

DEI-721E / 722E Operation Manual

Version 2.0
5INSL00320

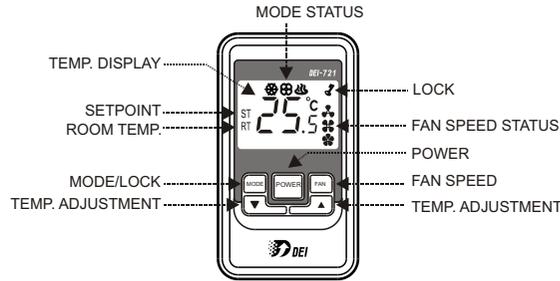
1. CAUTIONS :

- 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 ▲ or ▼ 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 ▲ 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 ▲ or ▼ 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 ▼ 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 ▲ or ▼ 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.