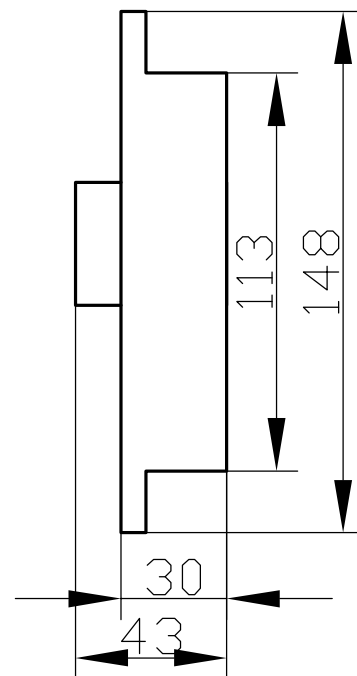
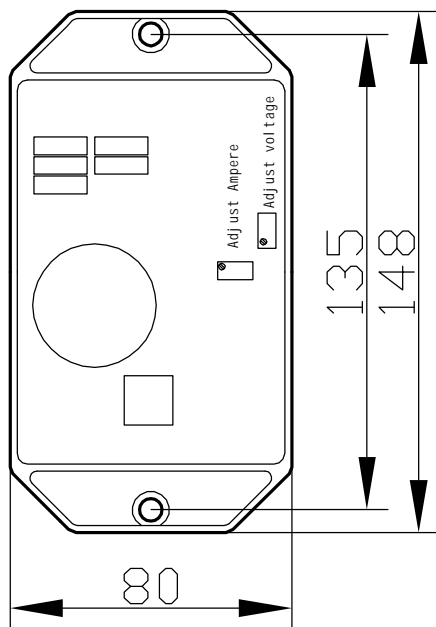


# BRUSH GENERATOR MANUAL INSTRUCTIONS

MODEL: KI-DAVR-50S、KI-DAVR-50S-A、KI-DAVR-50S3、KI-DAVR-50S3-A



D I M E N S I O N

## 1. SPECIFICATION

**SENSING INPUT** Auxiliary winding voltage ≤135VAC  
 Sample winding voltage 17VAC  
 Starting voltage : 5VAC

Capacitive protection voltage: ≥260VAC  
 EMI suppression: Built-in surge absorber(varistor )

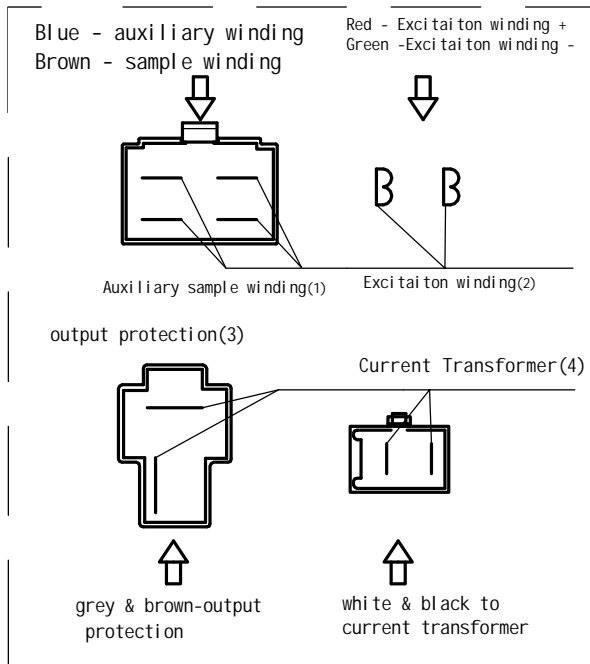
**Accuracy** ±5%( engine speed change<4%)

**Voltage range:** 185~260V

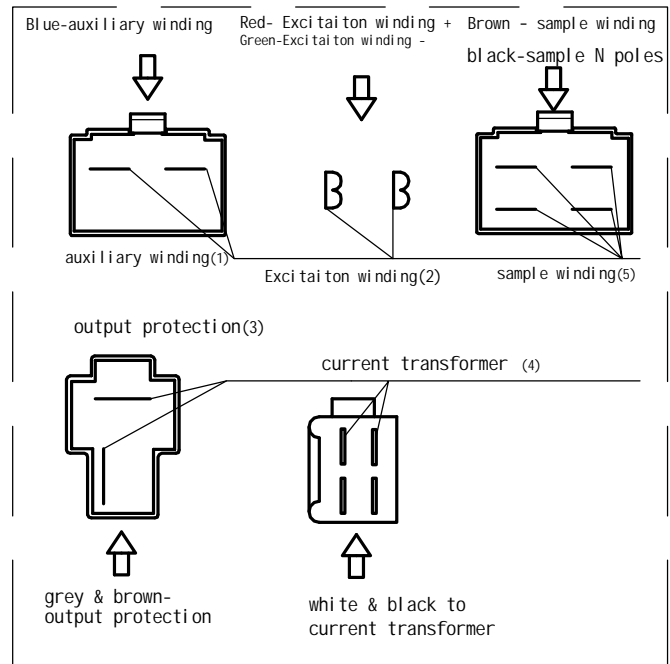
**Size(L\*W\*H)** 148mm\*80mm\*43mm

**Weight:** 420g

## 2. Connection



**Figure 1: 1-phase connection**  
 【KI-DAVR-50S、KI-DAVR-50S-A】



**Figure 2: 3-phases connection**  
 【KI-DAVR-50S3、KI-DAVR-50S3-A】

### 2.1 Wiring of auxiliary winding and sampling winding

1phase[ Figure1] : The two blue wires in the auxiliary and sampling winding (1) are connected to the auxiliary winding of the exciter, and the two brown wires are connected to the voltage sampling winding of the exciter ; ;

3phases[Figure2] : The two blue wires in the auxiliary winding (1) are connected to the auxiliary winding of the exciter, the three brown wires in the sampling winding (5) are connected to the voltage sampling winding of the exciter, and one black wire is connected to the N pole of the center line of the sampling winding .

### 2.2 Excitation field wiring "+, -"

The red wire of the field winding (2) is connected to the "+" of the exciter's magnetic field, and the green wire is connected to the "-" of the exciter's magnetic field.

### 2.3 Protection output wiring

The brown and gray wires of the protection output (3) are connected to the protection output;  
 [Note: The protection output is a relay output]

### 2.4 Current transformer wiring

1-phase [Figure 1]: The white and black wires of the current transformer (4) are connected to the secondary of the current transformer;

3-phs [Figure 2]: The three white wires of the current transformer (4) are connected to the secondary of the current transformer, and the black wire is connected to the center line of the current transformer

### 3.3. AVR DIAGRAM AND MANUAL

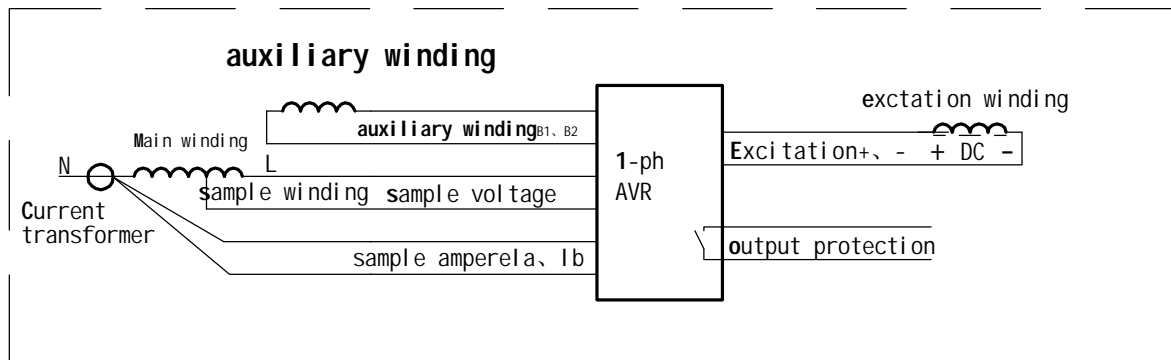


Figure 3: 1phase generator diagram

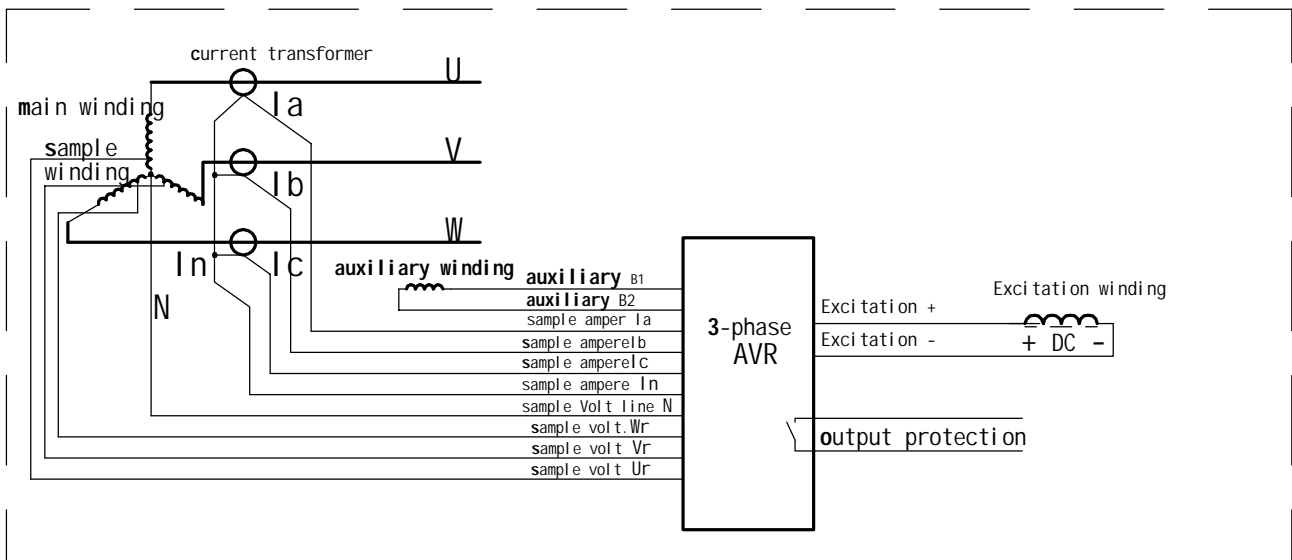


Figure 4: 3phase generator diagram

## 3 3AVR application

### 3.1 Working principle

The brushed generator AVR automatic voltage regulator is a partially sealed electronic regulator that controls the output voltage of the AC brushed generator by adjusting the generator excitation current.

### 3.2 Generator rated voltage regulation

Slowly adjust the potentiometer of the AVR to make the output voltage of the unit reach the rated value; (clockwise increase, counterclockwise decrease)

### 3.3 Current protection point adjustment

When the generator is loaded and the current reaches the protection point current, slowly adjust the current potentiometer to the moment when the overload indicator turns from dark to bright;

### 3.4 AVR protection

#### 3.4.1 Over Ampere protection

The current transformer is used to judge the output current of the motor, and the unit will be stopped when overloaded;

#### 3.4.2 Capacitive protection

If the auxiliary winding input voltage is overvoltage, the unit operation will be stopped.

### 3.5 AVR models & difference

1-phase AVR:

KI-DAVR-50S : Apply for all 1phase function;

KI-DAVR-50S-A : without over ampere protection.

3-phases AVR:

KI-DAVR-50S3: Apply for all 3phases function;

KI-DAVR-50S3-A: without over ampere protection