

## Pegasus High Temperature Controller Shortform

ZA0937-ZBC Issue E

May18, 2007.

### Overview

Pegasus (Figure 2) is a refrigeration controller used to switch refrigeration ON, if the operating temperature ( $4^{\circ}\text{C}$ ) exceeds the running temperature setting, and OFF if the operating temperature falls below the running temperature setting by  $3^{\circ}\text{C}$ . Four bit switches located on the controller board control the frequency defrost. A display (Figure 1), connected to the controller can show either the operating temperature or one of the following four messages:

1. dF: the controller is in defrost
2. Flashing between dF and operating temperature: controller is recovering from defrost
3. Flashing between PF1 and  $30^{\circ}\text{C}$ : probe failure
4. Flashing between AL and operating temperature: over temperature alarm

The maximum defrost time is set by adjusting RV4 and viewed whilst in the setting mode. Table 1 below, describes these settings:

Channel ID	Reading	Pot	Range
Pr	Case temperature probe		$-30^{\circ}\text{C}$ to $+30^{\circ}\text{C}$
Ch4	Maximum defrost time	RV4	10 to 40 minutes

Table 1: Pegasus Control Settings

### Defrost Settings

The controller initiates defrosts at intervals set on the defrost frequency switches (Table 2).

The compressor is held OFF for the maximum defrost period, during defrost.

After defrost the controller enters the recovery state. The compressor is cycled as normal for 15 minutes. During recovery the display flashes between the operating temperature and "dF".

### Setting Mode

Setting mode is selected using the channel setting push button (or an optional remote channel select button) on the controller board. Hold down the button to view the termination time (Ch4) on the display (Table 1). Release the button to see the value appropriate to that channel. Adjust the setting using a screwdriver whilst the appropriate

channel is selected. The display automatically reverts to normal after a period of 30 seconds.

### Probes

Pegasus is equipped with two inputs; P1 and AUX. The case temperature probe connects to P1 and the manual defrost initiation switch to AUX.

### Power Up

The fans are powered continuously from a supply on the board. The compressor is held OFF for two minutes after power up.

Hold down the channel select button whilst the case is switched on to override the two minute delay period and start the compressor immediately on power up.

### Case Test Mode

Put the controller into test mode by connecting the link on LK2 (Figure 2). Bit switch 3 now controls the relay output. The display shows bC followed by the software version.

### Over Temperature Alarm

The over temperature alarm level is set at  $10^{\circ}\text{C}$  with a 30 minute alarm delay. The over temperature alarm level and the alarm delay cannot be altered. The over temperature alarm is disabled during defrost.

### Compressor Minimum On/Off Time

The minimum ON/OFF time ensures that when the compressor switches ON/OFF, it remains ON/OFF, for a minimum period of two minutes.

### Probe Fault

If a probe fault occurs on P1, the display flashes between PF1 and  $30^{\circ}\text{C}$ . The compressor switches ON and then OFF continuously, every 8 minutes.

### Connecting a Display

Connect the display to your Pegasus controller using the information shown in Figures 1 and 2.

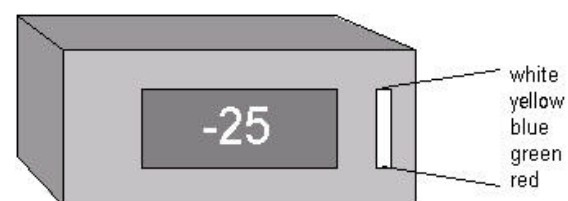
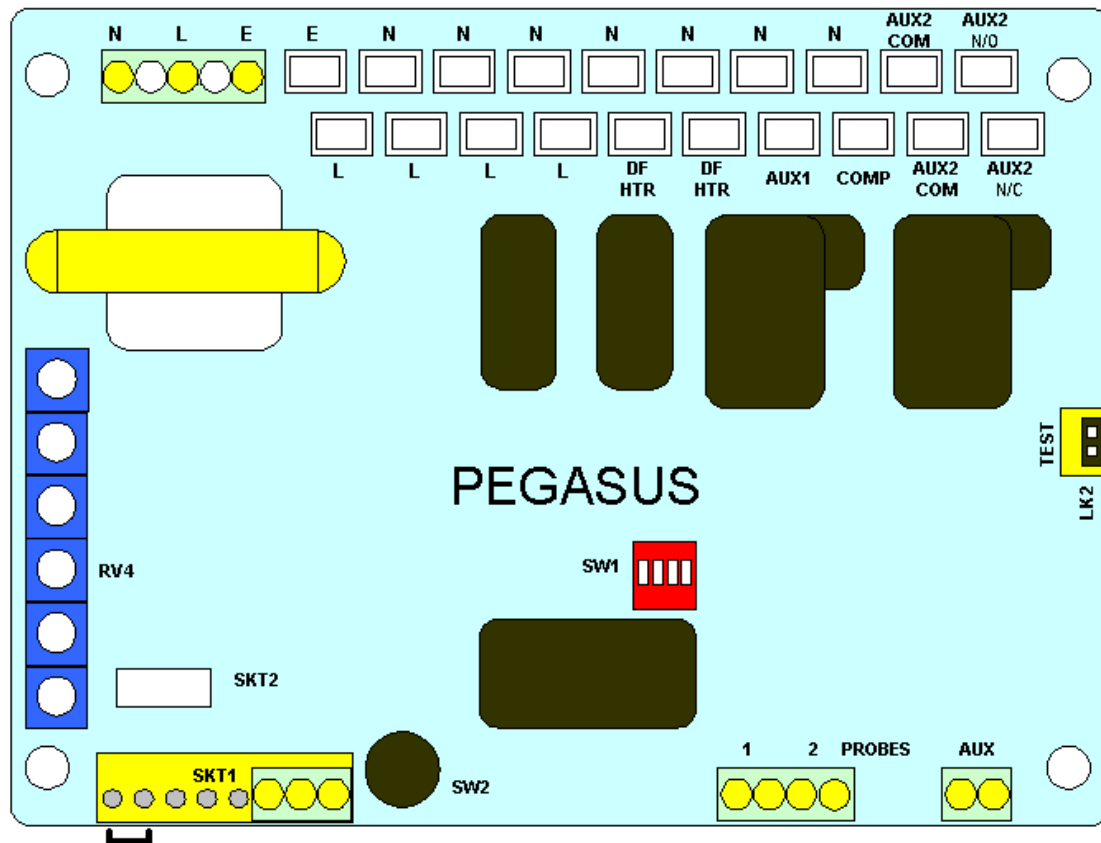


Figure 1: Connecting a Display



COMP (L): Compressor live connection.

DF HTR , AUX1, AUX2 COM, AUX2 N/C & AUX2 N/O are not supported.

### PROBES 1: Case temperature probe

PROBES 2: Not supported

AUX: Manual defrost input (short initiates defrost).

TEST: Case test mode. Remove link for normal operation.

SKT1: Wire push button between two left most pads (identified in Figure 2 above) for remote channel setting. Function performed by SW2 on board.

SKT2: Display connector (keyed)

RV4: Defrost period setting

RV1 – RV3, RV5, RV6: Not supported

SW1: Configures defrosts / day. See table opposite:

SW2: Push button for channel setting.

1	2	3	4	
ON	ON	x	OFF	6 defrost / day
OFF	ON	x	OFF	4 defrost / day
ON	OFF	x	OFF	3 defrost / day
OFF	OFF	x	OFF	2 defrost / day