

DEI-721E / 722E Operation Manual

Version 2.0
5INSL00320

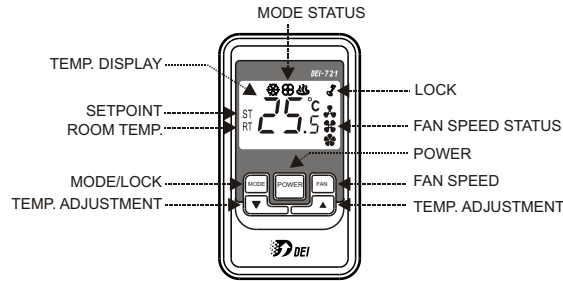
1. CAUTIONS :

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

2. SPECIFICATION :

2.1 Outer appearance:

2.1.1 Illustration:



2.1.2 Dimension:

- 2.1.2.1 Front panel : 87mm (L) × 87mm (W) × 13mm (D) + / - 1mm.
- 2.1.2.2 Power box : 67mm (L) × 47mm (W) × 26mm (D) + / - 1mm.

2.2 Ambient condition:

- 2.2.1 Operation : 0 °C ~ 50 °C , < 90%RH (non-condensing).
- 2.2.2 Storage : -10 °C ~ 60 °C , < 90%RH (non-condensing).

2.3 Output / Input

- 2.3.1 Input power : AC230V ± 10% 50 / 60Hz (single phase)
- 2.3.2 External control input × 1 (Power status control)
- 2.3.3 Temperature sensing input × 1 (Control panel)
- 2.3.4 Button input × 5
- 2.3.5 JP1 Jumper × 1 (Intermittent air blow)
- 2.3.6 Output contact
 - 2.3.6.1 Valve contact 2A / 250VAC × 1
 - 2.3.6.2 Fan speed contact 3A / 250VAC × 3
 - 2.3.6.3 Circuit fuse 5A / 250VAC
- 2.3.7 Display output : LCD backlight

3. OPERATION :

3.1 Operation / Button function :

- 3.1.1 POWER : Press once to switch on or off.

3.1.2 MODE :

- 3.1.2.1 Under power on status, press once to select operation mode: Cooling, heating and fan.
- 3.1.2.2 Under power off status, keep pressed for more than 3 seconds to lock or unlock the keyboard; under lock status, only "POWER" key is available.

3.1.3 FAN :

- 3.1.3.1 Under power on status, press once to select fan speed: Auto, high, medium and low.
- 3.1.3.2 Auto speed is not available under fan mode.

3.1.4 UP and DOWN temp. adjustment : Under power on status, press once to adjust setpoint in 0.5 °C step; keep pressed to speed up the adjustment.

- 3.1.4.1 "ST" icon is displayed when setting temperature.
- 3.1.4.2 Temp. setting is not adjustable under fan mode.

3.1.5 KEYCARD (External control) : (Gray wire + purple wire)

- 3.1.5.1 Under power off status, enable the external control, the controller will operate according to previous settings.
- 3.1.5.2 Under power on status, disable the external control, the controller will be switched off automatically.

3.2 Function description :

- 3.2.1 Temp. display range : 0.0 °C ~ 50.0 °C, accuracy ± 2 °C, in 0.5 °C step.
- 3.2.2 Setpoint range :
 - 3.2.2.1 Cooling:Maxi. is 35.0 °C, min. is the min. setpoint set by user, in 0.5 °C as a step.

- 3.2.2.2 Heating:Min. is 0.0 °C, maxi. is the maxi. setpoint set by user, in 0.5 °C as a step.

3.2.3 Default : Heating mode, auto fan speed, setpoint at 25 °C.

3.2.4 Cooling mode :

3.2.4.1 Three way valve:

- 3.2.4.1.1 When room temp. \geq setpoint + 0.5, three way valve is on.
- 3.2.4.1.2 When room temp. \leq setpoint - 0.5, three way valve is off.
- 3.2.4.1.3 Fan speed adjustable: Auto, high, medium and low.

3.2.4.2 Auto fan speed :

- 3.2.4.2.1 When (Room temp. - setpoint) \geq 3.0, operate at high speed.
- 3.2.4.2.2 When 2.5 \geq (Room temp. - setpoint) \geq 2.0, remain the existing fan speed.
- 3.2.4.2.3 When (Room temp. - setpoint) = 1.5, operate at medium speed.
- 3.2.4.2.4 When 1.0 \geq (Room temp. - setpoint) \geq 0.5, remain the existing fan speed.
- 3.2.4.2.5 When (Room temp. - setpoint) \leq 0, operate at low speed.

3.2.4.3 Disable intermittent air blow (JP1 = short), fan keeps operating.

3.2.4.4 Enable intermittent air blow (JP1 = open)

- 3.2.4.4.1 When -1.5 \leq (Room temp. - setpoint) \leq -1, fan operates in cycle of 1-min on/1-min off at low speed.
- 3.2.4.4.2 When -2.5 \leq (Room temp. - setpoint) \leq -2, fan operates in cycle of 1-min on/2-min off at low speed.
- 3.2.4.4.3 When (Room temp. - setpoint) \leq -3, fan stops operating.

3.2.5 Heating mode :

3.2.5.1 Three way valve:

- 3.2.5.1.1 When setpoint \geq room temp. + 0.5, three way valve is on.
- 3.2.5.1.2 When setpoint \leq room temp. - 0.5, three way valve is off.
- 3.2.5.1.3 Fan speed adjustable: Auto, high, medium and low.

3.2.5.2 Auto fan speed :

- 3.2.5.2.1 When (Setpoint - room temp.) \geq 3.0, operate at high speed.
- 3.2.5.2.2 When 2.5 \geq (Setpoint - room temp.) \geq 2.0, remain the existing fan speed.
- 3.2.5.2.3 When (Setpoint - room temp.) = 1.5, operate at medium speed.
- 3.2.5.2.4 When 1.0 \geq (Setpoint - room temp.) \geq 0.5, remain the existing fan speed.
- 3.2.5.2.5 When (Setpoint - room temp.) \leq 0, operate at low speed.

3.2.5.3 Disable intermittent air blow (JP1 = short), fan keeps operating.

3.2.5.4 Enable intermittent air blow (JP1 = open)

- 3.2.5.4.1 When -1.5 \leq (Setpoint - room temp.) \leq -1, fan operates in cycle of 1-min on/1-min off at low speed.
- 3.2.5.4.2 When -2.5 \leq (Setpoint - room temp.) \leq -2, fan operates in cycle of 1-min on/2-min off at low speed.
- 3.2.5.4.3 When (Setpoint - room temp.) \leq -3, fan stops operating.

3.2.6 Adjusting temperature calibration:

- 3.2.6.1 In power off status, press fan speed key and hold it for 3 seconds to enter temperature calibration adjusting, then "RT" icon is blinking, on/off for 0.5 second.

- 3.2.6.2 Press \blacktriangle or \blacktriangledown to adjust values, range is from -8.0 °C ~ +8.0 °C, without any keys pressed, controller will save the values and back to normal mode.

3.2.7 Adjusting maxi. temperature for heating:

- 3.2.7.1 In power off status, press \blacktriangle and hold it for 3 seconds to enter temperature calibration adjusting, then heating icon is blinking, on/off for 0.5 second.
- 3.2.7.2 Press \blacktriangle or \blacktriangledown to adjust values, range is from 0.0 °C ~ 35.0 °C, without any keys pressed, controller will save the values and back to normal mode.

3.2.8 Adjusting min. temperature for cooling:

- 3.2.8.1 In power off status, press \blacktriangledown and hold it for 3 seconds to enter temperature calibration adjusting, then cooling icon is blinking, on/off for 0.5 second.
- 3.2.8.2 Press \blacktriangle or \blacktriangledown to adjust values, range is from 0.0 °C ~ 35.0 °C, without any keys pressed, controller will save the values and back to normal mode.

4. ERROR ELIMINATION : (When following situation occurred, controller will be switched off automatically).

- 4.1 When showing "E1", it indicates the sensor is in failure. (Send it back to manufacturer for inspection)
- 4.2 When showing "FA" (Fire alarm), it indicates room temp. is over 55 °C.