

## REGENERATION DISCHARGE UNIT

### INSTRUCTION MANUAL

This instruction manual describes the regeneration discharge unit made by our company.

All users are requested to completely read through and understand this manual before use, and to handle the unit with utmost care.

Keep this manual for future reference.

### 1. Application

The regeneration discharge unit is intended for absorbing energy in its circuit, which is generated at slowdown of the actuator motor.

It is very useful when load inertia is expected to exceed the permissible value or when generation of too much energy is expected, and prevents generation of overvoltage in the robot controller.

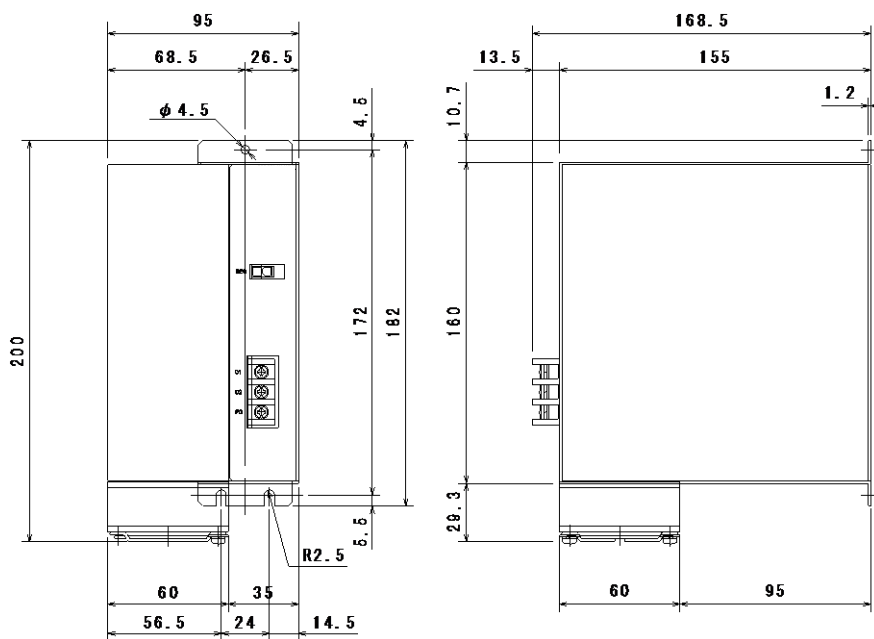
### 2. Specifications

Items	Specifications	Remarks
Type	KCA-ABSU-8000	
Regeneration operating voltage	DC421V	
Cooling system	Forced air cooling system (use of cooling fan)	
Specification of cooling fan	DC24V, 0.1A	Brushless DC motor
Protection function	The thermo-relay operates when the discharge resistor temperature has reached 150°C.	Contact capacity AC125V, 6 A AC250V, 3 A
Applicable controller	KCA-25-M80/S80	750W controller
Environmental conditions		
• Place of installation	Indoor	
• Operating temperature	0°C ~ 40°C	
• Operating humidity	30 % ~ 90 %RH, non-condensing	
• Operating atmosphere	No corrosive gas is involved.	
• Storage temperature	-20°C ~ 70°C	
• Storage humidity	30 % ~ 90 %RH, non-condensing	
• Storage atmosphere	No corrosive gas is involved.	
• Vibration	9.8 m/S <sup>2</sup> or less	
Outer dimensions	95 (W) □ 200 (H) □ 169 (D)	Including cooling fan.
Mass	2.9 kg	

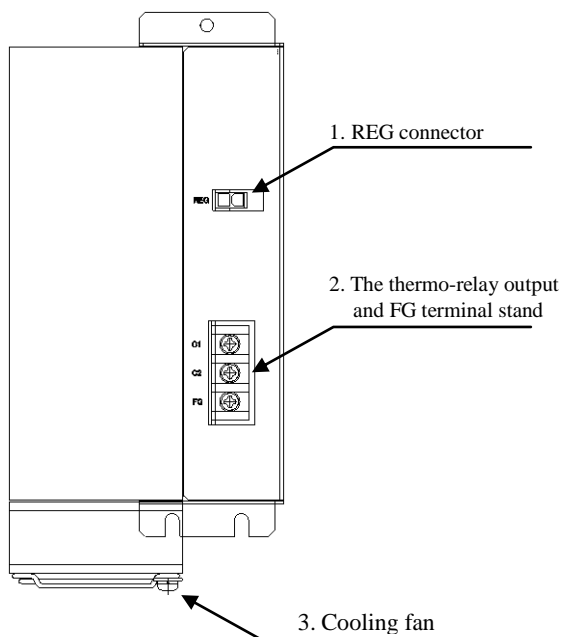
**Caution:** When this unit is used together with a controller other than the controller specified above, it may malfunction or may not operate at all.

### 3. Outer Dimensions and Name of all parts

#### 3.1 Outer Dimensions



#### 3.2 Name of all parts



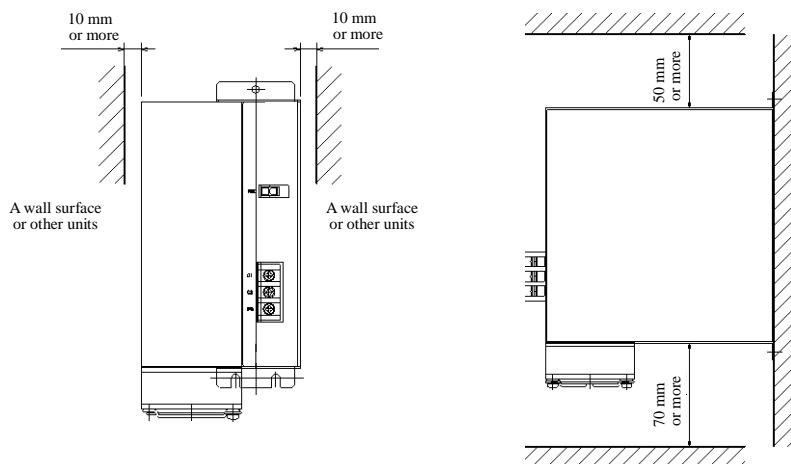
1. REG connector  
The harness of accessories is connected to this connector.
2. The thermo-relay output and FG terminal stand(M4)
  - C1,C2 terminal  
This terminal outputs the thermo-relay contact. C1-C2 interval opens when internal resistance heating is detected.
  - FG terminal  
Carry out grounding
3. Cooling fan  
This fan cool this unit. Please supply DC24V surely to a lead, and operate.  
RED : DC24V(0.1A)  
BLACK : GND

## 4. Installation

This unit is adopted the forced air cooling system using a cooling fan.

Be sure to install it lengthwise, operate the cooling fan and keep enough spaces as shown in the drawing below not to blockade the vent holes on the top and bottom sides. If ventilation is incomplete, it cannot be operated to its full capacity and may be caused a trouble.

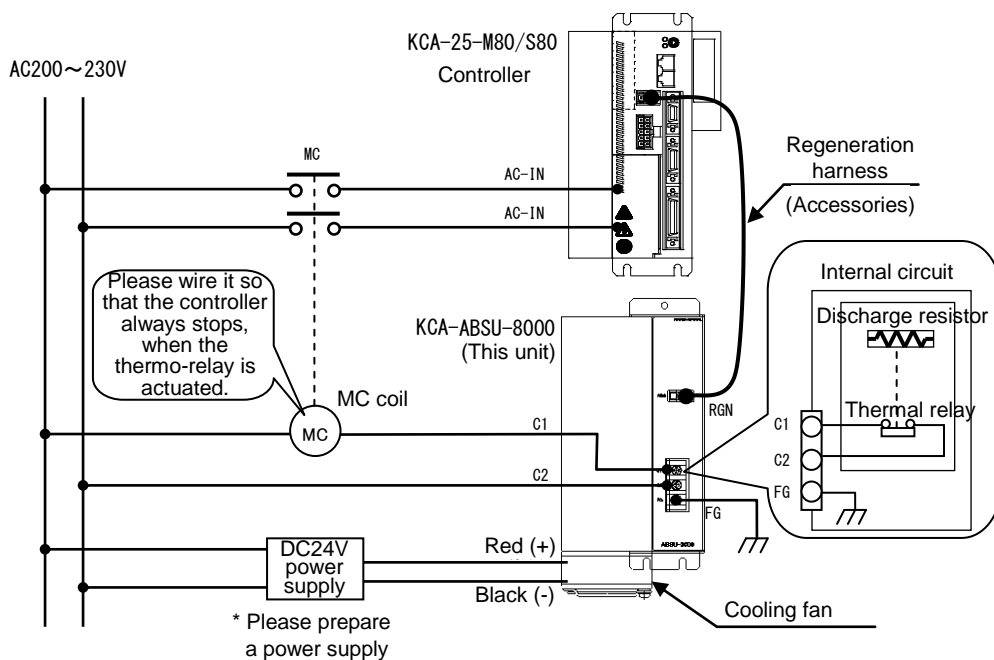
In use, the main body may become the high temperature. Please install it at intervals more than both sides 10mm from a wall surface or other units adjacent to the main body.



Take careful precautions to prevent entry of contaminant such as liquid and dust into the unit from the vent holes.

This unit is not dust-proof. Avoid using it in a place contaminated heavily.

## 5. Example of Connection



## 6. Cautions on Use

- Please use this unit with an appropriate controller.
- Please operate the cooling fan when this unit is used.
- A thermo-relay is incorporated in this unit, which operates when the discharge resistor temperature reaches 150°C.
- When this relay is actuated, output terminals C1–C2 of the regeneration discharge unit become open.
- Create the sequence so that the controller always stops, when the thermo-relay is actuated.
- Once the thermo-relay is actuated, it takes about three minutes until it is reset (i.e., restored to a normal state).
- For accident prevention, please attach a terminal stand cover after wiring, and use it.

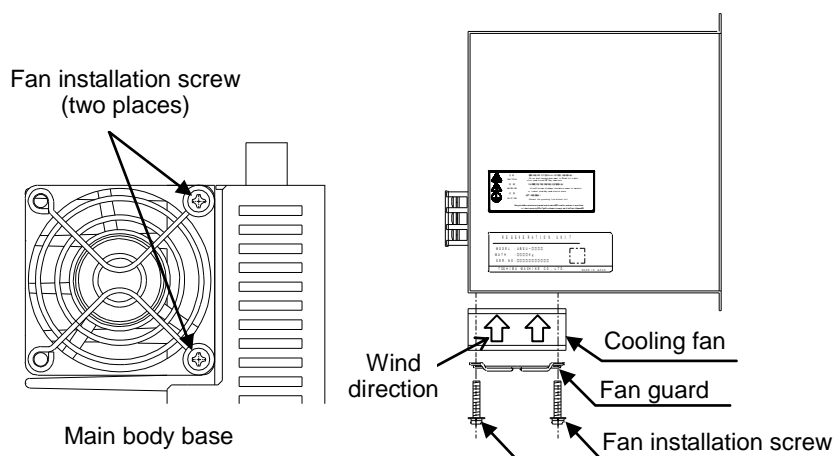
## 7. Maintenance

- Please turn off the power supply of equipment for safety when the cooling fan is exchanged.
- Please demand the cooling fan for exchange to our nearest office, agency.

Part name	Product code
Cooling fan	A3831810

- The method of exchanging the cooling fan.

Please remove fan installation screw (two places) at the main body base and exchange the cooling fan.



When the cooling fan is reinstalled, please pay attention to the direction of the cooling fan and do not forget to install the fan guard. Also pay enough attention not to sandwich the lead wire.