

DEI-201NE VAV Operation Manual

Version 01

SINSL00506

1. CAUTION :

- 1.1 Before wiring, please make sure that power is switched off to prevent from getting electric shock.
- 1.2 Before install according to the wiring diagram, in order to avoid incorrect wiring.
- 1.3 Before install, please make sure the waterproof to avoid the water seep to damage the controller.
- 1.4 Before installation, please avoid to install it in humid environment.
- 1.5 Before supplying the power, please always check if the wiring and input power connect properly.
- 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)±1mm
- 2.2 Power box: 140mm(L) x 78mm(W) x 73mm(H)±1mm
- 2.3 Operation environment: 0°C ~ 50 °C , < 90 % RH (Non-condensing).
- 2.4 Storage environment: -10°C ~ 60 °C , < 90 % RH (Non-condensing).
- 2.5 Input voltage: AC24V ±10%, 50 / 60 Hz (Single phase)
- 2.6 Power consumption: within 10w (no include output contact)
- 2.7 Output / Input :
 - 2.7.1 Power box :
 - 2.7.1.1 Digital input x 1 (input voltage AC24V) : Di external control
 - 2.7.1.2 Analog input x 1
 - 2.7.1.2.1 NTC sensor, 2.5 meter.
 - 2.7.1.2.2 Sensing range: -20.0°C ~ 50.0°C.
 - 2.7.1.2.3 temp. display range: 0.0°C ~ 50.0°C, accuracy ±1°C, 0.1°C in step.
 - 2.7.1.3 Analog output x 1: DC 0~10V
 - 2.7.2 Control panel :
 - 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 Operational panel communication(CN1) : Maximum communication distance 30m.
- 2.10 Communication indicator:
 - 2.10.1 Green LED : To **DEI-758LCN** or **DEI-758SCN** communication indicator, when communicate to **DEI-758LCN** or **DEI-758SCN**, the light will blink in communicating. There is no blinking when communicate failure.
 - 2.10.2 Red LED : to control panel communication indicator, when communicate to control panel, the light will blink in communicating. There is no blinking when communicate failure.

3 OPERATION / BUTTON FUNCTION :

- 3.1 POWER : Switch power on/off.
- 3.2 DAMPER : Change to manual/ auto AO output control.
 - 3.2.1 Auto control : After switch on power and press DAMPER, the control panel shows AUTO symbol, AO control output is based on PI (percentage & integration) control logical.
 - 3.2.2 Manual control : After switch on power and press DAMPER, the control panel shows % symbol, press ▲ or ▼ to adjust. (Range : AoL~AoH)
- 3.3 ▲ Button :
 - 3.3.1 Able to adjust the value under the parameter setting mode.
 - 3.3.2 Setting temperature +0.5°C in 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°C in power on status.
- 3.5 TIMER : Setting range1~24hour, 1hour in step.
 - 3.5.1 Setting time to switch off : under power ON status, press TIMER and then press ▲or ▼ to adjust.
 - 3.5.2 Setting 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/OFF.
 - 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.
- 3.7.2 Digital input contact :
 - 3.7.2.1 If Di action is setting no:
 - 3.7.2.1.1 When controller is power off and Di contact do not read AC24V, it will start calculating delay time. After delay time, controller will operate according to previous setting.
 - 3.7.2.1.2 When controller is power on and Di contact do not read AC24V, it will start calculating delay time. After delay time, controller will auto operate.

4 FUNCTION:

- 4.1 Parameter setting mode :
 - 4.1.1 In power off status, press MODE for 3 second to into parameter setting mode.
 - 4.1.2 Press MODE to select parameter code.
 - 4.1.2.1 Sequence of code: di→ot→HS→LS→Pb→ti→AoH→AoL→dir→IP→Pry→bAU→OU
 - 4.1.3 Select to purposed parameter code and display current value.
 - 4.1.3.1 Press ▲ 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 contact setting type: (for example, setting contact is NC, delay time is 30 seconds.)
 - 4.3.1 Into setting mode, select "di" parameter.
 - 4.3.1.1 Press ▲ or ▼ to adjust the delay time. (For example: 30sec.)
 - 4.3.1.2 Press TIMER to change "di" action, press ▲ or ▼ to set. (For example: NC)
 - 4.3.1.3 Press MODE to save setting or wait 10seconds to leave setting mode.
 - 4.3.2 When Di contact detects AC24V, the controller will follow last mode to operate after 30seconds.
- 4.4 Lock function: Press TIMER for 3 seconds under power off status, the panel will display lock symbol and lock the control panel.
 - 4.4.1 In lock status, only POWER and TIMER button is available.
 - 4.4.2 In lock status, able into parameter setting mode to check the setting value.
- 4.5 Failure elimination:
 - 4.5.1 " EC " : Communication failure between control panel and power box. (Please check communication wiring)
- 4.6 If the panel display below failure code, power box has to turn of all output contact.
 - 4.6.1 " EE " : Parameter memory failure, the system will auto relieve the memory failure status and into default value after 20 seconds.
 - 4.6.2 " FA " : Exceeding temperature alarm (room temperature over 55°C).
 - 4.6.3 " E1 " : Sensor failure, please check sensor (change sensor).

5. PARAMETER FORM :

Code	Function	Setting range		Default	Unit	Description
		Max	Min			
di	Input contact action	no	nus	nus	-	no: normal open, nc: normal close, nus: Di contact no act.
	Delay time	0	9999	0	Second	Delay alarm time for Di input contact .
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 percentage 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 / nagative	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
Pry	Parity setting	N81	O81	O81	-	N81, E81, o81
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)
OU	Exit	-	-	-	-	Exit setting mode