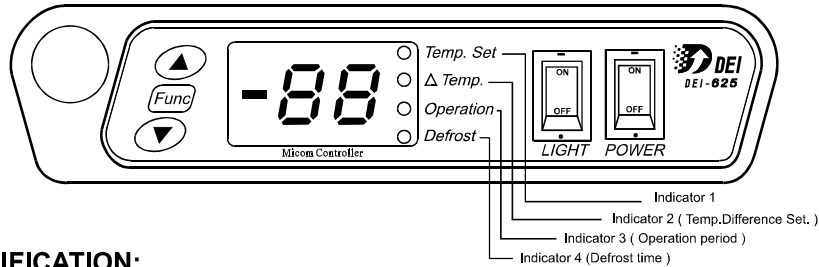


1. CAUTIONS:

- 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 controller burning out, please make sure water-proofed procedures undertaken during installation.
- 1.4 Before supplying the power, please always check if the wiring and input power is connected properly.
- 1.5 Please install according to the wiring diagram in order to avoid incorrect wiring.
- 1.6 Please always read this instruction before installation. The product is beyond our warranty if any damage is caused by incorrect wiring.



2. SPECIFICATION:

- 2.1 Dimension:
 - 2.1.1 Control panel size : 40mm (H) ×170mm (L) ±1mm.
 - 2.1.2 Mounting size : 33mm (H) ×140mm (L) ±1mm.
- 2.2 Environment:
 - 2.2.1 Operating temp. : -5°C ~ 55°C , RH25% ~ 85% (non-condensing)
 - 2.2.2 Storage temp. : -10°C ~ 65°C , RH25% ~ 85% (non-condensing)
- 2.3. Outputs / Inputs:
 - 2.3.1 Power supply : AC 230 / 115V ±10% single phase 50/60Hz.
 - 2.3.2 Power consumption : Max. 5W.
 - 2.3.3. Temp. display range: -40°C ~ 50°C , tolerance ±1°C.
 - 2.3.4 Temp. Sensor : NTC, PVC lead , 1.5m in length .
 - 2.3.5 Capacity of Compressor output : 25 (7)A / 250VAC Resistance.
 - 2.3.6 Capacity of Power switch : 10A / 250VAC Resistance.
 - 2.3.7 Capacity of Light switch : 10A / 250VAC Resistance.

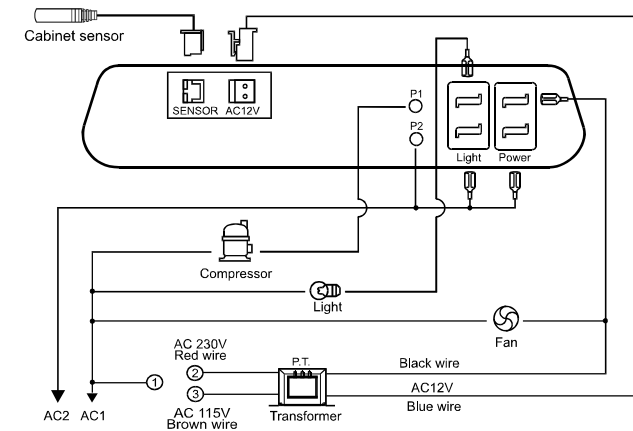
3. PANEL OPERATION:

- 3.1. Start / Stop defrosting manually:

To start or stop defrost is enabled by pressing \uparrow + \downarrow simultaneously for more than 3 seconds. If defrost period was set as "0", it will not be effective to start or stop defrosting manually.
- 3.2 Keyboard lock:

Press $\overline{\text{Func}}$ + \uparrow simultaneously for 3 seconds to lock keyboard, LED showing "00".
 Press $\overline{\text{Func}}$ + \uparrow simultaneously again for another 3 seconds to unlock, LED showing "33".
 Once the keyboard is locked, only setpoint "tS" can be adjustable.
- 3.3 Rapid setting:
 - 3.3.1 To change setpoint, press \uparrow or \downarrow to change setpoint value, indicator 1 will be on.
 - 3.3.2 If there are no actions within 5 seconds, controller will save parameters automatically and back to normal operation.
- 3.4 Parameter setting:
 - 3.4.1 Press and hold $\overline{\text{Func}}$ for 3 seconds to enter parameter setting, meanwhile, indicator 1 is ON.
 - 3.4.2 After entering parameter setting, press $\overline{\text{Func}}$ to select parameter in sequence: Setpoint adjust (Indicator 1 is ON), Temp. differential setting (Indicator 2 is ON), Operation period (Indicator 3 is ON), Defrosting period (Indicator 4 is ON), Min. setpoint (Indicator 1 & 4 are ON), Temp. calibration (Indicator 2 & 4 are ON), Compressor delay protection (Indicator 3 & 4 are ON), Max. setpoint (Indicator 1, 3 & 4 are ON).

- 3.4.3 To select parameters, press \uparrow or \downarrow for setting.
- 3.4.4 If there is no further action within 10 seconds, controller will save parameters automatically and back to normal operation.
- 3.5 Default setting: Switch off power, and press and hold $\overline{\text{Func}}$ and \uparrow before re-supplying power, the display will show rS, it means all parameters have returned to default values.



Note : Please connect wire 1 and wire 3 if power supply is AC115V.
 Please connect wire 1 and wire 2 if power supply is AC230V.

4. PARAMETERS :

Description	Min.	Max.	Default	Indicator
Setpoint adjust	Min. Setpoint	Max. Setpoint	5°C	1
Temp. differential setting	1°C	10°C	4°C	2
Operation period	0 hr.	30 hr.	6 hr.	3
Defrost period	0 min.	60 min.	30 min.	4
Min. setpoint	-40°C	Setpoint adjust	-25°C	1、4
Temp. calibration	-8°C	7°C	0°C	2、4
Compressor delay protection	0 min.	15 min.	3 min.	3、4
Max. setpoint	Setpoint adjust	40°C	25°C	1、3、4

5. COMPRESSOR OPERATION :

- 5.1 As Cabinet temp. \geq Setpoint + Temp. differential, the compressor will be turned on. As cabinet temp. \leq Setpoint, the compressor will be turned off.
- 5.2 Compressor delay protection is available from 0~15 minutes. When it is set as "0", compressor will still begin operation with 1 minute delay after power is supplied.
- 5.3 If there is a sensor failure, the compressor will operate as the cycle "15-minute on and 15-minute off". This is a default setting and not adjustable.

6. DEFROSTING OPERATION :

Defrosting by terminating operation of compressor.

It begins defrosting when reaching the time = Operation period - Defrost period.

7. ERROR CODES :

- EE : Parameter memory failure. (The parameter will back to factory defaults after power is re-supplied)
- E0 : Chip resistor for calibrating sensor failure (Please take it to the factory for repairing.)
- E1 : Cabinet sensor failure. (Check if the sensor is well-connected or replace the sensor.)