



ELECTROPUTERE
CRAIOVA-ROMANIA

POWER TRANSFORMER

STANDARD IEC 60076

CE

RATED POWER ONAN MVA
COOLING TYPE

RATED VOLTAGE HV kV
LV kV

YEAR OF MANUFACTURE

SERIAL NO.

IMPEDANCE VOLTAGE at 12.5 MVA base
75°C for normal ratio, at main tap

RATED FREQUENCY Hz

CONNECTION SYMBOL

NUMBER OF PHASES

TEMPERATURE WINDING °C
RISE OIL °C

HIGH VOLTAGE WINDING			
TAP CHANGER			
POS	SELECTOR	INV	
1	1		126500 98.81
2	2		125125 99.9
3	3		123750 101.01
4	4		122375 102.15
5	5		121000 103.3
6	6		119625 104.5
7	7		118250 105.7
8	8		116875 106.95
9	9		115500 108.2
10	10		114125 109.5
11	11		112750 110.86
12	12		111375 112.23
13	13		110000 113.6
14	K		110000 113.6
15	1		110000 113.6
16	2		108625 115.07
17	3		107250 116.5
18	4		105875 118
19	5		104500 119.6
20	6		103125 121.2
21	7		101750 122.8
22	8		100375 124.53
23	9		99000 126.26
24	10		97625 128
25	11		96250 129.8
26	12		94875 131.75
27	13		93500 133.68

LV WINDING	
VOLTAGE (V)	CURRENT (A)
27500	454.54

INSULATION LEVELS	
HV: LI 550 AC 230	
LV: LI 250 AC 95	

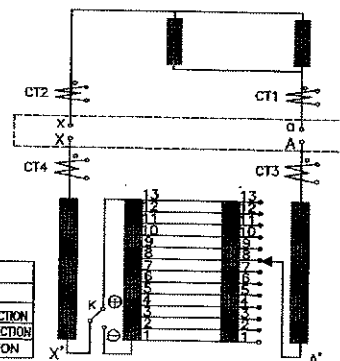
BUSHING CURRENT TRANSFORMERS			
ITEM	PLACE	CHARACTERISTICS	USED
CT1	a	600/1/1A/5P10/3/510/15/15VA	WITH PROTECTION
CT2	x	600/1/1A/5P10/3/510/15/15VA	WITH PROTECTION
CT3, CT4	A, X	200/5A/5P10/15VA	PROTECTION

TOTAL MASS kgs

SHIPPING MASS kgs

OIL MASS kgs

UNTANKING MASS kgs



T2.83999.V00

315

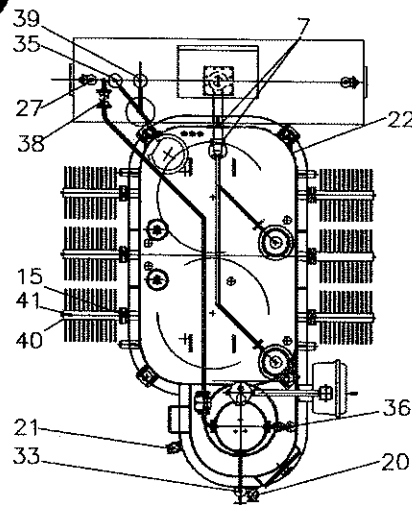
325

NOTE: The plate information will be inscribed with black writing on the stainless steel background colour. (Scale: 1:1)

Material: Stainless steel 1mm thick
4xØ4 holes

ELECTROPUTERE
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Designed <input type="text" value=""/>	Approved <input type="text" value=""/>	Date: 21.10.2008
NAME PLATE		T2.83999.DIE
TMUS 12.5 MVA 110/27.5 kV		



LEGEND

- 7.Dn 80 butterfly valve for Buchholz relay
 15.Dn 80 butterfly valve for radiator
 20.Dn 50 oil draining and filtering
 21.Dn 50 oil filtering valve
 22.Dn 15 oil sampling valve
 27.Dn 30 drain valve for conservator
 33.Dn 20 valve for OLTC siphoning
 35.Dn 30 valve between silicagel breather
 OLTC and conservator
 36.Dn 20 valve—pressure ballancing,OLTC—tank
 38.Dn 30 valve between OLTC and conservator
 39.Dn 30 valve between silicagel breather and
 conservator
 40.Radiator draining plug
 41.Radiator air release plug

CAUTION :
 The OLTC oil filling, draining
 and processing are separate,
 according to the OLTC Instructions
 Guide .

WARNING !
 Refer to the transformer and OLTC technical
 books before applying oil filling.

NOTE :
 Refer to T1.83039.DIE dwg. for items.

POSITION	7	15	20	21	22	27	33	35	36	38	39	40	41
Service	○	○	●	●	●	●	●	○	●	○	○	●	●
Draining of transformer oil	○	○	○	●	●	●	●	●	●	○	○	○	●
Oil sampling	○	○	○	○	○	○	○	○	○	○	○	○	○
Processing of transformer oil	○	○	○	○	○	○	○	○	○	○	○	○	○
Oil filling, refilling with oil	○	○	○	○	○	○	○	○	○	○	○	○	○
Transport	●	●	●	●	●	●	●	●	○	○	○	○	○

● —closed
 ○ —opened

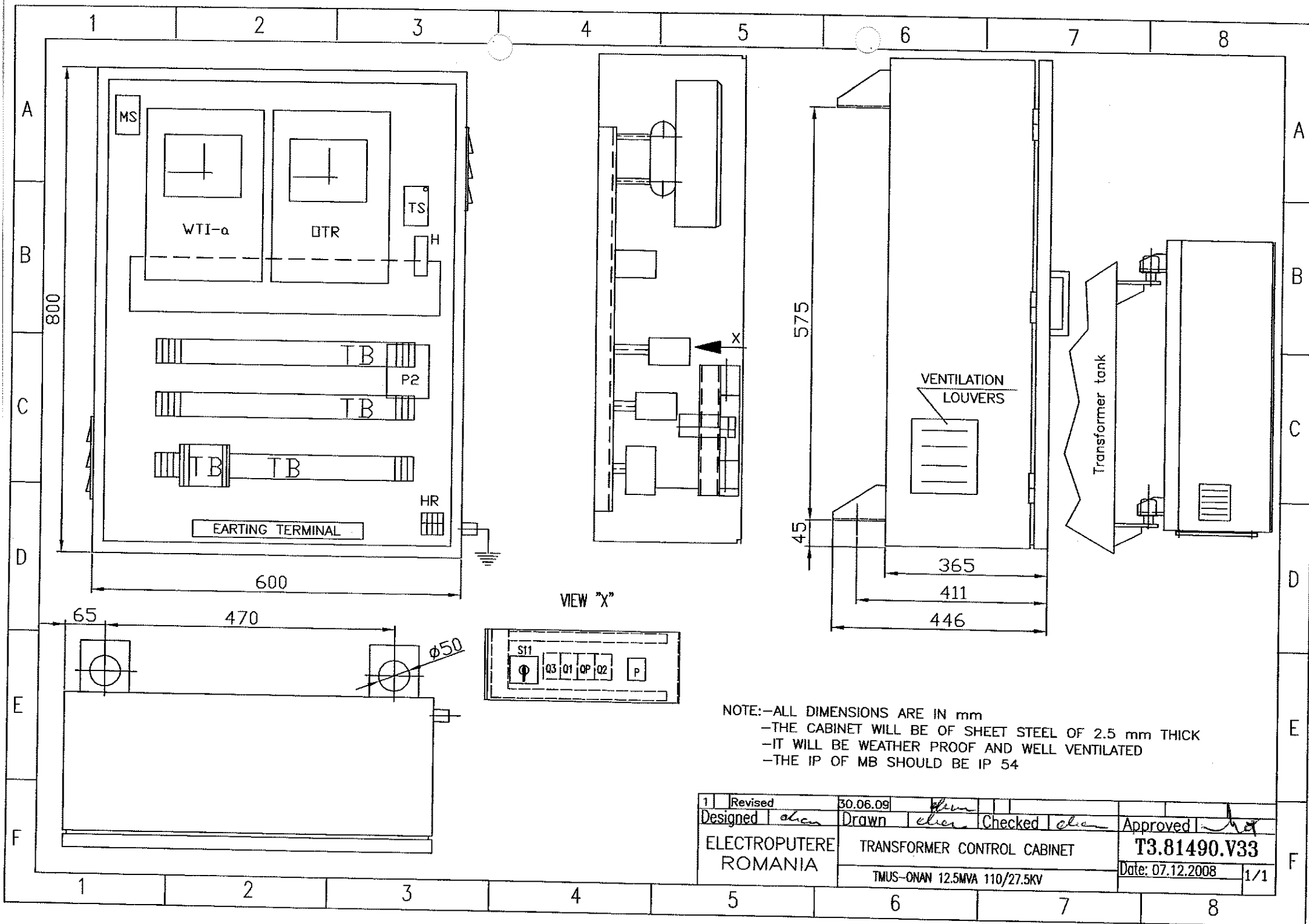
NOTE: The letters will be engraved,
 filled with black paint, on a clean white
 metal background (stainless steel)

Scale 1:1

Material: Stainless steel 1mm thick
 4xØ4 holes

ELECTROPUTERE
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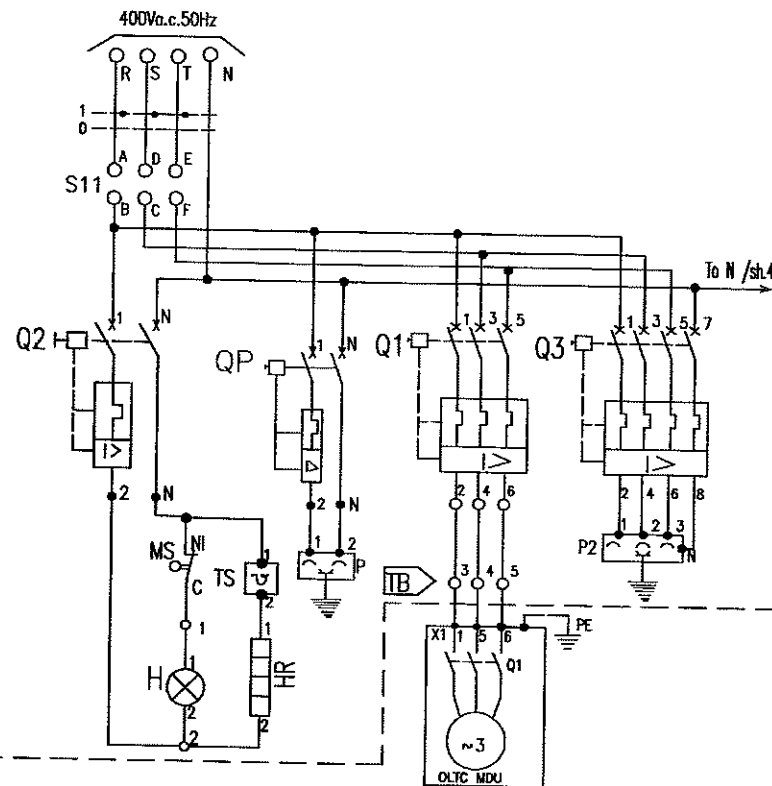
Designed	Approved	Date: 23.10.2008
VALVES ARRANGEMENT PLATE		T3.84013.V00



NOTE:-ALL DIMENSIONS ARE IN mm
 -THE CABINET WILL BE OF SHEET STEEL OF 2.5 mm THICK
 -IT WILL BE WEATHER PROOF AND WELL VENTILATED
 -THE IP OF MB SHOULD BE IP 54

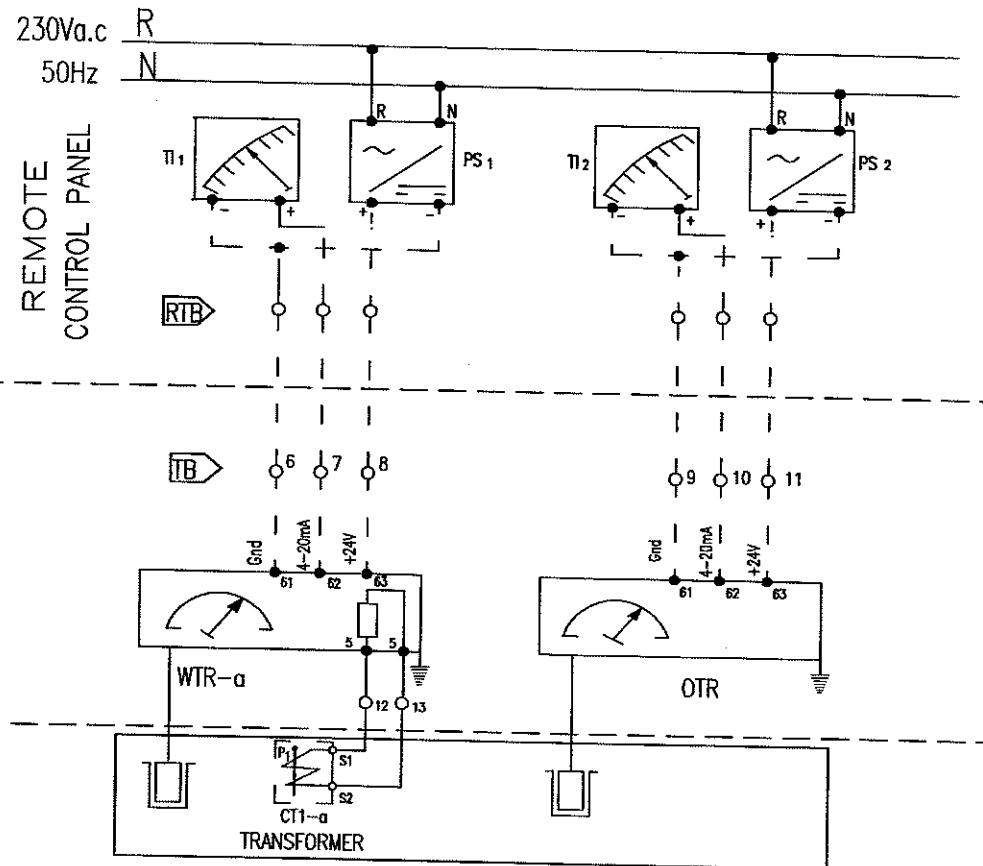
1	Revised	30.06.09				
Designed	alen	Drawn	alen	Checked	alen	Approved
ELECTROPUTERE ROMANIA		TRANSFORMER CONTROL CABINET			T3.81490.V33	
		TMUS-ONAN 12.5MVA 110/27.5KV			Date: 07.12.2008	1/1

MAIN TRANSFORMER CONTROL CABINET



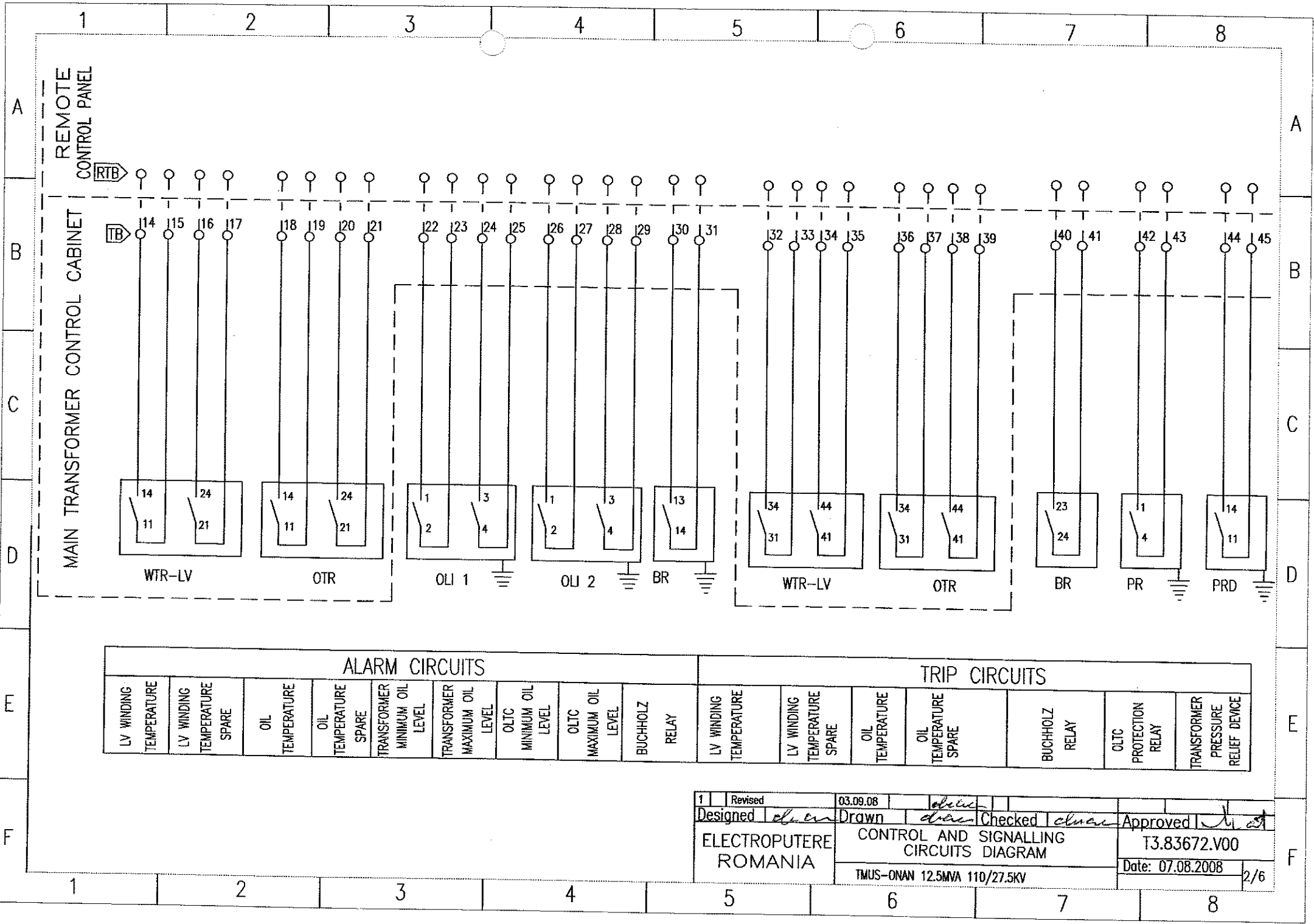
AC MAIN SUPPLY 400V ; 50 Hz		
AC SUPPLY LIGHTING AND HEATING	230V A.C. SUPPLY PLUG	MOTOR DRIVE MECANISM

CT1-a: 600/1A; 3FS10; 15VA Thermal replica
P1- Corresponds to the polarized terminal

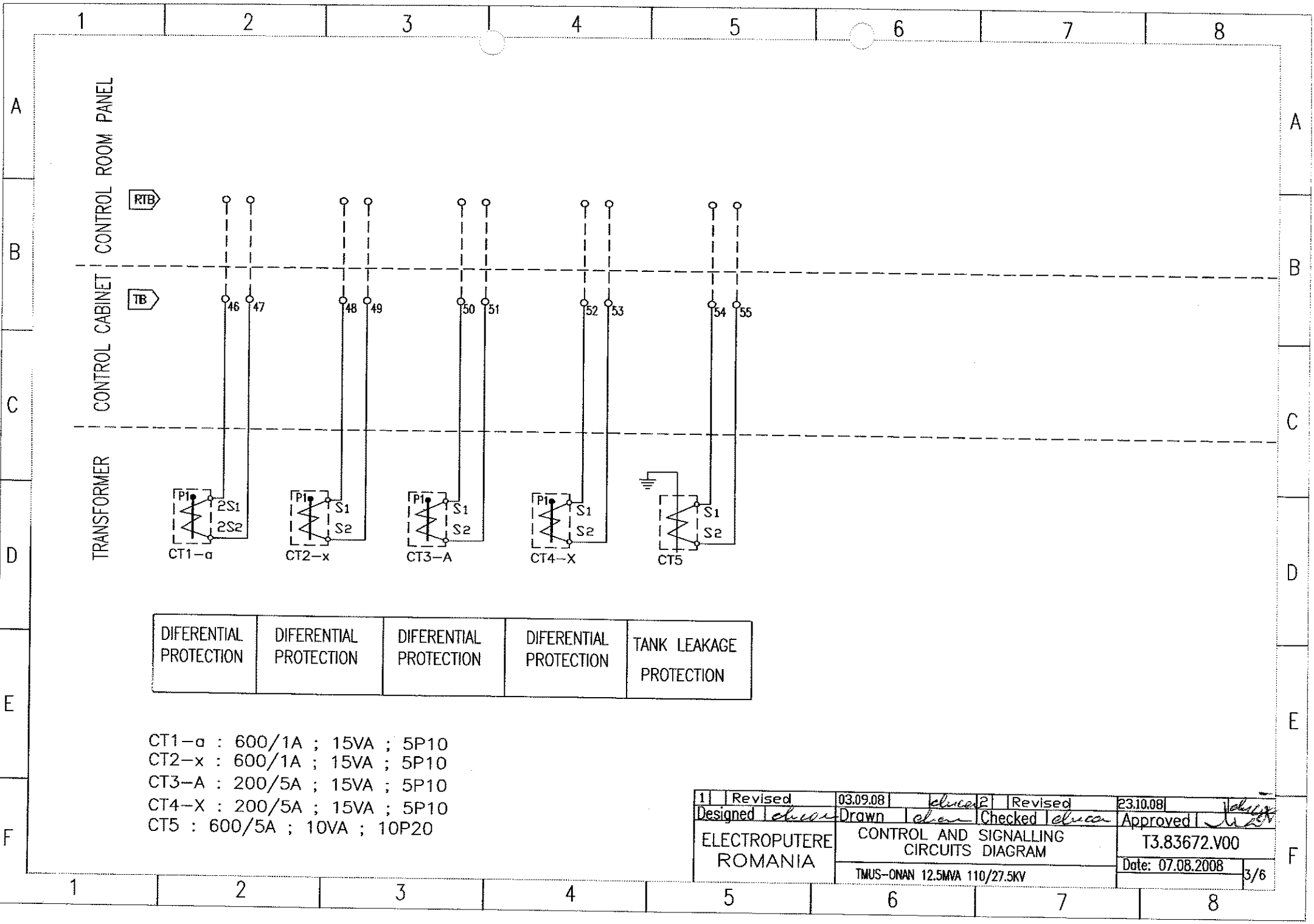


α WINDING TEMPERATURE INDICATION	OIL TEMPERATURE INDICATION
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1	Revised	03.09.08	2	Revised	29.06.09
Designed	dan	Drawn	dan	Checked	dan
ELECTROPUTERE ROMANIA		CONTROL AND SIGNALLING CIRCUITS DIAGRAM		T3.83672.V00	
		TMUS-ONAN 12.5MVA 110/27.5KV		Date: 06.08.2008	
				1/6	



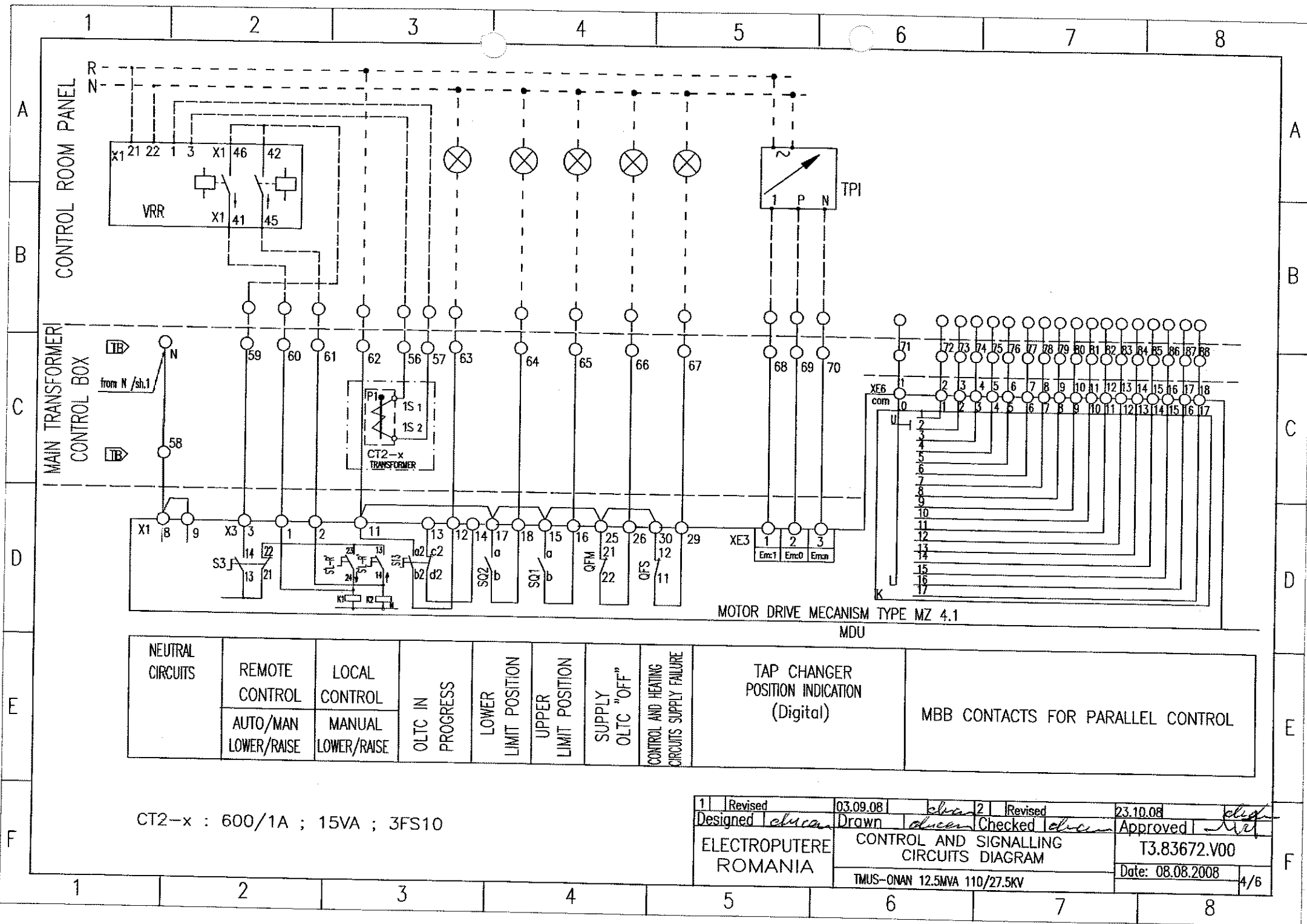
1	Revised	03.09.08	des	des	des	des
Designed <i>des</i>		Drawn <i>des</i>		Checked <i>des</i>	Approved <i>des</i>	
ELECTROPUTERE ROMANIA		CONTROL AND SIGNALLING CIRCUITS DIAGRAM				T3.83672.V00
		TMUS-ONAN 12.5MVA 110/27.5KV				Date: 07.08.2008
						2/6



DIFERENTIAL PROTECTION	DIFERENTIAL PROTECTION	DIFERENTIAL PROTECTION	DIFERENTIAL PROTECTION	TANK LEAKAGE PROTECTION
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CT1-a : 600/1A ; 15VA ; 5P10
CT2-x : 600/1A ; 15VA ; 5P10
CT3-A : 200/5A ; 15VA ; 5P10
CT4-X : 200/5A ; 15VA ; 5P10
CT5 : 600/5A ; 10VA ; 10P20

1	Revised	03.09.08	2	Revised	23.10.08
Designed	Drawn	Checked	Approved		
ELECTROPUTERE ROMANIA			CONTROL AND SIGNALLING CIRCUITS DIAGRAM		
TMUS-ONAN 12.5MVA 110/27.5KV			T3.83672.V00		
			Date: 07.08.2008		
			3/6		



Symbol	Designation	Quantity		
		Transfo	Control cabinet	Control panel
S11	Main supply switch		1	
Q2	Circuit breaker, 6A;230V.a.c		1	
QP	Circuit breaker, 16A;230V.a.c		1	
S16	DLTC main supply switch		1	
P	Plug 250 V.a.c., 16A		1	
MS	Door operated switch		1	
H	Illuminating lamp		1	
TS	Termostat		1	
Q3	Circuit breaker 16A;400V.a.c		1	
P2	Plug 16A ;400V.a.c		1	
HR	Heating resistance 150W		1	
WTR-2W	2W winding temperature relay		1	
OTR	Oil temperature relay		1	
CT1-a	Current transformers for WTR-a supply	1		
T11,T12	Remote indicator for winding and oil temperature			2
PS1,PS2	Power supply 230 V.a.c/24 V.d.c			2
DL-1	Transformer oil level indicator	1		
DLI-2	DLTC oil level indicator	1		
BR	Buchholz relay	1		
PR	DLTC protection relay	1		
PRD	Transformer pressure relief device	1		
CT1-a	Current transformers on a phase	1		
CT2-x	Current transformers on x phase	1		
CT3-A	Current transformers on A phase	1		
CT4-X	Current transformers on X phase	1		
CT5	Current transformers for tank leakage protection	1		
CT2-x	Current transformers for VRR supply	1		

Symbol	Designation	Quantity		
		Transfo	Control cabinet	Control panel
VRR	Voltage regulating relay			1
TPI	Tap position indicator			1
TB	Terminal block		1	
RTB	Terminal block			1

3	Revised	29.06.09		chican						
1	Revised	03.09.08		chican	2	Revised	23.10.08		chican	
Designed		chican	Drawn		chican	Checked		chican	Approved	chican
ELECTROPUTERE ROMANIA			CONTROL AND SIGNALLING CIRCUITS DIAGRAM					T3.83672.V00		
			TMUS-ONAN 12.5MVA 110/27.5KV					Date: 08.08.2008		6/6