

Technical Specification and Drawing
50MVA-115/38.5KV
POWER TRANSFORMER
No.2019020

JIANGSHAN SCOTECH ELECTRICAL CO., LTD

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Technical Data Sheet

No.	Basic information	Unit	Guaranteed
1	Manufacturer		Jiangshan Scottech Electrical Co.,Ltd
2	Standard		IEC60076
3	Type		Oil immersed power transformer
4	Installation		Outdoor
5	Altitude	M	≤ 1000
6	Rated power	KVA	50000
7	Primary voltage	KV	115
8	Secondary voltage	KV	38.5
9	Vector group		YNd11
10	Rated Frequency	HZ	50
11	Cooling		ONAF
12	Number of windings		2
13	Number of phases		3
14	Type of tap Changer		OLTC (Huaming Brand)
15	Tapping range		$\pm 9*1.78\%$ @primary side

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16	Impedance	%	12
17	No-load loss	KW	28
18	On load loss	KW	265
19	Basic insulation level		
19.1	Basic impulse lighting withstand voltage-primary side(BIL)	KV	550
19.2	Power Frequency withstand voltage-primary side	KV	230
19.3	Basic impulse lighting withstand voltage-secondary side(BIL)	KV	200
19.4	Power Frequency withstand voltage-secondary side	KV	85
19.5	Oil temperature rise @ rated service condition	K	55
19.6	Winding temperature rise @ rated service condition	K	65
20	Material		
20.1	Winding material		Cu
20.2	Core material		Grain oriented silicon steel sheet
20.3	Coolant material		PCB free transformer mineral oil
20.4	HV bushing material		OPI
20.5	Neutral bushing material		OPI
20.6	LV bushing material		Porcelain

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21	Dimension and weight		
21.1	Transport Dimension(L*W*H)	mm	As per drawing
21.2	Transport Weight	kg	As per drawing
21.3	Overall Dimension(L*W*H)	mm	As per drawing
21.4	Total Weight	kg	As per drawing
22	Others		
22.1	Location of HV bushings		Mounted on top of tank cover
22.2	Location of LV bushings		Mounted on top of tank cover
22.3	Location of Neutral bushing		Mounted on top of tank cover
23	Accessories	QTY	Remarks
23.1	Detachable radiator	1 lot	/
23.2	Oil&winding temperature indicator with alarm and trip contacts	1	/
23.3	Pressure relief valve	1	/
23.4	Oil level indicator	1	/
23.5	Buchholz relay with alarm and trip contacts	1	/
23.6	Oil conservator	1	/
23.7	Breather	1	/

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23.8	Oil sample valve	1	/
23.9	Oil drain valve	1	/
23.10	Oil filling valve	1	/
23.12	Earthing terminal	1	/
23.13	Terminal box	1	Stainless steel
23.14	Lifting lugs	4	For top cover and whole unit
23.15	Skid base	1	/
23.16	On load tap changer	1	Shanghai Huaming Brand

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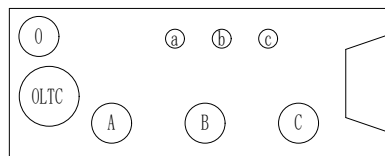
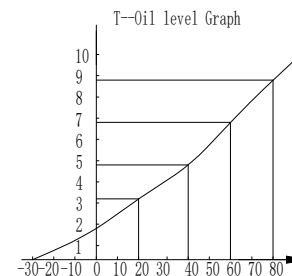
ON-LOAD-TAP-CHANGING POWER TRANSFORMER

Type : SFZ11-50000/115
 Technical Standard : IEC60076
 Standard NO. : SFZ11.50000
 Insulation Level: LI550AC230-LI325AC140/LI200AC85
 Operation Condition : OUTDOOR
 Altitude : 1000m
 Cooling : ONAF
 Phase : 3
 Rated power : 50000kVA
 Rated voltage : $115 \pm 9\% \times 1.78\% / 38.5\text{kV}$
 Rated Frequency : 50Hz
 Vector Group: YNd11
 Temperature rise of top oil: 50 K
 Impedance Voltage : %
 No-Load Current : %
 No-Load Loss : KW
 Load Loss : KW
 Upper Tank Weight : 5500kg
 Transformer Active Part : 29000 kg
 Total Oil Weight : 14850 kg
 Transportation Weight : 48300 kg
 Total Weight : 60300 kg
 Ex-factory No. :
 Manufacturing date: month year

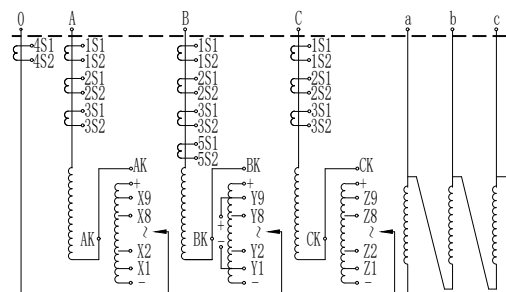
Tap	H. V. Side			L. V. Side	
	Connected Tappings	Voltage (V)	Current (A)	Voltage (V)	Current (A)
1	X1-Y1-Z1	133423	216.4	38500	749.8
2	X2-Y2-Z2	131376	219.7		
3	X3-Y3-Z3	129329	223.2		
4	X4-Y4-Z4	127282	226.8		
5	X5-Y5-Z5	125235	230.5		
6	X6-Y6-Z6	123188	234.3		
7	X7-Y7-Z7	121141	238.3		
8	X8-Y8-Z8	119094	242.4		
9	X9-Y9-Z9	117047	246.6		
10	AK-BK-CK	115000	251.0		
11	X1-Y1-Z1	112953	255.6		
12	X2-Y2-Z2	110906	260.3		
13	X3-Y3-Z3	108859	265.2		
14	X4-Y4-Z4	106812	270.3		
15	X5-Y5-Z5	104765	275.5		
16	X6-Y6-Z6	102718	281.0		
17	X7-Y7-Z7	100671	286.8		
18	X8-Y8-Z8	98624	292.7		
19	X9-Y9-Z9	96577	298.9		

DATA OF BUSHING CURRENT TRANSFORMER				
Type	Connection	Current Ratio	Accuracy Class	Burden (VA)
LR-110	1S1-1S2	500/5	0.5	15
LRB-110	2S1-2S2	500/5	5P20	15
LRB-110	3S1-3S2	500/5	5P20	15
LRB-63	4S1-4S2	300/5	5P20	15
LR-110	5S1-5S2	300/5	0.5	15

CAUTION: THE SECONDARY SIDE OF BCT MUST NOT BE OPEN CIRCUIT

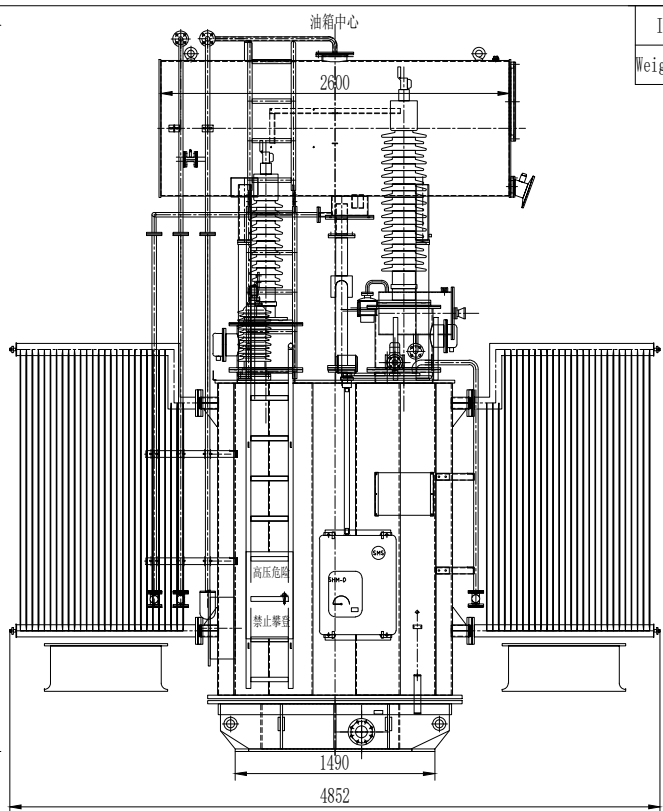
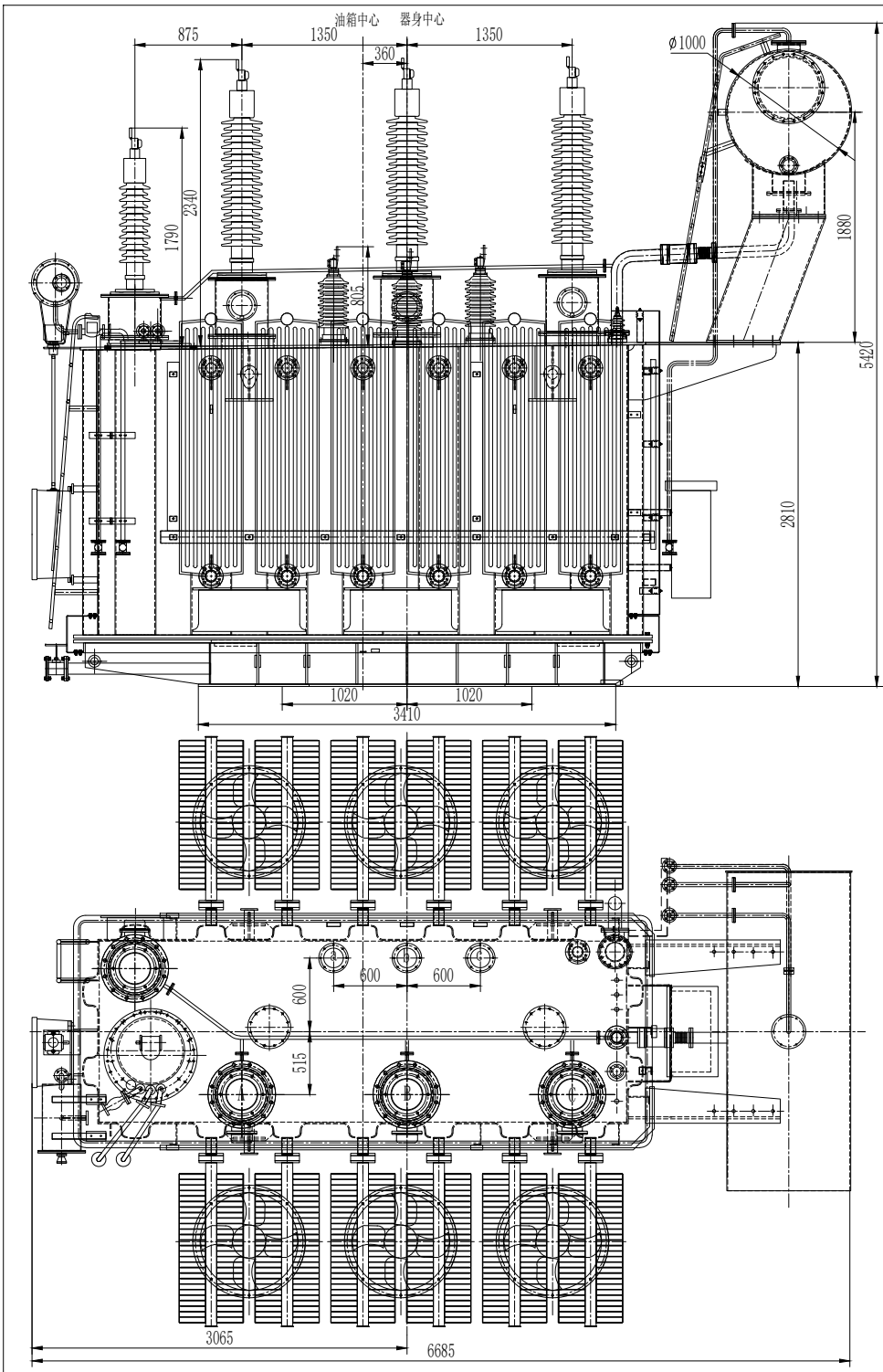


Case cover position diagram

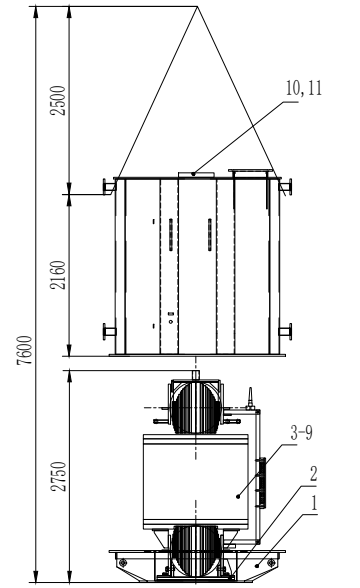
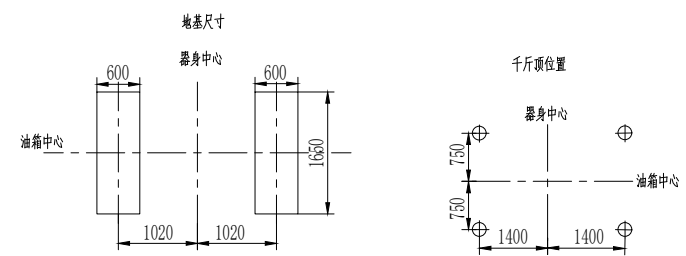
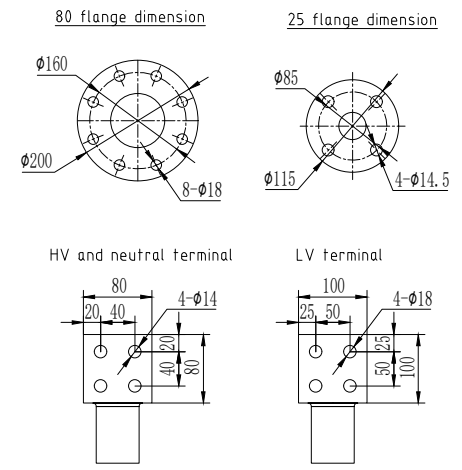


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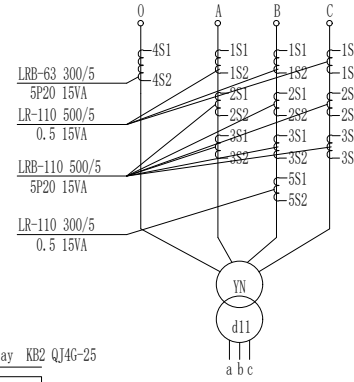
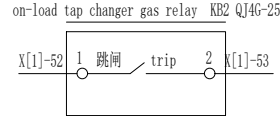
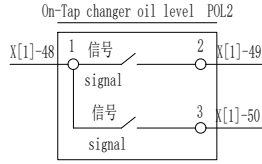
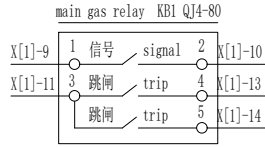
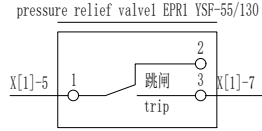
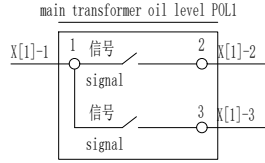
			SZ11-50MVA-115/38.5KV			SFZ11.50000.01.MP		
			NAME PLATE					
DESIGNER		APPROVER		Vetifier Remarks		Weight		Scale
CHECKER								
VERIFIER								
TECHNOLOGIST		DATE						Jiangshan Scotech Electrical Co., Ltd



Item	Active part	Upper tank	Oil	Total	Transport	Add oil
Weight (Kg)	29000	5500	148500	60300	48300	3700

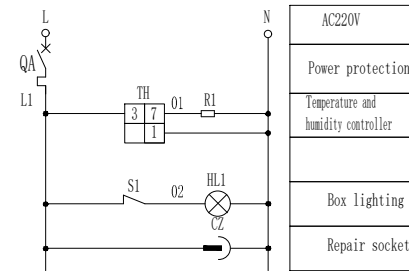
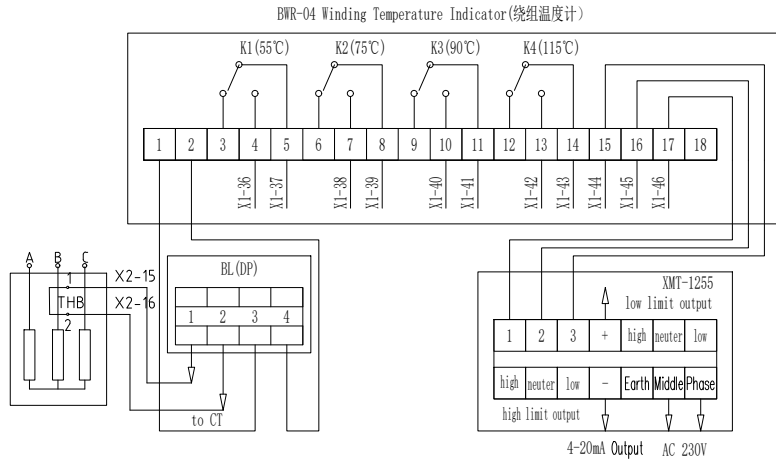
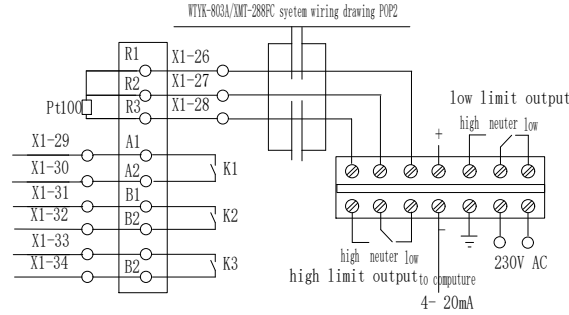
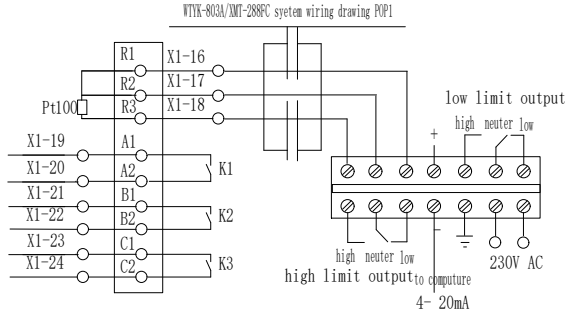


SZ11-50MVA-115/38.5KV		SFZ11.50000.01
General Arrangement		scale 1:1
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Y2		
1	4S1	TH01
2	4S2	TH02
3	1S1	THA1
4	1S2	THA2
5	2S1	THA3
6	2S2	THA4
7	3S1	THA5
8	3S2	THA6
9	1S1	THB1
10	1S2	THB2
11	2S1	THB3
12	2S2	THB4
13	3S1	THB5
14	3S2	THB6
15	5S1	THB7
16	5S2	THB8
17	1S1	THC1
18	1S2	THC2
19	2S1	THC3
20	2S2	THC4
21	3S1	THC5
22	3S2	THC6
23		
24		
25		
26		
27		
28	L	AC230V
29		
30	N	
31		
32		
33		
34		
35		

X1		
1	POL1-1	Public
2	POL1-2	signal
3	POL1-3	signal
4		
5	EPR1-1	
6	EPR1-2	trip
7	EPR1-3	
8		
9	KBI-1	
10	KBI-2	signal
11	KBI-3	
12		
13	KBI-4	trip
14	KBI-5	
15		
16	POP1-R1	
17	POP1-R2	PT100
18	POP1-R3	
19	POP1-A1	
20	POP1-A2	signal
21	POP1-D1	65°C
22	POP1-B2	signal
23	POP1-C1	85°C
24	POP1-C2	signal
25		
26	POP2-R1	
27	POP2-R2	PT100
28	POP2-R3	
29	POP2-A1	signal
30	POP2-A2	
31	POP2-D1	55°C
32	POP2-B2	fan stop
33	POP2-C1	65°C
34	POP2-C2	fan open
35		
36	BWR1-4	55°C
37	BWR1-5	
38	BWR1-7	75°C
39	BWR1-8	
40	BWR1-10	95°C
41	BWR1-11	
42	BWR1-13	115°C
43	BWR1-14	
44	BWR1-15	
45	BWR1-16	
46	BWR1-17	
47		
48	POL2-1	Public
49	POL2-2	signal
50	POL2-3	signal
51		
52	KB2-1	
53	KB2-2	trip
54		
55		
56		
57		
58		
59		
60		



		SZ11-50MVA-115/38/5KV		SFZ11.50000.01.KZ	
		Terminal Diagram			
DESIGNER		APPROVER		Verifier	Remarks
CHECKER				Weight	Scale
VERIFIER					1:1
TECHNOLOGIST		DATE		Jiangshan Scottech Electrical Co., Ltd	