DEI-758PNE Modbus Version Operation Manual

Version 01

5INS00213

1. CAUTIONS：

1.1 To prevent electric shock accident, please cut off all power supply before installation.

1.2 Read the wiring diagram and operation manual before wiring ; Any damages caused by wrong wiring are beyond our warranty.

1.3 Do not install the power board in humid environment to ensure good singal communication.

1.4 Overload on output contact capacity may causes danger.

1.5 Use the communication wire UL2464 / 24 AWG or 26 AWG 2C twin - wire braid shield with isolated feature.

2. SPECIFICATION：

2.1 Operation temperature：0℃～50℃ , < 90%RH (Non - condensing)

2.2 Storage temeprature：-10℃～60℃ , < 90%RH (Non - condensing)

2.3 Temperature sensing range ：0℃～50℃。

2.4 Temperature accuracy ：±1℃； Set temperature scale：0.5℃.

2.5 Power supply：AC230V±5% , 50 / 60Hz。

2.6 Fuse (Total capacity of contact output) ：5A / 250VAC 。

2.7 Output contact capacity：

2.7.1 3 - way valve / Compressor contact ：1A / 250VAC

2.7.2 Fan contact：3A / 250VAC × 3

2.7.3 Heating contact：

2.7.3.1 Heater：2A / 250VAC

2.7.3.2 Boiler：1A / 250VAC

2.7.4 Chiller chain contact：3A / 250VAC

3. FUNCATION DESCRIPTION：

3.1 Function option (DIP2)：(Default ：DIP2 All：OFF)

3.1.1 DIP2-1：OFF－Without 3 minutes protection (3 - way valve)；
ON－With 3 minutes protection (Compressor).

3.1.2 DIP2-2：OFF－Fan runs regually；
ON－Fan runs intermittently.

3.1.3 DIP2-3：OFF－Fan remains off while power is supplied；
ON－Fan operates while power is supplied.

3.1.4 DIP2-4：OFF－Boiler (2 pipes) heating；
ON－Heater (4 pipes) heating.

3.2 Chiller contact option (JP1)：(Default：JP1 short - circuit)

3.2.1 Short circuit：While Cooling, Dehumidifying and Boiler (2 pipes) Heating is running, contact is ON.

3.2.2 Open (Remove)：Chiller contact ON / OFF by following 3 - way valve.

3.3 Cooling mode ：

3.3.1 While room temperature≧set temperature + 0.5℃, 3 - way valve ON.

3.3.2 While room temperature≦set temperature - 0.5℃, 3 - way valve OFF.

3.3.3 Temperature control range：From 10℃ to 35℃ in 0.5℃ steps.

3.3.4 Fan speed available：Auto, High, Medium, Low.

3.3.5 Auto fan speed chart （Refer to chart 1）.

3.3.6 Heating contact OFF.

3.4 Heating mode：

3.4.1 Boiler (2 pipes) heating：DIP2 - 4 OFF

3.4.1.1 While room temperature≦set temperature - 0.5℃, 3 - way valve ON.

3.4.1.2 While room temperature≧set temperature + 0.5℃, 3 - way valve OFF.

3.4.1.3 Heating contact ON.

3.4.2 Heater (4 pipes) heating：DIP2 - 4 = ON

3.4.2.1 While room temperature≦set temperature - 0.5℃, Heating contact ON.

3.4.2.2 While room temperature≧set temperature + 0.5℃, Heating contact OFF.

3.4.2.3 3 - way valve OFF.

3.4.2.4 Chiller contact OFF.

3.4.2.5 Heating fan delay close：Under this mode, switch off air conditioning while heater output is ON, Fan motor will switch to low speed and keep running for 30 seconds, then stops (switch off) completely.

3.4.3 Temperature control range：10℃～35℃ in 0.5℃ steps.

3.4.4 Fan speed available：Auto, High, Medium and low.

3.4.5 Auto fan speed chart (Refer to chart 1).

3.5 Dehumidifying mode：

3.5.1 Fan speed will be turned to low automatically when switching to this mode.：
Other fan speed remains available (by controlling panel)

3.5.2 Auto fan speed and intermittently fan runs are not available.

3.5.3 Heating contact OFF.

3.5.4 Temperature control range：10℃～35℃ in 0.5℃ steps.

3.5.5 While room temperature≧set temperature + 0.5℃, 3 - way valve ON.

3.5.6 While room temperature≦set temperature - 0.5℃, 3 - way valve operates in the cycle of 2 minutes ON and 5 minutes OFF.

3.6 Fan mode：

3.6.1 Fan speed will be turned to low automatically when switching to this mode：
Other fan speed remains available (by controlling panel).

3.6.2 Auto fan speed and intermittently fan runs are not available.

3.6.3 Heating contact, Chiller contact and 3 - way valve contact OFF.

3.7 Automatic Air Conditioning. (Available by panel control)

3.7.1 When switch on controller on automatic air conditioning mode or switch to this mode, if (set temperature - 2.0℃) ＜ room temperature ＜ (set temperature + 2.0℃), Fan mode running.

3.7.2 When room temperature ≦ (set temperature - 2.0), Heating mode running.

3.7.3 When (set temperature + 2.0℃)≦ room temperature, Cooling mode running.

3.7.4 Temperature control range：10℃～35℃, in 0.5℃ steps.

3.8 Auto air conditioning when A / C is off (This function is available with version 21)

3.8.1 When power is off and indoor temperature≧28.0℃, it operates automatically in cooling mode, low fan speed：Until indoor temperature drops to 25℃, operation stops and power off.

3.8.2 When power is off and indoor temperature≦17.0℃, it operates automatically in heating mode, low fan speed. Until indoor temperature rises to 20.0℃, operation stops and power off.

3.9 Memory saving in case of outage：When 758LC or 758LCN changes its set temperature or operation mode, it saves the parameters automatically. Thus, after the power recovers, it can read the parameters which saved before outage. (This function excludes the power status)

3.10 Controller turns on automatically when there is a power supply. (DIP2 - 3 ON)：

3.11 Protection for fan operation：At the moment of power on, fan is at high fan speed. After 2 seconds, it operates with the set fan speed.

3.12 Communication indicator：

3.12.1 Green LED：Indicator of 758PN and 758LCN. It flashes once while communicating. It has no light when under abnormal status.

3.12.2 Red LED：Indicator of 758PN and 758LC or power status. It flashes under normal status and constant illuminated under abnormal status.

4. FAILURE ELIMINATED：(Error codes will be displayed on DEI-758LCN or DEI-758LC.

4.1 E1 Sensor failure：While this failure occurs, temperature controller will be switched off.

4.2 EE Memory failure：If memory of parameter fails when power is supplied, memory will load on the default value：Memory failure status will be eliminated in 20 seconds.

4.3 FA Overheating alarm：When room temperature is higher than 55℃, buzzer alarms and air conditioning will be switched off.

4.4 When communication indicator abnormal, please check whether communication wire fall off or wrong wiring.

Cooling mode		Heating mode
Room temp. – Set temp.	Fan speed	Set temp. – Room temp.
≧3.0	HI	≧3.0
2.0～2.5	Original Fan speed (Remark 1)	2.0～2.5
1.5	MID	1.5
0.5～1.0	Original Fan speed (Remark 2)	0.5～1.0
≦0.0	LOW	≦0.0

(Chart 1)

Remark 1. Original fan speed status, if original speed is low, then to switch as Medium speed.

2. Original fan speed status, if original speed is high, then to switch as Medium speed.

5. IP setting diagram of Fan Coils：(NO.01～NO.63)