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



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 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 Brasov - 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 Brasov - Sighisoara			Faza / Phase: P.Th. / T.D.

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

Emergency and fire protection systems/Sisteme de urgență și de incendiu
Electrical diagram services panel central C1 (Q_SILC1)/Electrice Diagrame cadru servicii centrale C1 (Q_SILC1)

Codificare / Codification System

Scara / Scale	LOT	Nr. / No
-	-	-

E A 5 1 0 1 C 1 0 L X T S 1 0 2 3 0 0 3 0

CHARACTERISTICS PANEL/CARACTERISTICI CADRU


























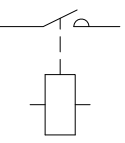
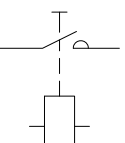
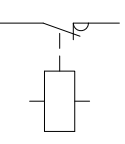
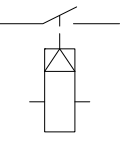



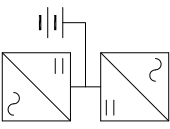
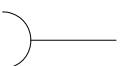
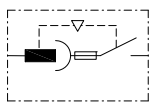

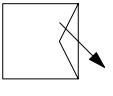

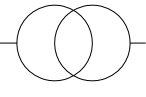
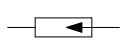
SYSTEM/SISTEM

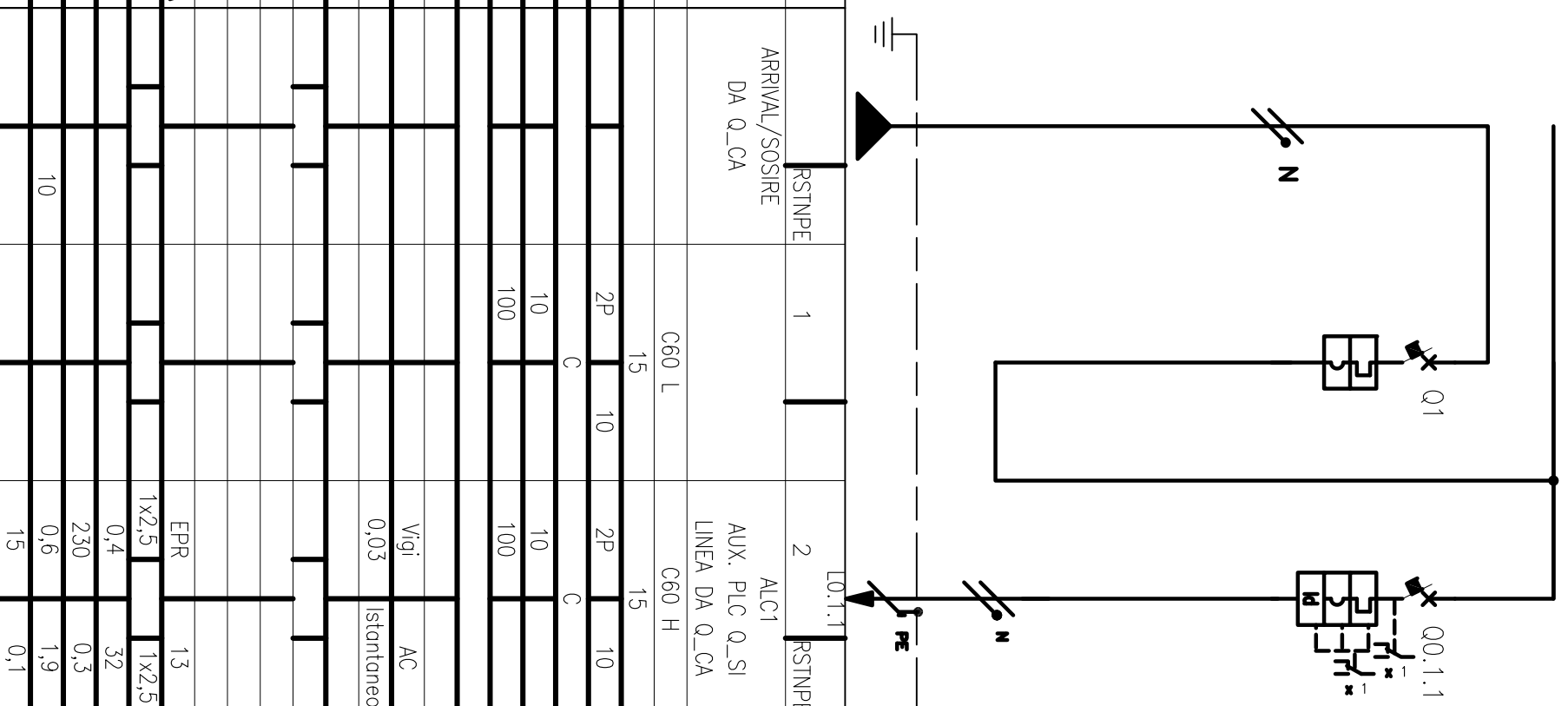
VOLTAGE/TENSIUNE [V]	400	FREQUENCY/FRECVENTA [Hz]	50
RETED CURRENT PANEL/CURENT NOMINAL CADRU [A]			
SHORT CIRCUIT CURRENT ON PANEL [kA]			16
DISTRIBUTION SYSTEM/SISTEMUL DE DISTRIBUTIE			TNS
SIZE BARS/DIMENSIUNEA BARS			
In [A]		Scc [kA]	
CARPENTRY/TAMPLARIE			METALLIC
INSULATION CLASS/CLASA DE IZOLARE			IP

REFERENCE STANDARDS/STANDARDELE DE REFERINTA

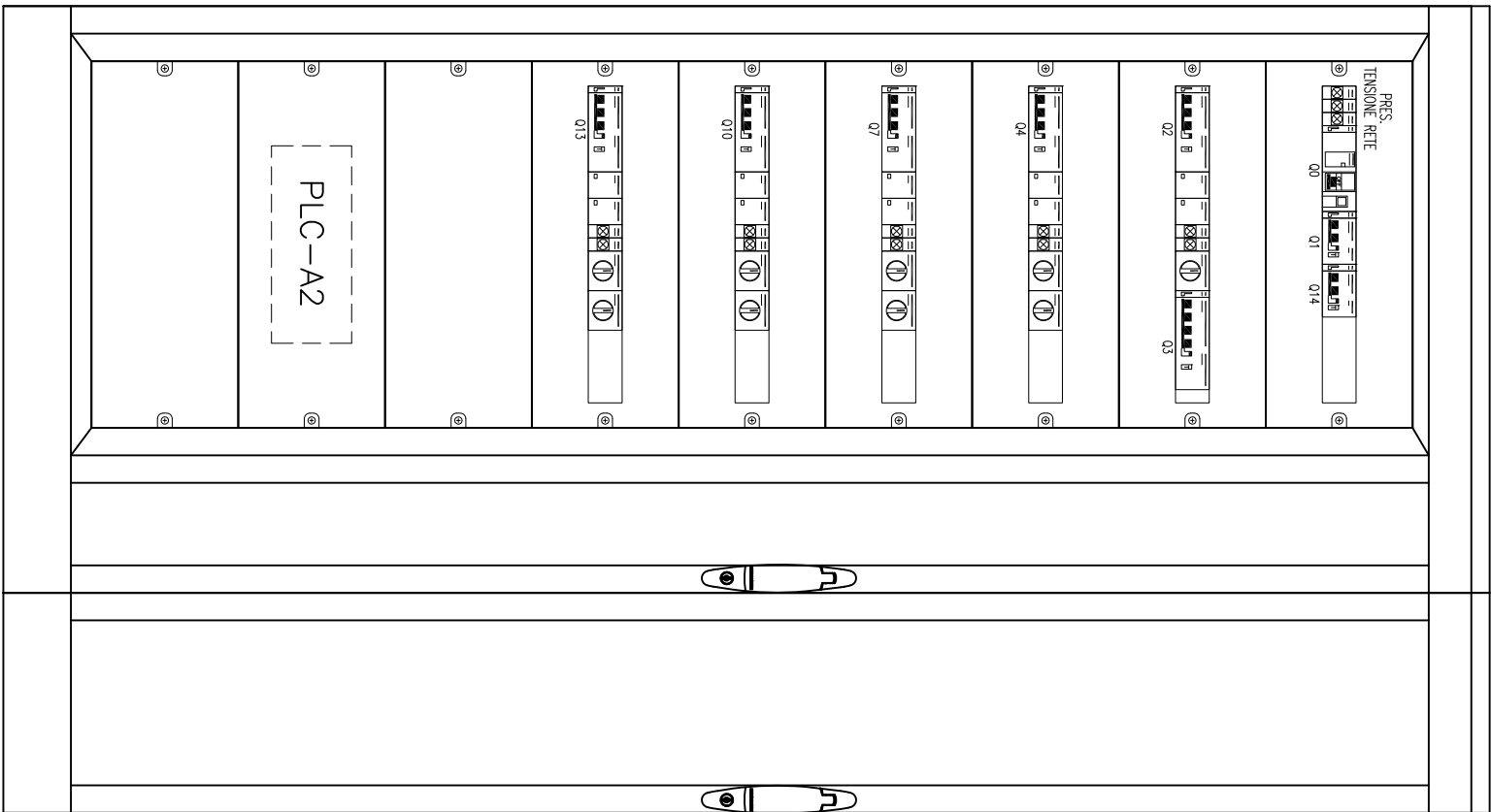
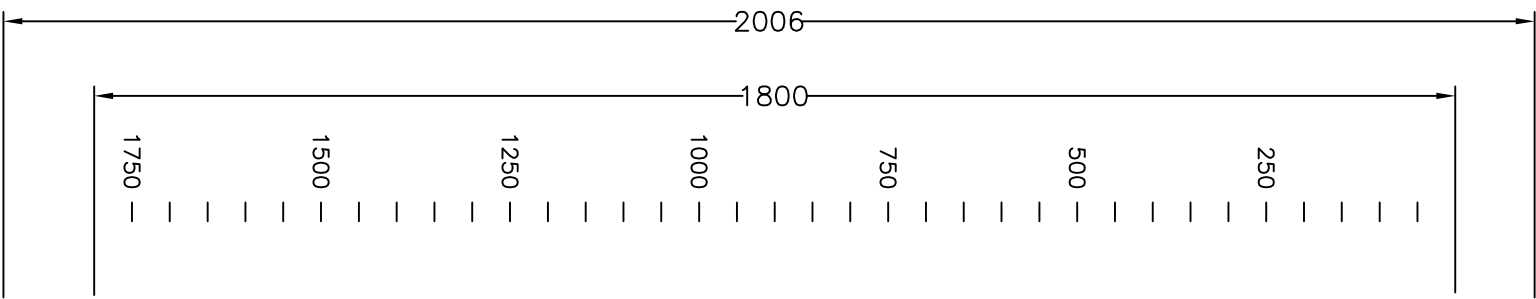
BREAKERS SWITCHES/CIRCUITUL CONCASOARE	<input checked="" type="checkbox"/>	EN 60947-2
MODULAR SWITCHES/CIRCUITUL MODULAR	<input checked="" type="checkbox"/>	EN 60947-2
	<input type="checkbox"/>	EN 60898
CARPENTRY/TAMPLARIE	<input checked="" type="checkbox"/>	EN 60439-1

LEGEND SYMBOLS CHEIA SIMBOLURI

	CIRCUIT BREAKER INTERRUPTOR		SWITCH		SWITCH OPERATION SWITCH OPERATIUNEA		THERMAL PROTECTION PROTECTIE TERMICA		MAGNETIC PROTECTION PROTECTIE MAGNETICA		DIFFERENTIAL PROTECTION PROTECTIE DIFERENTIALA		MOTOR MOTOR		FUSE ELEMENT FUZE ELEMENT		TOROID		MANUAL DRIVE MANUAL
	MOTORIZED CONTROL DE REGLAJ MOTORIZATE		FREE TRIP CALATORIE GRATUITA		ROTARY HANDLE INTERLOCKING MANER ROTATIV CENTRALIZARE		INTERLOCK INTERBLOCARE		REMOVABLE EQUIPMENT AMOVIBIL ECHIPAMENTE		LOCK KEY (LOCKED WITH APPLIANCE IN PLACE OF REST) LOCK (BLOCAT CU APARATULUI IN POZITIA DE ODHINA)		LOCK KEY (FREE WITH APPLIANCE IN PLACE OF REST) LOCK (GRATUIT CU APARATULUI IN POZITIA DE ODHINA)		AUX CONTACT (N=NUMBER OF INSTALLED CONTACTS, THE HATCH INDICATES WHICH EQUIPMENT PART ACT ON THE CONTACT) DATE DE CONTACT AUX (N=NUMARUL DE DATE INSTALATE, ACTI HATCH CU PRIMIRE LA ECHIPAMENTUL INDICA PARTUL CA DATE)		COIL A MINIMUM VOLTAGE COIL UN VOLTAJ MINIM		COIL A LAUNCH OF CURRENT COIL UN CANSAREA DE CURENT
	CHANGEOVER SWITCH FOR INSTRUMENT (VOLTMETRIC/AMPEROMETRIC) SWITCH PENTRU INSTRUMENT (VOLTMETRIC/AMPEROMETRIC)		AMPEROMETER AMPEROMETRU		VOLTMETER VOLTMETRU		FREQUENCYMETER FRECVENTA		INSTRUMENT INTEGRATOR (CONTACTOR) INSTRUMENT INTEGRATOR (CONTACTOR)		CONTACTOR WITH NO CONTACT CONTACTOR CU DATE DE NO CONTACT		CONTACTOR WITH POSSIBILITY OF MANUAL CONTACT CONTACTOR CU POSIBILITATEA DE DATE MANUAL CU DE CONTACT NO		CONTACTOR NORMALLY CLOSED CONTACT CONTACTOR CU DATE IN MOD NORMAL INCHIS		CONTACTOR (RELAY / STEP / STEP) CONTACTOR (RELEU PAS CU PAS)		CLOCK CEASUL
	TWILIGHT CREPUSCULAR		ASTRONOMIC CLOCK CEASUL ASTRONOMIC		UPS UPS		SOCKET (GENERAL SYMBOL) SOCKET (GENERAL SIMBOLURI)		PLUG AND SWITCH FUSE BLOCK SOCKET CU INTERBLOCATA EA SIGURANTI		SOFT STARTER		INVERTER INVERTOR		STAR STARTER		TRASFORMER TRASFORMER		SPD VAL



TERMINAL NUMBER/TERMINAL NUMARUL	DISTRIBUTION	ARRIVAL/SOSIRE DA Q_CA	1	2
NUMBER OF CIRCUIT NUMARUL DE CIRCUIT	RSTNPE	ALC1	L0:1.1	RSTNPE
DESCRIPTION OF THE CIRCUIT DESCRIBEA A CIRCUITULUI		AUX: PLC Q_SI LINEA DA Q_CA		
TYPE APPARATUS/TIP APARATURA		C60 H		
SWITCH/SWITCHI	Icu [kA]	15	15	
CURVE RELEASES/CURBA DE PRESA	N. POLE	2P	2P	10
	I_r [A]	10	10	
	I_{sd} [A]	100	100	
	I_i [A]			
	t_r [s]			
	t_{sd} [s]			
DIFFERENTIAL DIFFERENTIAL	$I_{\Delta n}$ [A]			Vigi
	CLASS/CLASA			AC
CONTACTOR	TYPE/TIP			Istantaneo
CONTACTOR	TYPE/TIP			
TERMIC	COIL [V]			
TERMIC	TYPE/TIP			
FUSE	N. POLE			
OTHER APP.	TYPE/TIP			
PIPELINE/ PIPELINE/	TYPE ISOLATION			
BOTTOM LINE/ FUND LINE/	SECTION PHASE-N-PE/PEN [mmq]	1x2,5	1x2,5	
	I_b [A]	0,4	0,4	32
	I_n [A]	230	0,3	
	P_n [kW]			
	$I_{cc\ min}$ [kA]	0,6	1,9	
	$I_{cc\ max}$ [kA]			
ENGHT/LUNGIMEA [m]	10			
NOTE				15
			0,1	



P = 450mm