of the environmental room so that all conduits can leave the top of the panel in an orderly fashion. It should also be located on the handle side of the door at a convenient height.

There should be three separate conduits carrying the electrical for:

- The walk-in door section
- The electrical for the SciPak™ refrigeration system and the electrical for the alarm loop to the SSR in the SciPak™ electrical panel (located in connection box labeled "power connections here")
- The orange wires for the dry circuit shutdown wires (located in connection box labeled "power connections here")

The orange dry circuit could experience some voltage interference. So, it should be installed inside its own conduit and use a quality shielded cable. See figure 1 below for proper control panel installation.

Refer to the wiring diagram supplied with the control panel to confirm where to land wires from the SciPak refrigeration system to the control panel.

Figure 1: Control Panel Mounting

Follow all the guidelines for installation of the SciPak™ refrigeration system found in the manual supplied with it. It is most important that the cowl (evaporator section) is completely sealed to the top of the environmental room to ensure that no moisture can infiltrate the room. Also, all penetrations for electrical should be completely sealed to ensure there is no moisture infiltration from the outside of the room.

Sensor Locations

A plastic tube, plug, mounting bracket and container of glycerin come with the control panel.

First, mount the tube with the bracket on the inside of the walk-in panel behind the control panel.

Second, drill a hole through the walk-in panel to route the sensors out of the back of the control panel.

Third, insert the product sensor (sensor from the combo display) into the tube.

Last, fill the tube with glycerin and place the plug on the tube.

At this point, the air sensor for the CAREL branded controller (door heater controller) and the air sensor for the chart recorder should be fastened to the glycerin tube with a wire tie (see figure 2 below).

Figure 2: Sensor Locations

Note: An ethernet cable supplied with the control panel must be connected from the LAN port on the Edge Manager in the bottom compartment of the control panel to the ethernet port on the LogiTemp® Plus control in the SciPak™ refrigeration system electrical box.

Programming the Combo Controller

The primary function of the combo controller, seen in figure 3 below, is to shut the room down in the event of the room temperature either rising or falling to a point that is outside of the design parameters set by the end user.

The controller has a high and low temperature limit and is equipped with a delay for those limits. The display on the control shows the product temperature inside the box.

Figure 3: Combo Display for Product Temperature

There are some parameters to check inside the combo control to set the shutdown to comply with the parameters set by the end user. These parameters include the high and low limit as well as the delay for alarm.

To enter the parameters listing, hold **Enter** and **Back** for three seconds. Then use the up and down arrow to navigate through the list.

It is recommended to scroll to the bottom of the list first and select Celsius so no conversions are needed when setting the high and low limits for the controller.

After each parameter is set, hold the **Enter** button until it is saved and the screen returns to the parameter list. When all is satisfactory, press the **Back** button three times to return to the home screen. A list of all parameters can be seen in table 1 below.

If the combo displays **Enable Battery**, either power it down, remove controller from the junction box it is positioned in and add a battery, or hold **Enter** and select **No.**

Parameter	Value
Aux 1 Function	Disabled
Aux 1 Switch State	Closed
Door Temp	Not Applicable*
Door Temp Diff	Not Applicable*
Hi Door Alr Ofst	Not Applicable*
Lo Door Alr Ofst	Not Applicable*
Door Temp Alr Dly	Not Applicable*
Door Switch State	Disabled
Door Alarm Delay	Not Applicable*
Lights Off Delay	Not Applicable*
Aux 2 Function	Monitor Temp
Aux 2 Switch State	Closed
Aux 3 Function	Disabled
Aux 3 Switch State	Closed
Monitor Temp 2 Hi Alrm	2-5 Degrees above setpoint**
Monitor Temp 2 Lo Alrm	2-5 Degrees below setpoint**
Monitor Temp 2 Alrm Dly	>70 minutes**
Monitor Temp 3 Hi Alrm	Not Applicable*
Monitor Temp 3 Lo Alrm	Not Applicable*
Monitor Temp 3 Alrm Dly	Not Applicable*
Buzzer Mode	Disabled
Disp Clear Alarm	Press and Hold Enter for 3 sec to clear alarm
Temp Units	Celsius

*Can be left as is   **will depend on application

Table 1: Combo Display Parameters

Accessing LogiTemp® Plus Controller in the SciPak™ Refrigeration System

Setting up the Edge Manager

After the panel has been powered up for two minutes, the router in the bottom section of the control panel should be accessible in the wifi menu of the iPad on the front of the control panel.

The iPad ships from the factory powered up and the passcode to unlock it is 111111. If the iPad isn't already on, please go through the prompts and set a passcode of all 1s so that there are no discrepancies should anyone need to access the tablet in the future.

Once inside the iPad, go to the wifi section in the settings app. There will be two different selections available for the KE2 Edge Manager. Generally, the 5G option is best. After selecting, the device will ask for a password. The password to initially get into the Edge Manager (router) is KE2EMPLS#1. For reference, this password is also is on the back of the device.

After accessing the wifi from the KE2 Edge Manager, go to the browser and, in the address bar, search the router's static IP address: 192.168.50.1

At this point the router will prompt you to setup the device. On the first page, an optional email can be assigned along with the required username and password. See figure 4 below.

Figure 4: Account Information for Edge Manager

The recommended username is **Lwarren** and the recommended password is **Lwarren1!**

This specific username and password is not required but if you decide to use different ones, make note of them for future users.

The second page for the setup wizard determines if the devices will be published, see figure 5 below. The devices can export an excel file if published. For more information see ke2therm.com or call 636-266-0140.
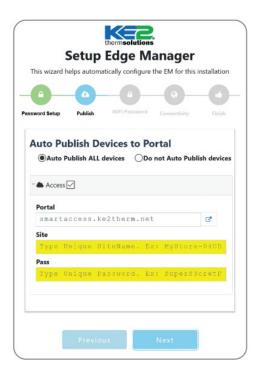

Figure 5:Publish Connected Devices

The third page determines the wifi username and password, and this should be the same as the previous choices so that there are no discrepancies. See figure 6 below.
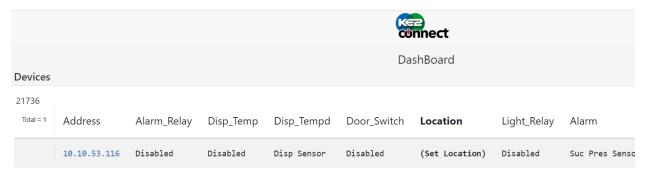

Figure 6: Wifi Username and Password

The last page determines if the Edge Manager is set up as stand alone or with an ethernet connection. Select **stand alone** for our purposes. See figure 7 below. If you would like to have remote access to the controls, contact KE2Therm at 636-266-0140.

Figure 7: Connectivity Details

Accessing IP Address

Once the Edge Manager is completely set up, go back to the browser and search the IP address again (192.168.50.1). Once inside, the controller should be visible. Click on the controller's IP address, in blue, and the browser will go to the web page associated with the LogiTemp® Plus controller. See figure 8 below.

Figure 8: KE2 Dashboard on E.M.'s IP Address

After clicking on the blue IP address inside the Edge Manager's dashboard, the browser will open a new tab that will take you to the home page of the controller that is connected to the Edge Manager. The home page is shown below in figure 9.
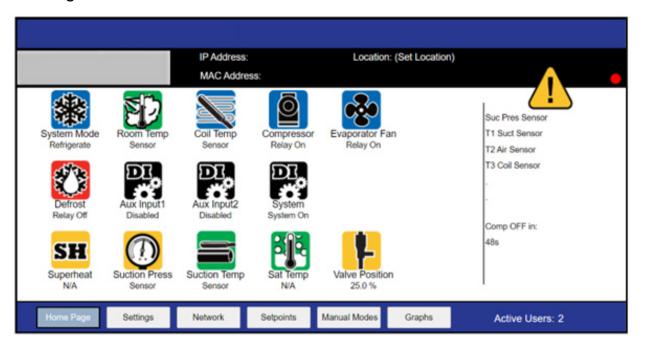
Home Page

Figure 9: LogiTemp® Plus Controller Home Page

From this point, the user can access the setpoints page and adjust as necessary to achieve the desired process from the equipment.

NOTE: **Any changes should be made while in contact with the Refrigerated Solutions Group (RSG) engineering staff or a qualified refrigeration technician. RSG will not be responsible for equipment damage that could occur because of changes made or suggested by non-authorized personnel.**

To make changes first click the login button and type 2222.

Cooler Setpoints

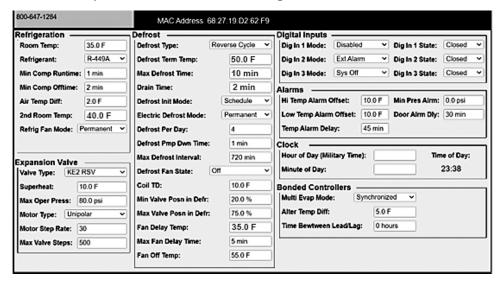The standard cooler setpoints are shown below in figure 10.

Figure 10: Standard Cooler Setpoints

Freezer Setpoints

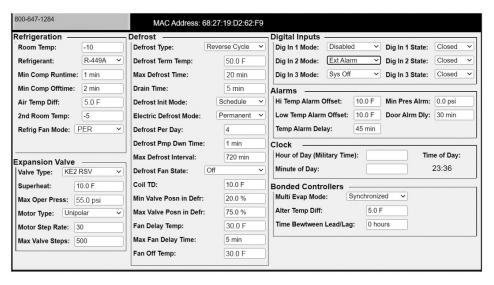The standard freezer setpoints are shown below in figure 11.

Figure 11: Standard Freezer Setpoints

<u>Note:</u> The setpoint in the LogiTemp® Plus controller should be adjusted to set the combo display's readout to the desired box temperature. Once the box has cycled off 5-10 times, the room should be mostly acclimated and the combo should be displaying an accurate reading.

At this time the LogiTemp Plus controller setpoint can be adjusted up or down 1 degree F at a time until the product temperature on the control panel shows the temperature noted in the design specifications for the room - typically -20C for a freezer and 4C for a cooler.

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