

<i>Secondary Doc Ref</i>		<i>PO</i>
<i>Document Item</i>		

Oil transformer
15-0.72 kV – 630kVA
Data Sheets + identification plate

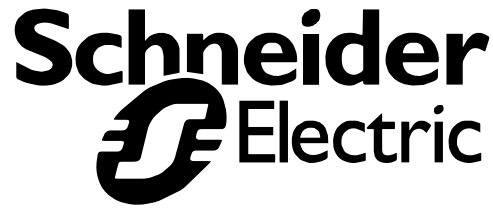
D	13 Jan 14	Issued for Construction		
C	12 Nov 13	Issued for Construction		
B	25 Sep 13	Issued for Construction		
A	22 Aug 13	Issued for Review		
Rev	Date	Description	Written By	Approved By
Document Revisions				

DISTRIBUTION TRANSFORMERS

Rev	OIL IMMERSSED HV/LV (15/0,72kV) SEALED TRANSFORMER			
1	ITEM :	QUANTITY		
2	Job specification:	9806J 0440 JSS 1641 002	Standards, codes:	IEC
3	Manufacturer:			
4	ENVIRONMENTAL CONDITIONS			
5	Installation (indoor/outdoor) / Ambient Type	Outdoor, under sun shade, in safe area	Industrial, Dusty & corrosive atmosphere (Mining), sand storm	
6	Ambient Design Temperature	Max: 47 °C	Min: 5°C	
7	Altitude/Relative Humidity	a.s.l.: <1000m		
8	GENERAL REQUIREMENTS (VENDOR TO COMPLY WITH)			
9	Type	With conservator <input type="checkbox"/>	Sealed <input checked="" type="checkbox"/>	
10		Dry type: <input type="checkbox"/>	Impregnated <input type="checkbox"/>	Cast resin <input type="checkbox"/>
11	Kind of transformer	With separate windings <input checked="" type="checkbox"/>	Autotransformer <input type="checkbox"/>	
12	No Load Voltage Ratio / Highest voltage Um	15 / 0,720	KV / KV	Refer to IEC 60076-3 kV / kV
13	Secondary voltage at rated power & P.F. of 0.8	690 V		
14	Mode of operation (individual / parallel)	(Yes / Yes)		
15	Frequency/Phases	50 Hz	2 +/- %	No: 3 phase
16	Maximum primary system short circuit current rating	31,5 kA rms		
17	Maximum short circuit duration	2 sec According to IEC 60076-5		
18	Off Circuit Tap Changer	± 2,5 % per step	N° steps: 5	Total range: ± 5 %
19	On Load Tap Changer	± % per step	N° steps:	Total range: ± %
20	Winding Connection and Vector Group	Dyn 11		
21	Insulation class	Class A		
22	Oil / Winding Temperature Rise (with ambient at 47°C)	Oil: 53 °C	Winding: 58 °C	
23	Oil type	Mineral oil		
24	Transformer mounting	Skid <input type="checkbox"/>	Rollers <input type="checkbox"/>	Bidirectionnal roller <input checked="" type="checkbox"/>
25	Accessories			
26	"DGPT2" type multifunction relay	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
27	Buchholz relay with 2 contacts (alarm / trip)	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	
28	Air breather and dryer	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	
29	Oil filler plug	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
30	Conservator oil drain plug	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	
31	Top oil thermometer with 2 contacts (alarm / trip)	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	
32	Dial thermometer with 2 contacts (alarm / trip)	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	
33	Liquid level gauge	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	
34	Pressure relief valve with operating signal contact	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	
35	Oil level gauge with alarm contact	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	
36		<input type="checkbox"/>	<input type="checkbox"/>	
37	Lifting rings	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
38	Safety valve	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	
39	Filling valve	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	
40	Tank oil drain plug	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
41	2 filterpress connections	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	
42	Insulation for tank earth protection	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	
43	2 earthing clamps	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
44	Lugs and hooks	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
45				
46	Drip pan	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	
47	TRANSFORMER SPECIFIC'S DATA (VENDOR TO COMPLY WITH)			
48	Transformer tag	See line 1	Quantity:	
49	Cooling type (ONAN, ONAF,...)	ONAN		
50	Nominal Rating Natural Cooling (ONAN)	630 kVA @ 47°C		
51	Nominal Rating Forced Cooling (ONAF)			
52	Impedance Voltage	4%		
53	Primary Connections	Bus Duct <input type="checkbox"/>	Cable <input checked="" type="checkbox"/>	line5) mm ²
54	Secondary Connections	Bus Duct <input type="checkbox"/>	Cable <input checked="" type="checkbox"/>	line5* mm ²
55		Primary 3 x 95 mm ² multipolar		
56	Cable Type & n° per phase	Secondary1 unipolar 300 mm ² per phase %i b]dc'U' -) 'a a 'z'f'GD\$		
57	CT on secondary (number per phase / ratio / class)	NA <input type="checkbox"/>	NA <input checked="" type="checkbox"/>	NA
58	Primary terminals	Box <input type="checkbox"/>	Plug in <input checked="" type="checkbox"/>	Plug in connectors (mobile and fix part) to be supplied by Vendor
59	Secondary terminals	Box <input checked="" type="checkbox"/>	Plug in <input type="checkbox"/>	Cable glands out of scope
60	Secondary / neutral brought out	Box <input checked="" type="checkbox"/>	Plug in <input type="checkbox"/>	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
61	Neutral connection: cable type / section	HOLD		HOLD mm ²

DISTRIBUTION TRANSFORMERS

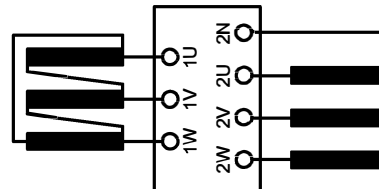
62	CT ring on neutral (ratio / class)	NA		NA	
63	Earthing resistor / resistor rating	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	NA Ω	
64	Earthing resistor box / installation / protection degree	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>		
65	Earthing system	Prim.: IT through neutral earthing transformer (at main substation) Sec.: IT (neutral resistor in the LV switchboard)			
66	Auxiliary Connections				
67	Sound press. level at 1 m / Sound power level	< 85 LPA (dB)		LWA (dB)	
68	Tropicalization	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>		
69	TRANSFORMER MANUFACTURER'S DATA (PART TO BE FILLED IN BY VENDOR)				
70	Manufacturer / Model	Schneider Electric		DCU 4132	
71	Highest Voltage (rms)	Primary Winding: 17.5 kV		Secondary Winding: 1.1 kV	
72	Short Duration Power Frequency Withst. Volt. (rms)	Primary Line Term.: 38 kV		Second. Line Term.: 3 kV	
73	Lightning Impulse Withstand Voltage (peak)	Primary Line Term.: 95 kV		Second. Line Term.: - kV	
74	Short Duration Power Frequency Withst. Volt. (rms)	Primary Neut. Term.: 38 kV		Second. Neut. Term.: 3 kV	
75	Lightning Impulse Withstand Voltage (peak)	Primary Neut. Term.: 95 kV		Second. Neut. Term.: - kV	
76	No Load Losses / No Load Current (primary)	1.4 kW		0,8 % of full load 1,25%	
77	Load Losses	4/4 Load: 9 kW	3/4 Load: 5.1 kW	2/4 Load: 2.3 kW	
78	Full Load Voltage Drop at 0.8 Power Factor	3,41 %			
79	Efficiency at 0,8 Power Factor	4/4 Load: 97,91%	3/4 Load: 98,28%	2/4 Load: 98,55%	
80	Efficiency at 1 Power Factor	4/4 Load: 98,35%	3/4 Load: 98,64%	2/4 Load: 98,85%	
81	Impedance voltage (%) / with tolerance of %	Ucc: 4 %		Tolerance: ±10 %	
82	Zero- Sequence Impedance	3.6 %			
83	X/R	3.45			
84	Magnetizing / Inrush current	0.3		A 273 (Peak) A	
85	Primary Bushing Quantity / Type	N°: 3		Plug-in	
86	Secondary Bushing Quantity / Type	N°: 3 + 1 N		Porcelain	
87	Fan Motors (Quantity / Rating / Voltage)	N°: NA		kW V	
88	Weight Iron / Copper	680 kg		260 kg	
89	Oil Weight	400 kg			
90	Total Weight	1740 kg			
91	Overall Dimensions (Length/Width/Height)	1710 mm		1120 mm 1530 mm	
92	When applicable, dimensions between rollers	670 mm			
93	Painting (Mfr standard,... / color)	Spec. 221 1aa + AUE000000000000			
94	Tropicalization	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>		
95	Sound press. level at 1 m / Sound power level	55 LPA (dB)		67 LWA (dB)	
96	Current density Primary / Secondary	3,55 A/mm²		3,45 A/mm²	
97	Core material and grade	Conventional Grain Oriented Steel (CGOS)			
98	Regulation at 47°C	96,59			
99	Earthing resistor rating	-			
100	Straight fault current limitation	-			
101	Straight fault short time rating	-			



Schneider Enerji End. San. ve Tic. Kocaeli - Turkey

TYPE	DCU 3832	ANNÉE		NO.		IEC 60076
PUISSANCE NOMINALE	630 kVA	MODÈLE	PT	PHASES	3	FREQUENCE 50 Hz
TENSION NOMINALE	COM.1	15750 V		V	TEMP. AMBIANTE	47 °C
	COM.2	15375 V		V	FONCTIONNEMENT	EN CONTINU
	COM.3	15000 V	720	V	COUPLAGE	Dyn 11
	COM.4	14625 V		V	TYPE DE REFROIDISSEMENT	ONAN
	COM.5	14250 V		V	POIDS TOTAL	1,74 t
COURANT NOMINAL	24,25 A		505,2 A	POIDS DE L'HUILE	0,40 t	
TENSION DE COURT-CIRCUIT	%			MASSE DE LA PARTIE ACTIVE	0,99 t	
COURANT DE COURT-CIRCUIT	kA			TAUX D'ISOLEMENT	LI 95 kV AC 38 kV / LI - AC 3 kV	
TYPE D'HUILE				DUREE MAX DE COURT-CIRCUIT	2 sec	
ECHAUFFEMENT MOYEN DES ENROULEMENTS	58 °K			VIDANGE D'HUILE A 20°C	0 lt	
ECHAUFFEMENT DE L'HUILE	53 °K					

ATTENTION !
 TRANSFORMATEUR HERMETIQUE
 LE TRANSFORMATEUR EST HERMETIQUEMENT
 BLINDE ET DISPONIBLE AU SERVICE
 NE PAS OUVRIR !
 NE PAS PURGER LES TRAVERSEES !



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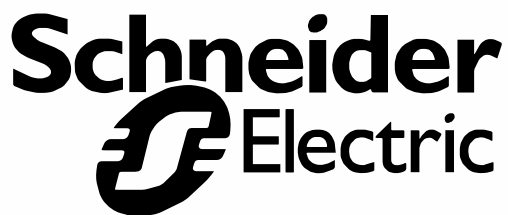
TAG NO	UNIT NO	1
		2
	

PLATE D 148x148 SS304 T 0947

LES VALEURS MANQUANTS VONT ETRE INDIQUEES APRES LES ESSAIS

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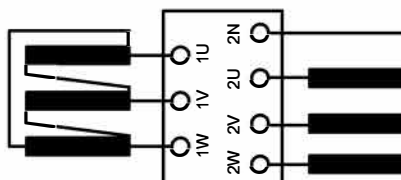
				Etabli le	05.11.2013	Remarque Plaque signalétique	Code Nr.
				Groupe	ADH-T1		
				Par			
				Verifie			
					Plan no:	Bl. Nr.	Blattz.
					1	1	Scale -/-
Pos.	Revision	Etabli le	Nom		Modification	Annule par	



Schneider Enerji End. San. ve Tic. AS Kocaeli - Turkey

TYPE	DCU 3832	NR	YEAR	IEC 60076
RATED POWER	630 kVA	MODEL	LT	PHASE 3
				FREQUENCY 50 Hz
	POS.1	15750 V	V	AMBIENT TEMP. 47 °C
	POS.2	15375 V	V	SERVICE CONTINUOUS
RATED VOLTAGE	POS.3	15000 V	720 V	VECTOR GROUP Dyn11
	POS.4	14625 V	V	COOLING METHOD ONAN
	POS.5	14250 V	V	TOTAL WEIGHT 1,74 t
RATED CURRENT	24,25 A	505,2 A	OIL WEIGHT	0,40 t
RATED IMPED.VOLTAGE	%	ACTIVE PART WEIGHT	0,99 t	
SHORT-CIRCUIT CURRENT	kA	INSULATION LEVEL LI 95 kV AC 38 kV / LI - AC 3 kV		
OIL TYPE	DURATION OF SHORT-CIRCUIT		2 s	
WINDING TEMPERATURE RISE	58 °K	OIL DRAIN IN 20°C	0 lt	
OIL TEMPERATURE RISE	53 °K			

ATTENTION !
 HERMETICALLY SEALED TRANSFORMER
 TRANSFORMER IS FILLED UP AS HERMETIC
 AND READY FOR OPERATING
 DO NOT OPEN IT !
 DO NOT VENT BUSHINGS !



Empty fields shall be engraved after factory tests.

TAG NO	
1

Plate D148x148 CR-NI T0947

				Dimensions without tolerance acc ISO 2768	App.		Class	Code Nr.
				Date	05.11.2013	Fb.No :	RPL	
				Department	ADH-T1	Rating plate		
				Designer				
				Check				
							Drawing no	Page no
								1
NO	Rev	Date	Name				Cancelled by drawing	Replaced by drawing
								Autocad

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