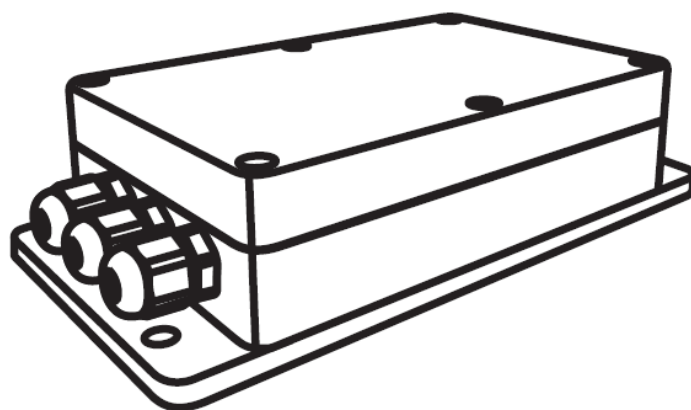


# Inverter Condensing Unit Control Module

## Technical Manual

Model:KA8243



## 1. Introduction

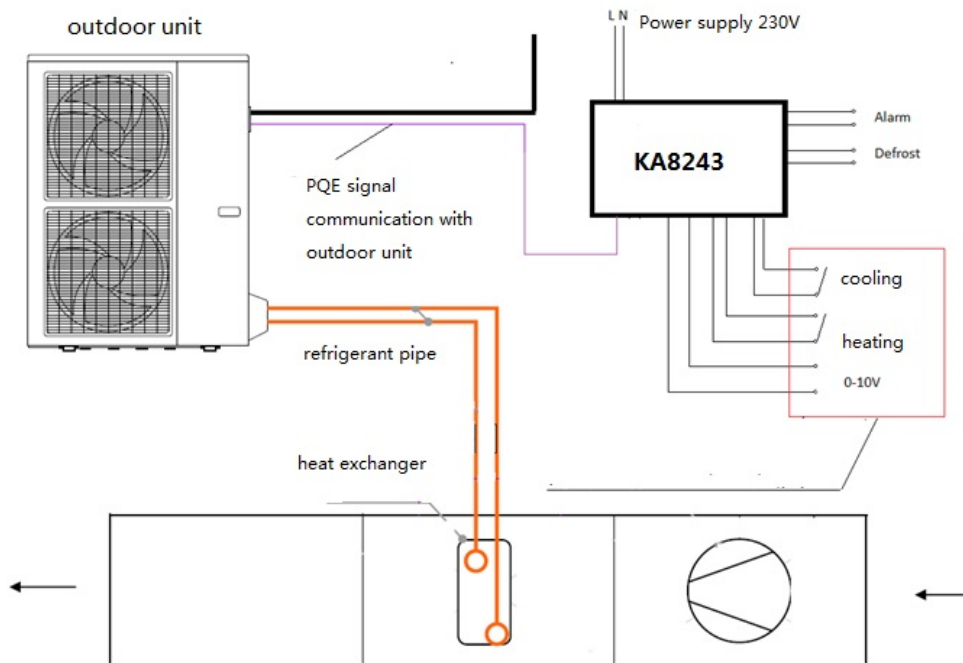
KA8243 control module enables to control inverter type outdoor unit without needs of AC factory produced indoor unit. It gives possibility to control outdoor unit capacity and state to produce heat or cooling for AHU or water heater/cooler.

KA8243 control module enables to control inverter condensing unit capacity between 0 - 10%~100% by external input 0~10VDC signal.

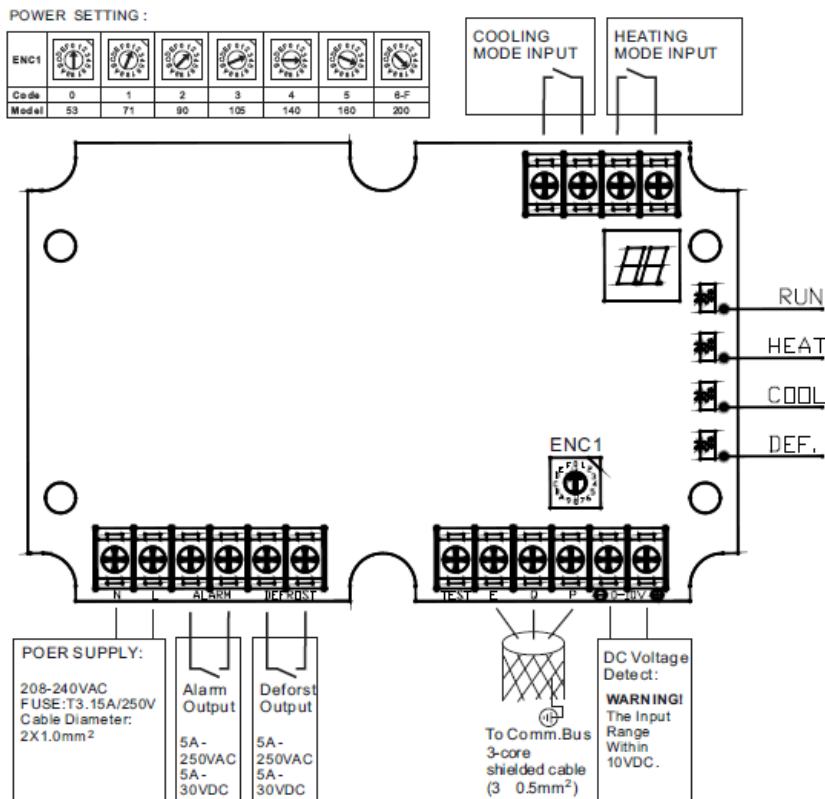
Through the dry contact signal outdoor unit can work in the cooling or heating mode.

The installation and operation of outdoor unit as well controller must be done according to the engineering rules (i.e. Uer's manual, Installation manual, Technical Specification, Service Manual).

## 2. System design



### 3. Function and Setting



#### Connection Terminal Introduction:

**N, L**---Power Supply Connection Terminal 230V, 1- phase, 50Hz.

**ALARM**---digital output 5A-250VAC or 5A-30VDC. When outdoor unit has malfunction signal is activated.

**DEFROST**--- digital output 5A-250VAC or 5A-30VDC. When outdoor unit is in defrost signal is activated.

**EPQ**---Terminal to communication cable between controller and outdoor unit. Sould not be less than 3x0, 5mm<sup>2</sup> (shielded).

**0 -10V**---analog input terminal to control outdoor unit capacity. Warning: signal input can not exed 10VDC, otherwise it may destroy this control module.

Capacity steps:

0-0.5 V 0% (unit stopped)

0.5-1.5 V, 10 % capacity (LED display digit 1)

1.5-2.5 V, 20 % capacity (LED display digit 2)

...

9.5-10.5V, 100% capacity (LED display digit 10)

**COOL**--- digital input. When terminals closed unit run in cooling mode and LED COOL will be on.

**HEAT**--- digital input. When terminals closed unit run in heating mode and LED HEAT will be on.

Note: HEAT signal has priority . If both COOL and HEAT terminals are closed unit will run in HEAT mode.

**ENC1** - knob to select condensing unit model.

Knob selection	Condensing unit
0	5,3 kW unit
1	7,1 kW unit
2	9,0 kW unit
3	10,5 kW unit
4	14,0 kW unit
5	16,0 kW unit

#### **LED lamps introduction:**

RUN - lightening when controller is powered

HEAT - lightening when the unit is operating in heating mode

COOL - lightening when the unit is operating in cooling mode

DEF -lightening when unit is in defrost mode

#### **4. Malfunction and Error Code**

E1- Communication error with outdoor unit

Ed- Outdoor unit temp sensor malfunction or outdoor unit protection. In this case, check the error code displayed on the PCB of the outdoor unit.

dF-Outdoor defrosting.

#### **5. Specification**

<b>Model</b>	<b>KA8243</b>
<b>Casing</b>	<b>Plastic</b>
<b>Dimension (h x w x d)</b>	<b>45 x100 x191mm</b>
<b>Weight</b>	<b>0.35KG</b>
<b>Operation Temperature Range</b>	<b>-25 ~ +45 C</b>
<b>Operation Humidity Range</b>	<b>40-90 %</b>
<b>Power Supply</b>	<b>230VAC, 1 Phase, 50Hz</b>
<b>Voltage Range</b>	<b>208-240V</b>
<b>Fuse</b>	<b>15A, 250V</b>
<b>Resistance class</b>	<b>IP54</b>

## 6. Dimensions

