

# SG


Three-phase dry type transformer

## OPERATION INSTRUCTION

Standards: Q/ZT 525

**CNC**

Deliver  
Power For Better Life

-  Before installing and using this product, please read this manual carefully and pay more attention to safety.

## **1 General**

### **1.1 Main purpose and scope of application**

SG series three-phase dry-type AC voltage converter (hereinafter referred to as transformer) is suitable for AC 50Hz-60Hz. The rated power supply voltage is 1200V and below. It can also be used as a small power supply.

### **1.2 Standard: Q/ZT 525**

## **2. Operating and installation conditions**

2.1 Altitude not exceeding 2000m;

2.2 The maximum ambient temperature is +40°C; the minimum ambient temperature is -25°C.

2.3 The relative humidity of the atmosphere should not exceed 50% when the surrounding air temperature is +40°C. There can be higher relative humidity at lower temperatures. The monthly average maximum relative humidity in the wettest month is 90%, and the monthly average minimum temperature in that month is +25°C. Considering the condensation on the product surface caused by temperature changes.

2.4 In the ambient air, there should be no dirt or explosive media that seriously affect the insulation of the transformer, and there should be no corrosive harmful gases or dust: during use, there should be no erosion of the transformer by water, rain, or snow.

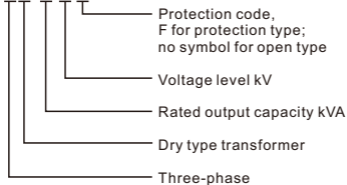
2.5 There is no severe vibration or turbulence at the installation site.

2.6 The power supply voltage waveform is the actual sine wave, and the three-phase power supply is approximately symmetrical.

### 3 Type designation and technical data

#### 3.1 Model and meaning

S G - □ / □ □



#### 3.2 Rated duty system:

Three-phase transformers are suitable for long-term duty under rated load.

#### 3.3 Product type and structure

The transformer is a three-phase dry-type transformer.

3.3.1 The iron core of the transformer is made of cold-rolled silicon steel sheet, and the two sides of the iron yoke are made of section steel or steel plate

as clamps, which are fastened by studs.

3.3.2 According to the structure, the transformer is divided into two types: open type and protective type. The protective type is made of steel plate and processed into a box shell. The transformer is inside the box shell. Conventional protection products of 3kVA and below are wired outside the shell, and the front and rear panels of the shell are respectively equipped with entry and exit terminals. In addition, protective products can be equipped with voltage and current monitoring instruments according to user requirements. Large-capacity transformers of 80kVA and above are equipped with axial flow cooling fans inside the housing, and moving wheels are installed at the bottom of the housing.

#### 3.4 Product varieties

Transformers are classified according to their rated output capacity, and all transformers of the same type and capacity are of the same variety. The variety of transformers is recommended to be selected according to the R10 series priority number system.

#### 3.5 Product specifications

Transformers of the same variety are divided into specifications according to different combinations of rated power supply voltage and rated output voltage.

Products with the same type, variety, rated power supply voltage and rated output voltage combination are products of the same specification. The basic specifications of the transformer are shown in Table 2

3.6 Rated output capacity  
Rated output capacity is expressed in kVA.

3.7 The combination of rated power supply voltage and rated output voltage shall be selected according to Table 1

Table 1 Voltage combination

Rated power supply voltage $U_e$	1140, 660, 380
Rated output voltage $U_n$	1140, 660, 380, 220, 127, 110

Note 1: The rated power supply voltage and rated output voltage listed can be combined as needed. The rated output voltage can also be obtained by tapping the winding with a higher rated output voltage to obtain a lower rated output voltage.

Note 2: Voltages other than those listed in the table shall be determined through consultation between the user and the manufacturer.

Note 3: The allocation of rated output capacity at each rated output voltage is determined according to user requirements.

### 3.8 Technical data

Model (KVA)	Voltage		Coupling group tab	Shape dimension			Mounting dimension		The box dimension (Copper)			The box dimension (Aluminum)			
	Input	Output		Bmax	Dmax	Emax	A	C±5	K x J	Bmax	Dmax	Emax	Bmax	Dmax	Emax
SG- 300VA				180	95	185	100	75	6×14						
SG- 500VA	660	380	Y/yno (Y/Yo)	180	95	185	100	75	6×14						
SG- 1000VA			Y/d (Y/ )	180	110	185	100	90	6×14						
SG- 1600VA	400	220		230	125	205	130	100	9×16						
SG- 2000VA	380	110	D/y ( /y)	230	125	205	130	100	9×16						
SG- 3000VA	200	36	D/d ( / )	240	145	215	130	120	9×16						
SG- 4000VA				240	155	235	130	130	9×16						
SG- 5000VA				320	160	255	180	115	10×20	400	330	480	400	330	480

Model (KVA)	Voltage		Coupling group tab	Shape dimension			Mounting dimension		K x J	The box dimension (Copper)			The box dimension (Aluminum)		
	Input	Output		Bmax	Dmax+5	Emax	A	C±5		Bmax	Dmax	Emax	Bmax	Dmax	Emax
SG-6000VA				300	165	280	180	130	10×20	400	330	480	400	330	480
SG-8000VA	660	380	Y/yno (Y/Yo)	300	175	280	180	140	10×20	450	360	480	450	360	480
SG-10kVA				360	180	305	215	140	10×20	450	360	480	450	360	480
SG-15kVA	400	220	Y/d (Y/ )	360	200	335	215	155	10×20	450	360	480	490	400	540
SG-20kVA	380	110	D/y ( /y)	420	210	350	250	170	10×20	490	400	540	490	400	540
SG-25kVA	200	36	D/d ( / )	420	220	350	250	180	10×20	490	400	540	490	400	540
SG-30kVA				420	230	380	250	190	10×20	490	400	540	580	410	630
SG-40kVA				480	240	410	280	205	12×20	730	490	780	480	240	410
SG-50kVA				680	350	550	420	220	Φ18	800	510	840	800	510	840

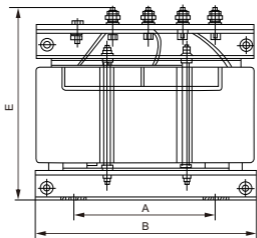
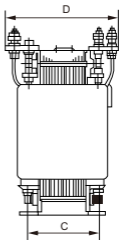
Model (KVA)	Voltage		Coupling group tab	Shape dimension			Mounting dimension		K×J	The box dimension (Copper)			The box dimension (Aluminum)		
	Input	Output		Bmax	Dmax±5	Emax	A	C±5		Bmax	Dmax	Emax	Bmax	Dmax	Emax
SG-60KVA	660	380	Y/yno (Y/Yo)	680	380	550	440	230	Φ18	800	510	840	800	510	840
	400	220	Y/d (Y/ )												
SG-80KVA	380	110	D/y ( /y)	750	400	620	480	250	Φ20	850	510	840	850	510	840
	200	36	D/d ( / )	780	420	650	500	250	Φ22	900	550	890	900	550	890



### 3.9 Electrical schematic diagram and connection group diagram



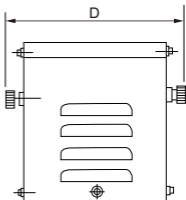
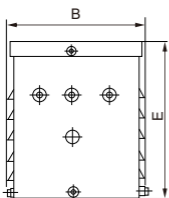
The box of SG (optional)



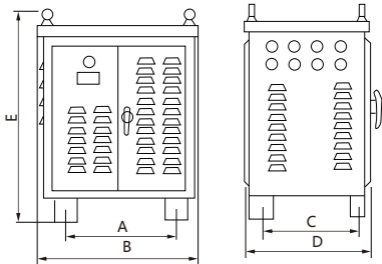
Note 1: The rated power supply voltage and rated output voltage listed can be combined as needed. The rated output voltage can also be obtained by tapping the winding with a higher rated output voltage to obtain a lower rated output voltage.

Note 2: Voltages other than those listed in the table shall be determined through consultation between the user and the manufacturer.

Note 3: The allocation of rated output capacity at each rated output voltage is determined according to user requirements.



0.3~3KVA



5~100KVA

#### 4 Instructions for use

4.1 Open the packaging box, take out the manual and this product, carefully read the "User Manual" for correct use.

Before use, it is necessary to test whether the power grid voltage is the rated input voltage value, with an allowable deviation of +5%; For products with Y or YO input connections, if there are +5% and -5% adjustable taps, when the voltage is less than 5% of the rated voltage, the input power can be connected to the -5% tap; When the voltage is 5% higher than the rated voltage, the input power can be connected to the +5% tap to maintain a constant output voltage or reduce deviation;

If it exceeds this range, consideration should be given to adding a regulated power supply to the front end.

4.3 The installation location should comply with the provisions of Article 2 on normal and installation conditions, and be reliably fixed to ensure that it is not subject to vibration and erosion.

4.4 Connect the wires according to the identification, check for errors, and then turn on the power for use.

## **5 Precautions**

Before purchasing, estimate the total capacity of the electrical appliances you are using and choose a transformer with a considerable margin.

5.2 Transformers are not allowed to be overloaded. Users are considering adding fuses or circuit breakers at the output end of the transformer for load limiting use.

Before use, carefully check the data on the nameplate and attachment instructions to see if they meet your requirements. Only after confirming that they are correct can they be installed and used.

5.4 When using, a bus with a sufficiently large cross-section should be selected for connection, and the nuts of the wiring terminals should be tightened in a timely manner. The grounding screw should be reliably grounded.

5.5 After power on, the iron core and coil of the transformer will heat up, which is a normal phenomenon. If the temperature rises too high or even smokes, the power supply should be cut off, and the capacity of the electrical appliances used should be rechecked and adjusted.

5.6 During transportation, collision should be avoided as much as possible and moisture should not be affected; Please pay attention to maintenance when using.

## **6 After sales service**

If the product is damaged or unable to function properly due to poor manufacturing quality within 12 months from the date of product installation, but no more than 18 months from the manufacturer's delivery to the user, provided that the user complies with the rules for storage, installation, and use, the manufacturer shall be responsible for warranty repair work.

## **7 Ordering instructions**

When purchasing products, users should indicate the following points:

- (1) Basic model, specifications, capacity, and quantity of transformers:
- (2) Rated input and output voltage values of transformers (referring to line voltage):
- (3) Transformer input and output voltage connection group label (connection method):
- (4) Usage environment and load type;
- (5) Is the product protective or open type

## **8 Accompanying documents**

- (1) One copy of the user manual:
- (2) One certificate of conformity:

Dear customer, please assist us in doing something. When this product is at the end of its life span, in order to protect our environment, please do a good job in recycling the product or its component

materials. For materials that cannot be recycled, please also handle them properly. Thank you very much for your cooperation and support.



# CERTIFICATE

Product Model: SG

Standards: Q/ZT 525

Inspector : **CNC003**

Production date: Printed on the product  
or package.

This product is qualified according  
to the delivery inspection

**CNC**  
SG

**CNC ELECTRIC**

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