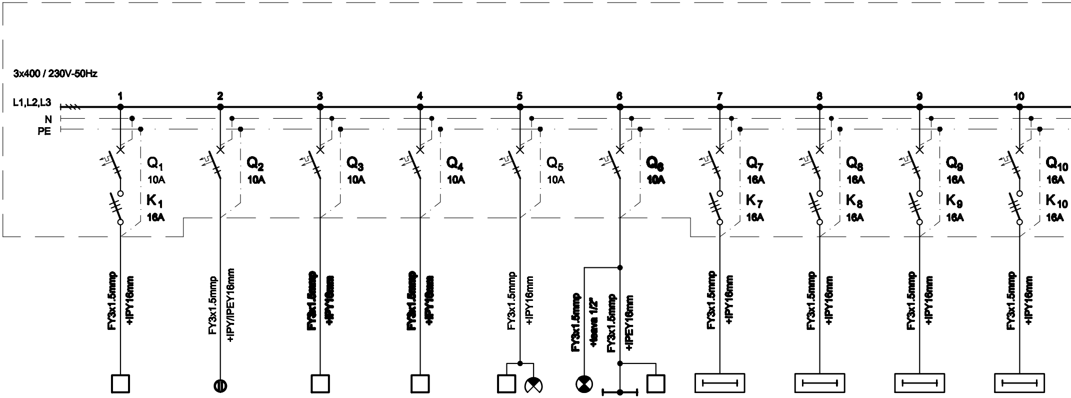
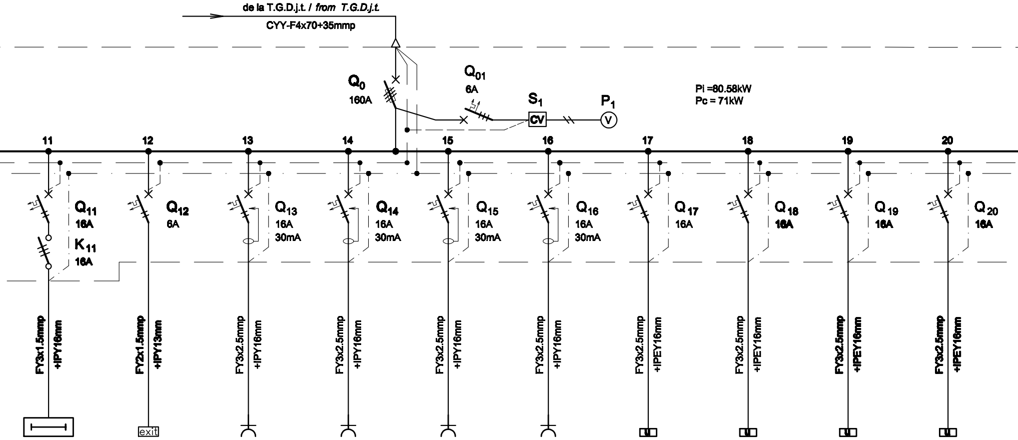
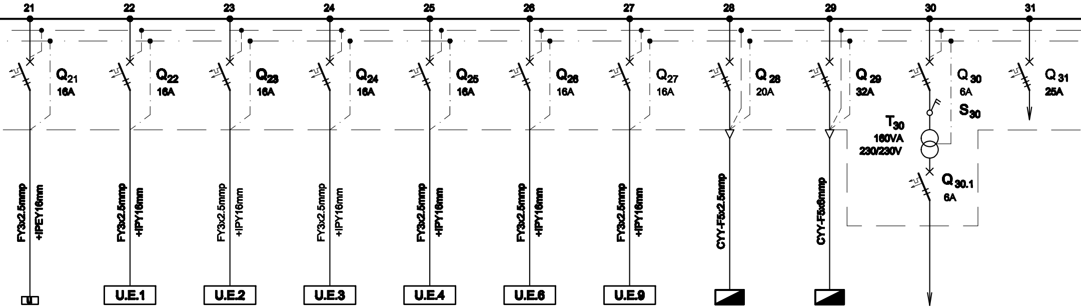
TABLOU ELECTRIC GENERAL T.G. - SCHEMA MONOFILARA
T.G. GENERAL ELECTRIC BOARD - SINGLE-WIRE DIAGRAM


3x400 / 230V-50Hz
L1,L2,L3
N
PE
1
2
3
4
5
6
7
8
9
10
Q_1 10A
K_1 16A
Q_2 10A
Q_3 10A
Q_4 10A
Q_5 10A
Q_6 10A
Q_7 16A
K_7 16A
Q_8 16A
K_8 16A
Q_9 16A
K_9 16A
Q_{10} 16A
K_{10} 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 *IS WORKSHOP, IS SHIFTMAN, ACUMULATORS, POWER SUPPLY ROOM, GENERATOR* 14LL / *Lamps*	PICTOGRAMA *PICTOGRAM* 6Buc. / *Pieces*	PICTOGRAMA *PICTOGRAM* 1Buc. / *Piece*	PICTOGRAMA *PICTOGRAM* 1Buc. / *Piece*	PICTOGRAMA *PICTOGRAM* 1Buc. / *Piece*

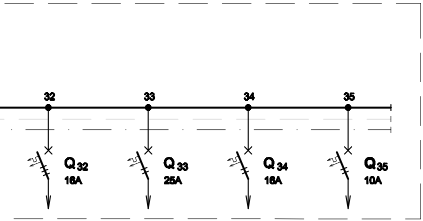

de la T.G.D.j.t. / *from T.G.D.j.t.*
CYY-F4x70+35mmp
Q0
160A
Q01
6A
S1
CV
P1
V
Pi =80.58kW
Pc = 71kW
11
12
13
14
15
16
17
18
19
20
Q11
16A
K11
16A
Q12
6A
Q13
16A
30mA
Q14
16A
30mA
Q15
16A
30mA
Q16
16A
30mA
Q 17
16A
Q 18
16A
Q 19
16A
Q 20
16A
FY3x1.5mmp
+IPY16mm
FY2x1.5mmp
+IPY13mm
FY3x2.5mmp
+IPY16mm
FY3x2.5mmp
+IPY16mm
FY3x2.5mmp
+IPY16mm
FY3x2.5mmp
+IPY16mm
FY3x2.5mmp
+IPEY16mm
FY3x2.5mmp
+IPEY16mm
FY3x2.5mmp
+IPEY16mm
FY3x2.5mmp
+IPEY16mm
exit

11	12	13	14	15	16	17	18	19	20
1.8	0.16	2	2	2	2	2.5	2.5	2.5	2.5
PICTOGRAME ***PICTOGRAMS*** **8Buc. / *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***

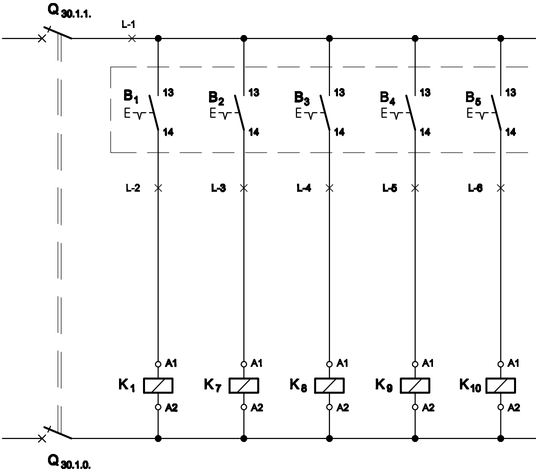


21
22
23
24
25
26
27
28
29
30
31
Q21
16A
Q22
16A
Q23
16A
Q24
16A
Q25
16A
Q26
16A
Q27
16A
Q 28
20A
Q 29
32A
Q 30
6A
S30
Q 31
25A
T30
160VA
230/230V
Q 30.1
6A
FY3x2.5mmp
+IPEY16mm
FY3x2.5mmp
+IPY16mm
FY3x2.5mmp
+IPY16mm
FY3x2.5mmp
+IPY16mm
FY3x2.5mmp
+IPY16mm
FY3x2.5mmp
+IPY16mm
FY3x2.5mmp
+IPY16mm
CYY-F5x2.5mmp
CYY-F5x6mmp
U.E.1
U.E.2
U.E.3
U.E.4
U.E.6
U.E.9

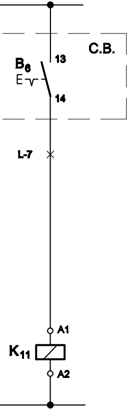
21	22	23	24	25	26	27	28	29	30	31
2.5	2	2	2	2	2	2	5.76	15.35	0.16	4
USCATOR DE MAINI ***HAND DRYER*** **1Buc. / *Piece***	UNITATE EXTERIOARA DE CLIMATIZARE SISTEM MONOSPLIT *OUTDOOR UNIT AIR CONDITIONING SYSTEM MONOSPLIT* **1Buc. / *Piece***	**UNITATE EXTERIOARA DE CLIMATIZARE SISTEM MONOSPLIT** ***OUTDOOR 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***	**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 - $T_{Sp.com.}$***	**CENTRALA TERMICA TABLOU ELECTRIC - $T_{c.t.}$** ***THERMAL STATION ELECTRIC BOARD - $T_{c.t.}$***	CIRCUIT COMANDA ILUMINAT INTERIOR ***COMMAND CIRCUIT INDOOR LIGHTING***	**REZERVA TRIFAZATA** ***THREE-PHASE RESERVE***


32
33
34
35
Q32
16A
Q33
25A
Q34
16A
Q35
10A

32	33	34	35
3	3	2	1
REZERVA TRIFAZATA *THREE-PHASE RESERVE*	REZERVA MONOFAZATA *SINGLE-PHASE RESERVE*	REZERVA MONOFAZATA *SINGLE-PHASE RESERVE*	REZERVA MONOFAZATA *SINGLE-PHASE RESERVE*


Q30.1.1.
L-1
B1
13
E
14
B2
13
14
B3
13
14
B4
13
14
B5
13
14
L-2
L-3
L-4
L-5
L-6
A1
K1
A2
K7
K8
K9
K10
Q30.1.0.

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
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*


C.B.
B_6
E
13
14
L-7
A1
K_{11}
A2

COMANDA
APRINDERE
STINGERE
PICTOGRAME

ON-OFF
COMMAND OF
THE
PICTOGRAMS

TABLOU ELECTRIC GENERAL T.G. - SPECIFICATIE DI
T.G. GENERAL ELECTRIC BOARD - EQUIPMENT SPE

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=160A Un=400V Uimp=8kV f=50Hz Icm=2.2kA	1	
2	Q1,...,Q6,Q35	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 8/20μS*	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,Q34	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	Q29	Intrerupator automat tripolar, curba C *Three-poles circuit breaker, curve C*	In=32A Un=400V Icu=6kA f=50Hz	1	
8	Q31	Intrerupator automat tripolar, curba C *Three-poles circuit breaker, curve C*	In=25A Un=400V Icu=6kA f=50Hz	1	
9	Q32	Intrerupator automat tripolar, curba C *Three-poles circuit breaker, curve C*	In=16A Un=400V Icu=6kA f=50Hz	1	
10	Q33	Intrerupator automat bipolar, curba C *Two-poles circuit breaker, curve C*	In=25A Un=230V Icu=6kA f=50Hz	1	

0	1
12	Q7,...,Q11
13	Q01
14	P1
15	S1
16	K1,K7,K8, K9,K10,K11
17	Q30,Q30.1
18	T30
19	S30
20	B1,B2,B3, B4,B5,B6
21	L
22	-

E APARATAJ
CIFICATION

2	3	4	5
Intrerupator automat bipolar, curba B *Two-poles circuit breaker, curve B*	In=16A Un=230V Icu=6kA f=50Hz	5	
Intrerupator automat tripolar, constructie modulara, curba C *Three-poles circuit breaker, modular construction, curve C*	In=6A Un=400V Icu=25kA f=50Hz	1	
Voltmetru feromagnetic *Ferromagnetic voltmeter*	Domeniu / *Range* 0...600 V	1	
Comutator voltmetric *Voltmetric switch*	In=10A Un=500Vca f=50Hz	1	
Contactor electromagnetic tripolar de curent alternativ / *Three-poles electromagnetic a.c. contactor*	In=16A Un=400A Uc=230V f=50Hz	6	
Intrerupatoare automate bipolare, curba D / *Two-poles circuit breaker, curve D*	Un=240Vc.a. In=6A f=50Hz Icu=10kA	2	
Transformator monofazat uscat de comanda / *Single-phase dry-type command transformer*	Sn=160VA U1n=230Vc.a. U2n=230Vc.a. f=50Hz	1	
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	1	
Butoane de comanda luminoase cu retinere / *Light command buttons with retainer*	Ui=500V In=6A f=50Hz IP67	6	Butoanele se vor monta in C.B. (cutia cu butoane) *Buttons will be installed in C.B.(box of buttons)*
Cleme de racordare *Connection clamps*	Un=660Vc.a. In=16A f=50Hz	7	
Cutie / *Box*	IP30, Clasa I / *Class I*	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				
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 Bod;
Bod station - T.G. general electric board

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

E A 5 1 | 0 1 | E | 0 5 | B X | I E | 0 0 | 2 | 1 | 0 4 3 | 1

A3(297x2310)