

1. CAUTION :

- 1.1 Before wiring, please make sure that power is switched off to prevent from getting electric shock.
- 1.2 Before installation, please avoid to install it in humid environment.
- 1.3 Before install, please make sure the waterproof to avoid the water seep to damage the controller.
- 1.4 Before supplying the power, please always check if the wiring and input power connect properly.
- 1.5 Before install according to the wiring diagram to avoid incorrect wiring.
- 1.6 Any improper wiring or installation is beyond our warranty.

2. SPECIFICATION :

- 2.1 Panel dimension : 87mm(L) x 87mm(W) x 13mm(H) \pm 1mm
- 2.2 Power box : 140mm(L) x 78mm(W) x 73mm(H) \pm 1mm
- 2.3 Operation environment : 0 $^{\circ}$ C ~ 50 $^{\circ}$ C , < 90 % RH (Non-condensing).
- 2.4 Storage environment : -10 $^{\circ}$ C ~ 60 $^{\circ}$ C , < 90 % RH (Non-condensing).
- 2.5 Input voltage : AC24V \pm 10%, 50 / 60 Hz (Single phase).
- 2.6 Power consumption : within 10w (no include output contacts).
- 2.7 Output / Input :
 - 2.7.1 Power Box :
 - 2.7.1.1 Digital input x 5 (input voltage AC24V)
 - 2.7.1.1.1 Di1 : filter status, Di2 : fire protection, Di3 : fan motor overloading protection, Di4 : Air flow switch, Di5 : Fan ON/OFF
 - 2.7.1.2 Digital output x 1 (1HP / 250VAC)
 - 2.7.1.3 Analog input x 1
 - 2.7.1.3.1 NTC sensor, 2.5m.
 - 2.7.1.3.2 Sensing range : -20.0 $^{\circ}$ C ~ 50.0 $^{\circ}$ C.
 - 2.7.1.3.3 Display range : 0.0 $^{\circ}$ C ~ 50.0 $^{\circ}$ C, accuracy \pm 1 $^{\circ}$ C, 0.1 $^{\circ}$ C in the step.
 - 2.7.1.4 Analog Output x 1 (DC 0~10V).
 - 2.7.2 Control pane :
 - 2.7.2.1 External control x 1(Power status control)
 - 2.7.2.2 Operation button x 6
 - 2.7.2.3 Display : LCD backlight.
- 2.8 Communication protocol (COMM1 & COMM2) : MODBUS RTU.
- 2.9 Control panel communication (CN1) : Max communication distance 30m.
- 2.10 Communication indicate :
 - 2.10.1 Green LED : To **DEI-758LCN** or **DEI-758SCN** communication indicator light, when communicate to **DEI-758LCN** or **DEI-758SCN**, the light will blink with every communication. There is no blinking when communication failure.
 - 2.10.2 Red LED : to control panel communication indicator light, when communicate to control panel, the light will blink with every communication. There is no blinking when communication failure.

3. Operation / button function :

- 3.1 POWER : Switch power on/off.

- 3.2 SET : Under power off status, press SET for 3 seconds into parameter setting model.

3.3 ▲ button :

- 3.3.1 Able to adjust the value under the parameter setting mode.
- 3.3.2 Setting temperature +0.5 $^{\circ}$ C in the power on status.

3.4 ▼ button :

- 3.4.1 Able to adjust the value under the parameter setting mode.
- 3.4.2 Setting temperature -0.5 $^{\circ}$ C in the power on status.

3.5 TIMER : Setting range1~24hour, 1hour in step.

- 3.5.1 Set time to switch off : under power ON status, press TIMER and then press ▲or ▼ to adjust.
- 3.5.2 Set time to switch on : under power OFF status, press TIMER and then press ▲or ▼ to adjust.
- 3.5.3 After complete setting, the control panel will count down. When reach time, control panel will send power control signal to switch on or off power.
- 3.5.4 During the timing, press TIMER or POWER to cancel the timing setting.

3.6 MODE :

- 3.6.1 Under power on status: able to change to cooling or heating mode.
- 3.6.2 Under parameter setting model: able to select parameter code.

3.7 External control :

- 3.7.1 Control panel (KEY CARD) : (grey wire + purple wire)
 - 3.7.1.1 Under power off status, enable the external control, the controller will operate according to previous settings.
 - 3.7.1.2 Under power on status, disable the external control, the controller will be switched off automatically.

4. FUNCTION :

4.1 Parameter setting mode :

- 4.1.1 Under power off status, press SET for 3 seconds to into parameter setting mode.
- 4.1.2 Press MODE to select parameter code.
 - 4.1.2.1 Sequence of code :
do→di1→di2→di3→di4→di5→ot→HS→LS→Pb→ti→AoH→AoL→dir→IP
→bAU→Pry→OU
- 4.1.3 Confirm the parameter code, display current value.
 - 4.1.3.1 ▲ or ▼ to adjust the parameter value.
 - 4.1.3.2 When set the "di" parameter, press TIMER to change delay time setting and input contact setting.
 - 4.1.3.3 Press MODE to save the parameter value and show next parameter code.
- 4.1.4 If no press any button in 10 seconds, it will auto save the parameter value and return the power off status.

4.2 After supplying power, the control panel will display IP and room temperature.

4.3 di input detection function

4.3.1 di act setting :

- 4.3.1.1 nus: di input is no acting.
- 4.3.1.2 nc : when di input is regular, the controller can detect AC24V.
It can't detected AC24V if there is a failure.
- 4.3.1.3 no: when di input is regular, the controller can't detects

AC24V. It will detect AC24V if there is a failure.

4.3.2 di delay time setting :

4.3.2.1 when di act setting "nus" , the delay time is unavailable.

4.3.2.2 when di is unusual, the controller will count down delay time and then display failure code on panel. In that time, the power box follow di function to act.

4.3.3 di setting : For example : di2 (fire protection), when di2 detects no voltage, after 30 seconds delay time, the control panel will display E2 and close all output.

4.3.3.1 Into setting mode, press MODE and select di2 parameter.

4.3.3.2 Press ▲ or ▼ to adjust the delay time to 30 second.

4.3.3.3 Press TIMER change to di2 act (no,nc or nus), press ▲ and ▼ button to nc.

4.3.3.4 Press MODE to change OU parameter, and leave setting mode around 2 seconds.

4.3.3.5 When di2 detects no voltage, after 30 second delay time, control panel display E2 and close all output.

4.3.4 di1~di5 contact description:

4.3.4.1 di1 Filter state detection.

4.3.4.2 di2 Fire protection detection.

4.3.4.3 di3 Fan motor overloading detection.

4.3.4.4 di4 Air flow switch detection.

4.3.4.5 di5 Fan ON/OFF status detection. (When fan on, the panel display on; fan off, the panel display off)

4.4 Do output contact :

4.4.1 After turn on AHU, through the DO delay time, DO contact will start.

4.4.2 DO contact will close output when there is failure: EE, FA, E1, E2, E3, E4.

4.5 Lock Function: Press TIMER for 3 seconds under power off status, the panel will display lock symbol and lock the control panel.

4.5.1 In lock status, only POWER, TIMER and SET button is available.

4.5.2 In lock status, user can into parameter setting model to check the setting value.

4.6 Failure Elimination :

4.6.1 " EC " : Communication failure between control panel and power box.
(Please check communication wiring)

4.6.2 " Eft " : Alert for filter status input contact.

4.7 If the panel display below failure code, power box has to turn of all output contact.

4.7.1 " EE " : Parameter memory failure, the system will auto relieve the memory failure status and into default value after 20 seconds.

4.7.2 " FA " : Exceeding temperature alarm (room temperature over 55°C).

4.7.3 " E1 " : Room sensor failure, please check sensor (change sensor).

4.7.4 " E2 " : Fire protection switch input acting.

4.7.5 " E3 " : Fan motor overload input acting.

4.7.6 " E4 " : Air flow switch input acting.

5. Parameter form :

Code	Function	Setting range		Default	Unit	Description
		Max	Min			
do	Output contact delay time	0	9999	15	Second	Switch on power, DO output will start operation after delay time.
di1~di5	Input contact action	no	nus	nus	-	no: normal open, nc: normal close, nus: Di contact no act.
	Input contact action	0	9999	0	Second	Di input contact delay alarm time.
ot	Room temp. Calibration	-8.0	8.0	0	°C	0.1 in step to increase or decrease
HS	Max. of heating temp. Setting	0	50	50	°C	0.5 in step to increase or decrease
LS	Min. of cooling temp. Setting	0	50	0	°C	0.5 in step to increase or decrease
Pb	Act percent range	1	500	40	-	
ti	Integration time	0	4096	256	Second	
AoH	Max value Ao output	AOL+1	100	100	%	0%: DC 0V, 100%: DC 10V
AoL	Min value Ao output	0	AOH-1	0	%	0%: DC 0V, 100%: DC 10V
dir	Ao output positive / negative	r	L	L	-	L: Positive output (Ao DC 0V→10V) r: Negative output (Ao output DC 10V→0V)
IP	IP setting	0	63	1	-	Power box address
bAU	Baud setting	12	576	96	-	12(1.2k), 24(2.4k), 48(4.8k), 96(9.6k), 192(19.2k), 288(28.8k), 576(57.6k)
Pry	Parity setting	n81	081	o81	-	N81 · E81 · o81
OU	Exit	-	-	-	-	Exit parameter setting mode