

# Instruction Manual

*TDGC2、TSGC2 VOLTAGE REGULATORS*

Please read the Instruction Manual carefully before using.

## USAGE

Series TDGC<sub>2</sub> and TSGC<sub>2</sub> are the fourteenth lot of energy conservation products of electromechanical industry. The series products are provided with many characteristics. Such as undistorted waveform, small volume, light weight, high efficiency and reliable operation and soon. These can be widely used for regulating voltage, controlling temperature, regulating speed, adjusting light and controlling power in chemical industry, metallurgy, instrument, machine manufacture, light industry, scientific experiment, public facilities and household appliances. These series products are divided into new and old types. The one with 2 is new type, and the one do not with 2 is old type.

## OPERATING PRINCIPLE

Voltage regulator is the autoconnected transformer that the turn ratio can be adjusted continuously. When turning the hand, it slides on the polished surface of the coil with the aid of the moveable brush to change the turn ratio. So then the output voltage can be adjusted smoothly from zero to the maximum value.

## SERVICE CONDITIONS

- ① Ambient temperature:  
the maximum temperature is +40°C, the minimum temperature is -5°C.
- ② Sea level elevation:  
The sea level elevation of the installation place of the voltage regulator cannot be more than 1000m.
- ③ Air relative humidity:  
The monthly relative humidity of the wettest month is 90%. Simultaneously the average temperature of the month is 25°C.
- ④ Line-voltage wave form:  
The line-voltage wave form is sinusoidal wave or approximates the sinusoidal wave.
- ⑤ There is no gas, steam, chemical deposition, dust and dirt that can seriously affect the insulation of the voltage regulator and other explosive and erosive medium in the installation place.
- ⑥ There is no serious vibration in the installation place.
- ⑦ Use in the house.
- ⑧ It is not allowed to use in parallel connection.

## USAGE AND MAINTENANCE

- 1、The voltage regulator is divided into single-phase and three-phase series. A.X wring terminals of the single-phase voltage regulator are input terminals, and a.x wring terminals are the output terminals. A,B and C wring terminals of the three-phase voltage regulator are input terminals and O wring terminal is star (Type Y) neutral point.
- 2、The insulation resistance of the wring terminal case of newly installed or long-term idle voltage regulator must be measured by the megger of 500V before operating. The value should not be less than 2MΩ.
- 3、The input source voltage should conform to the rated input voltage on the nameplate of the voltage regulator.
- 4、Pay attention that the load current cannot exceed the rated value when using. Otherwise, the life of the voltage regulator will be reduced or it will be burned down.
- 5、The using conditions should be tested usually. The contact surface of the coil and the brush should be kept clean. If the brush has worn too much or with defect, it should be replaced timely by a new one of the same specification.
- 6、It is not allowed to use many voltage regulators in parallel connection.
- 7、The voltage regulator must be grounded well to ensure safe using.

## SPECIFICATION AND DATA

Form 1.

Model	Rated capacity kVA	Phase number	Rated frequency Hz	Rated input (V) voltage	Output voltage scope (V)	Rated output current (A)
TDGC <sub>2</sub> -0.5	0.5	1	50	220	0-250	2
TDGC <sub>2</sub> -1	1	1	50	220	0-250	4
TDGC <sub>2</sub> -2	2	1	50	220	0-250	8
TDGC <sub>2</sub> -3	3	1	50	240	0-260	12
TDGC <sub>2</sub> -5	5	1	50	220	0-250	20
TDGC <sub>2</sub> -10	10	1	50	220	0-250	40
TDGC <sub>2</sub> -15	15	1	50	220	0-250	60
TDGC <sub>2</sub> -20	20	1	50	220	0-250	80
TDGC <sub>2</sub> -30	30	1	50	220	0-250	120

**TDGC<sub>2</sub>、TSGC<sub>2</sub> VOLTAGE REGULATORS**

Model	Rated capacity kVA	Phase number	Rated frequency Hz	Rated input(V) voltage	Output voltage scope(V)	Rated output current(A)
TSGC <sub>2</sub> -3	3	3	50	380	0-430	4
TSGC <sub>2</sub> -6	6	3	50	380	0-430	8
TSGC <sub>2</sub> -9	9	3	50	380	0-430	12
TSGC <sub>2</sub> -12	12	3	50	380	0-430	16
TSGC <sub>2</sub> -15	15	3	50	380	0-430	20
TSGC <sub>2</sub> -20	20	3	50	380	0-430	27
TSGC <sub>2</sub> -30	30	3	50	380	0-430	40
TSGC <sub>2</sub> -40	40	3	50	380	0-430	54

The voltage regulator is permitted to exceed the rated current value for a short time. But cannot exceed the standard in Form 2.

Form 2.

Overload	Cannot exceed(min)
20	60
40	30
60	6

**THE CONTACT VOLTAGE REGULATOR PRODUCTS CARRY OUT THE STANDARD ZBK42004.**

- 1、Strictly forbid hot-line work by the unprofessional personnel.
- 2、The company does not responsible for the problems in the aspects of safety and quality,if maintaining or replacing the parts that are not provided by the company.

**ATTACHMENT**

An Instruction Manual