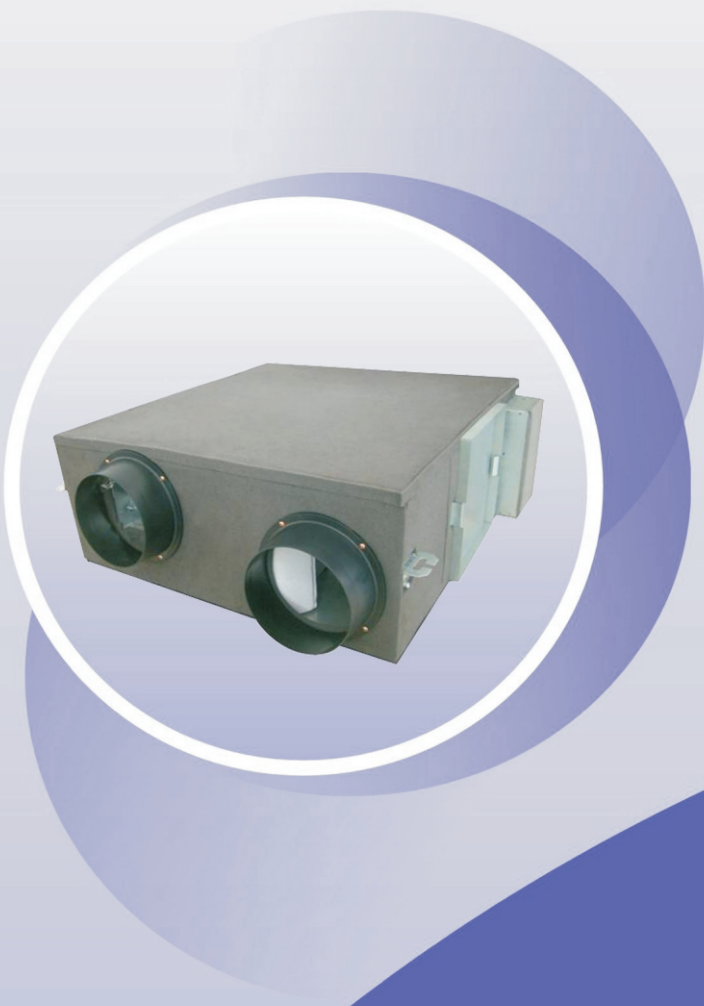


VENTING

making better air conditioners

TECHNICAL SALES GUIDE-50Hz



ENERGY-RECOVERY VENTILATION SYSTEM



The photos of products on the cover are for reference only, the actual appearance of certain product may be different.

CONTENTS

| | |
|------------------------------------|----|
| 1. MODELS LIST..... | 2 |
| 2. NOMENCLATURE..... | 3 |
| 3. FEATURES | 3 |
| 4. PRODUCT DATA..... | 4 |
| 5. DIMENSION..... | 5 |
| 6. BASIC SYSTEM CONFIGURATION..... | 6 |
| 7. MODEL SELECTION REFERENCE..... | 7 |
| 8. WIRED CONTROLLER..... | 8 |
| 9. WIRING DIAGRAM..... | 9 |
| 10. ELECTRIC WIRING WORK..... | 11 |
| 11. ACCESSORIES..... | 12 |

1 MODELS LIST

| Model | Air Flow (m³/h) | | External Static Pressure (Pa) | | PowerSupply | Appearance |
|---------|--------------------|------|----------------------------------|-----|---------------------|---|
| VGR35K | H | 350 | H | 100 | 220V~ 50Hz |  |
| | M | 260 | M | 80 | | |
| | L | 210 | L | 60 | | |
| VGR50K | H | 500 | H | 100 | | |
| | M | 380 | M | 80 | | |
| | L | 300 | L | 60 | | |
| VGR80K | H | 800 | H | 110 | | |
| | M | 600 | M | 85 | | |
| | L | 480 | L | 65 | | |
| VGR100K | H | 1000 | H | 110 | | |
| | M | 750 | M | 85 | | |
| | L | 600 | L | 65 | | |
| VGR150M | 1500 | | 150 | | 380V 3N~ 50Hz |  |
| VGR200M | 2000 | | 150 | | | |
| VGR300M | 3000 | | 220 | | | |

2 NOMENCLATURE

| | | | | | | | |
|---|---|---|--|----|---|--|--|
| V | G | R | | 35 | K | | |
| 1 | 2 | 3 | | 4 | 5 | | |

| NO. | Description | Options |
|-----|---|---|
| 1 | The symbol of energy recovery ventilation | / |
| 2 | The structure of heat exchanger | board |
| 3 | The diathermanous mode | Total heat exchange |
| 4 | Nominal Air Flow | 35:350 m ³ /h ; 50:500m ³ /h ; ; 300:3000 m ³ /h |
| 5 | The phase of power supply | K: single-phase:M:three- phase |

3 FEATURES

3.1 Description

Our living environments are more and more affected by modern civilization. As the application of air-conditioning system and various composite materials, popularization of office equipments and development of closeness of constructions and for the purpose of energy saving and reduction of cost which cause decrease of fresh air volume, harmful gas and pollution of creature won't be diluted properly and replaced. Healthy, energy-saving, simple and reliable fresh-air system and equipment has been the focus for engineers and users. Gree energy recovery ventilation system has solved this problem. This kind of system has two-way air exchange function so that the change of indoor temp is little during air exchange. The indoor air can be efficiently filtered by the air filter. New technology and new materials and special technique applied in the unit can ensure low energy consumption, great performance , low noise and easy installation.

3.2 Standard Features

- 1). Replacement and Ventilation Function
It introduces fresh air into room and discharges indoor air out of room to make you feel comfortable as in the nature.
- 2). Energy-recovery Function
Internal heat exchanger makes the discharged air and introduced air for cooling and heating exchange.
Energy-recovery rate above 70% keeps heat preservation and ventilation realized.
- 3). Low-noise Design
Special low-noise ventilation fan is set.
- 4). Air Filtration and Purge Function
Internal air filter keeps the fresh air introduced into room pure and dustless.
- 5). Various Series and Multiple Specifications
There are various series to match with the buildings of various structures.

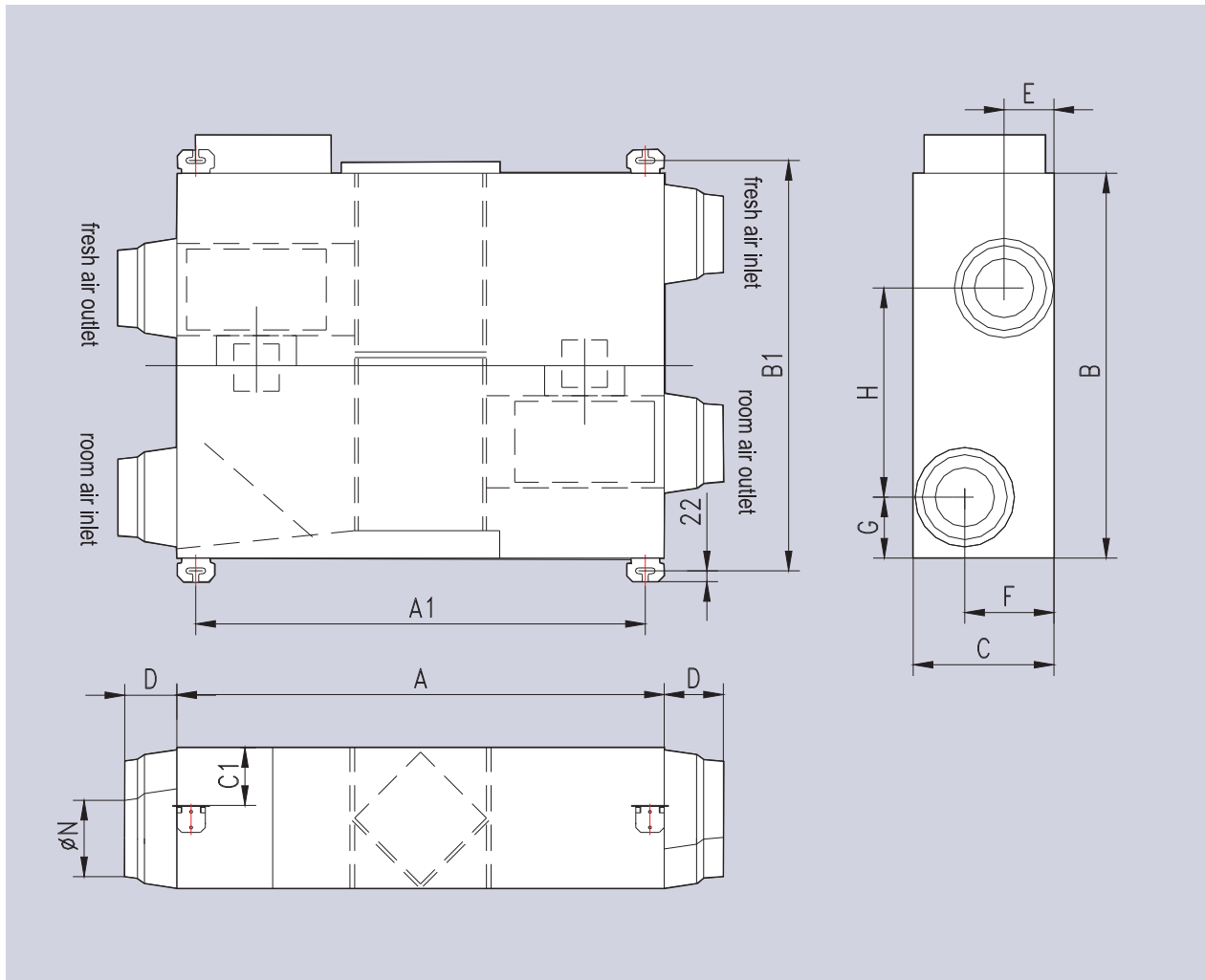
4 PRODUCT DATA

| Model | | | VGR35K | VGR50K | VGR80K | VGR100K | VGR150M | VGR200M | VGR300M | |
|---|-----------|---------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|----|
| Power Supply | | | 220V~ 50Hz | | | | 380V 3N~ 50Hz | | | |
| Air Flow (m³/h) | | H | 350 | 500 | 800 | 1000 | 1500 | 2000 | 3000 | |
| | | M | 260 | 380 | 600 | 750 | | | | |
| | | L | 210 | 300 | 480 | 600 | | | | |
| External Static Pressure (Pa) | | H | 100 | 100 | 110 | 110 | 150 | 150 | 220 | |
| | | M | 80 | 80 | 85 | 85 | | | | |
| | | L | 60 | 60 | 65 | 65 | | | | |
| Temperature Exchanging Efficiency (%) | | H | 71 | 68 | 70 | 75 | 73 | 71 | 70 | |
| | | M | 73 | 70 | 72 | 77 | | | | |
| | | L | 75 | 72 | 74 | 79 | | | | |
| Enthalpy Exchanging Efficiency (%) | | Heating | H | 65 | 62 | 63 | 66 | 65 | 62 | 62 |
| | | | M | 67 | 64 | 65 | 68 | | | |
| | | | L | 68 | 65 | 67 | 70 | | | |
| | | Cooling | H | 61 | 57 | 60 | 62 | 60 | 58 | 58 |
| | | | M | 63 | 59 | 62 | 64 | | | |
| | | | L | 65 | 61 | 64 | 65 | | | |
| Wiring Connections | Quantity | | 3 | | | | 5 | | | |
| | Area | mm² | 1.0 | | | | 1.5 | | | |
| Power Input | | W | 165 | 262 | 400 | 440 | 600 | 950 | 2800 | |
| Operating Sound | | dB (A) | 37 | 39 | 45 | 46 | 48 | 50 | 54 | |
| Dimensions (W×D×H) | Unit | mm | 800×879×306 | 800×879×306 | 832×1016×380 | 832×1016×380 | 1210×1215×452 | 1210×1215×452 | 1340×1550×572 | |
| | Packaging | mm | 1165×1050×315 | 1165×1050×315 | 1320×1087×400 | 1320×1087×400 | 1550×1540×470 | 1550×1540×470 | 1710×1610×700 | |
| Weight | Net | kg | 45 | 45 | 70 | 70 | 135 | 135 | 240 | |
| | Gross | kg | 53 | 53 | 78 | 78 | 152 | 152 | 280 | |

Note

1. The models of 200v power supply type has 3types fan speed and the models of 380v have one fan speed.
2. The temperature exchange efficiency and enthalpy exchange efficiency are tested under these testing conditions as below:
 - (1) Cooling efficiency: Indoor air 27°CDB, 20°CWB, outdoor temperature 35°CDB, 29°CWB
 - (2) Heating efficiency: 20°CDB, 14°CWB 。 Outdoor air temperature: 5°CDB, 2°CWB 。
3. Sound power level according to ISO 5151-sound pressure calculated at 1m distance.
4. Operation condition: ambient temperature-15°C-50°C, releivate humidity less than 80%RH

5 DIMENSION



Unit: mm

| Model | A | A1 | B | B1 | C | C1 | D | E | F | G | H | N |
|---------|------|------|------|------|-----|-----|-----|-----|-----|-----|-----|-----|
| VGR35K | 879 | 823 | 800 | 852 | 306 | 125 | 90 | 125 | 175 | 136 | 416 | 197 |
| VGR50K | 879 | 823 | 800 | 852 | 306 | 125 | 90 | 125 | 175 | 136 | 416 | 197 |
| VGR80K | 1016 | 960 | 832 | 884 | 380 | 165 | 90 | 150 | 230 | 155 | 372 | 246 |
| VGR100M | 1016 | 960 | 832 | 884 | 380 | 165 | 90 | 150 | 230 | 155 | 372 | 246 |
| VGR150M | 1215 | 1159 | 1210 | 1262 | 452 | 200 | 100 | 190 | 277 | 178 | 737 | 297 |
| VGR200M | 1215 | 1159 | 1210 | 1262 | 452 | 200 | 100 | 190 | 277 | 178 | 737 | 297 |

7 MODEL SELECTION REFERENCE

The fresh air flow of comfortable air-condition room

| Room type | No smoking | | | | | Little smoking | | Much smoking |
|--|-----------------|-----------|--------------------|-----------|---------------|----------------|-----------------------|--------------|
| | Common sickroom | gymnasium | Cinema/supermarket | office | Computer room | restaurant | high-grade guest room | boardroom |
| The need for fresh air per person Q (m ³ /h) | 17~42 | 8~20 | 8.5~21 | 25~62 | 40~100 | 20~50 | 30~75 | 50~125 |
| The frequency of fresh air change (degree/h) | 1.06~2.65 | 0.50~1.25 | 1.06~2.66 | 1.56~3.90 | 2.50~6.25 | 1.25~3.13 | 1.88~4.69 | 3.13~7.81 |

NOTE:

1. It should be both considered that the room space and the quantity of the person inside to affirm the fresh air flow volume. Based on the data in the table, Calculate the fresh air flow according to the need for fresh air per person and “the frequency of fresh air change”, then choose the bigger one as the model selection basis.
2. For special industry such as hospital (surgery, special sickroom), laboratory, workshop, the fresh air flow volume should be calculated according to the interrelated criterion of the industry.

Example:

A computer room, area $S=60\text{m}^2$ and net height $h=3\text{ m}$, the quantity of the persons $n=10$, .

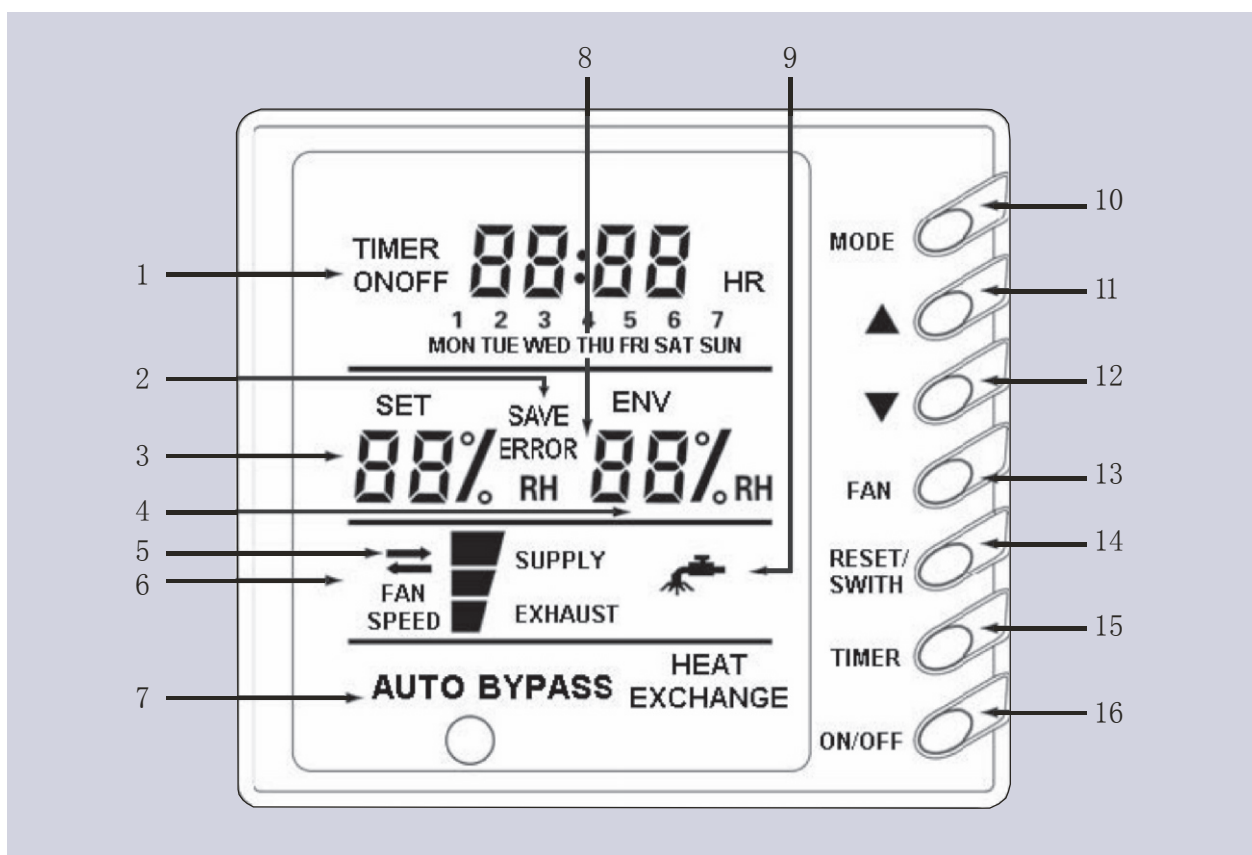
If we calculate the fresh air flow according to “the need for fresh air per person,” the result is $Q_1=n\times q=10\times 70=700\text{m}^3/\text{h}$ (the need for fresh air of one person $q=70\text{m}^3/\text{h}$)

If we calculate the fresh air flow according to “the frequency of fresh air change,” the result is $Q_2=p\times s\times h=5\times 60\times 3=900\text{m}^3/\text{h}$ (the frequency of fresh air change $p=5$ times per hour).

$Q_2>Q_1$, so Q_2 is the model selection basis. Choose VGR80K or VGR100K.

(Which is fit or not bases on the actual requirement of projects, such as the fixing space of the machine , the distance the flow can reach, and so on)

8 WIRED CONTROLLER



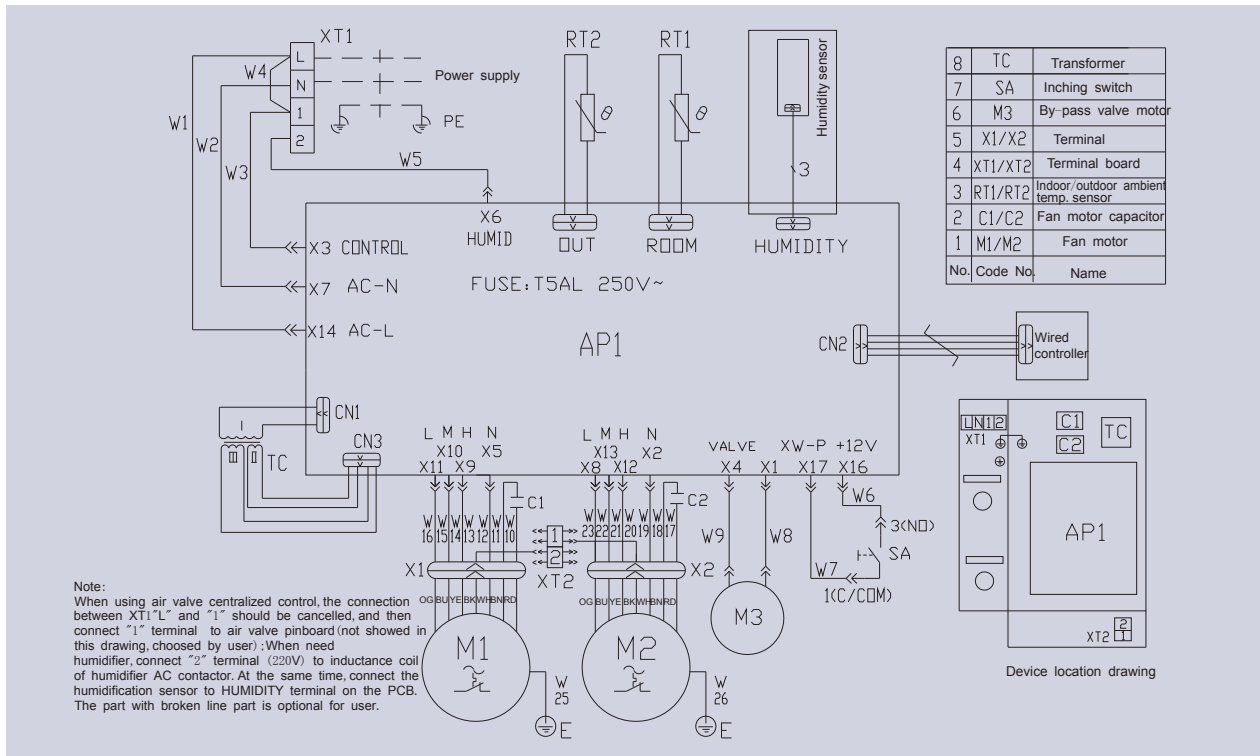
Front panel of wired controller

| Constitution of wired controller | | | |
|----------------------------------|---|----|----------------------------------|
| 1 | Timer display | 10 | Mode button |
| 2 | Energy-saving status display | 11 | Setting humidity increase button |
| 3 | Setting humidity display | 12 | Setting humidity decrease button |
| 4 | Ambient humidity display | 13 | Fan speed button |
| 5 | Air exchange mode (half-half air exchange, discharge and supply)* | 14 | Reset/Switch button |
| 6 | Fan speed display (high, mid, low)* | 15 | Timer button |
| 7 | Mode(auto, by-pass, heat exchange) | 16 | On/Off button |
| 8 | Error status display | | |
| 9 | Cleaning status of filter display | | |

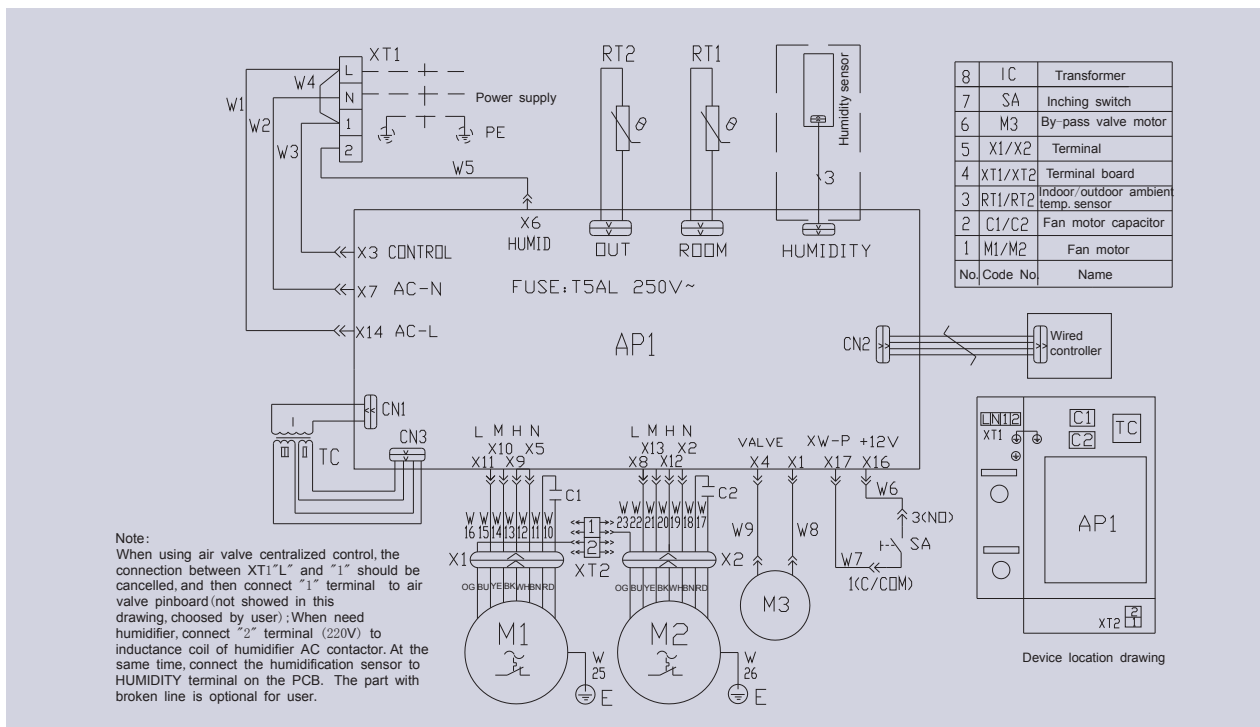
Notice: For VGR150M and VGR200M, there is no air discharge and supply function in Item 5 and the fan speed in Item 6 is unadjustable. The wired controller is not apply to VGR300M.

9 WIRING DIA GRAM

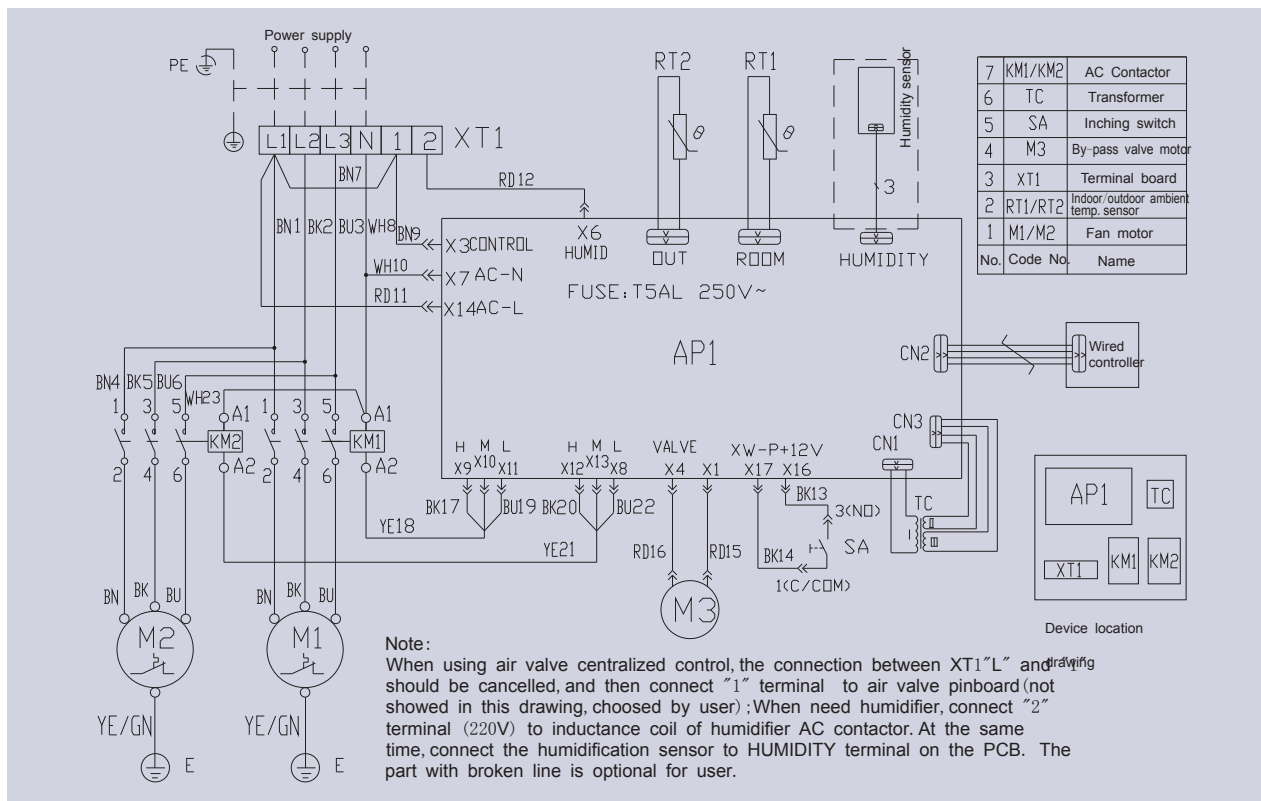
VGR35K, VGR80K, VGR100K, Energy recovery ventilation system



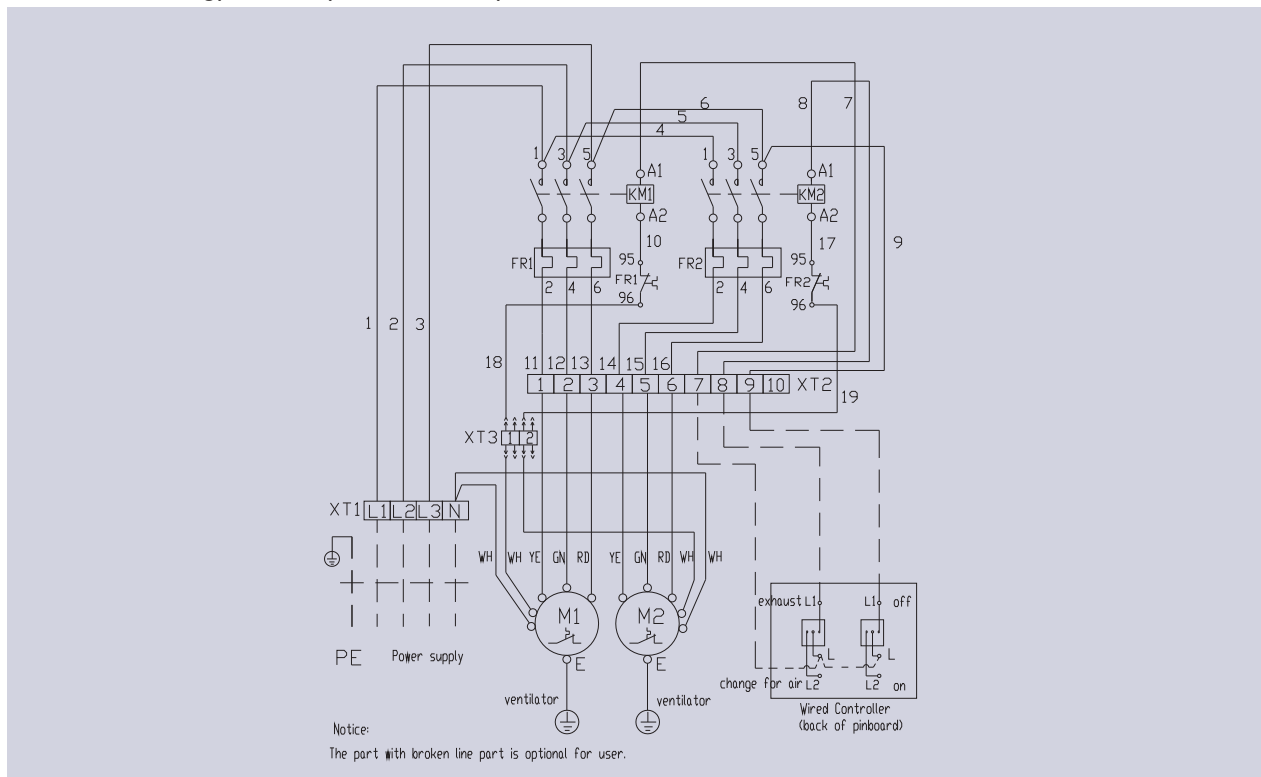
VGR50K Energy recovery ventilation system



VGR150M, VGR200M Energy recovery ventilation system

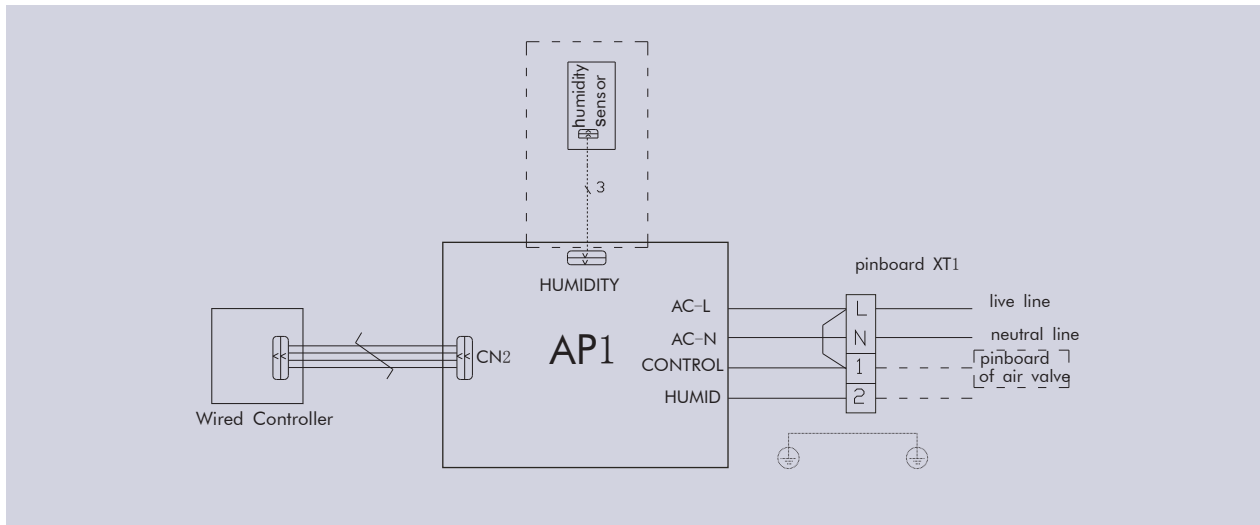


VGR300M Energy recovery ventilation system



10 ELECTRIC WIRING WORK

- ◆ VGR35K, VGR50K, VGR80K, VGR100K, Energy recovery ventilation system.

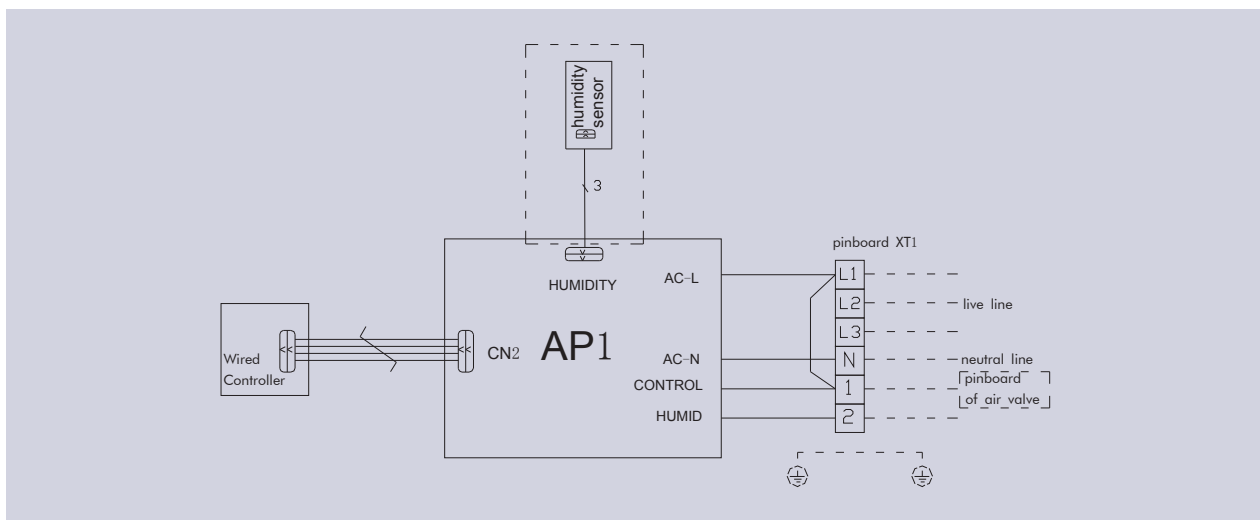


◆When need humidifier, connect “2” terminal(220V~Live line)to inductance coil of humidifier AC contactor. At the same time, connect the humidification sensor to HUMIDITY terminal on the PCB.

◆When using air valve centralized control, the connection between “b” and “1” should be cancelled, and then connect “1” terminal to air valve pinboard.

◆The part with broken line part is optional for user.

- ◆ VGR150M, VGR200M Energy recovery ventilation system.

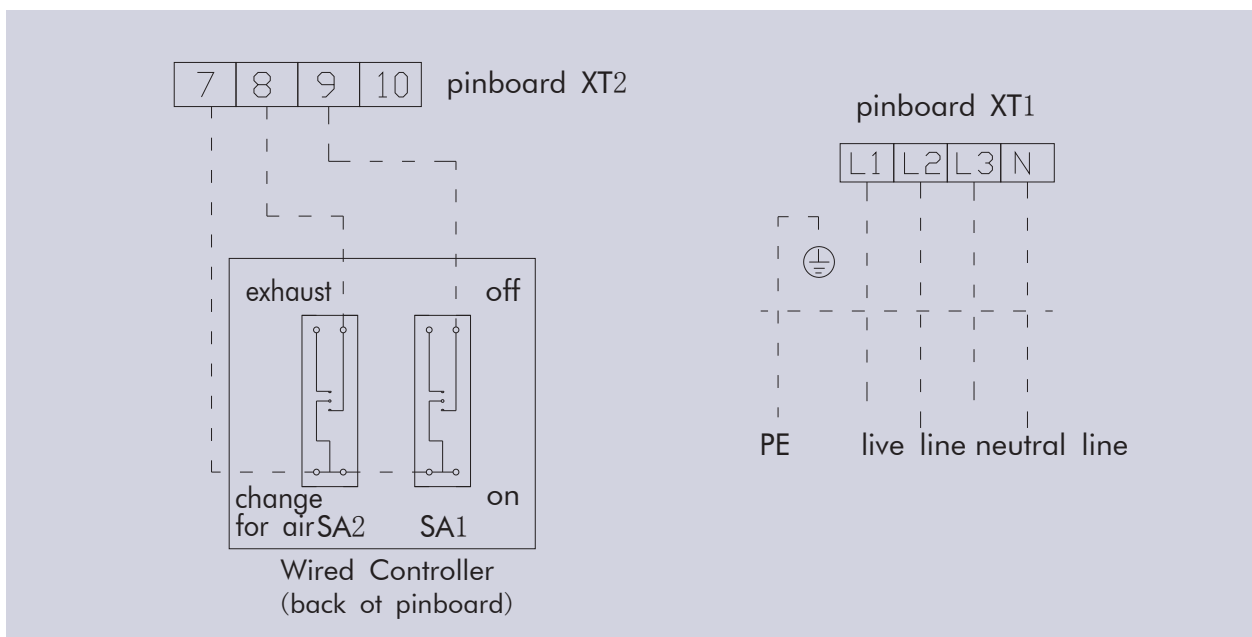


◆When need humidifier, connect “2” terminal(220V~Live line)to inductance coil of humidifier AC contactor. At the same time, connect the humidification sensor to HUMIDITY terminal on the PCB.

◆When using air valve centralized control, the connection between “L1” and “1” should be cancelled, and then connect “1” terminal to air valve pinboard.

◆The part with broken line part is optional for user.

◆ VGR3OOM Energy recovery ventilation system



Notice: The part with broken line part is optional for user.

11 ACCESSORIES

| Model | Accessories name | Standard | Optional | Provide for oneself |
|-----------------------------------|------------------|----------|----------|---------------------|
| VGR35, 50, 80, 100, 150, 200, 300 | Wired Controller | ✓ | | |
| VGR35, 50, 80, 100, 150, 200 | Humidity sensor | | ✓ | |
| VGR35, 50, 80, 100, 150, 200 | Humidifier | | | ✓ |