

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					
Aprobat Approved	Coordonator 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 Brasov - Simeria, parte componentă a coridorului IV Pan European, pentru circulația trenurilor cu viteza maximă de 160 km/h. Section 1 Brasov - Sighisoara		Project/Project	2004/RO/16/P/PA/003
Rehabilitation of the railway line Brasov - Simeria, component Part of the IV Pan-European Corridor, for the trains circulation with maximum speed of 160 km/h. Section 1 Brasov - Sighisoara		Faza / Phase: P.Th. / T.D.	

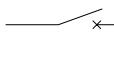
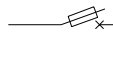
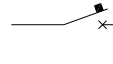
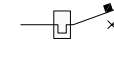
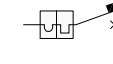
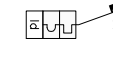
Denumire desen / Drawing Title : TUNNEL/TUNELUL HOMOROD

RACOS SIDE/INSPRE RACOS

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 2
L X	T S	2 0	7
6	0 0 2	A	

	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			
	OPENING CONTACT (OPEN TO REPOSE)/CONTACT DE DESCHIDERE (DESCHIS LA REPAUS)				CLOSING CONTACT TO THERMIC RELAY/CONTACT DE INCHIDERE DE RELEU TERMICE			
	CONTACT EXCHANGE WITH MOMENTARY INTERRUPTION/DATE DE SCHIMB CU ÎNTRERUPERILOR 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/DOUA-WAY SWITCH			
	CLOSING CONTACT WITH MANUAL DRIVE/CONTACT DE INCHIDERE CU COMANDA MANUAL				TWO-WAY SWITCH AT THREE POSITIONS WITH CENTRAL POSITION OPENING/DOUA-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							
	CLOSING CONTACT WITH ROTARY CONTROL/CONTACT DE INCHIDERE CU CONTROL ROTATIV							
E								
	CLOSING POSITION CONTACT/POZITIA DE CONTACT DE INCHIDERE							
	OPENING POSITION CONTACT/POZITIA DE CONTACT DE DESCHIDERE (LIMIT/LIMITA)							
F								
	EXCHANGE CONTACT WITHOUT INTERRUPTION/CONTACT DE SCHIMB FĂRĂ ÎNTRERUPERE							

	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 INDICĂȚIE 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 DIFERENTIAL						
		POWER SWITCH OPENING AUTOMATIC, MAGNETOTHERMIC/BUTONUL DE PORNIRE DESCHIDEREA AUTOMATĂ, MAGNETOTHERMICE			<input type="checkbox"/> I >	OVERCURRENT RELAY (LONG DELAY)/RELEU SUPRACURENT (ÎNĂRZIERII 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 ÎNĂRZIERE)						
		POWER SWITCH FOR AUTOMATIC OPENING, WORKING FOR CURRENT 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 LIPSA 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>Ss</td> <td>EL</td> </tr> </table>	M	D	Ss	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											
Ss	EL											
F												
	1	2	3	4	5	6	7	8				

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 BI (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

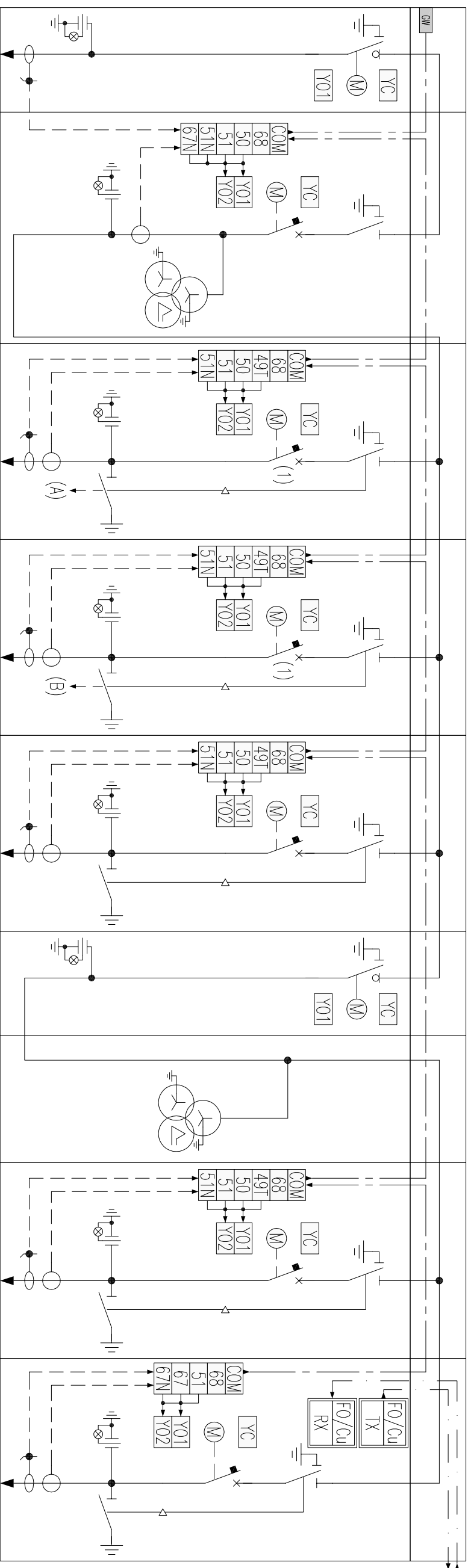
- 2X16A 230V OUTLET FOR EVERY CELL AUXILIARY + T
- TYPE OF REPORTING OF LAMPS LED
- TEST CIRCUIT LAMPS
- PROTECTION OF MAGNETIC MOTORS
- CONDENSATION HEATERS WITH THERMOSTAT
- Operation counter SWITCHES
- REPORTING OFFICERS SPRINGS
- TERMINAL (TA) SHORT AND TERMINAL (TV) DISCONNECT
- UPPER CHANNEL INTERPANNELLARE
- 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 URGENȚĂ 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 PRIVIRE BI (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 CUTIE TRANSFORMATOR
- (8) DATE DE SEMNALE UTILIZATE ÎN CUTIE 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 PROTECȚIA SINCRONIZAREA TIMPULUI, CU SEMNALE DE CEAS GPS
- (14) TION TASCIONAME ÎNIRE SFOE ELECTRICE SOL DECONECTĂMÎNT PANEL ȘI DE LEGARE LA PĂMÂNT ÎN PIAȚA (PDO)
- TOATE ECHIPAMENTELE MOTORIZATE AR TREBUI SA FIE FURNIZATE PENTRU SISTEMUL DE CONTROL DE LA DISTANȚĂ A CENTRALE
- FUNCȚIA ACTIVĂ DE PROTECȚIE 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
 - ȘOC SPRINGS CONTROL SWITCH
 - DECONECTĂRI DECONECTĂRI DESCHIS
 - FUSE ÎMPĂMÂNTARE LĂSA

ACCESORII

- 2X16A 230V PIAȚĂ DE DESFĂCERE PENTRU FIECARE CELULA AUXILIARE + T
- TIP DE RAPORTARE DE LĂMPI CU LED-URI
- CIRCUIT DE TEST LAMP
- PROTECȚIA MOTORILOR MAGNETIC
- ÎNCALZITOARE CONDENS CU THERMOSTAT
- CONȚOR DE OPERARE SWITCHES
- MANDATE RAPORTARE SPRINGS
- TERMINAL (TA) SCURT ȘI UN TERMINAL (TV) DECONECTĂRI
- SUPERIOR CHANNEL INTERPANNELLARE
- SEMNALELE OPTICE ESTE PREZENTĂȚĂ ÎN CADRU PENTRU TERMINALE:
 - * CLICK CONTACTE AUXILIARE
- BLOCARE CHEIE ȘI ÎNCĂLȚE
- COMUTATOR CU CHEIE PENTRU ÎNHBAREA LOC_REM DE COMENZI GENERAL DIN AFARA
- FRONT SCHEMA PREZENTARE GENERALĂ A PANOUULI



FUNCTIONAL UNIT / UNITATEA FUNCTIONALA N.	1	2	3	4	5	6	7	8	9
UNIT FUNCTIONAL / UNITATEA FUNCTIONALA 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 IMT	-	50 67	49T 51N 50 68	49T 51N 50 68	49T 51N 50 68	-	-	49T 51N 50 68	51 67 67N
PROTECTIONS - RATINGS / PROTECTII - PUERII	-	N° 3 TA 300/5 A 2,5 VA SP30	N° 3 SENSOBI TOROIDALI - II - S430A - RA/POR/TC = 100A/2,5 mV CI, 0,5-SP250	N° 3 SENSOBI TOROIDALI - II - S430A - RA/POR/TC = 100A/2,5 mV CI, 0,5-SP250	N° 3 SENSOBI TOROIDALI - II - S430A - RA/POR/TC = 100A/2,5 mV CI, 0,5-SP250	-	-	N° 3 SENSOBI TOROIDALI - II - S430A - RA/POR/TC = 100A/2,5 mV CI, 0,5-SP250	N° 3 SENSOBI TOROIDALI - II - S430A - RA/POR/TC = 100A/2,5 mV CI, 0,5-SP250
FEATURES / CARACTERISTICI TA	-	-	100/1A SP20	100/1A SP20	100/1A SP20	-	20000x3/100x3	100/1A SP20	100/1A SP20
FEATURES / CARACTERISTICI TV	-	20000x3/100x3/100x3	-	-	-	-	30 VA - CI, 0,5	-	-
FEATURES TYPE CABLE / CARACTERISTICI TIP DE CABLU	RG7H1M1X - 12/20 KV	30 VA - CI, 0,5 / 50 VA CI, 3P	RG7H1M1X	RG7H1M1X	RG7H1M1X	-	RG7H1M1X	RG7H1M1X	RG7H1M1X
TRAINING CABLE / FORMARE CABLE	3x1x120	-	3x1x95	3x1x95	3x1x95	-	3x1x95	3x1x95	3x1x95
LENGTH / LUNGIMEA (M)	10	-	15	15	15	-	15	15	15
LINE DESTINATION / LINE DESTINATIE	GRUPUL DE SERVICII DE APROXIMARE CORPUL DISTRIBUTOR	-	POWER TRANSFORMER / ALIMENTARE TRASFORMATOR TR/1/P	POWER TRANSFORMER / ALIMENTARE TRASFORMATOR TR/1/D	POWER TRANSFORMER / ALIMENTARE TRASFORMATOR TR/PE/1	CONNECTOR / CONECTOR	-	POWER TRANSFORMER / ALIMENTARE TRASFORMATOR TR/PE/2	TO EXTERNAL SUB STATION SAFE AREA TO RAOS

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/FUNCTIONALE
UNITATEA N°1

FUNCTIONAL
UNIT/FUNCTIONALE
UNITATEAN°2

FUNCTIONAL
UNIT/FUNCTIONALE
UNITATEAN°9

FUNCTIONAL
UNIT/FUNCTIONALE
UNITATEAN°2

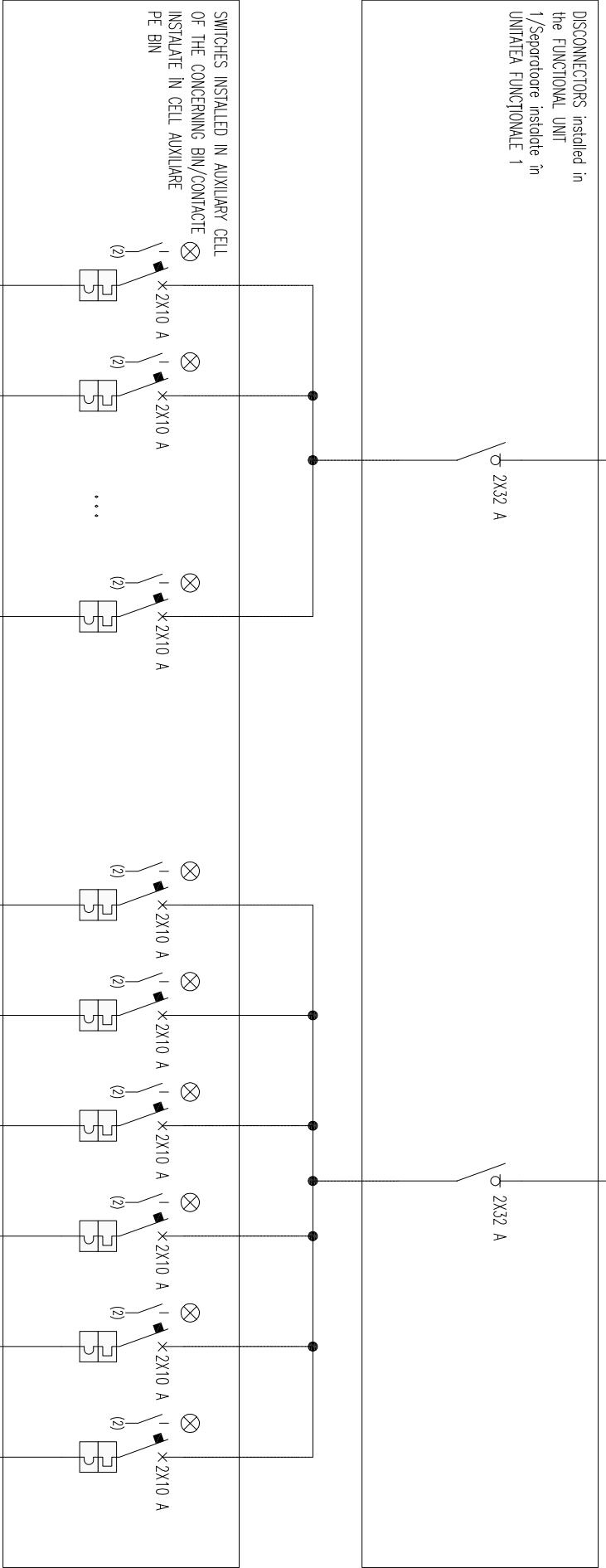
FUNCTIONAL
UNIT/FUNCTIONALE
UNITATEAN°3

FUNCTIONAL
UNIT/FUNCTIONALE
UNITATEA N°4

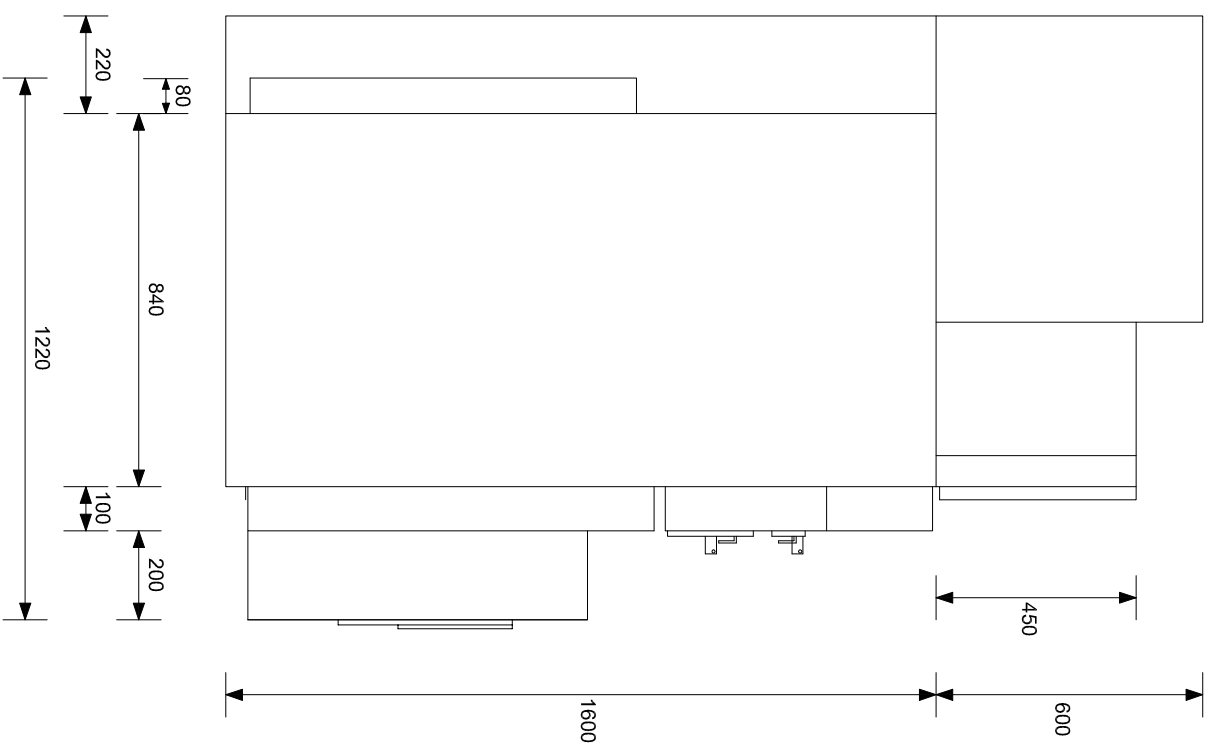
FUNCTIONAL
UNIT/FUNCTIONALE
UNITATEA N°5

FUNCTIONAL
UNIT/FUNCTIONALE
UNITATEA N°8

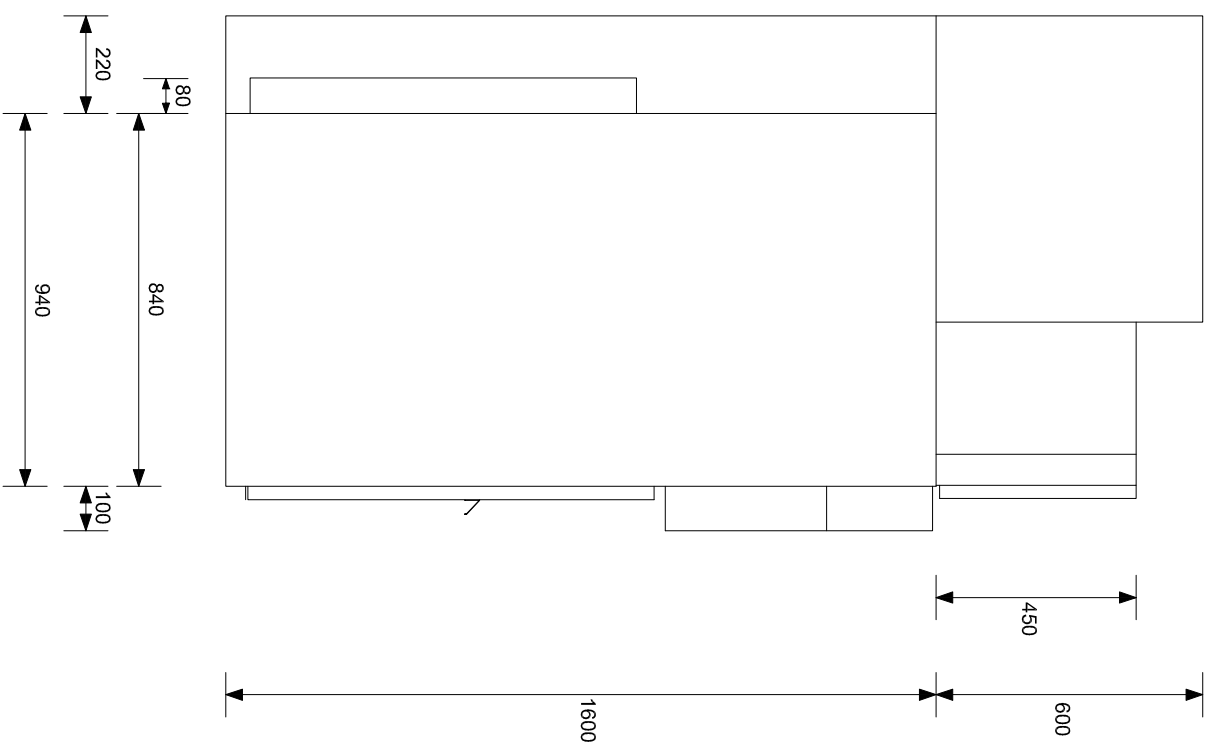
FUNCTIONAL
UNIT/FUNCTIONALE
UNITATEA N°9



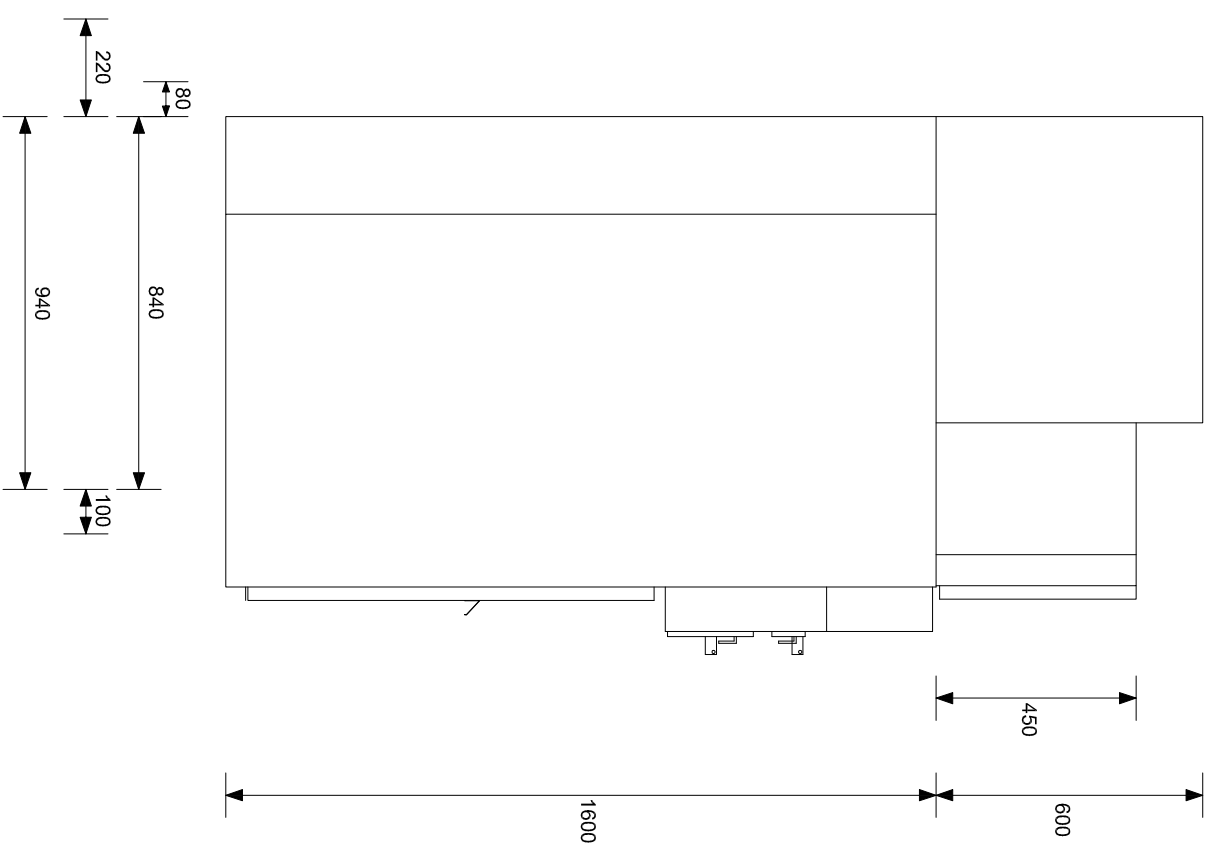
FUNCTIONAL UNIT /
FUNCTIONALE UNITATEA
2-3-4-5-8-9



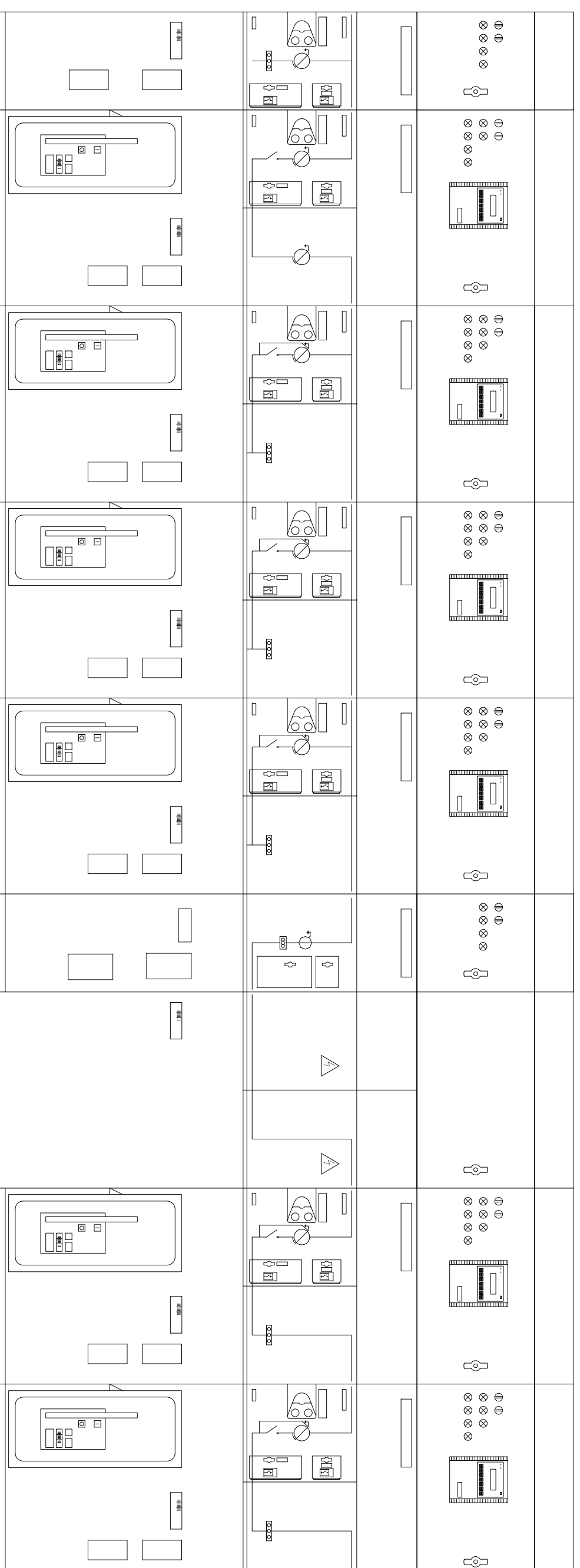
FUNCTIONAL UNIT /
FUNCTIONALE
UNITATEA 7



FUNCTIONAL UNIT /
FUNCTIONALE
UNITATEA 1-6



ROOM MINIMUM HEIGHT: 2800 mm



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

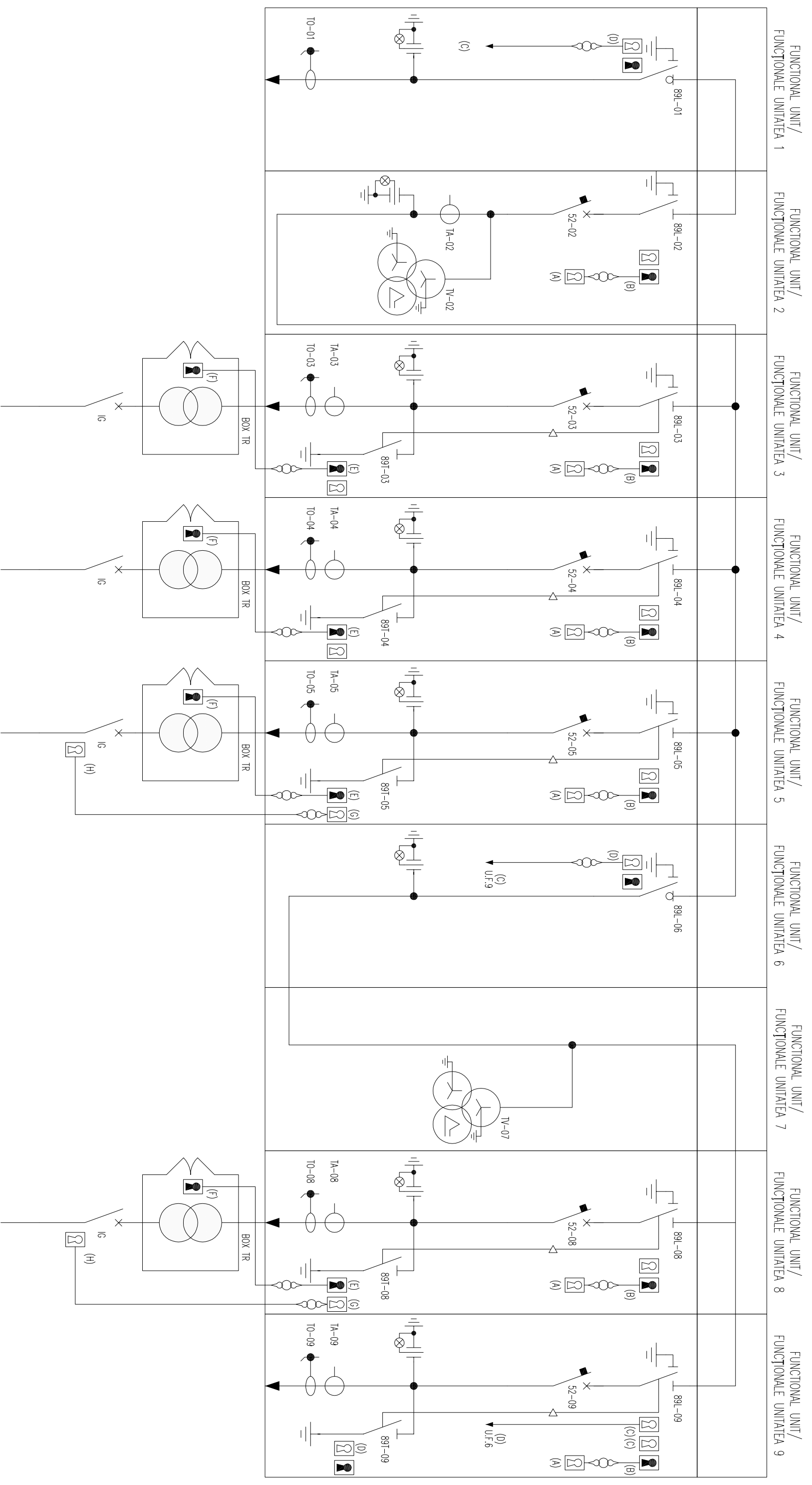
2200
1400
6000

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 PAMANT **FĂRĂ** CHEIE DESCHIS DESCONECTORI PENTRU
INCHIDEREA MT PANOULUI LINE CONNECTED (SAU ALTE ACELAȘI CADRU F. U. SCRISOARE DIN
INDICAT SPECIFICE)
- (S) CU UN COMUTATOR DE LEGARE LA PAMANT **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 **PĂMÂNT** GRATUIT DESCHISE **ȘI** INELE CU ÎNTRERUPATOR
DE PE PARTEA LATERALĂ LV TRANSFORMER
- (H), INELE CU TASTĂ 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

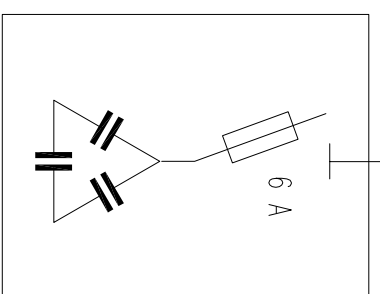


CONNECTION TO QdP/1
CONEXIUNEA A QdP/1

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

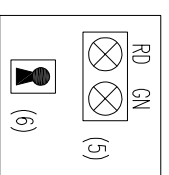
n°4 SCREENED CABLE/CABLU
ECRANAT 2x1mmq

[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
51N-50N OF PANEL
QdP/PENTRU A
PROTEJA 51N-50N
DE CADRU QdP

FROM FUNCTIONAL UNIT/DE
FUNCTIONALE UNITATEA 3

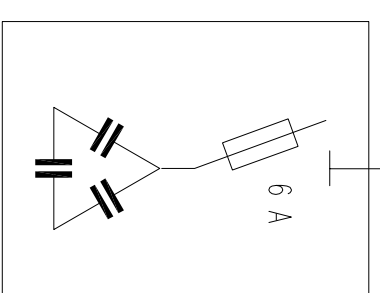
FROM FUNCTIONAL UNIT/DE
FUNCTIONALE UNITATEA 4

CONNECTION/CONEXIUNE
QdP/1

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

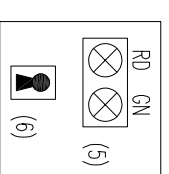
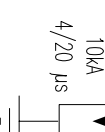
n°4 SCREENED CABLE/CABLU
ECRANAT 2x1mmq

[04-A7]

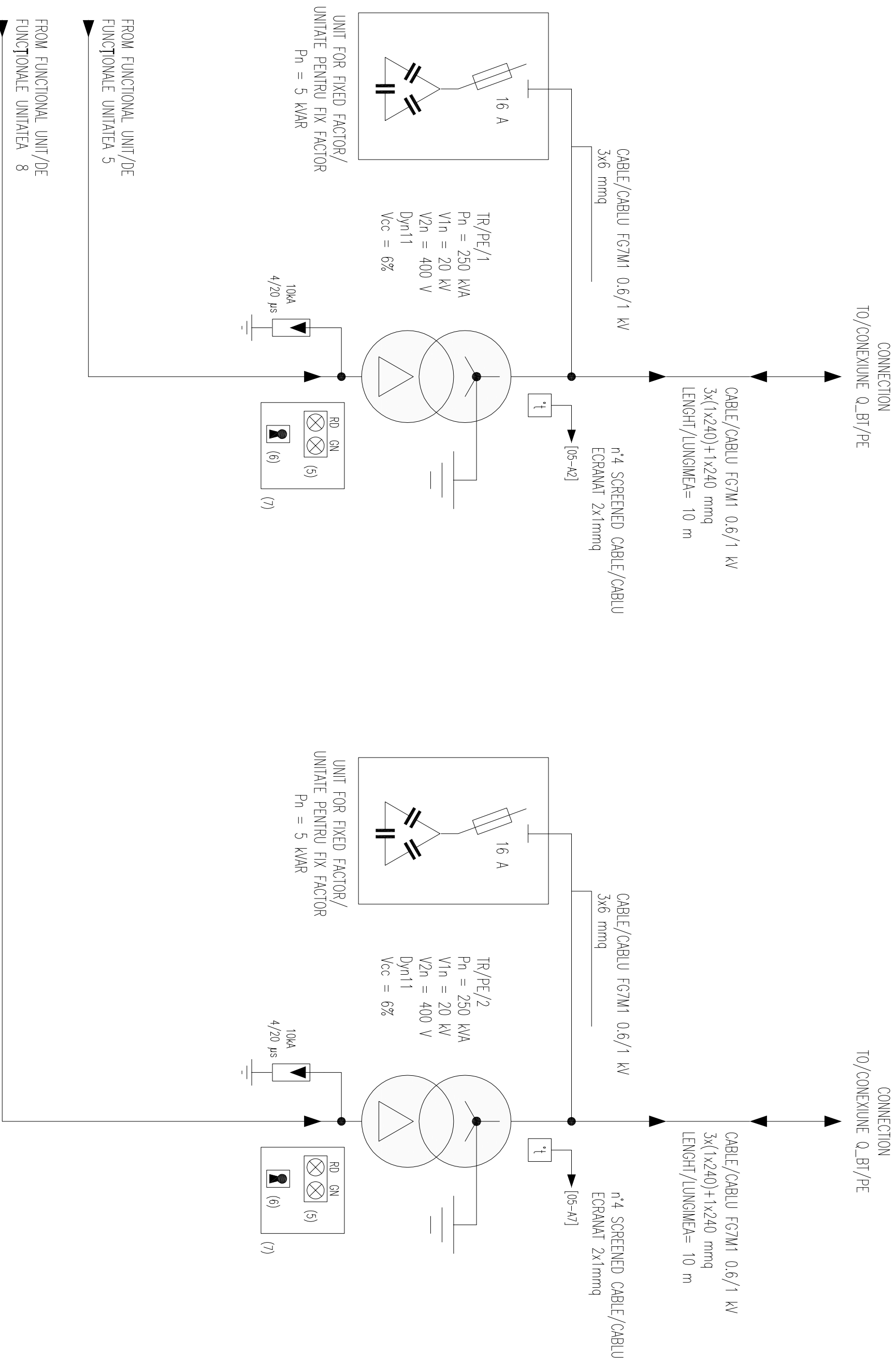


UNIT FOR FIXED FACTOR/
UNITATE PENTRU FIX FACTOR
Pn = 5 kVAR

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



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

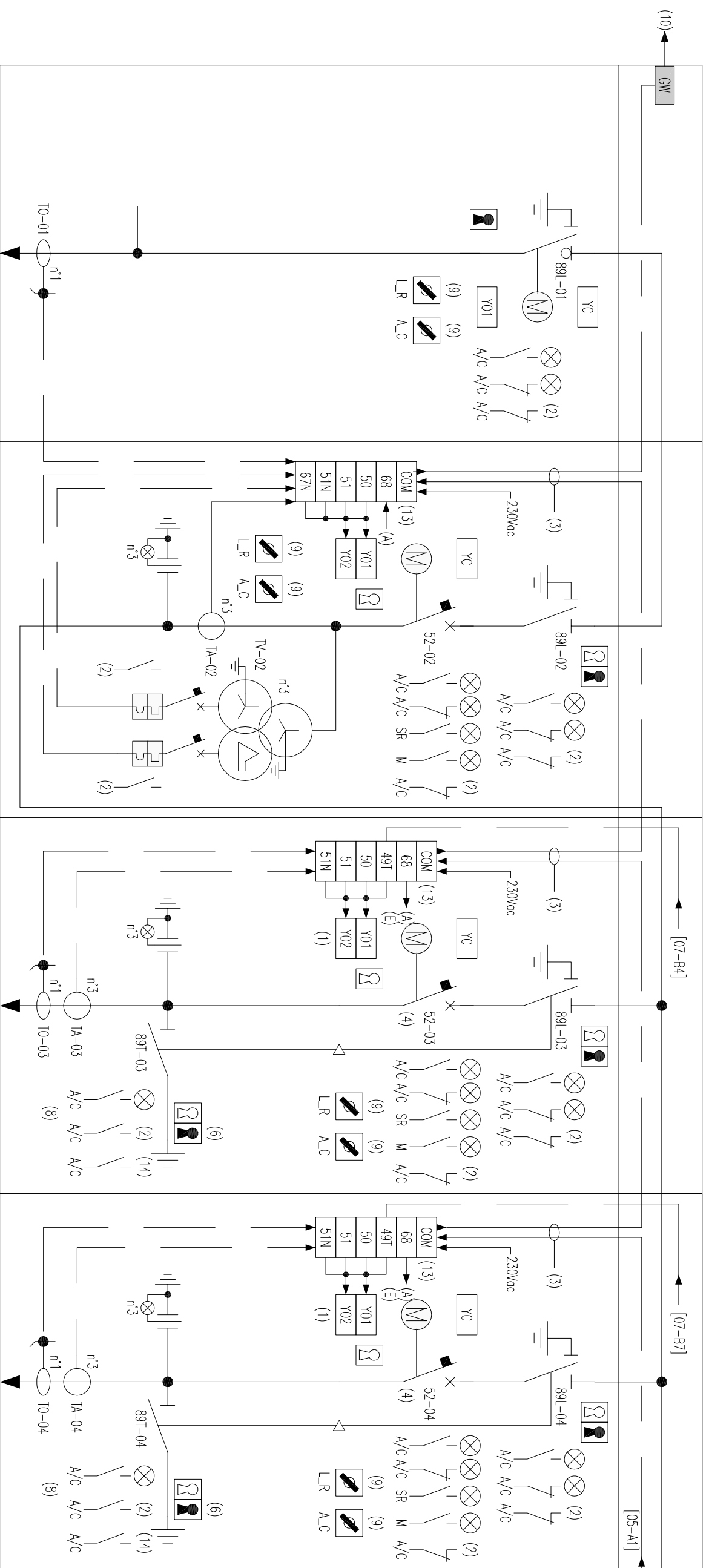


FUNCTIONAL UNIT/
FUNCTIONALE UNITATEA 1

FUNCTIONAL UNIT/
FUNCTIONALE UNITATEA 2

FUNCTIONAL UNIT/
FUNCTIONALE UNITATEA 3

FUNCTIONAL UNIT/
FUNCTIONALE UNITATEA 4

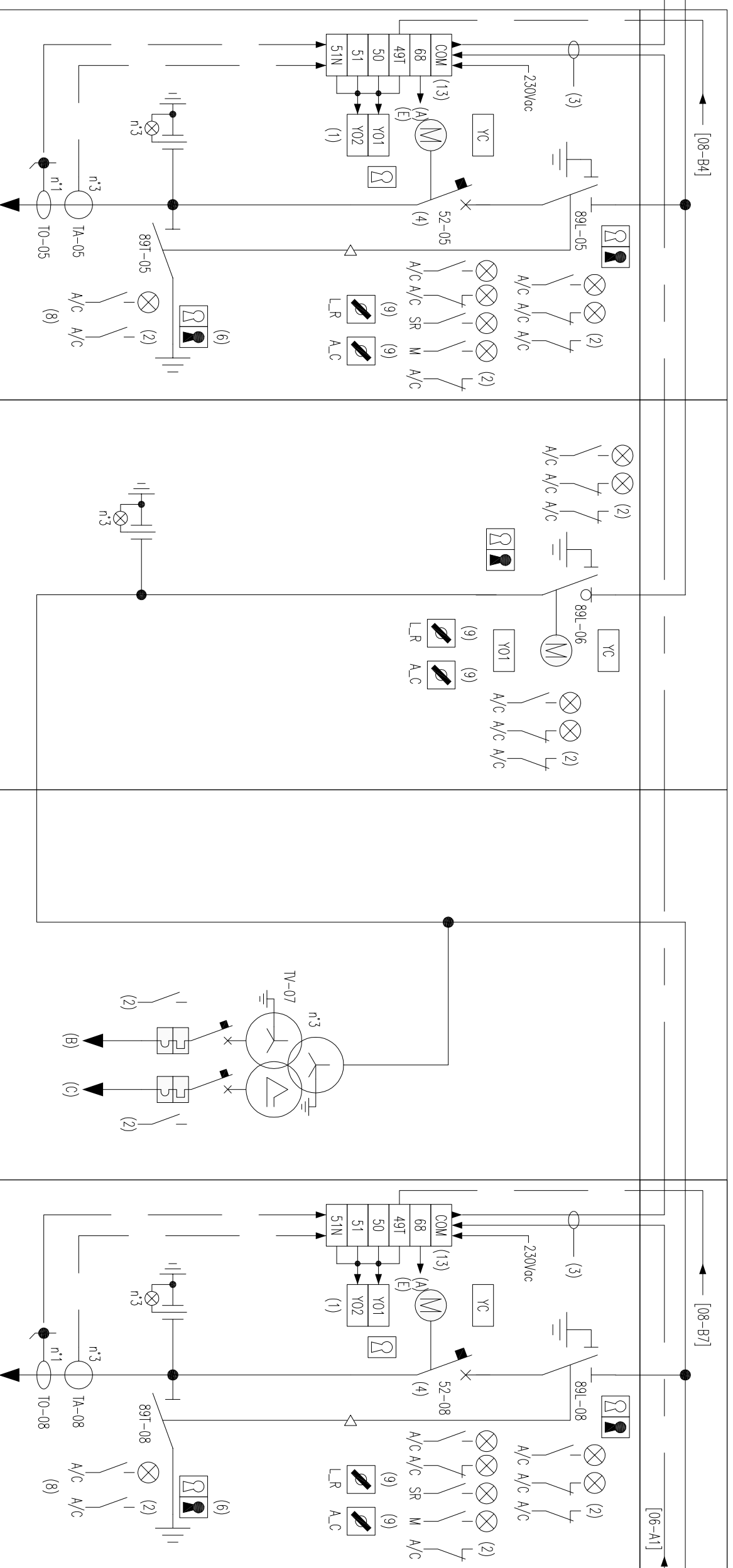


FUNCTIONAL UNIT/
FUNCTIONALE UNITATEA 5

FUNCTIONAL UNIT/
FUNCTIONALE UNITATEA 6

FUNCTIONAL UNIT/
FUNCTIONALE UNITATEA 7

FUNCTIONAL UNIT/
FUNCTIONALE UNITATEA 8



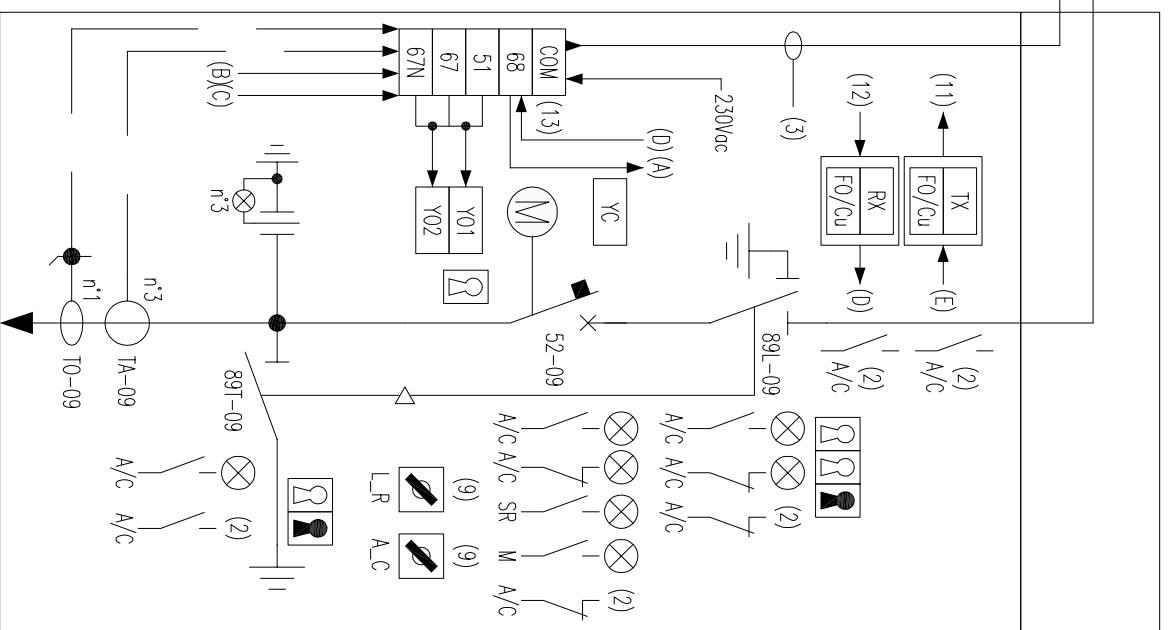
[04-A8]

[08-B4]

[08-B7]

[06-A1]

FUNCTIONAL UNIT/
FUNCTIONALE UNITATEA 9



[05-A8]