



# Asia Trafo Co., Ltd

## SPECIFICATION OF OIL IMMERSED TRANSFORMER

### TRANSFORMER SPECIFICATION

30 kVA. 1Ph. 50 Hz.

22000 - 480/240 V. Subtractive

HERMETICALLY SEAL TYPE

88/99 หมู่ 12 ซ. สุนทรวิภาค ถ.บางพลี - ตำหนุ่ ต.บางปลา อ.บางพลี จ.สมุทรปราการ 10540 Tel. (02) 346-0980-7 Fax. (02) 346-0978-9

88/99 Moo.12 Soi sunthonwipark Bangplee -tumroo Road Bangpra Bangplee samuthprakarn 10540 Tel. (02) 346-0980-7 Fax. (02) 346-0978-9

SPEC NO.

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## SPECIFICATION OF OIL IMMERSED TRANSFORMER

### TECHNICAL DATA FOR 30 kVA, 22000-480 V. Subtractive

No.	Description	Unit	Guaranteed Value		
1	Manufacture's name	-	ASIA TRAF0 CO.,LTD.		
2	Country of origin	-	Thailand		
3	Applied standard	-	IEC 60076		
4	Type of Transformer	-	Hermetically seal type		
5	Rated power	kVA	30		
6	Number of phase	-	1		
7	Rated frequency	Hz	50		
8	Rated high voltage	V	22000		
9	Rated low voltage	V	480/240		
10	Conection symbol	-	Subtractive		
11	Rated high current	A	1.36		
12	Rated low current	A	62.5/125		
13	Primary tapping :	-	Off-circuit tap changer		
14	Number of steps of high voltage tapping	Step	4 Steps 5 Position		
15	Percent of rated voltage of each tapping	%	±2 x 2.5%		
16	Type of oil preservation system	-	Completely oil fill system		
17	Operation duty	-	Continuous operation		
18	Cooling System	-	ONAN		
19	Ambient	°C	50		
20	Max. temperature rise of winding, at full load	°C	55		
21	Max. temperature rise of top oil, at full load	°C	50		
22	Class of insulation	-	A (105°C)		
23	Noise level	dB(A)	≤ 42		
24	No-load current & Tolerance	% & %	1.096 % & +30%		
25	Short-circuit impedance at 75°C & Tolerance	% & %	2.00 & ±10		
26	No-load loss	W	120		
27	Load loss at 75°C	W	430		
28	Efficiency at 75°C	: Full load unity power factor	%	98.20	
		: Full load 0.8 power factor	%	97.76	
		: 3/4 load unity power factor	%	98.42	
		: 3/4 load 0.8 power factor	%	98.03	
		: 1/2 load unity power factor	%	98.51	
		: 1/2 load 0.8 power factor	%	98.14	
29	Voltage regulation at	: Unity power factor	%	1.44	
		: 0.8 power factor	%	1.15	
30	<b>Winding</b>			HV.Winding	LV.Winding
	Material of winding		-	Copper	Copper
	Insulation material of wire		-	Polyvinyl formal	Kraft paper
	Full-wave impulse withstand voltage, or BIL		kV, peak	125	30
	Power-frequency test voltage, 1 min		kV, r.m.s	50	10
Construction of winding		-	Layer winding	Layer winding	
31	<b>Core</b>				
	Core silicon steel grade		-	Cold rolled grain oriented electrical steel	
Rev	Date	Prepared by	Checked by	Approved by	Signature
00	8/8/2563	วรกาฬ	กิตติ	กิตติ	
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## SPECIFICATION OF OIL IMMERSED TRANSFORMER

### TECHNICAL DATA FOR 30 kVA, 22000-480 V. Subtractive

No.	Description	Unit	Guaranteed Value	
32	Transformer oil	-		
	Type of oil	-	Mineral oil (None PCB)	
	Oil dielectric breakdown	kV	≥55	
33	<b>Bushings</b>		HV.Bushing	LV.Bushing
	Applied standard	-	DIN 42531	DIN 42530
	Rated current	A	250	250
	Full-wave impulse withstand voltage, or BIL	kV, peak	125	30
	Low-frequency dry 1-minute test voltage	kV, r.m.s.	50	10
	Low-frequency wet 10 second test voltage	kV, r.m.s.	50	10
	Protection class	-	20NF	1N
	Color of glazing	-	Brown	Brown
	Stud thread size (Dia)	mm.	12	12
34	<b>Terminal connectors</b>		HV.Terminal	LV.Terminal
	Diameter range	mm.	Clamp (7.5-12.6)	PAD 12 mm.
	Number of circuit	-	1(35.95 mm <sup>2</sup> )	2
35	<b>Pressure relief value</b>			
	Operating pressure	kg / cm <sup>2</sup>	-	
	Flow rate at 1.03 Kg/cm <sup>2</sup>	cc / sec	-	
36	Color of tank	-	Gray (RAL 7036)	

#### Accessories

- HV & LV Bushing with terminal connectors
- Name plate with connection diagram
- Arcing horn
- Bird guard cap
- Off-circuit tap changer
- Thermometer pocket
- Oil drain and sampling valve
- Earthing terminal
- Lifting eyes on the cover
- Lifting lugs
- Oil level gauge
- Pressure relief device
- Buchholz relay with alarm&trip contacts
- Dehydrating breather with silica gel
- Other ... Factory standard

#### Routine test

- Measurement of voltage ratio and check of phase displacement
- Insulation resistance test
- Measurement of winding resistance
- Separated source voltage withstand test
- Induce over voltage withstand test
- Measurement of no-load loss and exciting current
- Measurement of short circuit impedance and load loss
- Oil dielectric strength test

#### Type tests

- Temperature - rise test (IEC 60076-2)
- Full wave lightning impulse test (IEC 60076-1 and IEC 60076-3)
- Measurement of no-load loss and current at 90% and 110 %  
Of rated voltage (IEC 60076-1 )

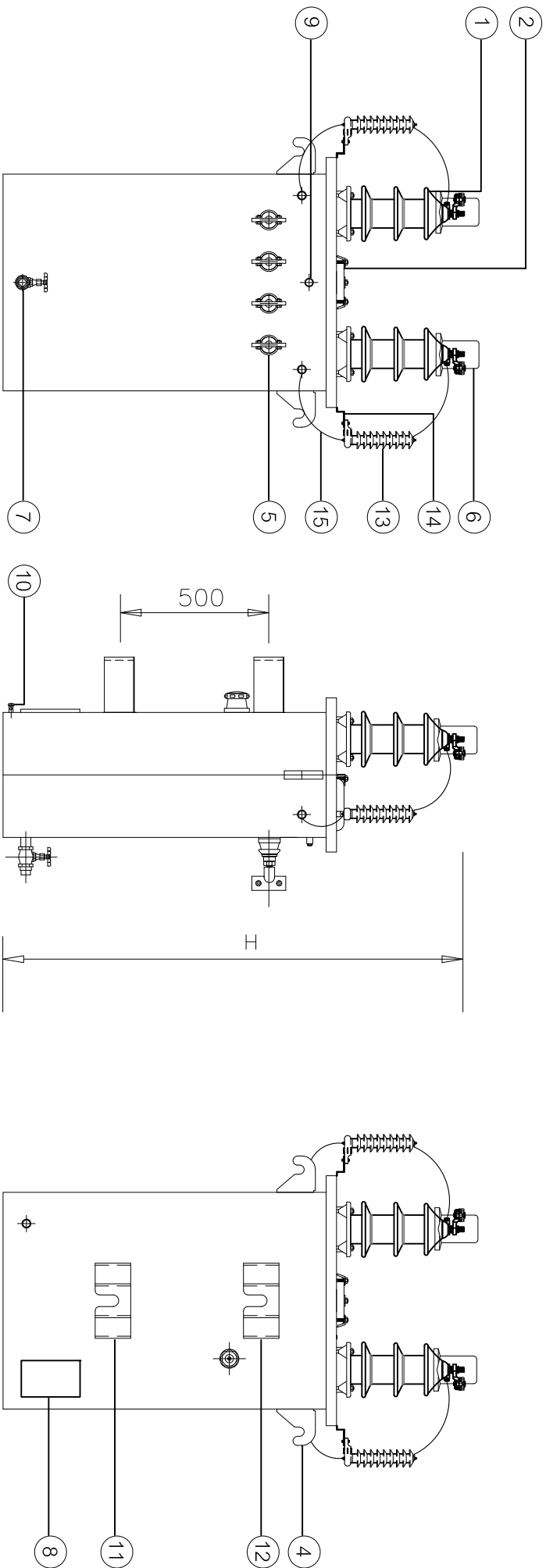
#### Special tests

- Short-circuit withstand test (IEC 60076-5 )

with

without

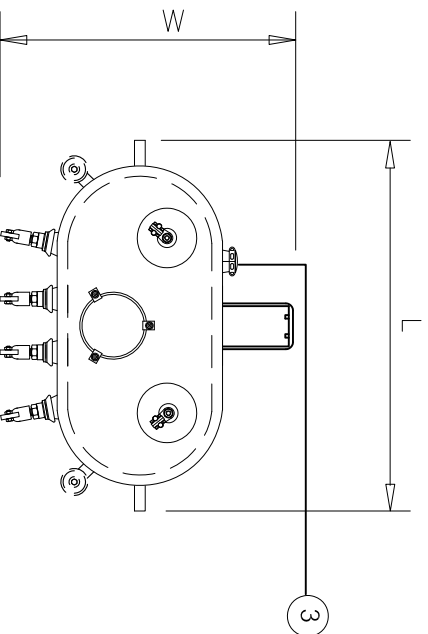
Rev	Date	Prepared by	Checked by	Approved by	Signature
00	8/8/2563	วรภาพษ์	กิตติ	กิตติ	
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PRELIMINARY DRAWING : This drawing is for estimate only, showing approximate dimensions. It should not be referred to as the final drawing.

LIST OF PART

No.	PART NAME	Qty
1.	HV Bushing with terminal connectors	2
2.	Hand hole	1
3.	Off load tap changer	1
4.	Lifting Lug For Body	2
5.	LV Bushing with terminal connectors	4
6.	Birdguard Cap	2
7.	Lower Filter Valve	1
8.	Nameplate with connection diagram	1
9.	Test Plug	1
10.	Earth Terminal	1
11.	Lower Supporting Lug	1
12.	Upper Supporting Lug	1
13.	Surge arrester( Polymer housing type ) (Supplied by PEA)	2
14.	Bracket for surge arrester (Supplied by PEA)	2
15.	Flexible copper insulated ground lead (Supplied by PEA)	2



<b>ASIA TRAFKO CO., LTD.</b>				
Project :				
Title : OVERALL DIMENSION OF TRANSFORMER OIL IMMERSDED TRANSFORMER 30 KVA 1Ph 50Hz 22000 - 480/240 V.				
Dimension in millimeters				
H	L	W	Weight	Oil
1185	730	600	kgs	Litres
			302	78
SPEC NO. S-TR30-SC-22000-480/240		Signature		
Date		Date		
Drawn	By			
Checked	By			
Approved	By			