



# TECHNICAL SPECIFICATIONS

Jakarta - Indonesia



## A. GENERAL CHARACTERISTICS

Design standards : IEC 67  
 Transformer type : Hermetically Sealed Totally Oil Filled  
 Service Condition : Indoor  
 Type of oil : Mineral Oil Class 1 acc. to IEC 296  
 Number of phase : 3 Phase  
 Frequency : 50 Hz

## B. TECHNICAL SPECIFICATION

Capacity : 1600 kVA  
 Primary Voltage : 20 kV  
 Secondary Voltage : 0.4 kV  
 Vector Group : Dyn5  
 Cooling : ONAN  
 Temperature Rise - Oil : 60 oC  
                                   - Winding : 65 oC  
 No load losses at nominal voltage : 2300 Watts  
 On load losses at principal tapping : 23000 Watts  
 Impedance voltage : 6 %  
 Off load current at nominal voltage : 2 %  
 Temperature Insulation Class : A  
 Noise : 60 dB  
 Tapping value : +/-2.5%; +/-5%

## C. INSULATION CLASS OF THE WINDINGS

	Primary	Secondary
Highest system voltage (kV)	24	1.1
Impulse test voltage (kV)	125	0
Applied test voltage (kV)	50	3

## D. EFFICIENCY AND VOLTAGE REGULATION

	Efficiency ( % )				Voltage Regulation	
	4/4 load	3/4 load	2/4 load	1/4 load	in Volt	in %
Pf 0.8	98.06	98.44	98.76	98.85	381	4.72
Pf 1.0	98.44	98.75	99.00	99.07	394	1.61

## E. APPROXIMATE WEIGHTS AND DIMENSION

Total length : 1,940 mm  
 Total width : 1,260 mm  
 Total height : 1,865 mm  
 Weight of oil : 780 kg  
 Weight of core and winding : 1,370 kg  
 Total weight : 3,460 kg  
 Approximate Drawing No. :  
 Painting Colour : Light Grey RAL 7032

The above dimensions and masses are approximate and provided to give a general description of our proposed transformer.

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Est.	SGT			
Chk				
App.				



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## F. ACCESSORIES

- Name Plate and Rating Plate
- HV Plug in Bushings and LV Porcelain Bushings
- Off Circuit Tap Changer
- Oil Filling Valve
- Oil Draining Valve
- Lifting Lugs
- Grounding Terminal
- Bidirectional Rollers
- Pressure Relief Device Without Contact
- Protection Relay RIS
- Fins Type Radiator

## G. DEVIATIONS / EXCEPTIONS

- None

## H. NOTES

- None

## I. LIST OF TEST

Routine Test :

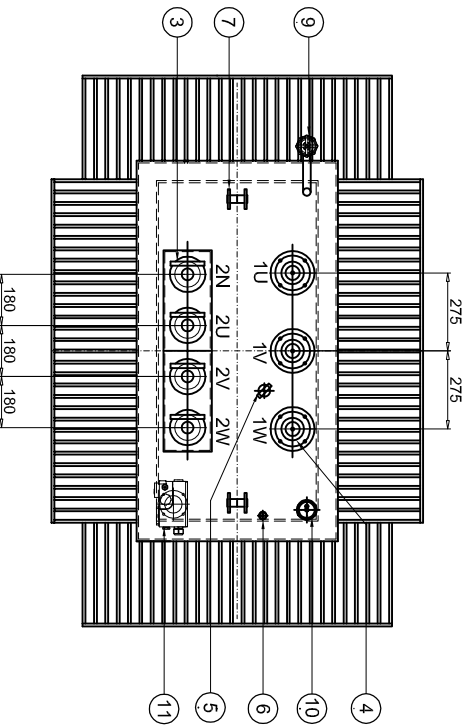
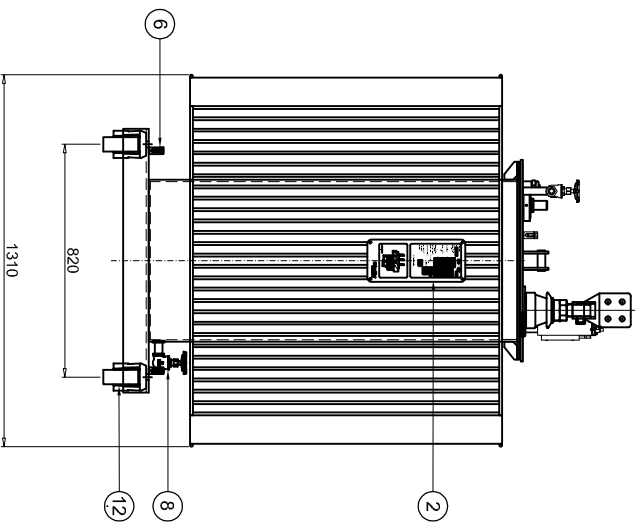
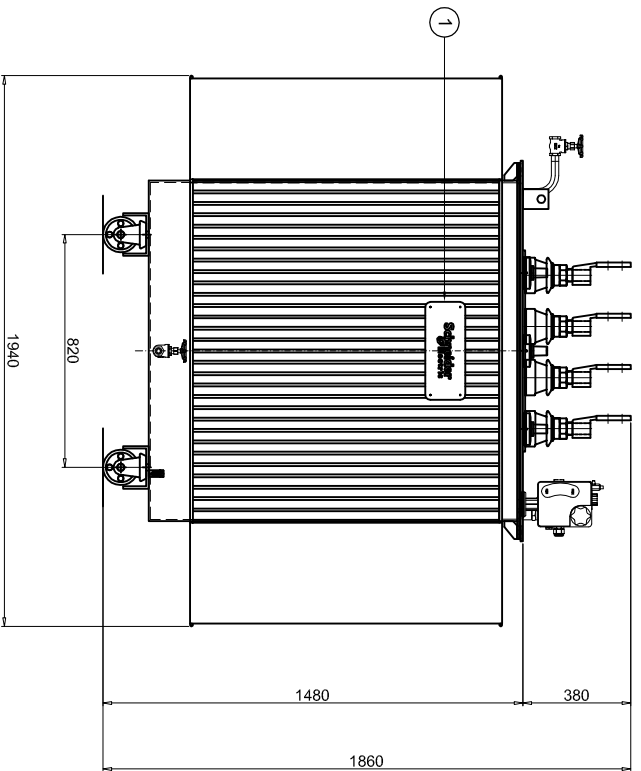
- |  | Yes                                 | No                       |
|--|-------------------------------------|--------------------------|
| - Measurement of the resistance value and checking of polarities :         | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| - Measurement of the ratio on all taps :                                   | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| - No load test for measurement of the no load loss and no load current :   | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| - Short circuit test for determination of the on load loss and impedance : | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| - Applied voltage test :   | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| - Induced voltage test :   | <input checked="" type="checkbox"/> | <input type="checkbox"/> |

Type test :

- |   |                          |                                     |
|---|--------------------------|-------------------------------------|
| - Temperature rise test :                 | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| - Full wave impuls test ( 1.2 / 50 us ) : | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

**Tests other than the above mentioned list needs further confirmation**

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NOTES :

1. NAME PLATE
2. RATING PLATE
3. LV BUSHING
4. HV PLUG-IN BUSHING
5. OFF CIRCUIT TAP CHANGER
6. EARTHING TERMINAL
7. LIFTING LUGS
8. DRAINING VALVE
9. OIL FILLING PLUG
10. PRESSURE RELIEF DEVICE WITHOUT CONTACT
11. PROTECTION RELAY RIS
12. BIDIRECTIONAL ROLLERS

ELECTRICAL CHARACTERISTICS

TYPE : OUTDOOR / ONAN  
 RATING : 1600 KVA  
 PRIMARY VOLTAGE : 20 kV ± 2.5%, ±5%  
 SECONDARY VOLTAGE : 0.4 kV  
 VECTOR GROUP : Dyn5  
 APPR WEIGHT : 3610 KG.  
 OIL WEIGHT : 850 KG.

PROJECT										PRIVATE CA9	
TITLE										OUTLINE DRAWING	
REMARKS										TRANSFORMER 1600 KVA	
DATE										SIGN	
SCALE										DATE	
DRAWN BY										Asmp	
CHECKED BY										Bw	
APPROVED BY										Ehs	
Distribution Transformer											
DATE										20-Nov-2012	
Schneider Electric										N.9949.G105	
A3											