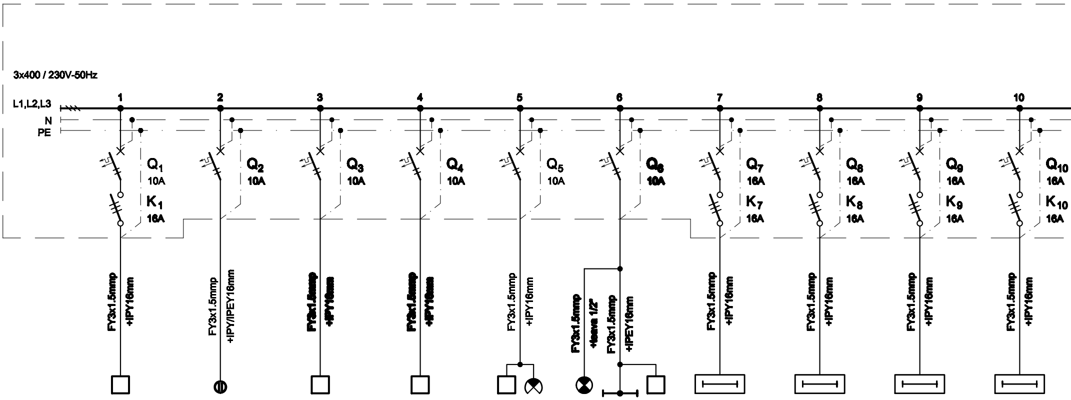
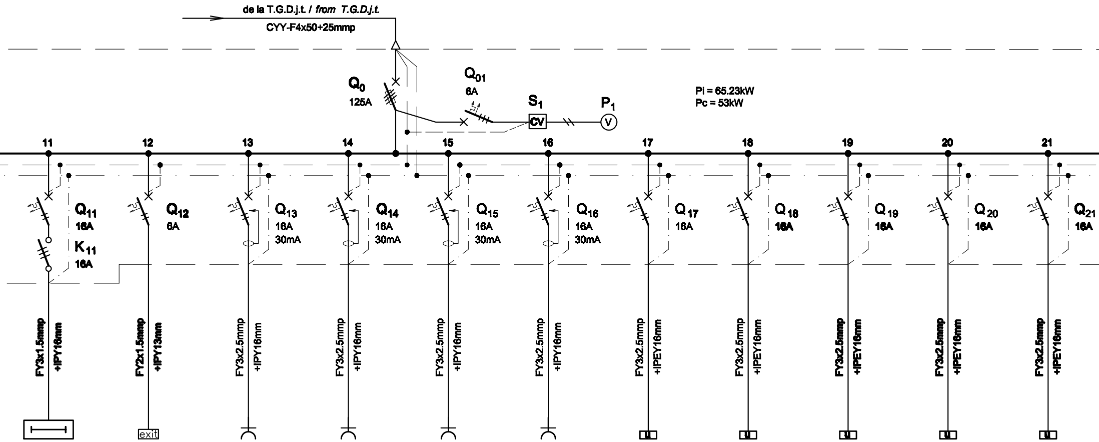
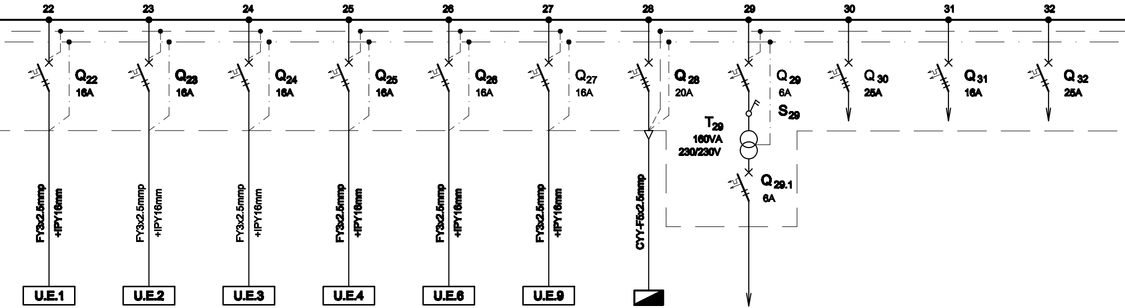
TABLOU ELECTRIC GENERAL T.G. - SCHEMA MONOFILARA
T.G. GENERAL ELECTRIC BOARD - SINGLE-WIRE DIAGRAM


3x400 / 230V-50Hz
L1,L2,L3
N
PE
1
2
3
4
5
6
7
8
9
10
Q1 10A
K1 16A
Q2 10A
Q3 10A
Q4 10A
Q5 10A
Q6 10A
Q7 16A
K7 16A
Q8 16A
K8 16A
Q9 16A
K9 16A
Q10 16A
K10 16A
FY3x1.5mmp +IPY16mm
FY3x1.5mmp +IPY/IPEY16mm
FY3x1.5mmp +IPY16mm
FY3x1.5mmp +IPY16mm
FY3x1.5mmp +IPY16mm
FY3x1.5mmp +teava 1/2"
FY3x1.5mmp +IPEY16mm
FY3x1.5mmp +IPY16mm
FY3x1.5mmp +IPY16mm
FY3x1.5mmp +IPY16mm
FY3x1.5mmp +IPY16mm

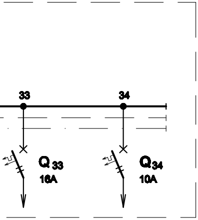
Nr. circuit *Circuit number*	1	2	3	4	5	6	7	8	9	10
PI [kW]	0.5	0.69	1.2	1.2	0.86	1.4	1.5	1.5	1.5	1.5
Destinatia *Destination*	HOL, ZONA ASTEPTARE *MAIN HALL, WAITING AREA* 5LL / *Lamps*	GS PERSOANE CU HANDICAP, MAMA SI COPILUL, WC FEMEI, WC BARBATI, HOL, VESTIAR SI DUS PERSONAL *TOILET FOR THE DISABLED, BABYCARE, WC WOMEN, WC MEN, HALL, LOCKER and SHOWER STAFF* 14LL / *Lamps*	CASE BILETE,SEF STATIE, IDM, REPARTITOR *TICKET OFFICE, STATION CHIEF, MOVEMENT OFFICE, DISTRIBUTING FRAME ROOM* 12LL / *Lamps*	SALA COMPUTERE SI RELEE, CAMERA SCB *COMPUTER AND RELAY ROOM, SCB ROOM* 12LL / *Lamps*	HOL, VESTIBUL *HALL, VESTIBULE* 9LL / *Lamps*	ATELIER CED, TURNANT CED, ACUMULATORI, ELECTROALIMENTARE, GRUP ELECTROGEN *3S WORKSHOP, 3S SHIFTMAN, ACUMULATORS, POWER SUPPLY ROOM, GENERATOR* 14LL / *Lamps*	PICTOGRAMA *PICTOGRAM* 6Buc. / *Pieces*	PICTOGRAMA *PICTOGRAM* 1Buc. / *Piece*	PICTOGRAMA *PICTOGRAM* 1Buc. / *Piece*	PICTOGRAMA *PICTOGRAM* 1Buc. / *Piece*

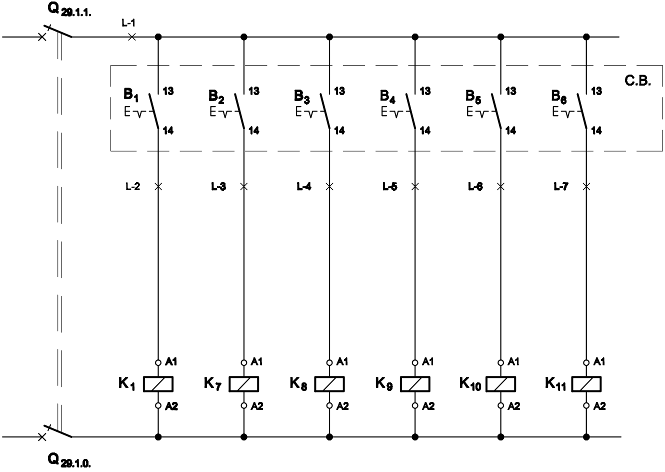

de la T.G.D.j.t. / *from T.G.D.j.t.*
CYY-F4x50+25mmp
Q0
125A
Q01
6A
S1
CV
P1
V
Pi = 65.23kW
Pc = 53kW
11
12
13
14
15
16
17
18
19
20
21
Q11
16A
K11
16A
Q12
6A
Q13
16A
30mA
Q14
16A
30mA
Q15
16A
30mA
Q16
16A
30mA
Q17
16A
Q18
16A
Q19
16A
Q20
16A
Q21
16A
FY3x1.5mmp
+IPY16mm
FY2x1.5mmp
+IPY13mm
FY3x2.5mmp
+IPY16mm
FY3x2.5mmp
+IPY16mm
FY3x2.5mmp
+IPY16mm
FY3x2.5mmp
+IPY16mm
FY3x2.5mmp
+IPEY16mm
FY3x2.5mmp
+IPEY16mm
FY3x2.5mmp
+IPEY16mm
FY3x2.5mmp
+IPEY16mm
FY3x2.5mmp
+IPEY16mm
exit

11	12	13	14	15	16	17	18	19	20	21
1.8	0.16	2	2	2	2	2.5	2.5	2.5	2.5	2.5
PICTOGRAME ***PICTOGRAMS*** **9Buc. / *Pieces***	**ILUMINAT DE SIGURANTA** ***EMERGENCY LIGHTING*** **10Buc. / *Pieces***	**CASE BILETE, SEF STATIE, IDM** *TICKET OFFICE, STATION CHIEF, MOVEMENT OFFICE* **7LP / *Sockets outlet***	REPARTITOR, SALA COMPUTERE SI RELEE, CAMERA SCB, HOL *DISTRIBUTING FRAME ROOM, COMPUTER AND RELAY ROOM, SCB ROOM, HALL* **8LP / *Sockets outlet***	**ATELIER CED, TURANT CED, ELECTROALIMENTARE, GRUP ELECTROGEN** ***IS WORKSHOP, IS SHIFTMAN, POWER SUPLLY ROOM, GENERATOR*** **8LP / *Sockets outlet***	**VESTIAR SI DUS PERSONAL, HOL** ***LOCKER and SHOWER STAFF, HALL*** **3LP / *Sockets outlet***	**USCATOR DE MAINI** *HAND DRYER* 1Buc. / *Piece*	**USCATOR DE MAINI** *HAND DRYER* **1Buc. / *Piece***	USCATOR DE MAINI *HAND DRYER* **1Buc. / *Piece***	USCATOR DE MAINI *HAND DRYER* **1Buc. / *Piece***	**USCATOR DE MAINI** ***HAND DRYER*** **1Buc. / *Piece***


22
23
24
25
26
27
28
29
30
31
32
Q22 16A
Q23 16A
Q24 16A
Q25 16A
Q26 16A
Q27 16A
Q 28 20A
Q 29 6A
S29
Q 30 25A
Q 31 16A
Q 32 25A
T29 160VA 230/230V
Q 29.1 6A
FY3x2.5mmp +IPY16mm
FY3x2.5mmp +IPY16mm
FY3x2.5mmp +IPY16mm
FY3x2.5mmp +IPY16mm
FY3x2.5mmp +IPY16mm
FY3x2.5mmp +IPY16mm
CYY-F5x2.5mmp
U.E.1
U.E.2
U.E.3
U.E.4
U.E.6
U.E.9

22	23	24	25	26	27	28	29	30	31	32
2	2	2	2	2	2	5.76	0.16	4	3	3
UNITATE EXTERIOARA DE CLIMATIZARE SISTEM MONOSPLIT *OUTDOOR UNIT AIR CONDITIONING SYSTEM MONOSPLIT* **1Buc. / *Piece***	**UNITATE EXTERIOARA DE CLIMATIZARE SISTEM MONOSPLIT** ***OUTDOOR UNIT AIR CONDITIONING SYSTEM MONOSPLIT*** **1Buc. / *Piece***	**UNITATE EXTERIOARA DE CLIMATIZARE SISTEM MONOSPLIT** ***OUTDOOR UNIT AIR CONDITIONING SYSTEM MONOSPLIT*** **1Buc. / *Piece***	UNITATE EXTERIOARA DE CLIMATIZARE SISTEM MONOSPLIT *OUTDOOR UNIT AIR CONDITIONING SYSTEM MONOSPLIT* **1Buc. / *Piece***	**UNITATE EXTERIOARA DE CLIMATIZARE SISTEM MONOSPLIT** ***OUTDOOR UNIT AIR CONDITIONING SYSTEM MONOSPLIT*** **1Buc. / *Piece***	**UNITATE EXTERIOARA DE CLIMATIZARE SISTEM MONOSPLIT** ***OUTDOOR UNIT AIR CONDITIONING SYSTEM MONOSPLIT*** **1Buc. / *Piece***	**SPATIU COMERCIAL TABLOU ELECTRIC - $T_{Sp.com.}$** ***COMMERCIAL AREA ELECTRIC BOARD - $T_{Sp.com.}$***	CIRCUIT COMANDA ILUMINAT INTERIOR ***COMMAND CIRCUIT INDOOR LIGHTING***	**REZERVA TRIFAZATA** ***THREE-PHASE RESERVE***	**REZERVA TRIFAZATA** ***THREE-PHASE RESERVE***	**REZERVA MONOFAZATA** ***SINGLE-PHASE RESERVE***


33
34
Q33
16A
Q34
10A


Q29.1.1.
L-1
C.B.
B1
B2
B3
B4
B5
B6
E
13
14
L-2
L-3
L-4
L-5
L-6
L-7
A1
K1
K7
K8
K9
K10
K11
A2
Q29.1.0.

33	34
2	1
REZERVA MONOFAZATA *SINGLE-PHASE RESERVE*	REZERVA MONOFAZATA *SINGLE-PHASE RESERVE*

PROTECTIE CIRCUIT DE COMANDA	COMANDA ILUMINAT HOL CENTRAL / SALA ASTEPTARE	COMANDA APRINDERE STINGERE PICTOGRAME	COMANDA APRINDERE STINGERE PICTOGRAME	COMANDA APRINDERE STINGERE PICTOGRAME	COMANDA APRINDERE STINGERE PICTOGRAME	COMANDA APRINDERE STINGERE PICTOGRAME
PROTECTION OF THE COMMAND CIRCUIT	*LIGHTING COMMAND WAITING ROOM*	*ON-OFF COMMAND OF THE PICTOGRAMS*	*ON-OFF COMMAND OF THE PICTOGRAMS*	*ON-OFF COMMAND OF THE PICTOGRAMS*	*ON-OFF COMMAND OF THE PICTOGRAMS*	*ON-OFF COMMAND OF THE PICTOGRAMS*

TABLOU ELECTRIC GENERAL T.G. - SPECIFICATIE DE APARATAJ
T.G. GENERAL ELECTRIC BOARD - EQUIPMENT SPECIFICATION

Nr. *No.*	Simbol *Symbol*	Denumirea aparatului *Equipment denomination*	Caracteristici tehnice *Technical data*	Buc. *Pcs.*	Observatii *Remarks*
0	1	2	3	4	5
1	**Q0**	**Separator de sarcina tripolar cu fuzibil / *Three-poles switch-disconnector with fusible***	In=125A Un=400V Uimp=8kV f=50Hz Icm=2.2kA	1	
2	**Q1,...,Q6,Q34**	**Intrerupator automat bipolar, curba B *Two-poles circuit breaker, curve B***	In=10A Un=230V Icu=6kA f=50Hz	7	
3	**Q13,...,Q16**	**Intrerupator automat bipolar cu protectie la curent diferential rezidual, curba C / *Two-poles circuit breaker with protection at residual differential current device, curve C***	In=16A Un=230V Icu=6kA f=50Hz IΔn=0,03A Tip A Nivel de imunitate 250A la forma de unda 8/20 μS *Level of immunity 250A to wave form 8/20 μS*	4	
4	Q12	Intrerupator automat bipolar, curba B *Two-poles circuit breaker, curve B*	In=6A Un=230V Icu=6kA f=50Hz	1	
5	**Q17,...,Q27,Q33**	**Intrerupator automat bipolar, curba C *Two-poles circuit breaker, curve C***	In=16A Un=230V Icu=6kA f=50Hz	12	
6	**Q28**	**Intrerupator automat tripolar, curba C *Three-poles circuit breaker, curve C***	In=20A Un=400V Icu=6kA f=50Hz	1	
7	**Q30**	**Intrerupator automat tripolar, curba C *Three-poles circuit breaker, curve C***	In=25A Un=400V Icu=6kA f=50Hz	1	
8	**Q31**	Intrerupator automat tripolar, curba C *Three-poles circuit breaker, curve C*	In=16A Un=400V Icu=6kA f=50Hz	1	
9	**Q32**	Intrerupator automat bipolar, curba C *Two-poles circuit breaker, curve C*	**In=25A** **Un=230V** **Icu=6kA** **f=50Hz**	1	
10	Q01	Intrerupator automat tripolar, constructie modulara, curba C *Three-poles circuit breaker, modular construction, curve C*	In=6A Un=400V Icu=25kA f=50Hz	1	
11	**Q7,...,Q11**	**Intrerupator automat bipolar, curba B *Two-poles circuit breaker, curve B***	**In=16A** **Un=230V** **Icu=6kA** **f=50Hz**		
12	P1	Voltmetru feromagnetic *Ferromagnetic voltmeter*	Domeniu / *Range* 0...600 V		
13	S1	Comutator voltmetric *Voltmetric switch*	In=10A Un=500Vca f=50Hz		
14	K1,K7,K8, K9,K10,K11	Contactor electromagnetic tripolar de curent alternativ / *Three-poles electromagnetic a.c. contactor*	In=16A Un=400A Uc=230V f=50Hz		
15	Q29,Q29.1	Intrerupatoare automate bipolare, curba D / *Two-poles circuit breaker, curve D*	Un=240Vc.a. In=6A f=50Hz Icu=10kA		
16	T29	Transformator monofazat uscat de comanda / *Single-phase dry-type command transformer*	Sn=160VA U1n=230Vc.a. U2n=230Vc.a. f=50Hz		
17	S29	Comutator cu came cu doua pozitii si un etaj / *Switch with cams having two-positions and a floor*	Un=500Vc.a. In=16A f=50Hz		
18	B1,B2,B3, B4,B5,B6	Butoane de comanda luminoase cu retinere / *Light command buttons with retainer*	Ui=500V In=6A f=50Hz IP67		
19	L	Cleme de racordare *Connection clamps*	Un=660Vc.a. In=16A f=50Hz		
20	-	Cutie / *Box*	IP30, Clasa I / *Class I*		

4	5
5	
1	
1	
6	
2	
1	
1	
6	Butoanele se vor monta in C.B. (cutia cu butoane) *Buttons will be installed in C.B.(box of buttons)*
7	
1	

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 FINANŢAT DE UNIUNEA EUROPEANĂ
EUROPEAN UNION FINANCED PROJECT

CLIENT / CLIENT

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

ITALFERR
GRUPPO FERROVIE DELLO STATO
Joint Venture leader

Scott Wilson

OBERMEYER
PLANEN + BERATEN GmbH

TECNIC
Consulting Engineers

CONSULTANT / CONSULTANT

			Data Date	Semnătură Signature
Aprobat Approved	Şef proiect Project manager	R. Liuzza	12.2011	
Aprobat Approved	Coordonator Secţiune 1 Section 1 Coordinator	C. Gambelli	12.2011	
Verificat Checked	Expert Verificator Checking Expert	G. Fioravanti	12.2011	

SUBCONTRACTANT / SUBCONTRACTOR

AREX COMPANY

Aprobat Approved	Responsabil Subconsultant Subconsultant Responsible	A.Stanciu - Dinulescu	12.2011	
Întocmit Elaborated	Proiectant Designer	D. Matei	12.2011	

Reabilitarea liniei de cale ferata Braşov - Simeria, parte componentă a coridorului IV Pan European, pentru circulaţia trenurilor cu viteza maximă de 160 km/h,
Tronsonul : Braşov - Sighişoara
Rehabilitation of the railway line Braşov - Simeria, component Part of the IV Pan-European Corridor, for the trains circulation with maximum speed of 160 km/h,
Section : Braşov - Sighişoara

Proiect/Project
2004/RO/16/P/PA/003

Faza / Phase:
D.E. / E.D.

Denumire desen / Drawing Title :

Tablou electric general T.G. - Staţia Caţa;
Cata station - T.G. general electric board

Codificare / Codification System	Scara / Scale	LOT / LOT	Nr. / No 01 / 01

E A 5 1 | 0 1 | E | 1 3 | B X | I E | 0 0 | 3 | 1 | 0 4 3 | 1

A3(297x2205)