

D					
C					
B					
A					
Indice Index	Data Date	Modificare Modification/Revision	Proiectant Designer	Aprobat Consultant Approved Consultant	Aprobat CFR Approved CFR



GUVERNUL ROMANIEI
ROMANIAN GOVERNMENT



PROIECT FINANȚAT DE UNIUNEA EUROPEANĂ
EUROPEAN UNION FINANCED PROJECT



C.N.C.F. "C.F.R." - S.A.

CLIENT / CLIENT



CONSULTANT / CONSULTANT

		Șef proiect Project manager	R. Liuzza	Data Date	Semnătură Signature
Aprobat Approved	Proiect manager				
Aprobat Approved	Coordonator Sectiune 1 Section 1 Coordinator	C. Gambelli			
Verificat Checked	Tunel Expert Tunnel Expert	C. Gambelli			
Intocmit Elaborated	Proiectant Designer	P. Amodio			

SUBCONSULTANT / SUBCONSULTANT

Aprobat Approved	Responsabil Subconsultant Subconsultant Responsible		
Intocmit Elaborated	Proiectant Designer		
Reabilitarea liniei de cale ferata Brașov - Simeria, parte componentă a coridorului IV Pan European, pentru circulația trenurilor cu viteză maximă de 160 km/h. Sectiune 1 Brașov - Sighisoara		Project/Project 2004/RO/16/P/PA/003	
Rehabilitation of the railway line Brașov - Simeria, component Part of the IV Pan-European Corridor, for the trains circulation with maximum speed of 160 km/h. Section 1 Brașov - Sighisoara		Faza / Phase: P.Th. / T.D.	

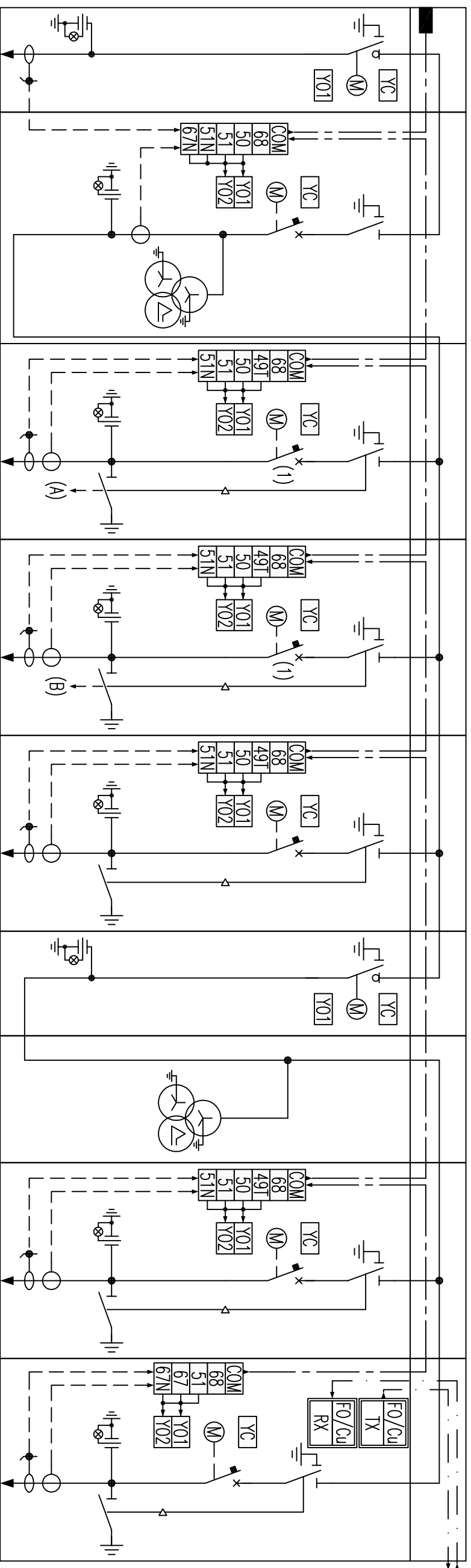
Denumire desen / Drawing Title : TUNNEL/TUNELUL ORMENIS
ORMENIS SIDE/INSPRE ORMENIS

Safety Tunnel Power Supply system /Sistem de alimentare de siguranță a tunelului
Single-line diagrams medium-voltage electrical panels Q_MT/PE/Diagrame single-line cadru electrice medie tensiune Q_MT/PE

Codificare / Codification System

Scara / Scale	LOT	Nr. / No
-		

E A 5 1 0 1 C 1 0 L X T S 1 0 2 6 0 0 2 0



FUNCTIONAL UNIT / UNIT FUNCȚIONALĂ N.	1	2	3	4	5	6	7	8	9
UNIT FUNCTIONAL / UNITĂȚEA FUNCȚIONALĂ N.	IMS 630	SWITCH-LIFT 630	SWITCH 630	SWITCH 630	SWITCH 630	IMS 630	RISALITA -	SWITCH 630	SWITCH 630
COMMAND / COMANDA	MOTORIZED / MOTORIZAT	MOTORIZED / MOTORIZAT	MOTORIZED / MOTORIZAT	MOTORIZED / MOTORIZAT	MOTORIZED / MOTORIZAT	MOTORIZED / MOTORIZAT	MOTORIZED / MOTORIZAT	MOTORIZED / MOTORIZAT	MOTORIZED / MOTORIZAT
FUSE / FUSE MŢ	-	-	-	-	-	-	-	-	-
PROTECTIONS - RATINGS / PROTECȚII - PUȚERII	-	50 67	51 68	51 68	51 68	51 68	-	51 68	51 67 67N
FEATURES / CARACTERISTICI TA	-	N° 3 TA 300/5 A 2,5 VA SP30	N° 3 SENSOBI TOROIDALI - I1 = 5A/30A - RA/PORȚIO = 100A/2,5 mV CI, 0,5-SP250	N° 3 SENSOBI TOROIDALI - I1 = 5A/30A - RA/PORȚIO = 100A/2,5 mV CI, 0,5-SP250	N° 3 SENSOBI TOROIDALI - I1 = 5A/30A - RA/PORȚIO = 100A/2,5 mV CI, 0,5-SP250	N° 3 SENSOBI TOROIDALI - I1 = 5A/30A - RA/PORȚIO = 100A/2,5 mV CI, 0,5-SP250	-	N° 3 SENSOBI TOROIDALI - I1 = 5A/30A - RA/PORȚIO = 100A/2,5 mV CI, 0,5-SP250	N° 3 SENSOBI TOROIDALI - I1 = 5A/30A - RA/PORȚIO = 100A/2,5 mV CI, 0,5-SP250
FEATURES / CARACTERISTICI TV	100/1A SP20	-	100/1A SP20	100/1A SP20	100/1A SP20	100/1A SP20	20000x3/100x3	100/1A SP20	100/1A SP20
FEATURES / CARACTERISTICI TIP DE CABLU	-	30 VA - CI: 0,5 / 50 VA CI: 3P	-	-	-	-	30 VA - CI, 0,5	-	-
TRAINING CABLE / FORMARE CABLE	RG7H1M1X 3x1x120	-	RG7H1M1X 3x1x95	RG7H1M1X 3x1x95	RG7H1M1X 3x1x95	-	-	RG7H1M1X 3x1x95	RG7H1M1X 3x1x95
LENGTH / LUNGIMEA (M)	10	-	15	15	15	-	-	15	15
LINE DESTINATION / LINE DESTINAȚIE	MINORITATE / GRUPA ETNICĂ DE APROXIMATIV 5% DIN POPULAȚIA DE DISTRIBUȚIE	-	POWER TRANSFORMER / ALIMENTARE TR/1/P	POWER TRANSFORMER / ALIMENTARE TR/1/D	POWER TRANSFORMER / ALIMENTARE TR/PE/1	CONNECTOR / CONECTOR	-	POWER TRANSFORMER / ALIMENTARE TR/PE/2	TO EXTERNAL SUB STATION SAFE AREA TO ORMENS

SOCKETS, ENGINES AND RESISTANCE
FROM ANTICONDENSATION FROM Q.BT
Vn=230 VAC/PRIZE, MOTORELE SI
REZISTENTA ANTICONDENS DE Q.BT
Vn=230 VAC

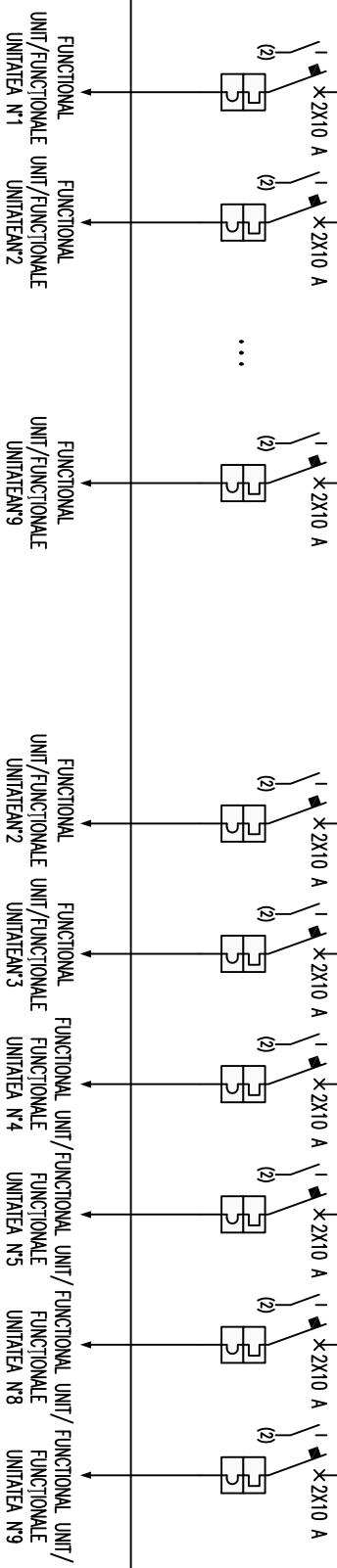
PROTECTION AND
MEASURES FROM Q.BT
Vn=230 VAC/MASURILE
SI PROTECTIE DE Q.BT
Vn=230 VAC

DISCONNECTORS installed in
the FUNCTIONAL UNIT
1/Separatoare instalate in
UNITATEA FUNCTIONALA 1

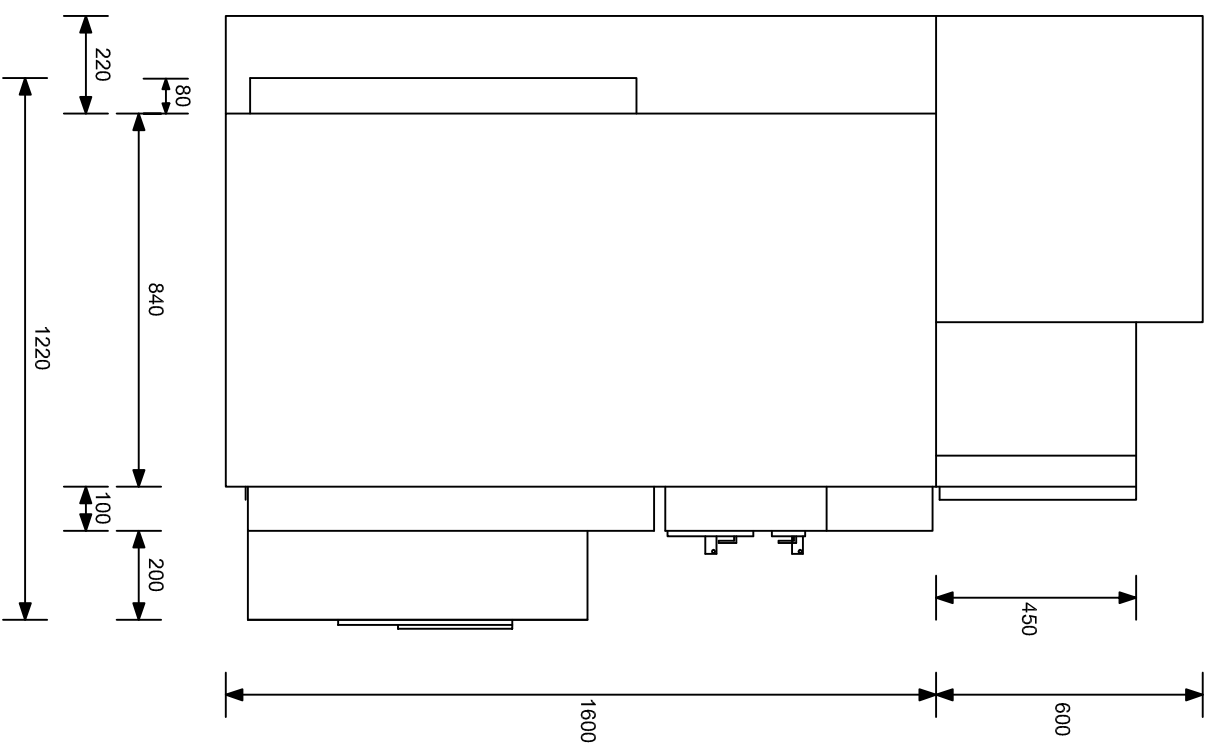
2X32 A

2X32 A

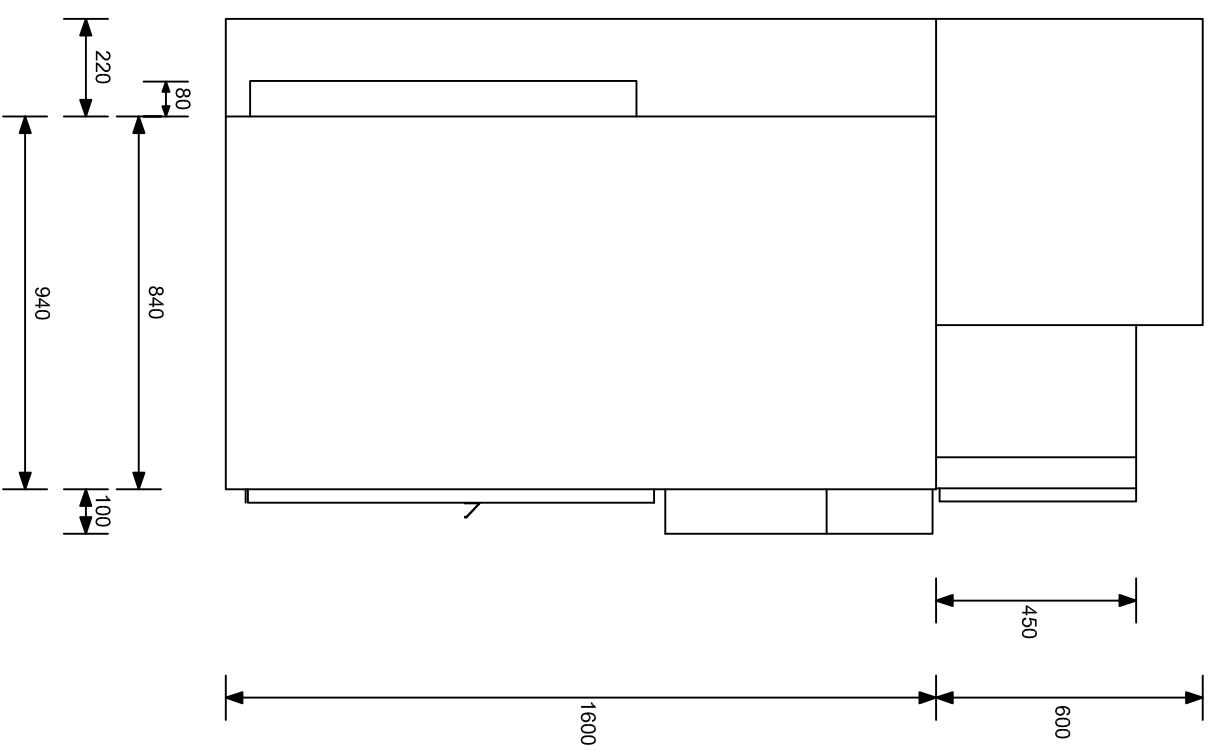
SWITCHES INSTALLED IN AUXILIARY CELL
OF THE CONCERNING BIN/CONTACTE
INSTALATE IN CELA AUXILIARA
PE BIN



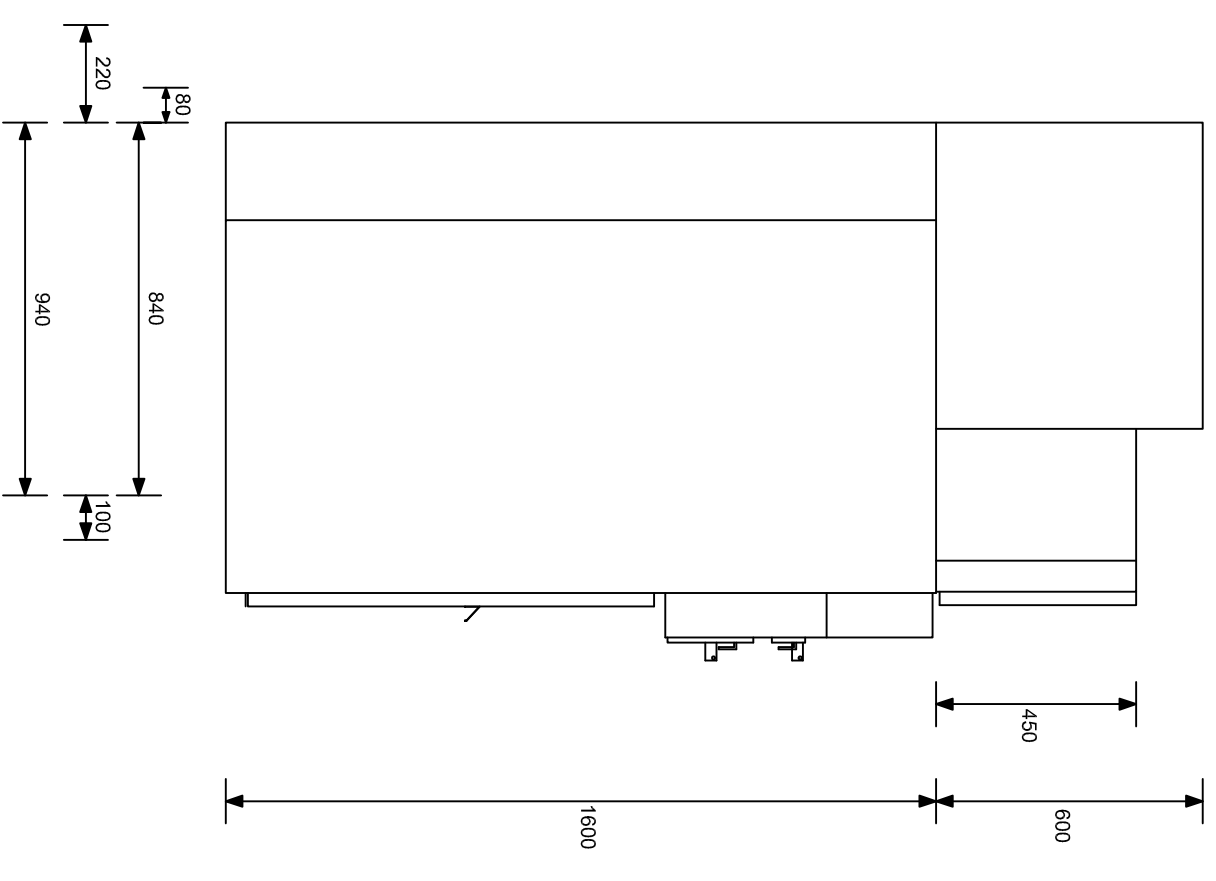
FUNCTIONAL UNIT/
 FUNCȚIONALE UNITATEA
 2-3-4-5-8-9



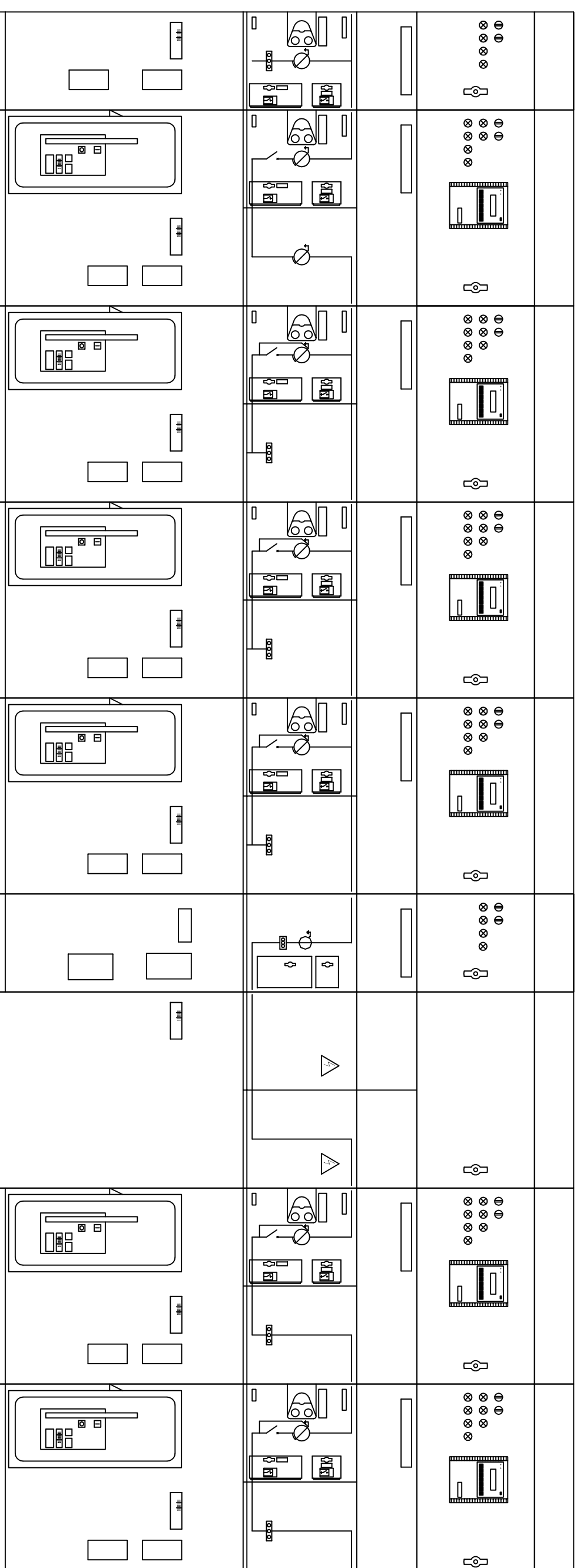
FUNCTIONAL UNIT/
 FUNCȚIONALE
 UNITATEA 7



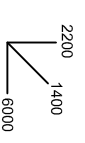
FUNCTIONAL UNIT/
 FUNCȚIONALE
 UNITATEA 1-6



ROOM MINIMUM HEIGHT: 2800 mm



UNIT/UNITATEA 375 UNIT/UNITATEA 750 UNIT/UNITATEA 750 UNIT/UNITATEA 750 UNIT/UNITATEA 750 UNIT/UNITATEA 375 UNIT/UNITATEA 750 UNIT/UNITATEA 750 UNIT/UNITATEA

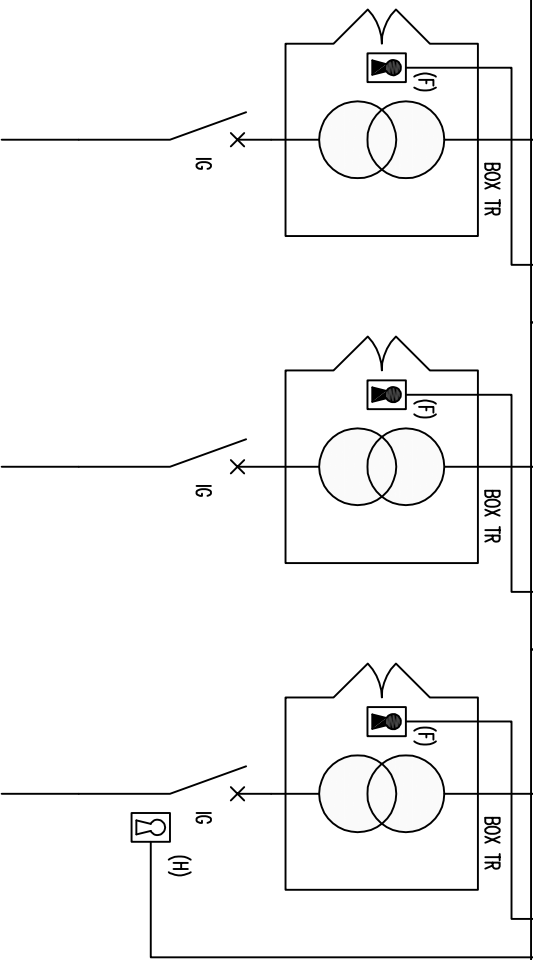
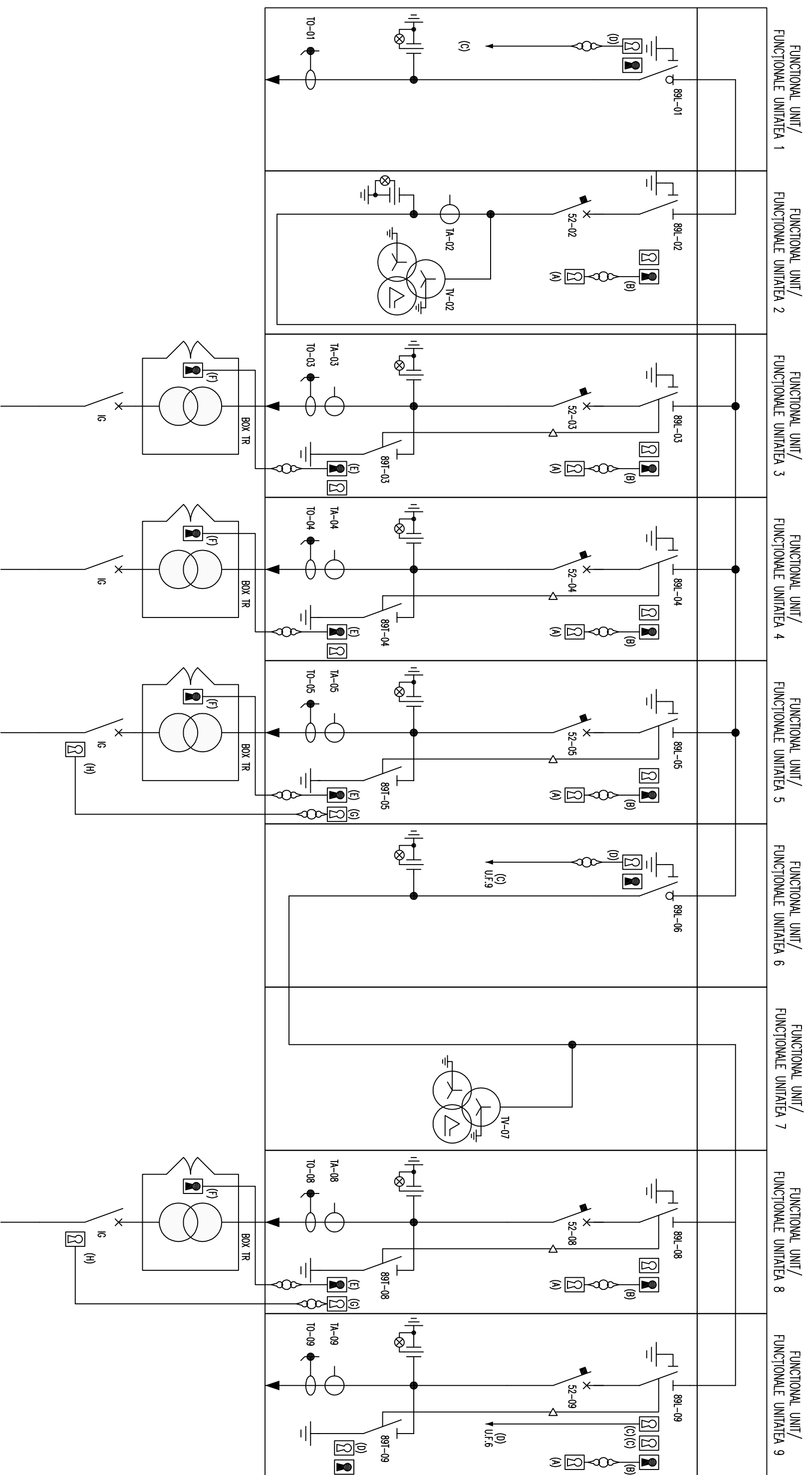


NOTES (SEE NEXT PAGE):

- (A) FREE KEY WITH OPEN SWITCH AND RINGED WITH KEY DISCONNECTOR LINE
- (B) FREE KEY WITH CLOSED LINE DISCONNECTOR AND RINGED WITH KEY SWITCH
- (C) FREE KEY WITH OPEN LINE DISCONNECTOR TO CLOSE THE GROUND
THE FRAMEWORK DISCONNECTOR MT CONNECTED (OR OTHER OF THE SAME FRAMEWORK
F. U. INDICATED LETTER FROM SPECIFIC)
- (D) FREE KEY WITH EARTHING SWITCH OPEN DISCONNECTOR FOR CLOSING OF
LINE PANEL MT CONNECTED (OR OTHER OF THE SAME FRAMEWORK F. U. INDICATED
LETTER FROM SPECIFIC)
- (S) FREE KEY WITH EARTHING SWITCH CLOSED AND RINGED WITH KEY FOR ACCESS TO
BOX TRANSFORMER
- (F) KEY FOR ACCESS TO BOX TRANSFORMER
- (G) KEY FREE WITH EARTHING SWITCH OPEN AND RINGED WITH SWITCH KEY ON THE
SIDE LV TRANSFORMER
- (H) RINGED WITH KEY DISCONNECTOR KEY OF THE LAND FOR BIN CONCERNING MT
- OTHER KEY SHOWN NOT TO BE FUNCTIONAL MOVES BUT THEY ONLY FUNCTION OF
BLOCK EQUIPMENT REPRESENTED IN POSITION

NOTE (A SE VEDEA PAGINA URMĂTOARE):

- (A) CU UN COMUTATOR DE KEY LIBERE ȘI DESCHISE INELAT CU LINIA CHEIE DE SARCINĂ
- (B) LINE GRATUIT CHEIE CU INCHISA SI SEPARATOR INELAT CU ÎNTRERUPĂTOR CU CHEIE
- (C) GRATUIT CU LINIA OPEN CHEIE APROAPE DE SOL SEPARATOR CADRU MT DESCONECTORI
CONNECTED (SAU ALTA DINTRE CADRU ACELAȘI LUCRU SA SCRISOARE DIN INDICAT SPECIFICE)
- (D) CU UN COMUTATOR DE LEGARE LA PĂMANT FĂRĂ CHEIE DESCHIS DESCONECTORI PENTRU
INCHIDEREA MT PANULUI LINE CONNECTED (SAU ALTE ACELAȘI CADRU F. U. SCRISOARE DIN
INDICAT SPECIFICE)
- (S) CU UN COMUTATOR DE LEGARE LA PĂMANT FĂRĂ CHEIE ÎNCHIS ȘI INELE CU CHEIA DE
ACCES LA BOX TRANSFORMER
- (F), CHEIA DE ACCES LA BOX TRANSFORMER
- (G)-CHEIE CU COMUTATOR DE LEGARE LA PĂMĂNT GRATUIT DESCHISE ȘI INELE CU ÎNTRERUPĂTOR
DE PE PARTEA LATERALĂ LV TRANSFORMER
- (H), INELE CU TASTĂA TERENULUI PENTRU SEPARATOR ÎN CEEA CE PRIVEȘTE BIN MT
- NU CHEIE ALTE DOVEDIT A FI FUNCȚIONALE MUTARI DAR EI DOAR AU FUNCȚIA DE BLOC
ECHIPAMENTE REPREZENTATE ÎN POZIȚIA

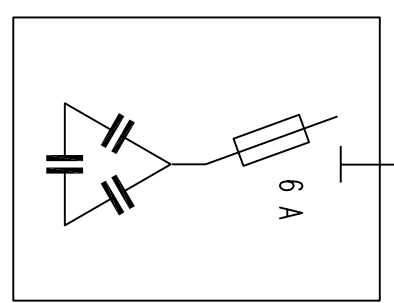


CONNECTION TO QdP/1
CONEXIUNEA A QdP/1

CABLE /CABLU FG10M1 0.6/1 kV
3x(2x240) mmq
LENGHT/LUNGIMEA = 10 m

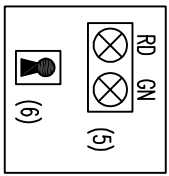
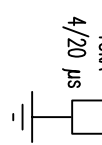
n°4 SCREENED CABLE/CABLU
ECRANAT 2x1mmq

[04-A6]



UNIT FOR FIXED FACTOR/
UNITATE PENTRU FIX FACTOR
Pn = 5 KVAR

TR/1/P
Pn = 200 kVA
V1n = 20 kV
V2n = 1 kV
Dyn11
Vcc = 6%



TO PROTECT THE
QdP/PENTRU A
PROTEJA 51N-50N
DE CADRU QdP

FROM FUNCTIONAL UNIT/DE
FUNCTIONALE UNITATEA 3

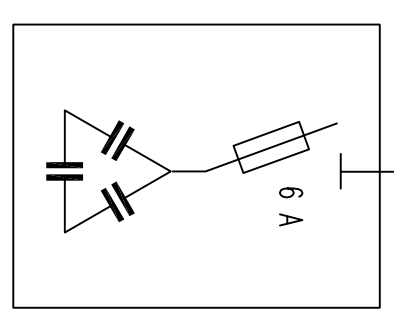
FROM FUNCTIONAL UNIT/DE
FUNCTIONALE UNITATEA 4

CONNECTION/CONEXIUNE
QdP/1

CABLE /CABLU FG10M1 0.6/1 kV
3x(2x240) mmq
LENGHT/LUNGIMEA = 10 m

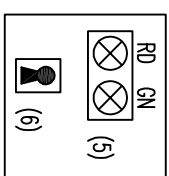
n°4 SCREENED CABLE/CABLU
ECRANAT 2x1mmq

[04-A7]



UNIT FOR FIXED FACTOR/
UNITATE PENTRU FIX FACTOR
Pn = 5 KVAR

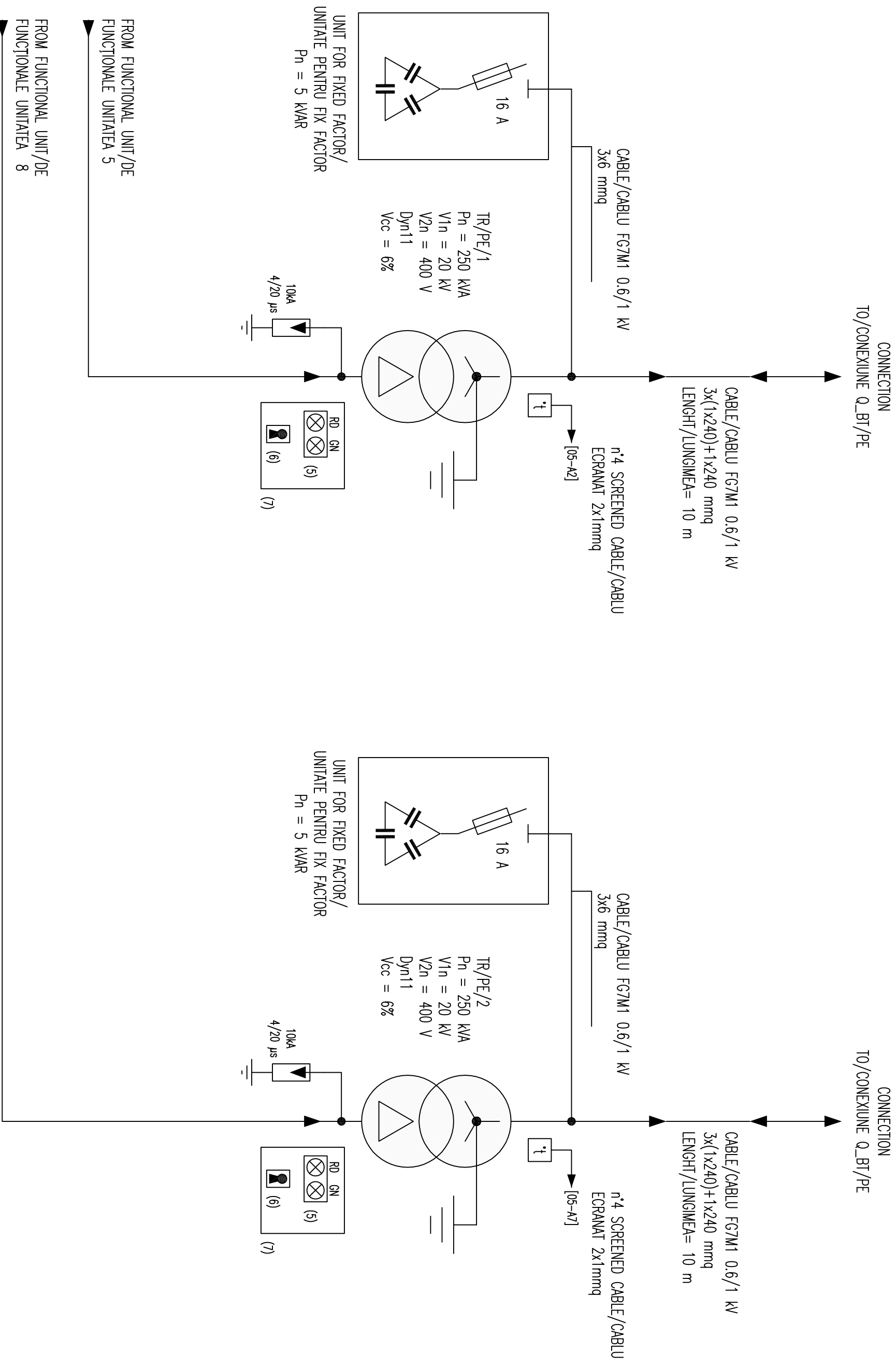
TR/1/D
Pn = 200 kVA
V1n = 20 kV
V2n = 1 kV
Dyn11
Vcc = 6%



TO PROTECT THE
QdP/PENTRU A
PROTEJA 51N-50N
DE CADRU QdP

FROM FUNCTIONAL UNIT/DE
FUNCTIONALE UNITATEA 3

FROM FUNCTIONAL UNIT/DE
FUNCTIONALE UNITATEA 4

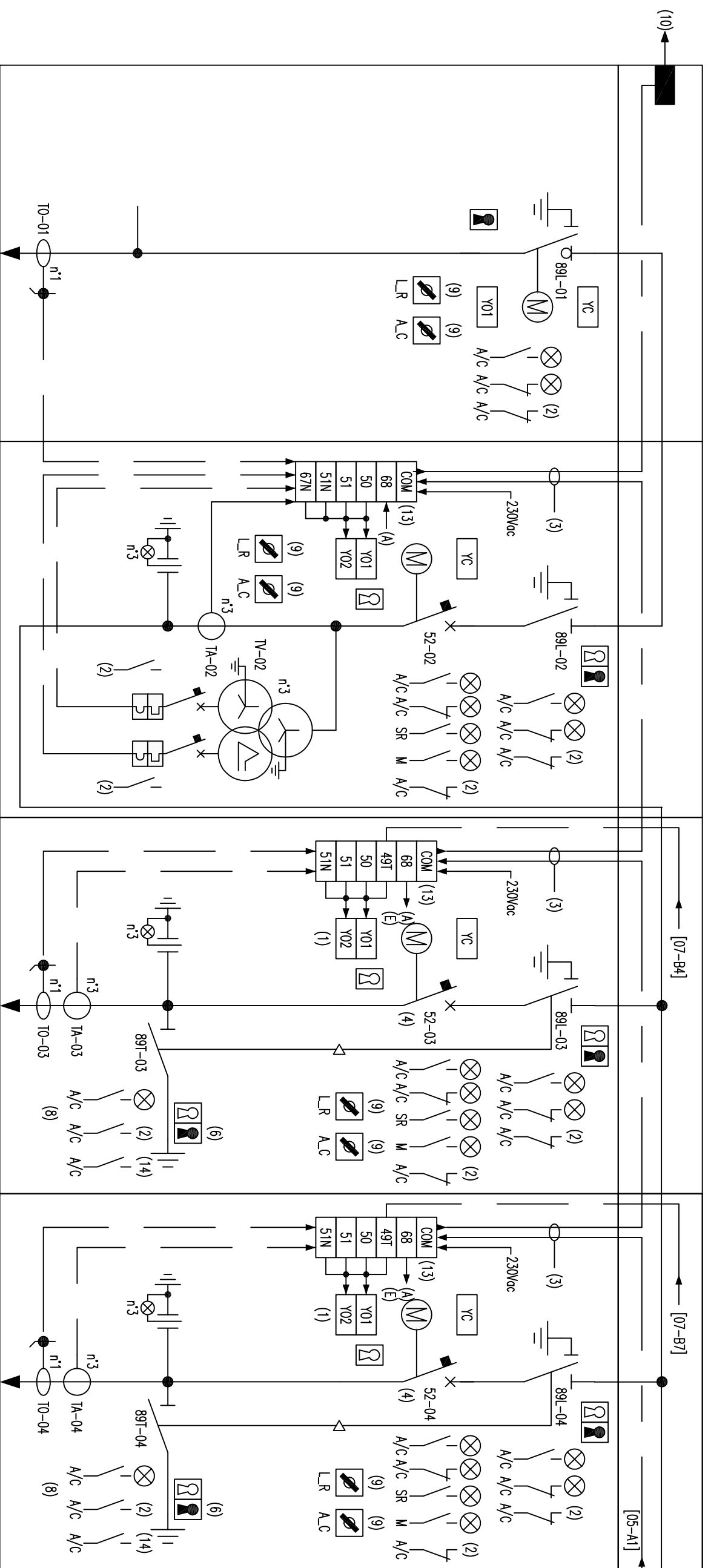


FUNCTIONAL UNIT/
FUNCȚIONALE UNITATEA 1

FUNCTIONAL UNIT/
FUNCȚIONALE UNITATEA 2

FUNCTIONAL UNIT/
FUNCȚIONALE UNITATEA 3

FUNCTIONAL UNIT/
FUNCȚIONALE UNITATEA 4

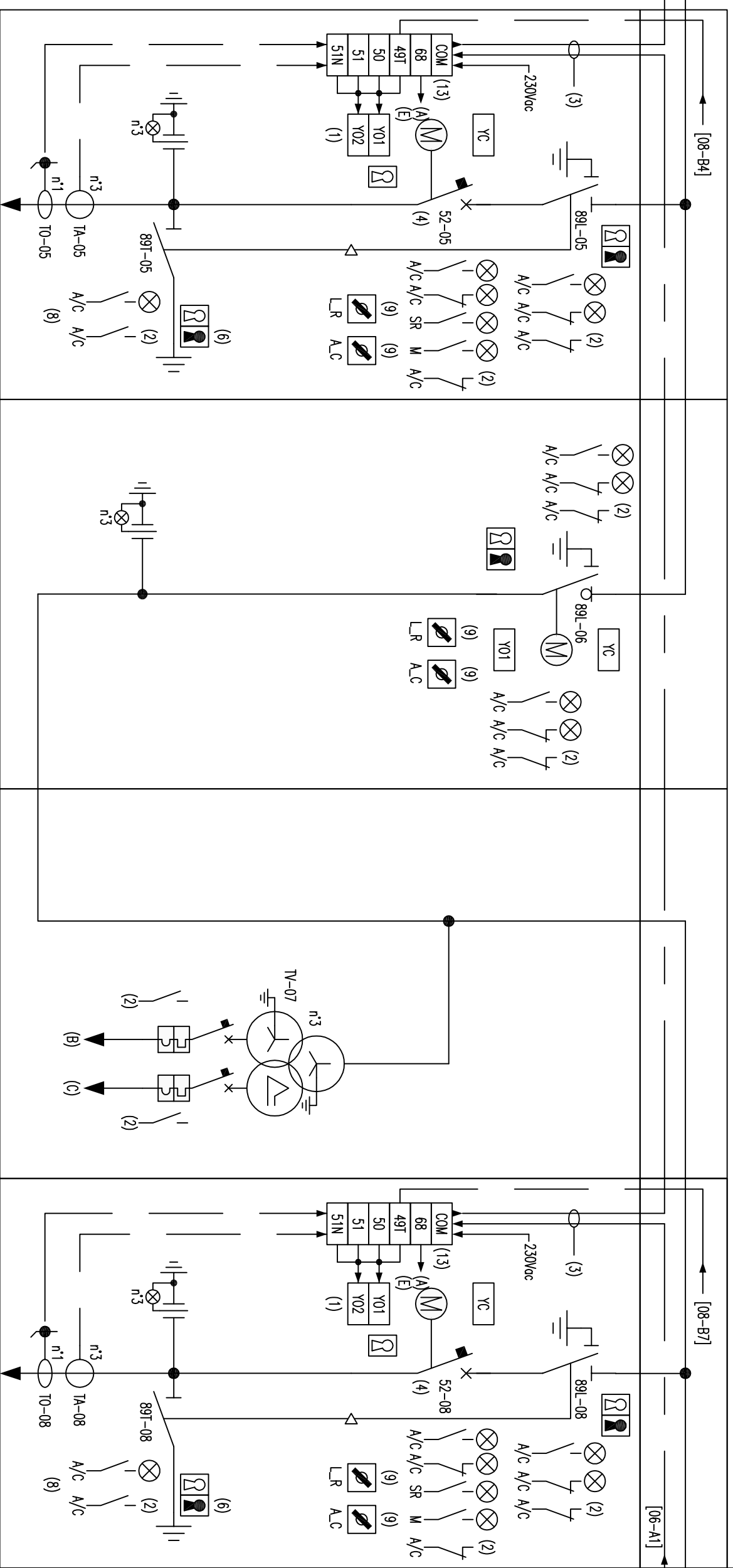


FUNCTIONAL UNIT/
FUNCTIONALE UNITATEA 5

FUNCTIONAL UNIT/
FUNCTIONALE UNITATEA 6

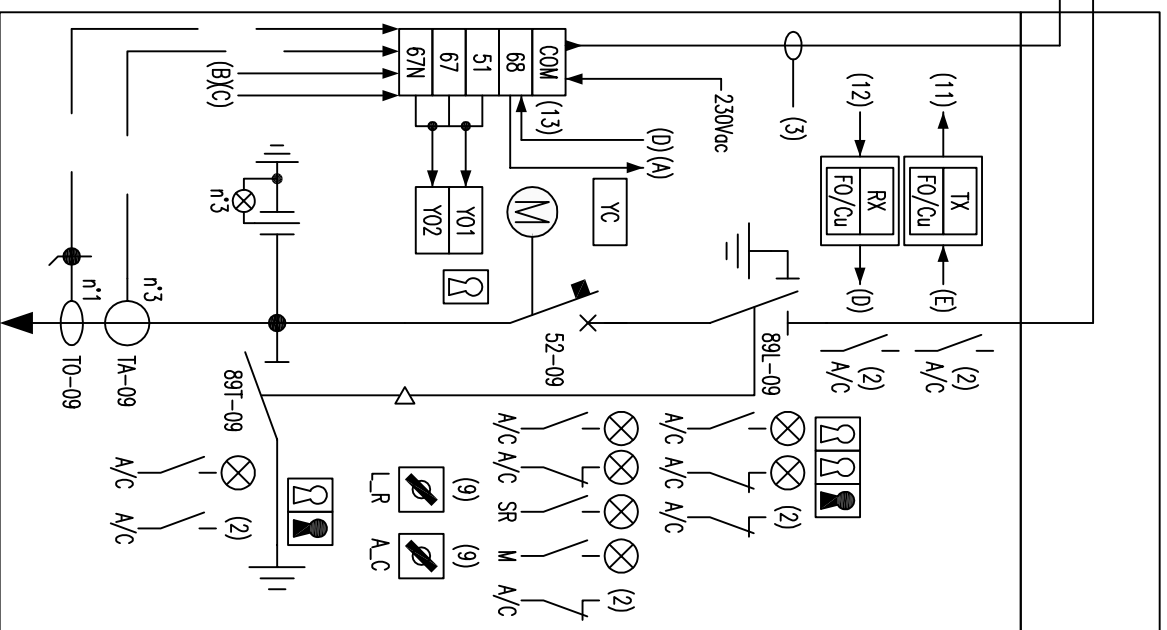
FUNCTIONAL UNIT/
FUNCTIONALE UNITATEA 7


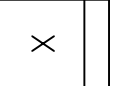



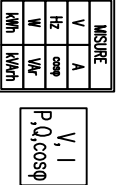


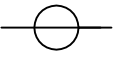

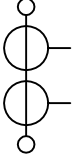
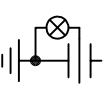
FUNCTIONAL UNIT/
FUNCTIONALE UNITATEA 8



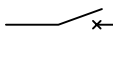
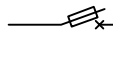
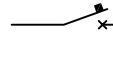
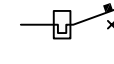
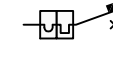
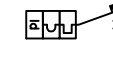
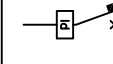

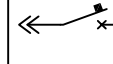
FUNCTIONAL UNIT /
FUNCTIONALE UNITATEA 9

[05-A8]



	1	2	3	4	5	6	7	8																				
A		MULTI-POSITION SWITCH/SWITCH MULTI-POZITII				RECORDER INSTRUMENT (COUNT, X = MEASURED QUANTITY, ES. KWH POWER)/INSTRUMENTUL RECORDER (COUNT, X = CANTITATEA MĂSURATĂ, ES. KWH DE ENERGIE)																						
A		WATCH GENERAL GRAPHIC SIGN/WATCH SEMNUL GRAFIC GENERALE				INSTRUMENTS (X = MEASURED QUANTITY, ES. V VOLTAGE)/INSTRUMENTE (X = CANTITATEA MĂSURATĂ, ES V TENSUNE)																						
B		TWILIGHT/			 <table border="1" data-bbox="1577 1501 1688 1590"> <tr><td colspan="4">MASURE</td></tr> <tr><td>V</td><td>A</td><td></td><td></td></tr> <tr><td>Hz</td><td>comp</td><td></td><td></td></tr> <tr><td>W</td><td>Var</td><td></td><td></td></tr> <tr><td>KWh</td><td>KVh</td><td></td><td></td></tr> </table> 	MASURE				V	A			Hz	comp			W	Var			KWh	KVh			MEASURING INSTRUMENT (MULTIMETER OR OTHER DEVICE)/INSTRUMENTE (METER SAU A ALTUI DISPOZITIV)		
MASURE																												
V	A																											
Hz	comp																											
W	Var																											
KWh	KVh																											
B		PRESSURE TO SERVE THE CELL (X) THE BIN (N)/SENSOR DE PRESIUNE PENTRU A SERVI CELL (X) BIN (N)				TRANSFORMER CURRENT "TA"/TRANSFORMATOR DE CURENT "TA"																						
C		ACCUMULATOR BATTERY OR FLEECE/ACUMULATOR BATERIE SAU LANĂ				CURRENT TRANSFORMERS 2 SECONDARY WINDINGS, EACH ON THEIR MAGNETIC CIRCUIT/TRANSFORMATOARE DE CURENT 2 INFĂȘURĂRI SECUNDARE, FIECARE PE CIRCUITUL ACESTORA MAGNETIC																						
C		DIMDER FOR INDICATOR POWER/DIMZOR PENTRU INDICATOR DE PUTERE																										
D																												
D																												
E																												
E																												
F																												
F	1	2	3	4	5	6	7	8																				

	1	2	3	4	5	6	7	8
A								
	CLOSING CONTACT (OPEN TO REPOSE)/CONTACT DE INCHIDERE (DESCHIS LA REPAUS)				CLOSING CONTACT SENSITIVE TO TEMPERATURE/CONTACT DE INCHIDEREA SENSIBILE LA TEMPERATURA			
A								
	OPENING CONTACT (OPEN TO REPOSE)/CONTACT DE DESCHIDERE (DESCHIS LA REPAUS)				CLOSING CONTACT TO THERMIC RELAY/CONTACT DE INCHIDERE DE RELEU TERMICE			
B								
	CONTACT EXCHANGE WITH MOMENTARY INTERRUPTION/DATE DE SCHIMB CU INTERRUPERILOR MOMENTANE				THREE-WAY SWITCH/TREI-WAY SWITCH			
B								
	CONTACT A TWO-WAY THREE POSITIONS WITH CENTRAL POSITION OPENING/DATE DE A DOUA-WAY TREI POZITII, CU DESCHIDERE POZITIE CENTRALĂ				TWO-WAY SWITCH/DOUĂ-WAY SWITCH			
	CLOSING CONTACT WITH MANUAL DRIVE/CONTACT DE INCHIDERE CU COMANDA MANUAL				TWO-WAY SWITCH AT THREE POSITIONS WITH CENTRAL POSITION OPENING/DOUĂ-WAY SWITCH TREI POZITII CU DESCHIDERE POZITIE CENTRALĂ			
C								
	CLOSING CONTACT WITH CONTROL BUTTON/CONTACT DE INCHIDERE CU BUTONUL DE CONTROL				CONTACT N.A.-N.C. TIMED TO ACTION/CONTACT N.A.-N.C. CRONOMETRAT PENTRU A ACȚIUNE			
	OPENING CONTACT WITH CONTROL BUTTON/CONTACT DE DESCHIDERE CU BUTONUL DE CONTROL				CONTACT N.A.-N.C. THE TIMED RELEASE/CONTACT N.A.-N.C.CRONOMETRAT PENTRU A ELIBERAREA			
D								
	CLOSING CONTACT WITH CONTROL ROD/CONTACT DE INCHIDERE CU COMANDA ROD							
D								
	CLOSING CONTACT WITH ROTARY CONTROL/CONTACT DE INCHIDERE CU CONTROL ROTATIV							
E								
	CLOSING POSITION CONTACT/POZITIA DE CONTACT DE INCHIDERE							
E								
	OPENING POSITION CONTACT/POZITIA DE CONTACT DE DESCHIDERE (LIMIT/LIMITA)							
F								
	EXCHANGE CONTACT WITHOUT INTERRUPTION/CONTACT DE SCHIMB FĂRĂ INTERRUPERE							

	1	2	3	4	5	6	7	8				
A		SWITCH (POWER)/SWITCH (PUTERE)			<input type="checkbox"/> X	RELAY OF MEASURING OR SIMILAR DEVICE WITH INDICATION OF SECURITY FEATURES ENABLED IN ANSI CODES/RELEU PENTRU DISPOZITIV DE MĂSURARE SAU SIMILARE CU INDICAȚIE DE CARACTERISTICI DE SECURITATE ESTE ACTIVAT ÎN CODURI ANSI						
		SWITCH WITH BUILT-IN FUSE/SWITCH CU BUILT-IN FUSE			<input type="checkbox"/>	THERMAL RELAY/RELEU TERMIC						
		POWER SWITCH FOR AUTOMATIC OPENING/BUTONUL DE PORNIRE DESCHIDEREA AUTOMATĂ			<input type="checkbox"/>	RELAY MAGNETIC/RELEU MAGNETIC						
B		POWER SWITCH OPENING AUTOMATIC, THERMIC/BUTONUL DE PORNIRE DESCHIDEREA AUTOMATĂ, TERMICE			<input type="checkbox"/> Id	CURRENT DIFFERENTIAL RELAY/RELEU CURENT DIFFERENTIAL						
		POWER SWITCH OPENING AUTOMATIC, MAGNETOTHERMIC/BUTONUL DE PORNIRE DESCHIDEREA AUTOMATĂ, MAGNETOTERMICE			<input type="checkbox"/> I >	OVERCURRENT RELAY (LONG DELAY)/RELEU SUPRACURENT (ÎNȚĂRZIERII PRELUNGITE)						
C		POWER SWITCH FOR AUTOMATIC OPENING, DIFFERENTIAL MAGNETOTHERMIC/COMUTATORUL DE ALIMENTARE TIMP DESCHIDEREA AUTOMATĂ, DIFERENȚIAL MAGNETO TERMICE			<input type="checkbox"/> I >	OVERCURRENT RELAY (SHORT DELAY)/RELEU SUPRACURENT (SCURTĂ ÎNȚĂRZIERE)						
		POWER SWITCH FOR AUTOMATIC OPENING, WORKING FOR CURENT DIFFERENTIAL/COMUTATORUL DE ALIMENTARE TIMP DESCHIDEREA AUTOMATĂ, LUCRU PENTRU DIFERENȚIAL CURENT			<input type="checkbox"/> I ±	EARTH FAULT RELAY/RELEU FAULT PĂMÂNTULUI						
D		POWER SWITCH AT AUTOMATIC OPENING WITH ADJUSTABLE THERMIC/COMUTATORUL DE ALIMENTARE TIMP DESCHIDEREA AUTOMATĂ CU CĂLDURĂ REGLABIL			<input type="checkbox"/> U = 0	RELAY GROUND FAULT RELAY A LACK OF POWER/RELEU ÎMPĂMÂNTARE RELEU LIPSĂ DE PUTERE						
		POWER SWITCH AT AUTOMATIC OPENING REMOVABLE/COMUTATORUL DE ALIMENTARE TIMP DESCHIDEREA AUTOMATĂ AMOVIBIL			<input type="checkbox"/> U <	RELAY UNDERVOLT/RELEU UNDERVOLT						
E					<table border="1" data-bbox="577 1543 661 1632"> <tr> <td>M</td> <td>D</td> </tr> <tr> <td>Sf</td> <td>EL</td> </tr> </table>	M	D	Sf	EL	PROTECTION TRIP UNITS ELECTRIC UNIT OF MEASURE (M) AND DIALOGUE (D)/ ÎMPEDICAT DE UNITATI ELECTRICE CU UNITATEA DE MASURA (M) ȘI DIALOG (D)		
M	D											
Sf	EL											
F												
	1	2	3	4	5	6	7	8				

	1	2	3	4	5	6	7	8		
A	01	ELECTRICAL CHARACTERISTICS OF THE PANEL/CARACTERISTICILE ELECTRICE DE CADRU								
		A	LOSS CATEGORY OF CONTINUITY SERVICE/CATEGORIA DE PIERDERE A CONTINUITATE SERVICIULUI	=	LSC 2A					
		B	CLASS OF DIAPHRAGM/CLASA DE DIAPHRAGMA	=	PI					
		C	KEEPING THE INNER ARC/PASTRAREA ARC INTERIOR (IAC)	=	AFLR					
		D	OPERATING VOLTAGE/TENSIUNE DE FUNCTIONARE Ue	=	20 kV					
		E	NOMINAL VOLTAGE/TENSIUNE NOMINALA Ui	=	24 kV					
		F	NOMINAL FREQUENCY/FRECVENTA NOMINALA Fn	=	50 Hz					
		G	NOMINAL CURRENT MAIN BARS/CURRENT NOMINAL BARE PRINCIPALE In	=	630 A					
		H	NOMINAL CURRENT DERIVATIVE BARS/CURRENT NOMINAL BARE DERIVATE In	=	630 A					
		I	CURRENT SHORT-TIME/CURRENTUL DE SCURT-TIMP(SIMM.) Icc	=	16 kA (1 s)					
		L	CURRENT SHORT-TIME/CURRENTUL DE SCURT-TIMP (PICCO) Icc	=	40 kA (1 s)					
		M	POWER TO BREAK THE SWITCHES/PUTEREA DE RUPE DE SWITCHES	=	16 kA					
		N	INTERNAL PROTECTION ARC/PROTECTIE INTERNA ARC	=	16 kA (1 s)					
		O	NUMBER OF STEPS/NUMAR DE PASI	=	3					
		P	IDENTIFICATION OF STEPS/IDENTIFICAREA DE ETAPE	=	L1 L2 L3					
		Q	INSULATION LEVEL /NIVEL DE IZOLATIE F=50 Hz E T=1'	=	50 kV (F-1)					
R	IMPULSE INSULATION LEVEL/IMPULSE NIVELUDE IZOLATIE 1.2/50µs (VDI PICCO)	=	125 kV (F-1)							
D	02	CONDITIONS OF SERVICE/CONDITII DE SERVICE								
		A	CLIMATE/CLIMATICE	=	MEDITERRANEO					
		B	ENVIRONMENT/AMBIANTA	=	INDUSTRIALE					
		C	MAXIMUM TEMPERATURE/TEMPERATURA MAXIMA	=	40°C (-5 / +40)					
		D	HUMIDITY ON AIR/UMIDITATE ON AIR	=	95% (MIN 50% / MAX 100%)					
		E	ALTITUDE/ALTITUDINE	=	< 1000 m s.l.m.					
F	PANEL INSTALLATION/INSTALARE DE PANOU	=	ALL'INTERNO							
E	03	AUXILIARY VOLTAGE/TENSIUNE AUXILIAR								
		A	SPRINGS CHARGER/INCARCATOR-CONTROLS/CONTROALE-SIGNALS/SEMNALE-ALARMS/ALARMS	=	230Vac/24Vdc					
		B	COMPARTMENT INTERIOR LIGHTING/COMPARTIMENTUL DE LUMINAT INTERIOR	=	NO					
A	04	MECHANICAL PROPERTIES OF PANEL/PROPRIETATIILOR MECANICE DE CADRU								
		A	DEGREE OF EXTERNAL PROTECTION/GRADE DE EXTERNE PROTECTIE	=	IP2XC					
		B	DEGREE OF INTERNAL PROTECTION/GRADE DE INTERNE PROTECTIE	=	IP2X					
		C	ACCESSIBILITY/ACCESUL	=	ANTERIOR/FRONT					
		D	ARRIVAL CABLES/SOSIRE CABLURI	=	FROM BELOW/INFERIOARA					
		E	START CABLE/PORNIRE CABLU	=	FROM BELOW/INFERIOARA					
		F	SLAB PANEL/BASE CADRU	=	CLOSED WITH GALVANIZED STEEL FLANGES/INCHIS CU OTEL ZINCAT FLANSE					
		G	COLOR INT-EXT/COLOR INC-DISC	=	WHITE RAL 9002 EMBOSSED/ALBRAL 9002 gofrate					
		H	TYPE OF PAINTING/TIP DE PICTURA	=	EPOXY POWDER/EPOXIDICE PULBERE (> 50 µm)					
		I	UNCOATED SURFACES/SUPRAFETELOR NEZOLATE	=	GALVANIZED OR TROPICAL/GALVANIZAT SAU TROPICAL					
		L	RESISTANCE ANTICONDENSATION BIN/REZISTENTA ANTICONDENS BIN	=	YES/DA					
		M	PLATE (ENGRAVED BY FRONT)/PLACA (GRAMATE DE FRONTALA)	=	YES/DA					
		N	DEVELOPMENT PANEL/DEZVOLTAREA CADRU	=	SX > DX					
		O	STANDARDS/STANDARDE	=	IEC 62271-200 / RFI IFS300:2006					
		P								
		Q								
D	05	COPPER BARS/BARE CUPRU								
		A	NAKED/NUDE	<input checked="" type="checkbox"/>	A	NAKED/NUDE	<input checked="" type="checkbox"/>			
		B	ISOLATED RESIN/IZOLAT RESIN	<input type="checkbox"/>	B	TINNED/COSITORIT	<input type="checkbox"/>			
C	INSULATING SHEATH THERMO-REACTIVE/IZOLARE TECII TERMO-REACTIVE	<input type="checkbox"/>	C	SILVER/ARGINT (> 6 µm)	<input type="checkbox"/>					
E	06	LEADS AND TERMINALS FOR AUXILIARY CIRCUITS (UNLESS OTHERWISE INDICATED IN THE DIAGRAM) OPORTUNITATI SI TERMINALE PENTRU CIRCUITE AUXILIARE (EXCEPTIA CAZULUI IN CARE NU ESTE INDICAT ALTEFL IN DIAGRAMA)								
		A	COMMAND-SIGNAL-ALARM/COMANDA-SIGNAL-ALARM	=	N07G9-K 1x1.5mmq					
		B	VOLTAGE CIRCUIT/TENSIUNEA CIRCUITULUI	=	N07G9-K 1x2.5mmq					
		C	CURRENT CIRCUIT/CIRCUIT CURENTE	=	N07G9-K 1x2.5mmq					
		D	TERMINAL TYPE-SIZE/TERMINAL TIP-SIZE	=	TERMOPLASTICO / = 4mmq					
E	ANTICONDENSATION RESISTANCE/CONDENS REZISTENTA	=	N07G9-K 1x4mmq							
F	07	SURFACE TREATMENT/TRATAMENT SUPRAFATA								
		A	NAKED/NUDE	<input checked="" type="checkbox"/>						
		B	TINNED/COSITORIT	<input type="checkbox"/>						
F	1									

CODES ANSI LEGEND/
LEGENDA CODURI ANSI

49T	MAXIMUM TEMPERATURE (TRANSFORMER)/TEMPERATURA MAXIMA (TRANSFORMATOR)
50	MAXIMUM PEAK CURRENT/CURRENTUL MAXIM INSTANTANEU
51	CURRENT MAXIMUM LATE/CURRENTUL MAXIM INTARZIERE
51N	MAXIMUM EARTH FAULT LATE CURRENT/CURRENT MAXIM DE DEFECTE PAMANTULUI INTARZIERE
67	MAXIMUM CURRENT DIRECTIONAL PHASE/CURRENTUL MAXIM DE DIRECTIONAL FAZA
67N	MAXIMUM CURRENT DIRECTIONAL EARTH FAULT/MAXIME DIRECTIONAL CURENT DE DEFECT PAMANTULUI
68	SELECTIVITY LOGIC (NETWORK LOCK)/SELECTIVITATEA LOGIC (RETEA BLOCK)
52	SWITCH/SWITCH
89	DISCONNECTOR/SEPARATOR

NOTE (SEE FOLLOWING PAGES)

- (1) CONTROL THE RELEASE OF EMERGENCY BUTTON INSTALLED OUTSIDE THE CABIN
- (2) STATE REPORTING SYSTEM TO BE GIVEN AT SUPERVISION
- (3) CONNECTING AT SYSTEM OF SUPERVISION RS485
- (4) INTERLOCK SWITCH WITH CONCERNING BT (DRIVE)
- (5) STATE OF SIGNAL PROCESSOR WITH AUXILIARY CONTACTS OF MANAGED DISCONNECTOR UNIT OF LAND ON THE FUNCTIONAL (see point 8)
- (6) KEY ACCESS TO BOX TRANSFORMER
- (7) DEVICES INSTALLED OUTSIDE OF ACCESS TO THE TRANSFORMER BOX
- (8) CONTACT THE SIGNALS USED FOR TRANSFORMER BOX
- (9) STATUS OF THE SWITCH TO BE GIVEN AT SYSTEM OF SUPERVISION
- (10) CONNECTING TO ETHERNET SWITCH CAR
- (11) SIGNAL TRANSMISSION OF LOGIC BLOCK ADJACENT TO THE CABIN
- (12) RECEIVING SIGNAL FROM THE CABIN ADJACENT TO BLOCK LOGIC
- (13) DIGITAL INPUT ON TIME SYNCHRONIZATION PROTECTION, with signals from GPS clock
- (14) TASCIONAME TION BETWEEN ELECTRICAL DISCONNECTOR GROUND SFOE THE PANEL MT and earthing UNDER THE SQUARE (PDO)
- ALL MOTORIZED EQUIPMENT SHOULD BE PROVIDED FOR THE REMOTE CONTROL SYSTEM OF CENTRAL
- The ENABLE FUNCTION OF PROTECTION AND *ADJUSTMENT WILL BE MADE IN ITS PLACE OF AGREEMENT WITH THE BODY IN DL SUPPLIER SCHEMES ARE REPRESENTED IN THE FOLLOWING CONDITIONS:
 - AUXILIARY CIRCUITS AND POWER IN THE ABSENCE OF TENSION
 - SWITCH OPEN AND ISOLATED
 - SHOCK SPRINGS CONTROL SWITCH
 - Earthing switch open
 - FUSE grounding leave

ACCESSORIES

- 2x16A 230V OUTLET FOR EVERY CELL AUXILIARY + T
- TYPE OF REPORTING OF LAMPS LED
- TEST CIRCUIT LAMPS
- PROTECTION OF MAGNETIC MOTORS
- CONDENSATION HEATERS WITH THERMOSTAT
- Operation counter SWITCHES
- REPORTING OFFICERS SPRINGS
- TERMINAL (TA) SHORT AND TERMINAL (TV) DISCONNECT
- UPPER CHANNEL INTERPANNELLARE
- Optical signals is shown in FRAMEWORK FOR TERMINAL:
 - * CLICK AUXILIARY SWITCHES
- Key lock and padlocks
- KEY SWITCH FOR LOC_REM INHIBITION OF GENERAL COMMANDS FROM OUTSIDE
- DIAGRAM FRONT PANEL OVERVIEW

NOTĂ (VEZI PAGINILE URMĂTOARE)

- (1) CONTROLA ELIBERAREA DE BUTON DE URGENȚA INSTALATE ÎN EXTERIORUL CABINEI
- (2) SISTEMUL DE RAPORTARE DE STAT CARE SE DE SUPRAVEGHERE
- (3) CONECTAREA UNUI SISTEM DE SUPRAVEGHERE 485
- (4) PORȚINEA INTERBLOCARE CU PRINTE BT (DRIVE)
- (5) DE STAT CU AUXILIARE PROCESOR DE SEMNAL DE UNITATE DE COMUTARE DE TEREN PE FUNCȚIONAL *A SE VEDEA PUNCTUL 8)
- (6) CHEIE DE ACCES LA CAȘTIA TRANSFORMATOR
- (7) DISPOZITIVELE INSTALATE AFARA DE ACCES LA CUTE TRANSFORMATOR
- (8) DATE DE SEMNALE UTILIZATE ÎN CUTE TRANSFORMATOR
- (9) STAREA DE SWITCH SĂ SE ACORDE O SISTEM DE SUPRAVEGHERE
- (10) CONECTAREA LA CAR SWITCH ETHERNET
- (11) DE TRANSMITERE A SEMNALULUI DE BLOCARE A LOGIC ADJACENTE DE MÂNĂ
- (12) SEMNAL DE PRIMIRE DIN CABINA ADJACENTE BLOCK LOGIC
- (13) INTRARE DIGITALĂ PRIND PROTEȚIA SINCRONIZAREA TIMPULUI, CU SEMNALE DE CEAS GPS
- (14) TION TASCIONAME ÎNRE SFOE ELECTRICE SOL DECONECTĂMNT PANEL ȘI DE LEGARE LA PĂMÂNT ÎN PIAȚA (PDO)
- TOATE ECHIPAMENTELE MOTORIZATE AR TREBUI SA FIE FURNIZATE PENTRU SISTEMUL DE CONTROL DE LA DISTANȚĂ CENTRALE
- FUNCȚIA ACTIVATI DE PROTEȚIE ȘI DE *AJUSTAREA SE VA FACE ÎN LOCUL SAU DE COMUN ACORD CU ORGANISMUL ÎN FURNIZOR DL SISTEME SUNT REPREZENTATE ÎN URMĂTOARELE CONDȚII:
 - CIRCUITELE AUXILIARE ȘI PUTERE ÎN ABSENȚA DE TENSIUNE
 - SWITCH DESCHISE ȘI IZOLAT
 - SOC SPRINGS CONTROL SWITCH
 - DECONECTAPI DECONECTAPI DESCHIS
 - FUSE ÎMPĂMÂNTARE LUSA

ACCESORII

- 2x16A 230V PIAȚĂ DE DESFĂCERE PENTRU FIECARE CELULA AUXILIARE + T
- TIP DE RAPORTARE DE LĂMPI CU LED-URI
- CIRCUIT DE TEST LAMP
- PROTEȚIA MOTORILOR MAGNETIC
- ÎNCALZITOARE CONDENS CU THERMOSTAT
- CONȚOR DE OPERARE SWITCHES
- MANDATE RAPORTARE SPRINGS
- TERMINAL (TA) SCURT ȘI UN TERMINAL (TV) DECONECTATI
- SUPERIOR CHANNEL INTERPANNELLARE
- SEMNALELOR OPTICE ESTE PREZENTĂȚĂ ÎN CADRU PENTRU TERMINALE:
 - * CLICK CONTACTE AUXILIARE
- BLOCARE CHEIE ȘI LĂCĂTE
- COMUTATOR CU CHEIE PENTRU ÎNHBAREA LOC_REM DE COMENZI GENERAL DIN AFARA
- FRONT SCHEMA PREZENTARE GENERALĂ A PANOUULI