Please check your controller label. Depends on your order the power supply (operating voltage) could be either 110V, 220V or 12V.

**Specification and size:**
Product size: 75L x 34.5W x 85D (mm)
Mounting size: 71L x 29W (mm)

**wiring diagram:**
Terminals 1 & 2: Cooling output - Relay contact switch (normally open).
Terminals 1 & 3: Heating output - Relay contact switch (normally open).
Terminals 1 & 4: Alarm output - Relay contact switch (normally open).
Terminals 5 & 6: Power supply connection.
Terminals 7 & 8: Locking the controller parameter setting by making a short circuit between terminals 7 to 8.
Terminals 9 & 10: Temp sensor connection (NTC Probe).

**Technical Parameters:**
- Temperature measurement range: -50 °C ~ 110 °C
- Temperature measurement error: ± 0.5 °C
- Control accuracy: 1 °C
- Maximum power consumption: 2W
- Resolution: 0.1 °C

**Button (Key) Description:**
1. RST: A) To turn the controller On and Off: To turn the controller ON press the RST key. To turn the controller OFF press and hold the RST key for 3 seconds.
   B) To set the Heating Temperature (lower set point): Press the RST key once and the controller will go to the “heating temperature setting or lower set point setting” mode. By pressing ▲ or ▼ keys you can adjust the temperature to your required set point. When the lower set point is adjusted you can exit the “heating temperature setting” mode by pressing the RST key again (or wait for about 15 seconds and the controller automatically exit this mode). This lower set point can also be set via F2 parameter (learn more about this in parameters setting section).
2. SET: A) To set the Cooling Temperature (higher set point): Press the SET key once and the controller will go to the “cooling temperature setting or higher set point setting” mode. By pressing ▲ or ▼ keys you can adjust the temperature to your required set point. When the higher set point is adjusted you can exit the “cooling temperature setting” mode by pressing the SET key again (or wait for about 15 seconds and the controller automatically exit this mode). This higher set point can also be set via F3 parameter (learn more about this in the parameters setting section).
   B) To set the controller parameters: Press and hold the SET key for more than 3 seconds and the controller will go to the “parameter setting menu”. By pressing ▲ or ▼ keys you can select the required parameter from the menu. When the required parameter is found, press the SET key once and the controller will go to the required parameter setting mode. By pressing ▲ or ▼ keys, you can adjust the parameter that you need. When the parameter is set, you can exit the “parameter setting mode” by pressing the RST key (or wait for about 15 seconds and the controller automatically exit this mode).
3. ▲: Increasing key 4. ▼: Decreasing key

**Operating Instructions:**
LED Status (light display):
- When the red light beside the “Work” is ON it shows that the output (heating or cooling) is working.
- If the light beside the “Work” flashes, it shows that the controller is on delay.
- If the light beside the “Set” is ON, it shows that the controller is on setting mode.

- **Heating and cooling functions:**
  - If the current temperature is more than the cooling temperature (higher) set point \( \geq (F3 + F1) \), the cooling output relay will be opened and will turn the chiller (the cooling source) ON and when the current temperature drops to lower than the cooling set point \( \geq (F3-F1) \) the cooling output relay will be closed and will turn the cooling source OFF.
  - If the current temperature is less than the heating temperature (lower) set point \( \geq (F2 - F0) \), the heating output relay will be opened and will turn the heater (the heating source) ON and when the current temperature passes the heating set point \( \geq (F2+F0) \) the heating output relay will be closed and will turn the heating source OFF.
When the controller displays HHH it shows that the measured temperature by sensor is higher than 110 °C.

When the controller displays LLL it shows that the measured temperature by sensor is lower than -50 °C.

When the controller displays HHH it shows that the measured temperature by sensor is higher than 110 °C.

Caution:
- The maximum current load of the heating or cooling source must not exceed the output relay contact capacity. It will damage the unit and may cause fire.
- Check the wiring diagram before wiring the unit. Wrong wiring will damage the controller and may cause fire.
- Applying extra force on the screws of controller terminals will break the base. Please tighten the screws gently.
- Turn the power supply off when you are wiring relays, sensors, .. Otherwise it will damage the unit and may cause fire.

Error messages and troubleshooting:
1) When the controller displays --- it shows that the sensor is disconnected. The controller will make beeping sound and the heating output relay will be closed (so the heater is off).
2) When the controller displays LLL it shows that the measured temperature by sensor is lower than -50 °C.
3) When the controller displays HHH it shows that the measured temperature by sensor is higher than 110 °C.