

Outline size list

Rated capacity (kVA)	Outline and installation size (mm)				
	L	W	H	C1	C2
800	2200	1290	2120	820	820
1000	2340	1340	2170	820	820
1250	2450	1480	2190	820	820
1600	2570	1550	2250	820	820
2000	2690	1670	2300	1070	1070
2500	2720	2230	2365	1070	1070
3150	2830	2480	2410	1070	1070
4000	2890	2560	2530	1070	1070
5000	2910	2710	2790	1070	1070
6300	3050	2830	3080	1070	1070
8000	3160	2950	3210	1475	1475
10000	3290	3190	3400	1475	1475
12500	3370	3280	3540	1475	1475
16000	3460	3340	3690	1475	1475
20000	3980	3470	3850	1475	1475
25000	4630	3930	3900	1475	1475
31500	5160	4210	3960	1475	1475

S9 type double-winding non-excitation tap-changing oil immersed distribution transformer of 35kV

Main technical parameters

Rated capacity (kVA)	Voltage			Connection symbol	Loss(kW)			Short circuit impedance (%)	Weight (kg)	
	H.V (kV)	Tapping range of high voltage	L.V (kV)		Load loss	No-load loss	No-load current (%)		Oil weight	Total weight
50	38.5 35	±5% ±2×2.5%	10.5 6.3 3.15 0.4 0.4 0.69 0.8	D,yn11 Yyno Yd11	1.22	0.22	2	6.5	265	860
100					2.03	0.31	1.8		310	1150
125					2.39	0.34	1.75		320	1190
160					2.84	0.37	1.65		360	1230
200					3.33	0.43	1.55		390	1300
250					3.96	0.51	1.4		425	1480
315					4.77	0.61	1.4		460	1590
400					5.76	0.74	1.3		490	1760
500					6.93	0.87	1.3		540	2150
630					8.28	1.04	1.25		620	2380
800					9.9	1.25	1.05		780	2800
1000					12.15	1.49	1		910	3850
1250					14.67	1.76	0.85		1060	4600
1600					17.55	2.13	0.75		1210	5200

External connecting mode

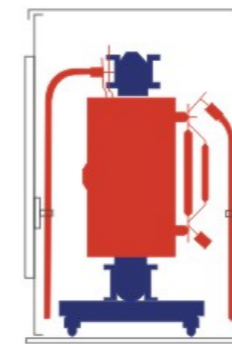
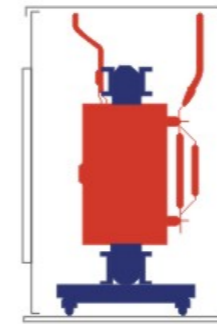
- Coil out mode of high voltage terminal:
 - Coil out from the top is standard
 - Coil out from the bottom is acceptable
- Coil out mode of low voltage terminal:
 - Coil out from the top is standard
 - Coil out from the bottom is acceptable
 - Coil out from the horizontal side is acceptable



SCB10 series dry-type transformer

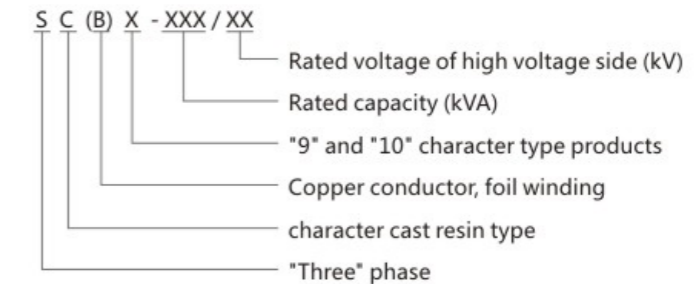
Implementation of the standards

Dry type transformer of "9" and "10" character types that accord with standards like GB6450, IEC726, DIN42523 and GB/T10228-2008.



Models and meaning

Transformer number is compiled according to JB/T3837-1996 Type Designation System for Transformers that issued by national electromechanical department.



Production range

Rated capacity	Voltage grade	Phase number	Frequency	Insulation level			Insulation grade
				Rated voltage (kV)	Power frequency withstand voltage(kV)	Impulse voltage (kV)	
≤2500kVA AN(FN)	≤35	Single-phase or three-phase	50Hz or 60Hz	6	20/25	60	F
				10	28/35	75	
				20	50	125	
				35	70	170/200	

Main technical parameters

35kV SC(Z)9 Series Dry-type Power Transformer

Type	Rated capacity (kVA)	Voltage			Connection	No-load loss (W)	Load Loss (75°C) (W)	No-load current (%)	Short circuit impedance
		H.V (kV)	Tapping range of high voltage	L.V (kV)					
SC(Z)B9-50/35	50	35, 38.5	±5% ±2×2.5% ±3×2.5%	0.4 0.69 0.8	Yyno Dyn11	380	1490	3	6
SC(Z)B9-80/35	80					500	1950	2.7	
SC(Z)B9-100/35	100					640	2400	2.4	
SC(Z)B9-125/35	125					750	2640	2	
SC(Z)B9-160/35	160					820	3100	2	
SC(Z)B9-200/35	200					900	3700	1.7	
SC(Z)B9-250/35	250					1080	4350	1.7	
SC(Z)B9-315/35	315					1250	4400	1.4	
SC(Z)B9-400/35	400					1550	5660	1.2	
SC(Z)B9-500/35	500					1800	6970	1.0	
SC(Z)B9-630/35	630					2070	8120	0.9	
SC(Z)B9-800/35	800					2430	9630	0.9	
SC(Z)B9-1000/35	1000					2700	11070	0.9	
SC(Z)B9-1250/35	1250					3150	13400	0.8	
SC(Z)B9-1600/35	1600					3600	16200	0.8	
SC(Z)B9-2000/35	2000					4230	19100	0.7	
SC(Z)B9-2500/35	2500					4950	22900	0.7	
SC(Z)B9-3150/35	3150	6200	25800	0.6					
SC(Z)B9-4000/35	4000	7200	31000	0.6					

Type	Rated capacity (kVA)	Voltage			Connection	No-load loss (W)	Load Loss (75°C) (W)	No-load current (%)	Short circuit impedance			
		H.V (kV)	Tapping range of high voltage	L.V (kV)								
SC(Z)B9-800/35	800	35, 38.5	±5% ±2×2.5% ±3×2.5%	3.15 6 6.3 10 10.5 11 0.4 0.69 0.8	Yyno Dyn11	2500	9900	0.9	6			
SC(Z)B9-1000/35	1000					2970	11520	0.9				
SC(Z)B9-1250/35	1250					3480	13500	0.8				
SC(Z)B9-1600/35	1600					4100	16200	0.8				
SC(Z)B9-2000/35	2000					4720	19100	0.8				
SC(Z)B9-2500/35	2500					5400	22900	0.7				
SC(Z)B9-3150/35	3150				6750	25800	0.7	7				
SC(Z)B9-4000/35	4000				7830	31000	0.6					
SC(Z)B9-5000/35	5000				9360	36800	0.6					
SC(Z)B9-6300/35	6300				11000	43000	0.5					
SC(Z)B9-8000/35	8000				12600	47700	0.5					
SC(Z)B9-10000/35	10000				14400	58500	0.5	8				
SC(Z)B9-12500/35	12500				16000	61000	0.5					
SC(Z)B9-16000/35	16000				20000	64000	0.5					
SC(Z)B9-20000/35	20000				23000	73000	0.5					
								Yd11 Dnd11				9

Structural features

1. Iron core
Made up of high quality cold rolled silicon steel sheet that is for electric engineering
2. Low voltage winding
Made up of a whole copper foil coil
3. High voltage winding
Made up of sectional type vacuum casting double glass-fiber covered coils
4. Low voltage terminal
Variable wiring mode, which is convenient for installation
5. High voltage terminal
Variable wiring mode, which is convenient for installation
6. Resilient pad
Avoid mechanical resonance, and reduce noise
7. Clamp and trolley
The wheel of trolley can rotate to 90°
It is convenient for vertical and horizontal movement.
8. Packing type resin insulation
With advantages of damp proof, anti-damp and hot, flame-retardant, and self-extinguish.



SCB10 Epoxy Resin Wrapped Coil series



SCB10 Epoxy series

Product characteristic

The epoxy resin cast dry type transformer of Special Transformer Company of Great is made with abroad advanced technology, it includes the following characteristics:

1. Low local discharge
As the coil is cast in vacuum state, the air bubble produced in coil can be prevented efficiently, the local discharging value fully accords with relative national standard.
2. Strong capability of lightning impact
The lightning impact voltage that affects the insulation of transformer windings along the initial voltage distribution of windings, the foil type windings initial voltage distribution approaches to linear one, therefore, the transformer manufactured by us has good ability to resist the lightning impact.
3. Strong ability to resist short-circuit
The width of copper foil of LV windings that is the reactance height, LV current is supplied according to be the requirement for ampere turns balance among windings, HV/LV windings axial force caused by short circuit tends to zero.
4. Good performance of anti-drying crack
The transformer manufactured by us is made of packing type resin and designed into the structure of full copper oil, the coefficient of insulation material is the similar to the that of thermal expansion of copper conductor, so the coils can be prevented cracking efficiently. The transformer has been done kinds of anti-crack tests, such as cold/hot alternation test, thermal impact test, rapid aging test, etc, and the test result demonstrates that our technology can meet the requirements of service occasions like low temperature, high temperature and large range of variable temperature, as well as anti-crack after the transformer runs for a long time.
5. Strong over-load capability
If the transformers of same capacity whose load consumption is equal, the sectional area of copper foil will be increased correspondingly, and the volume

will be extended with the sectional area that requires more packing resin, therefore, both the thermal capacitive property of windings and short-time over load capability of transformer are quite strong.

6. Good flame retardancy

The transformer has visible features such as free-maintenance, moisture-proof, anti-damp and hot, flame-retardant, self-extinguishing, etc., besides, its stuffing type resin casting technology is good for environmental protection. When bum by the electric are at high temperature, it will not product any noxious gas. The superior flame retardancy is proved in the burning test. The product has good ability to adapt to environment, on the basis of European HD464 standard, it reaches the environment class E2, weather-resistant class FC2, flame-retardant class F1, it can be widely used in fields or locations where service conditions are rather atrocious such as commercial area, under ground, power plant, steamship, offshore drilling platform, etc.

7. Low noise

Because of special structure and design, the noise produced by transformer is reduced greatly, compared with the noise value stipulated at national Specialized Standard, its whole noise level is lower than it for more than over 10-13dB(A).

8. Low consumption

Compared with "8" character type products, SCB9 series has better economic benefit, its total consumption is reduced for 10~15% in average.

SC(B)12-30~2500/10 type cast resin dry-type power transformer main Technical parameters

Rated capacity (kVA)	Connection Symbol	Rated Voltage		Tapping	Loss (W)		Short circuit impedance (%)	No-load current (%)	Total weight (kg)	thermal class for electric machine insulation	Figuration size (mm)			
		H.V (kV)	L.V (kV)		No-Load Loss	Load loss					L	B	H	d1×d2
30	Y,yn0 D,Yn11	6	0.4	±5% ±2×2.5%	150	710	4	2.3	260	F	780	450	750	300×300
50					215	1000	4	2.0	325		800	450	770	300×300
80					295	1380	4	1.8	490		880	500	860	450×450
100					320	1570	4	1.8	570		940	500	920	450×450
125					375	1850	4	1.6	860		1050	650	980	450×450
160					430	2130	4	1.6	930		1080	710	1020	550×550
200					495	2530	4	1.5	1010		1100	710	1050	550×550
250					575	2760	4	1.5	1200		1180	710	1130	660×660
315					705	3470	4	1.3	1320		1190	710	1160	660×660
400					785	3990	4	1.3	1670		1250	710	1200	660×660
500					930	4880	4	1.3	1740		1270	710	1230	660×660
630					1070	5880	4	1.3	1800		1450	870	1420	660×820
630					1040	5960	6	1.2	1830		1420	870	1400	660×820
800					1215	6960	6	1.2	2240		1460	870	1430	820×820
1000					1415	8130	6	1.2	2740		1500	870	1470	820×820
1250					1670	9690	6	1.1	3100		1580	870	1550	1070×1070
1600	1960	11730	6	1.1	3700	1680	1120	1630	1070×1070					
2000	2440	14450	6	1.0	4800	1840	1120	1800	1070×1070					
2500	2880	17170	6	0.9	5420	1880	1120	1850	1070×1070					

SC(B)10-30~2500/10type cast resin dry-type power transformer main Technical parameters

Rated capacity (kVA)	Connection Symbol	Rated Voltage		Tapping	Loss (W)		Short circuit impedance (%)	No-load current (%)	Total weight (kg)	thermal class for electric machine insulation	Figuration size (mm)			
		H.V (kV)	L.V (kV)		No-Load Loss	Load loss					L	B	H	d1×d2
30	Y,yn0 D,Yn11	6	0.4	±5% ±2×2.5%	190	710	4	2.6	300	F	580	450	650	300×380
50					270	1000	4	2.2	380		600	450	650	300×380
80					370	1380	4	2.0	470		880	500	800	450×450
100					400	1570	4	2.0	560		970	500	820	450×450
125					470	1850	4	1.8	650		970	500	860	450×450
160					550	2130	4	1.8	780		980	650	950	550×550
200					630	2530	4	1.6	880		1000	650	970	550×550
250					720	2750	4	1.6	1030		1040	760	1070	660×660
315					880	3470	4	1.4	1250		1100	760	1110	660×660
400					980	3990	4	1.4	1400		1170	760	1235	660×820
500					1160	4880	4	1.4	1600		1190	760	1250	660×820
630					1360	5870	4	1.4	1900		1220	760	1250	660×820
630					1300	5960	6	1.3	1900		1220	760	1250	660×820
800					1520	6950	6	1.3	2580		1330	760	1330	660×820
1000					1770	8130	6	1.3	2850		1350	920	1450	820×820
1250					2090	9690	6	1.1	3200		1440	920	1550	820×820
1600	2450	11730	6	1.1	3800	1510	1170	1620	1070×1070					
2000	3060	14450	6	1.1	4280	1530	1170	1785	1070×1070					
2500	3600	17170	6	1.0	5250	1560	1170	1930	1070×1070					

Trolley size

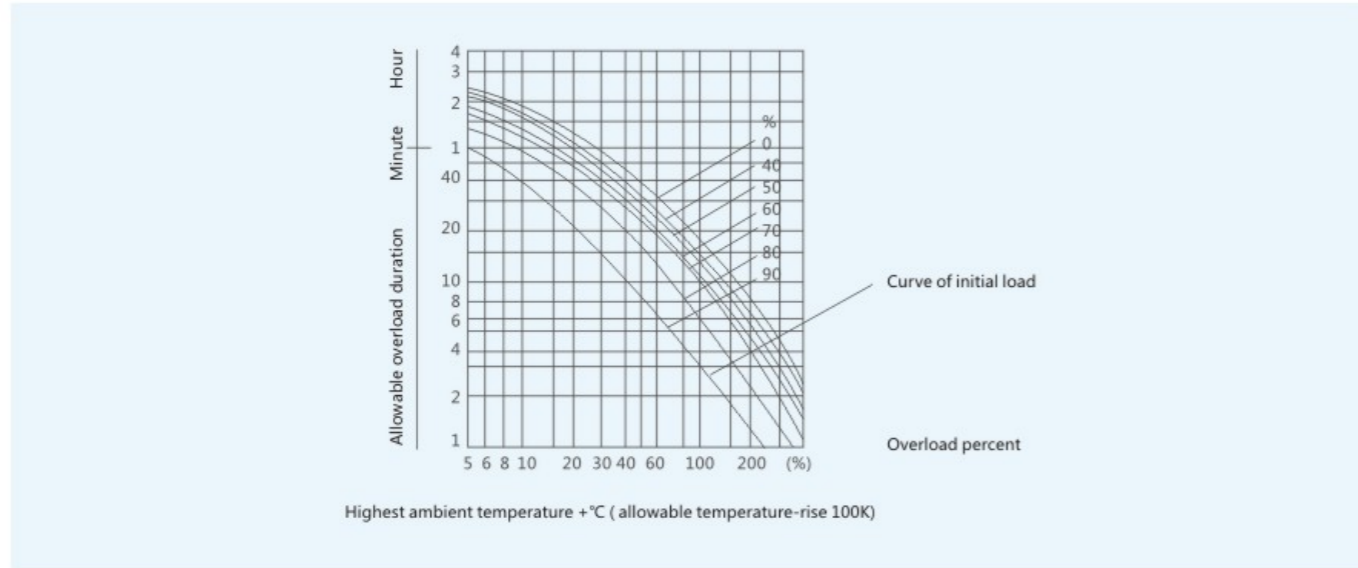
Rated capacity (kVA)	50~250	315~800	1000~1600	2000~2500
e	520	660	820	1070
f	125	125	160	200
g	40	40	50	70
k	45	45	55	40

Size diagram of LV connecting terminal

Rated capacity (kVA)	a	b	c	Picture number
≤100	-	-	12	1
125~160	-	-	14	1
200~315	26	26	14	2
400~630	35	30	14	2
800	40	40	14	3
1000	50	40	14	3
1250	60	40	14	3
1600	50	40	14	3
2000	50	40	14	3
2500	60	40	14	3

Overload capability

Overload capability of the transformer is relative to factors like transformer structure, ambient temperature, initial load and so on. Overload capability of our transformer is determined after accurate calculation, see the following curve for reference.



Note: The outline dimensions and track gauge dimensions covered in the catalog are only for reference. Welcome to contact us for accurate dimensions

Refer to the following data list for overload capability of our transformer (Highest ambient temperature +45°C)

Allowable overload duration(mm)	Overload capability (%)	Initial load(%)								
		10	20	30	40	50	60	80	100	
50		85	56	42	33	28	23	16	14	
60		80	43	39	29	25	19	14	12	
70		74	47	33	25	21	16	12	9	
80		57	35	25	19	19	12	8.5	7	
90		37	21	18	11	8	6.5	5	3.5	

Temperature control and temperature thermometer system

1. Safety running and service life of dry type transformer is largely determined by safety and reliability of transformer's winding insulation. When the temperature rise of winding conductor exceeds its insulation withstand range, it will destroy the insulation, it is one of the main cause of transformer fault.
2. The temperature control and temperature thermometer system of our products are accord with JB/T7631.

Common type temperature controller



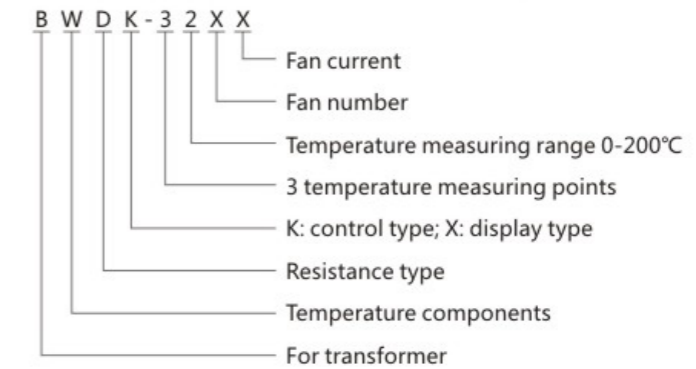
SCB10 Epoxy Resin Wrapped Coil series



SCB10 Epoxy series

1. Temperature control system measures and get the temperature signal by 3 PT100 temperature-measuring elements, which is pre buried in the temperature hole at the top of low voltage coil, it controls the air cooling fan's running, and gives over-temperature alarm signal or even over-temperature tripping signal according to the winding temperature.
2. Main functions
 - a. When it is natural air cooling (AN), if the winding temperature exceeds 130°C, it will give alarm, and output tripping signal if exceeds 150°C.
 - b. When it is forced air cooling (AF), if the winding temperature exceeds 100°C, the system will start the fan automatically; when the temperature is lower than 80°C, the system will stop the fan automatically; if the temperature rises continuously and exceed 130°C, it will output ver-temperature alarming signal. When the temperature is beyond 150°C, it will input over-temperature tripping signal to the secondary protection system.
 - c. The above temperature points are set by the supporting factory, if necessary, these temperature points can be adjusted, adjusting range is ±20°C.

3. Model of temperature controller as following:



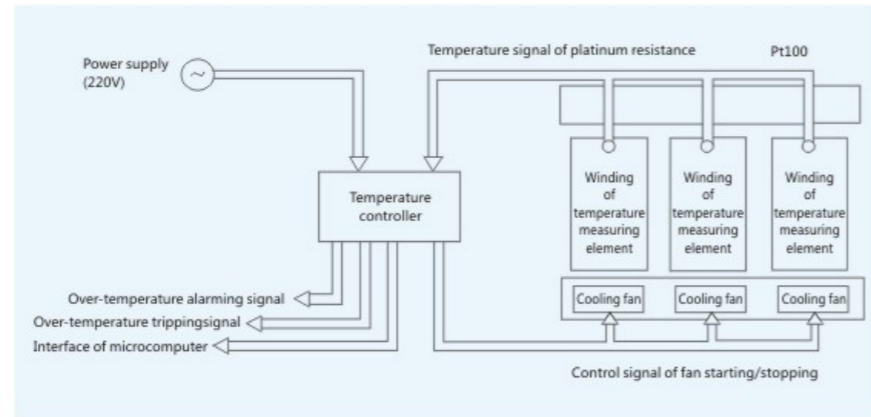
Microcomputer interface type temperature controller

1. Temperature thermometer system test the temperature signal by PT100 thermistor that pre buried in low voltage winding, it can display the temperature of each winding directly, can be equipped with computer to realize remote temperature control.
2. Main functions
 - a. Serial communication (RS-485), transmission distance can be as far as 1200m. We can provide data control software under Windows operating system.
 - b. Output 3 circuit of 4-20mA standard current signal (4mA corresponding to 0°C; 20mA corresponding to 200°C). It can connect with the secondary and tertius instrument and computer A/D board directly, transmission distance is far than 500m.

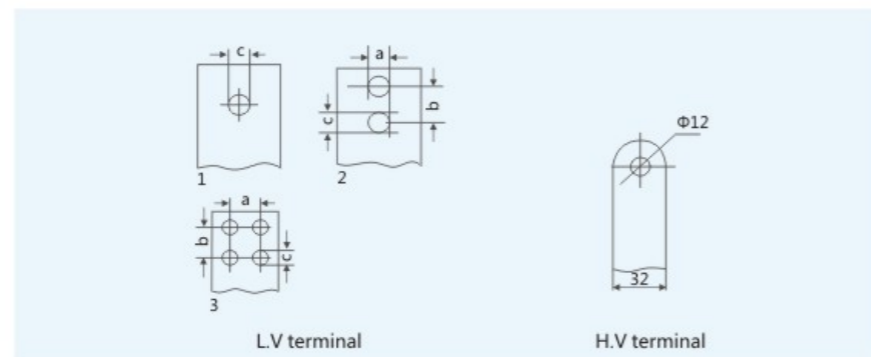
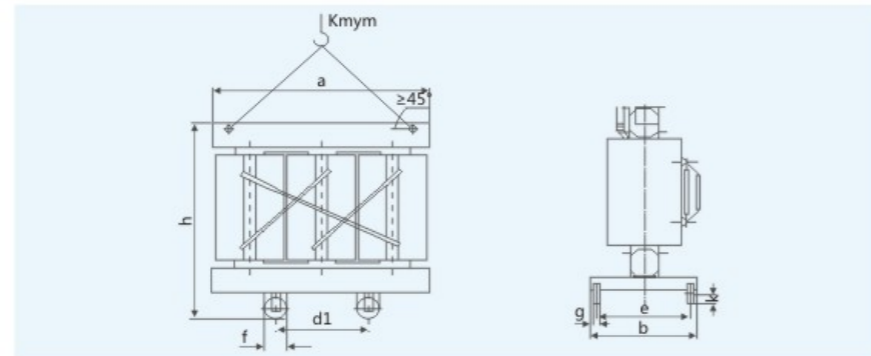
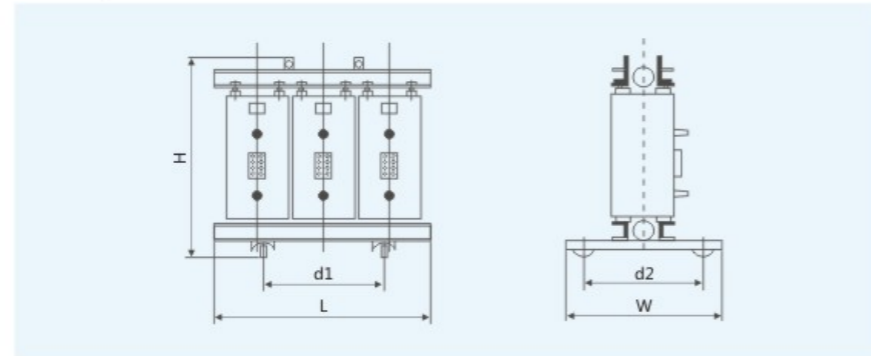
Main performance index of temperature controller

1. Operating temperature: -10°C~+55°C
2. Operating power supply: AC220V±10%, 50Hz
3. Measuring range: 0~200C
4. Contact capacity of output signal: AC220V, 3A

Principle diagram of temperature control and temperature thermometer system as following:



Note: temperature system can obtain power supply from the transformer or from outside power source



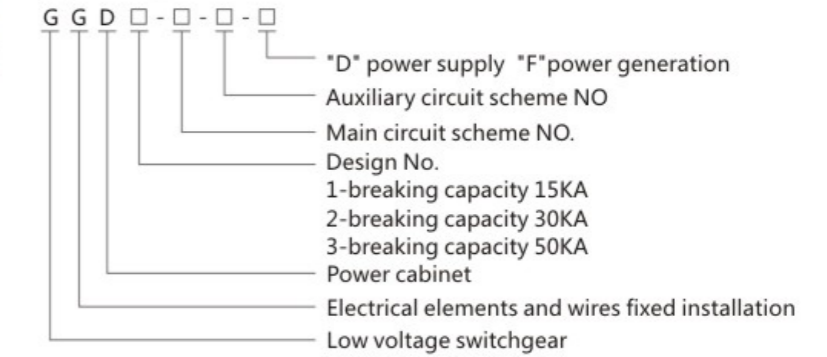
Note: The outline dimensions and track gauge dimensions covered in the catalog are only for reference. Welcome to contact us for accurate dimensions



General

1. Rating: Rated voltage: 380V.
2. Rated current: 3150A, 50-60Hz
3. Application: mainly applicable in power station, power substation industrial and mining enterprises as energy converter, distributor and controller of power, light and distribution device.
4. Standard: IEC60439-1

Type designation



Working Conditions

1. Ambient air temperature: -15°C~+40°C
Daily average temperature: ≤35°C
When the actual temperature exceed the range, it should be used by reducing the capacity accordingly.
2. Transport and store temperature: -25°C~+55°C. do not exceed +70°C in short time.
3. Altitude: ≤2000m
4. Relative humidity: ≤50%, when temperature is +40°C
When temperature is low, larger relative humidity is allowed. when it is +20°C, relative humidity can be 90%. Since the temperature change will make out condensation.
5. Installation inclination: ≤5%
6. Applicable in the places without corrosive and flammable gas.

Note: Customized products are available.

Main technical Parameter

1. Main technical data Sheet 1

Type	Rated voltage (V)	Rated current (A)	Rated short-circuit breaking current (kA)	Rated short-circuit withstand current (1s)(1kA)	Rated peak withstand voltage (kA)
GGD1	380	A 1000	15	15	30
	380	B 600(630)	15	15	30
	380	C 400	15	15	30
GGD2	380	A 1500(1600)	30	30	63
	380	B 1000	30	30	63
	380	C 600	30	30	63
GGD3	380	A 3150	50	50	105
	380	B 2500	50	50	105
	380	C 2000	50	50	105