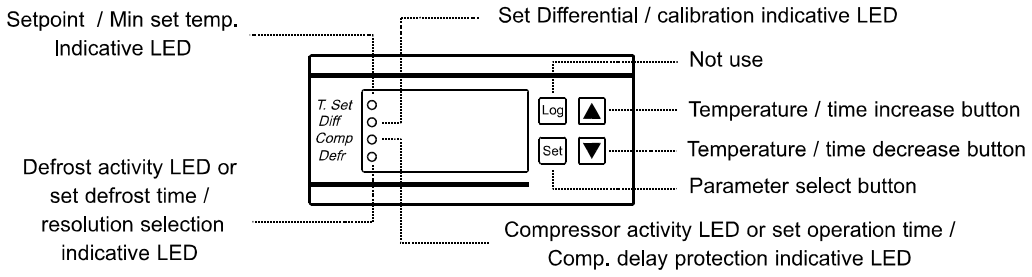
DEI-105AE Operation Manual

Version 03

5INSLL00258



1. CAUTIONS :

1.1 Before wiring, please make sure that power is switched off to prevent from getting electric shock.
1.2 The product should be avoided to install at humid environment.
1.3 To prevent the controller burning out, please make sure the water-proofed procedure is undertaken during installation.
1.4 Please install according to the wiring diagram, in order to avoid incorrect wiring.
1.5 Before supplying the power, please always check if the wiring and input power is connected correctly.
1.6 Please always read this instruction carefully before installation. If the damage is caused of incorrectly wiring, the product would not be guaranteed.

2. SPECIFICATION :

2.1 Dimension :
2.1.1 Front panel size : 34.5mm (H) x 75mm (W) x 82mm (D) ± 1mm
2.1.2 Mounting hole size : 30mm (H) x 71mm (W) ±1mm
2.2 Operating Environment : Operating temperature : -5℃～55℃ (23℉～131℉)
2.3 Storage environment : Storage temperature : -10℃～65℃ (14℉～149℉),Humidity : 20%～95% (non - condensing)
2.4 Output / Input :
2.4.1 Power supply : AC 230 / 115V ± 10%, single phase 50 / 60Hz
2.4.2 Power consumption : Max. 5 watts (Controller only)
2.4.3 Temperature display range : -10℃～45℃, ±1℃ (10 ℉～99 ℉, ±1℉)
2.4.4 Temperature sensor : NTC,PVC 1.5m (standard) in length, optional with 2.5m, 3m and 5m in length.
2.4.5 Compressor output contact : 25A 250VAC Resistance

3. FUNCTION :

3.1 Button operation :
3.1.1 User setup mode :
3.1.1.1 In power on status, press Set and hold it for 3 seconds to enter setup mode ; meanwhile, the LED light of "T.Set" is on.
3.1.1.2 Press Set to change to the next parameters. The order is as follows : set point ("T.Set" LED ON), temperature calibration ("Diff" LED ON), defrost cycle ("Comp" LED ON) and defrost period ("Defr" LED ON).
3.1.1.3 When the required parameter is shown, press ▲ or ▼ buttons to adjust values.
3.1.1.4 If no more command is given within 10 seconds, the controller saves new parameters and return to operation.
3.1.2 Administrator setup mode :
3.1.2.1 In power off status, keep pressing Set and supply the power to enter the administrator setup mode; normal meanwhile, the LED light of "T.Set" is on.
3.1.2.2 Press Set to change to the next parameters. The order is as follows : minimum set point ("T.Set" LED ON), temperature calibration ("Diff" LED ON), compressor delay protection ("Comp" LED ON) and unit selection ("Defr" LED ON).
3.1.2.3 When the required parameter is shown, press ▲ or ▼ buttons to adjust values.
3.1.2.4 If no more command is given within 10 seconds, the controller saves new parameters and return to normal operation.
3.1.3 Manual defrost : In power on status, press ▲ and ▼ buttons for 3 seconds to enter or terminate defrost mode.
3.1.4 Lock / unlock parameters : In power on status, under normal operation mode, press ▲ and ▼ buttons and hold them for 3 seconds. If the display shows "00" means in lock mode, "33" means in unlock mode. When under the lock mode, all the parameters are not adjustable, only viewable.
3.1.5 Restore default setting :
Before power supply, press Set and ▲ , then re - supply the power. In this case, the display shows "rs" and the controller automatically turns on and then operates with the default setting
3.2 Function instruction :
3.2.1 Compressor operation :
3.2.1.1 Compressor operates between setpoint plus 1 / 2 differential and setpoint minus 1 / 2 differential. (Find diagram 1 below).
3.2.1.2 Compressor functions one minute after first time power on even the compressor delay protection is set at "0".
3.2.1.3 When sensor is failed, compressor operates cyclically 15 minutes on and 15 minutes off.
3.2.1.4 When under defrost mode, the compressor stops operation.

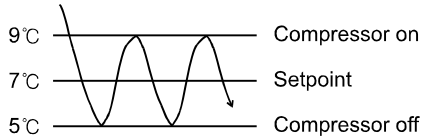


Diagram 1. When Setpoint = 7℃, differential = 4℃

3.3 Indicator / symbol :
3.3.1 "Comp" Compressor status indicator : Compressor output ON, the indicator ON ; compressor output OFF, the indicator OFF. During compressor delay protection period, the indicator blinks. The indicator ON when under the defrost cycle mode and delay protection setup.
3.3.2 "Defr" Defrost mode indicator : When under defrost mode and defrost period setup, the indicator ON.
3.3.3 "T.Set" Setpoint indicator : When setting the temperature and minimum temperature, the indicator ON.
3.3.4 "Diff" Temperature differential indicator : When setting temperature differential and temperature calibration, the indicator ON.
3.4 Parameter list :

Auth.	IND.	Function	Setting range		Default	Unit	Description
			Min.	Max.			
User	T.Set	Set point	Min.	40	5	℃	Temperature range for setup, 1℃ accuracy
			Min.	94	40	℉	
	Diff	Set Differential	2	10	4	℃	Interval is 2 as positive temperature
			2	10	4	℉	
	Comp	Defrost cycle	0	99	6	Hour	To setup the defrost period
	Defr	Defrost period	0	60	30	Minute	To control defrost by time setup, once reach the time, it starts to defrost
Adm.	T.Set	Min. set point	-5	10	0	℃	To prevent users from setting the temperature that is too low for compressor to reach.
			20	50	30	℉	
	Diff	Temp. Calibration	-8	7	0	℃	To adjust appropriate temp. calibration, the controller operates as the calibration value adjusted.
			-8	7	0	℉	
	Comp	Delay protection	0	15	3	Minute	To setup the period of delay protection once compressor stops untill it starts again
	Defr	Unit selection	℃	℉	℃	-	To select different temperature unit

4. ERROR CODES :

4.1 EE : Interior memory failure. (Press any button to back to the default setting and re - supply the power)
4.2 E0 : Interior sensor for calibration failure. (Send back to the factory)
4.3 E1 : Room sensor failure. (Check the connection of sensor or replace a new probe)