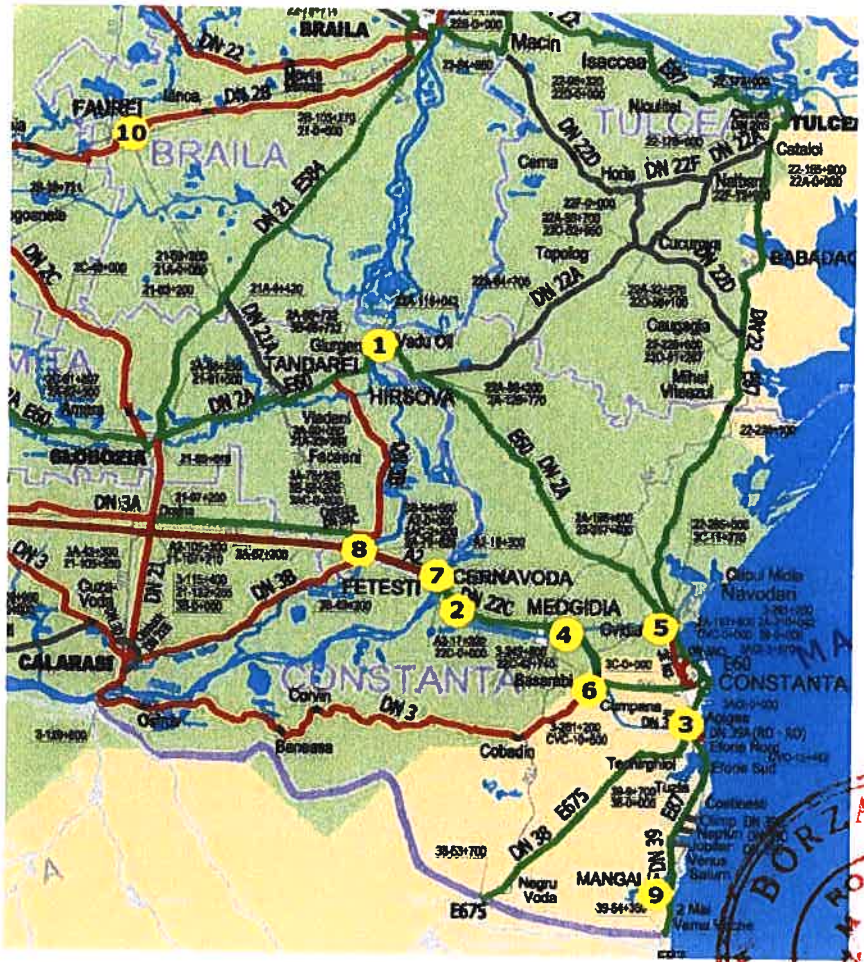
RNCMNR – ROMANIAN NATIONAL COMPANY OF MOTORWAYS AND NATIONAL ROADS

CONSULTING SERVICES FOR DESIGN AND WORKS SUPERVISION OF 10 BRIDGES IN DOBROGEA AREA



Detailed Design

Volumes series 3 – Electrical works

Volume 3.3 – Electric Panels Details

October 2008

Louis Berger Group, Inc.

BORZA N. IOAN
ROMANIA
NR. 1609
VERIFICATOR PROIECTE

INVESTOR/INVESTITOR

ROMANIAN NATIONAL COMPANY OF MOTORWAYS AND NATIONAL ROADS

COMPANIA NATIONALA DE AUTOSTRAZI SI DRUMURI NATIONALE DIN ROMANIA

DESIGNER/PROIECTANT

LOUIS BERGER GROUP inc.

CONSULTING SERVICES FOR DESIGN AND WORKS SUPERVISION OF 10 BRIDGES IN DOBROGEA AREA

DETAILED DESIGN

GENERAL DOCUMENTS

DD - GD - 11

DESIGN TEAM LEADER
Vittorio Ascoli Marchetti

Dott. Ing. Vittorio Ascoli Marchetti
ORDINE INGEGNERI ROMA N° 12645

ELECTRIC PANEL DETAILS

CONSULTANTS
SOLIDUS s.r.l. - Roma Italia
Francesco Del Tosto
Romano Tucci

scale	various	file name DD - GD - 11				
data / date	rev.	revision title	des	ver/chk	CP / PC	APPR. AUTHORITY
08 sept 2008	0	issue	SOLIDUS	ASCOLI		

CUSTOMER:

ROMANIAN NATIONAL COMPANY OF MOTORWEYS AND NATIONAL ROADS

WORK:

DESIGN AND WORKS SUPERVISION OF 10 BRIDGES IN DOBROGEA AREA

DETAILED DESIGN

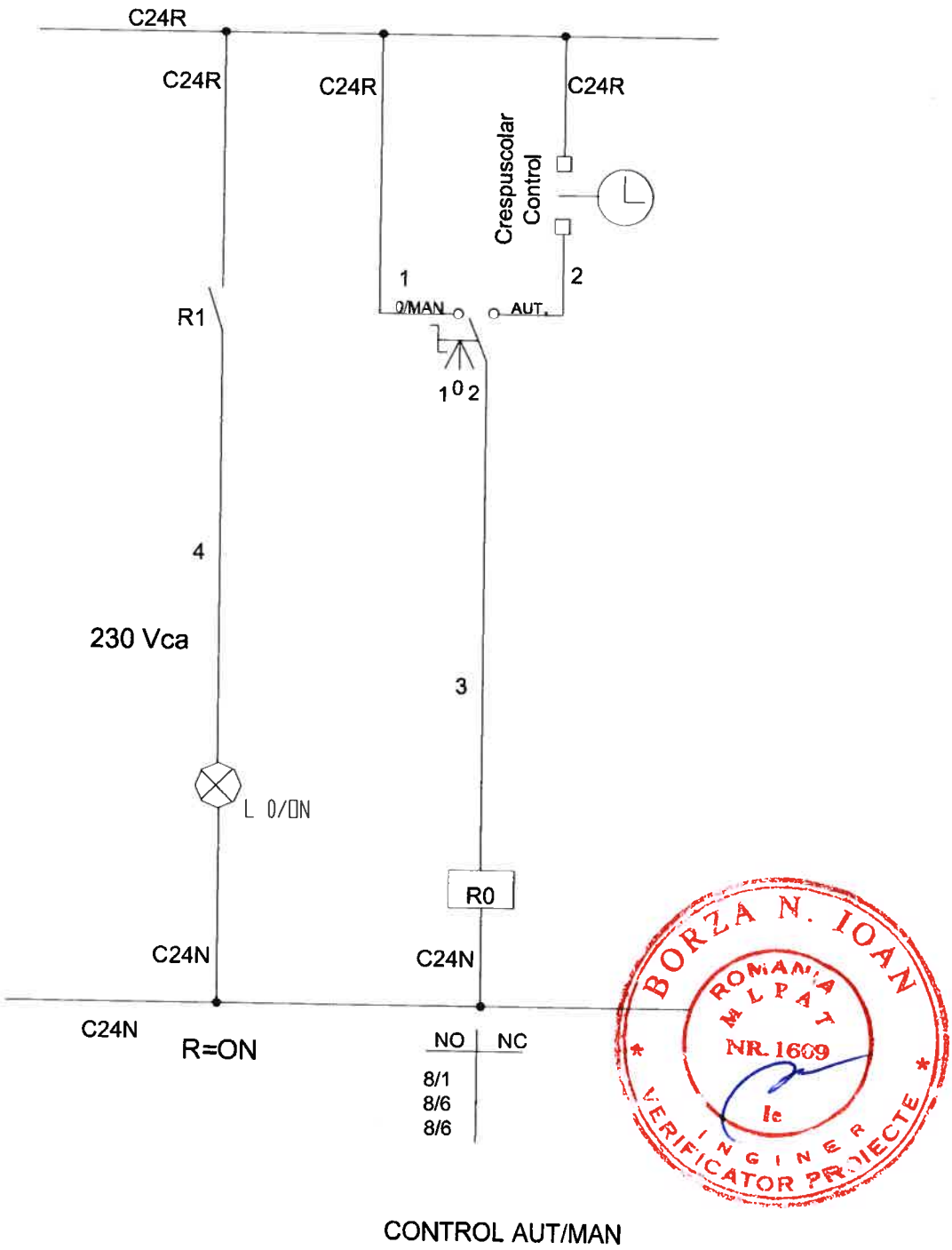
ELECTRIC PANEL DETAILS				
ELECTRICAL INSTALLATION				
TENSION [V]	400	FREQ. [Hz]	50	
ELECTRIC PANEL NOMINAL CURRENT [A]				
ELECTRIC PANEL PRESSARE [kA]			10	
SYSTEM NEUTRAL			TT	
CABLES DESIGN In [A]	–	Icc [kA]	10	
STRUCTURAL WORK			FIBERGLASS	
PROTECTION DEGREE		IP	55	

REFERENCE RULES	
BOX SWITCH	☒ — CEI EN 60947-2
MODULAR SWITCH	☒ — CEI EN 60947-2 ☐ — CEI EN 60898
STRUCTURAL WORK	☒ — CEI EN 60439-1 ☐ — CEI 23-48 CEI 23-49 CEI 23-51

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1/117

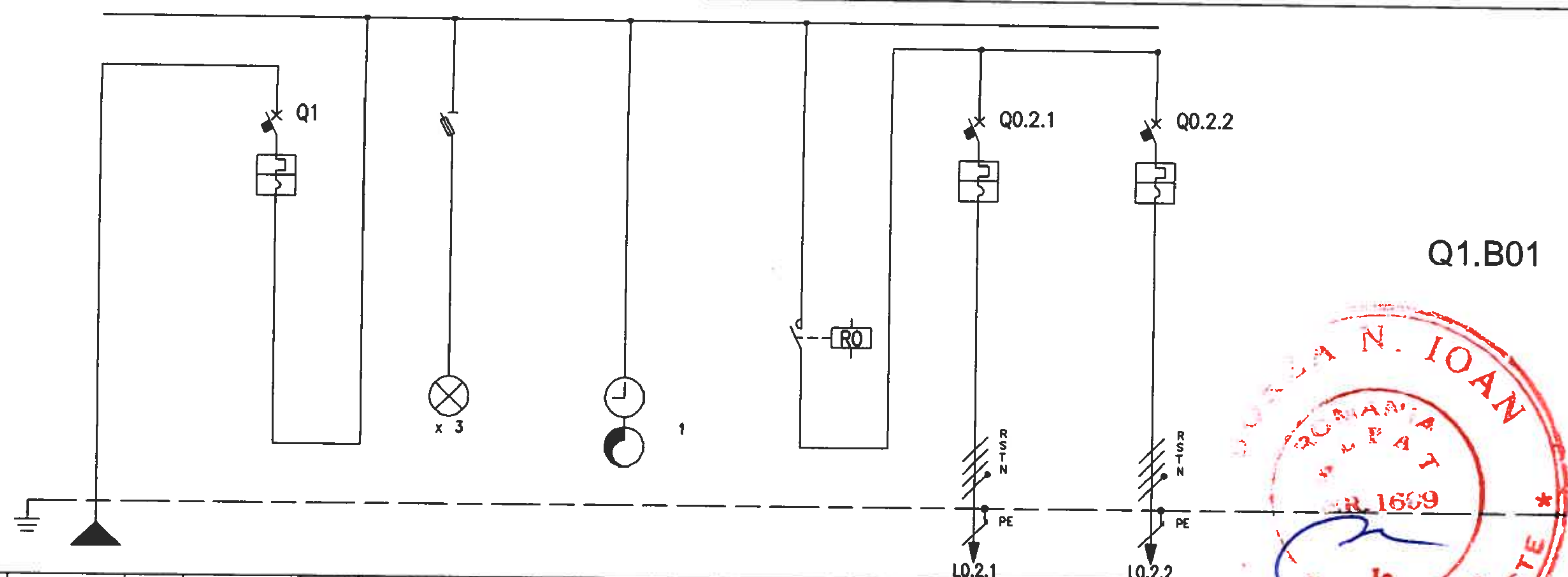
AUXILIARY SCHEME POWER ARRIVAL



CONTROL AUT/MAN

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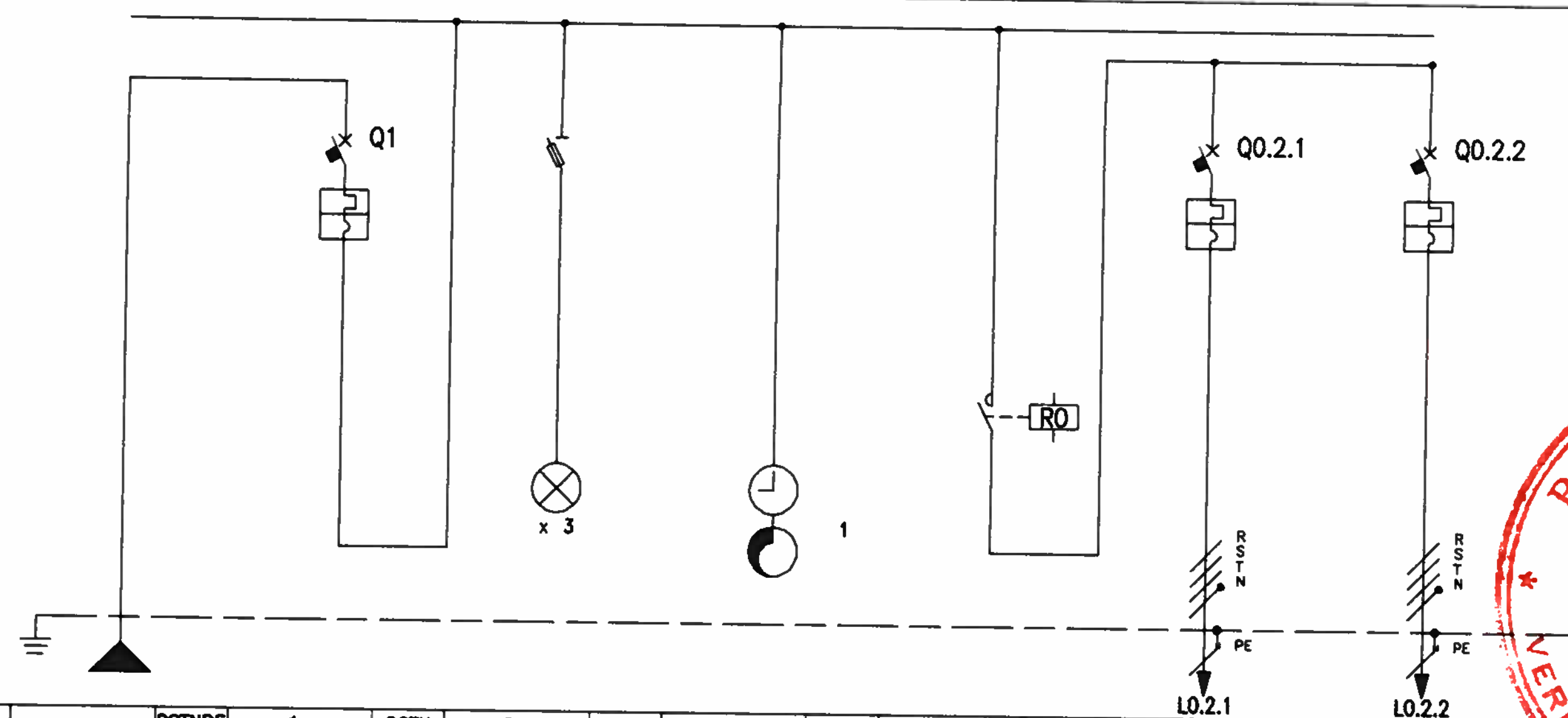
Q1.B01



Q1.B01

			DISTRIBUTION	1	2	3	4	5	6
CLAMPS NUMBER			RSTNPE	RSTN	RSTNPE	RSTNPE		RSTNPE	RSTNPE
CIRCUIT NUMBER		DISTRIBUTION		1	2	3	4	5	6
CIRCUIT DESCRIPTION				GENERAL	TENSION PRESENCE	CREPUSCOLAR	TO CREPUSCOLATE	L1	L2
MACHINE TYPE				C40 N	STI			C40 N	C40 N
INTERRUPTER	Icu [kA]			10				10	10
	POLE NUMBER	In [A]		3P+N / 32	3+N / 32			3P+N / 20	3P+N / 20
	CURVE			C				B	B
	Ir [A]	tr [s]		32				20	20
	Isd [A]	tsd [s]		320				96	96
	Ii [A]								
	Ig [A]	tg [s]							
DIFFERENTIAL	TYPE	CLASS							
	Idn [A]	tdn [ms]							
CONTACTOR	TYPE	CLASS					LC1D32 / AC3		
RT CTRL SWITCH	COIL [V] / POLE N°	In [A]					230 / 4 poli / 32		
TERMIC	TYPE	Irth [A]							
FUSE	POLE NUMBER	In [A]			3+N / 6				
OTHER MACHIN.	TYPE	MODEL							
CONDUIT	WEATHERP. TYPE	LAYING	EPR					PVC / 41	PVC / 41
	SECTION FASE-N-PE/PEN [mmq]							1x16 / 1x16	1x16 / 1x16
	Ib [A]	Iz [A]						8,8 / 47,6	8,8 / 47,6
	Un [V]	Pn [kW]	400					400 / 5,5	400 / 5,5
IN LINE CABLES	Icc min [kA]	Icc max [kA]	10					0,1 / 0,4	0,1 / 0,4
	LENGTH	TOTAL V DROP[%]						830 / 2,6	850 / 2,7

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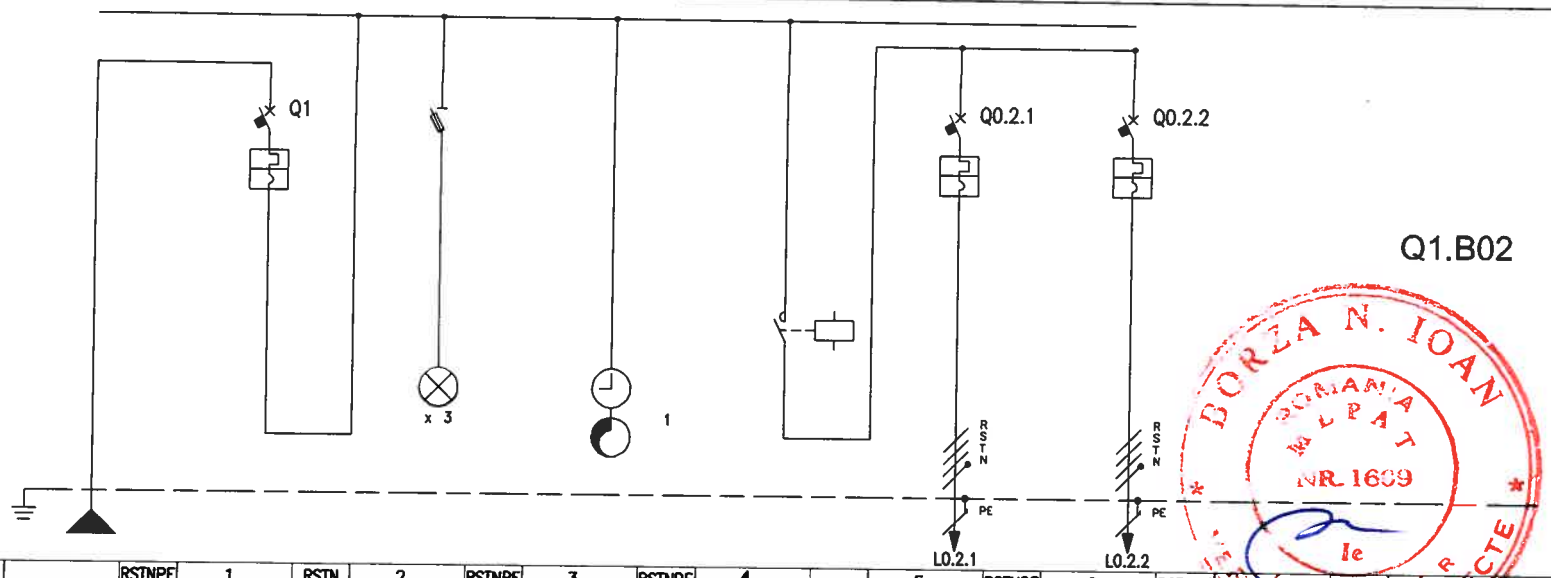


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NR. 1609
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INGINER

		DISTRIBUTION	1	2	3	4	5	6
CLAMPS NUMBER / CIRCUIT NUMBER		RSTNPE	1 RSTN	2 RSTNPE	3 RSTNPE	4	5 RSTNPE	6 RSTNPE
CIRCUIT DESCRIPTION			GENERAL	TENSION PRESENCE	CREPUSCOLAR	TO CREPUSCOLATE	L3	L4
MACHINE TYPE			C40 N	STI			C40 N	C40 N
INTERRUPTER	Icu [kA]		10				10	10
	POLE NUMBER / In [A]		3P+N 32	3+N 32			3P+N 20	3P+N 20
	CURVE		C				B	B
	Ir [A] / tr [s]		32				20	20
	Isd [A] / tsd [s]		320				96	96
	Ii [A]							
	Ig [A] / tg [s]							
DIFFERENTIAL	TYPE / CLASS							
	Idn [A] / tdn [ms]							
CONTACTOR	TYPE / CLASS					LC1D32 AC3		
RT CTRL SWITCH	COIL [V] / POLE N° / In [A]					230 4 poli 32		
TERMIC	TYPE / Irth [A]							
FUSE	POLE NUMBER / In [A]			3+N 6				
OTHER MACHIN.	TYPE / MODEL							
CONDUIT	WEATHERP. TYPE / LAYING	EPR					PVC 41	PVC 41
	SECTION FASE-N-PE/PEN [mmq]						1x16 1x16	1x16 1x16
	Ib [A] / Iz [A]						8,3 47,6	8,3 47,6
IN LINE CABLES	Un [V] / Pn [kW]	400					400 5,2	400 5,2
	Icc min [kA] / Icc max [kA]	10					0,2 0,5	0,2 0,5
	LENGTH / TOTAL V DROP[%]						790 2	810 2,1

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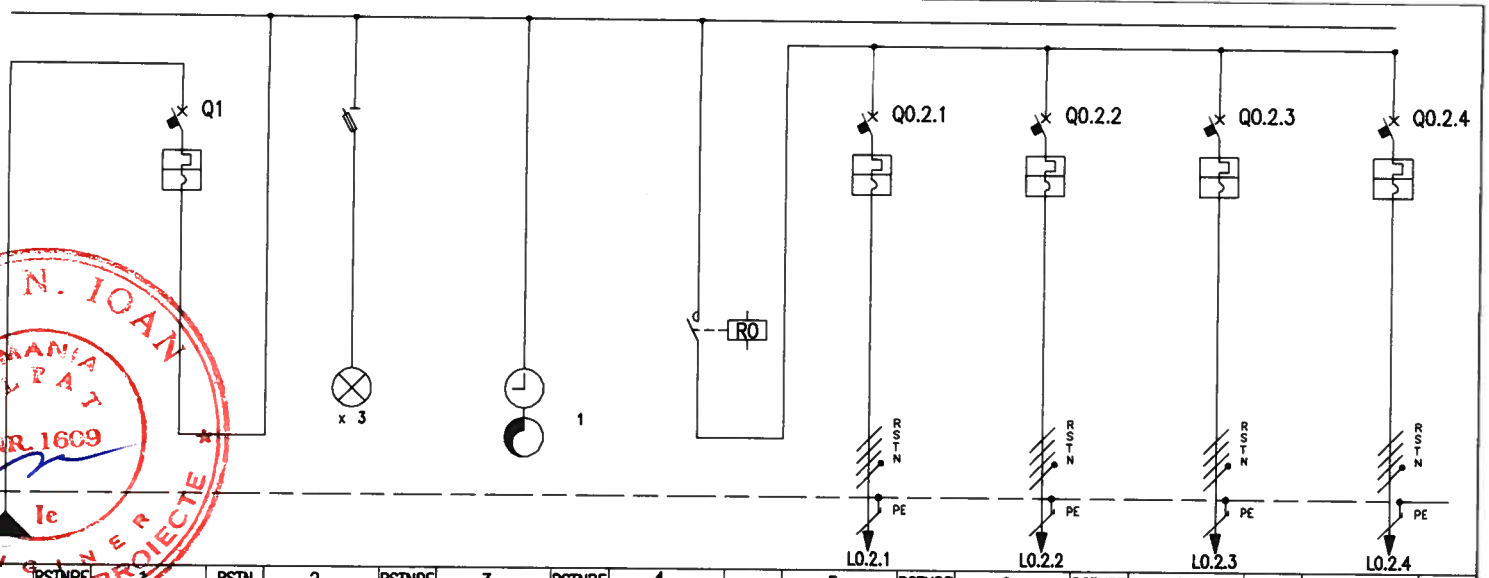


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C.N.P.A.T.
NR. 1609
INGINER
INDICATOR PROIECTE

CLAMPS NUMBER																							
CIRCUIT NUMBER		DISTRIBUTION		RSTNPE	1	RSTN	2	RSTNPE	3	RSTNPE	4		5	RSTNPE	6	RSTNPE							
CIRCUIT DESCRIPTION					GENERAL		TENSION PRESENCE		3		TO CRESPUCOLATE		L1		L2								
MACHINE TYPE					C60 N		STI						C40 N		C40 N								
INTERRUPTER	Icu [kA]				10								10		10								
	POLE NUMBER	In [A]			4P	50	3+N	32					3P+N	20	3P+N	20							
	CURVE				C								B		B								
	Ir [A]	tr [s]			50								20		20								
	Isd [A]	tsd [s]			500								96		96								
	Ii [A]																						
	Ig [A]	tg [s]																					
DIFFERENTIAL	TYPE	CLASS																					
	Idn [A]	tdn [ms]																					
CONTACTOR	TYPE	CLASS									LC1D32	AC3											
RT CTRL SWITCH	COIL [V]	POLE N° In [A]									230	4 poli 32											
TERMIC	TYPE	Irth [A]																					
FUSE	POLE NUMBER	In [A]					3+N	6															
OTHER MACHIN.	TYPE	MODEL																					
CONDUIT	WEATHERP. TYPE	LAYING	EPR										PVC	41	PVC	41							
	SECTION FASE-N-PE/PEN [mmq]												1x10	1x10	1x10	1x10							
	Ib [A]	Iz [A]											7,4	35	7,4	35							
	Un [V]	Pn [kW]	400										400	4,6	400	4,6							
IN LINE CABLES	Icc min [kA]	Icc max [kA]		10									0,1	0,3	0,1	0,3							
	LENGTH	TOTAL V DROP[%]											600	2,8	620	3							

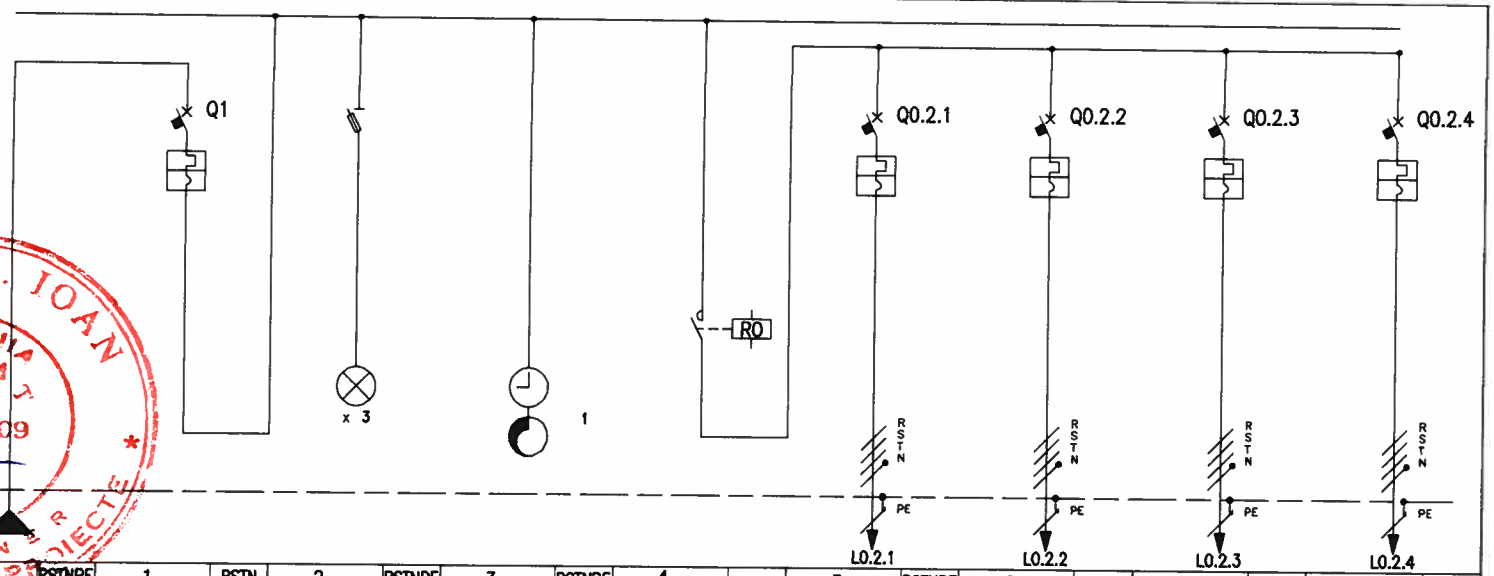
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MEPAT
NR. 1609
VERIFICATOR PROIECTE

CLAMPS NUMBER																										
CIRCUIT NUMBER		DISTRIBUTION		RSTNPE	1		RSTN	2		RSTNPE	3		RSTNPE	4			5		RSTNPE	6		RSTNPE	7		RSTNPE	8		RSTNPE
CIRCUIT DESCRIPTION					GENERAL			TENSION PRESENCE			CREPUSCOLAR			TO CREPUSCOLATE			L1			L2			L3			L4		
MACHINE TYPE					C40 N			STI									C40 N			C40 N			C40 N			C40 N		
INTERRUPTER	Icu [kA]				10												10			10			10			10		
	POLE NUMBER	In [A]			3P+N	32		3+N	32								3P+N	16		3P+N	16		3P+N	10		3P+N	10	
	CURVE				C												B			B			C			C		
	Ir [A]	tr [s]			32												16			16			10			10		
	Isd [A]	tsd [s]			320												77			77			100			100		
	Ii [A]																											
	Ig [A]	tg [s]																										
DIFFERENTIAL	TYPE	CLASS																										
	Idn [A]	tdn [ms]																										
CONTACTOR	TYPE	CLASS												LC1D32	AC3													
RT CTRL SWITCH	COIL [V]	POLE N°	In [A]											230	4 poli	32												
TERMIC	TYPE	Irth [A]																										
FUSE	POLE NUMBER	In [A]						3+N	6																			
OTHER MACHIN.	TYPE	MODEL																										
CONDUIT	WEATHERP. TYPE	LAYING		EPR													PVC	41		PVC	41		PVC	41		PVC	41	
	SECTION FASE-N-PE/PEN [mmq]																1x6	1x6		1x6	1x6		1x6	1x6		1x6	1x6	
	Ib [A]	Iz [A]															3,7	25,2		3,7	25,2		2,1	58		2,1	58	
	Un [V]	Pn [kW]		400													400	2,3		400	2,3		400	1,3		400	1,3	
IN LINE CABLES	Icc min [kA]	Icc max [kA]			10												0,1	0,2		0,1	0,2		0,1	0,3		0,1	0,3	
	LENGTH	TOTAL V DROP[%]															335	1,9		340	1,9		250	0,8		270	0,9	

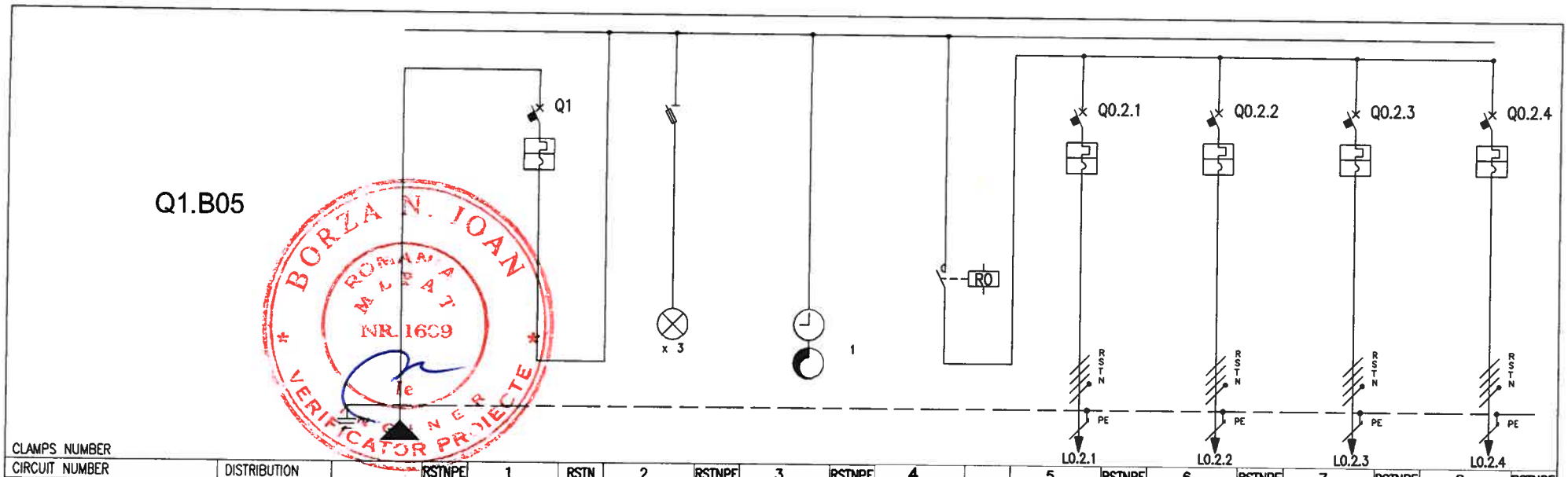
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CLAMPS NUMBER																					
CIRCUIT NUMBER		DISTRIBUTION	RSTNPE	1	RSTN	2	RSTNPE	3	RSTNPE	4		5	RSTNPE	6	RSTNPE	7	RSTNPE	8	RSTNPE
CIRCUIT DESCRIPTION				GENERAL		TENSION PRESENCE		CREPUSCOLAR		TO CREPUSCOLATE		L1		L2		L3		L4	
MACHINE TYPE				C40 N		STI						C40 N		C40 N		C40 N		C40 N	
INTERRUPTER	Icu [kA]			10								10		10		10		10	
	POLE NUMBER	In [A]		3P+N	25	3+N	32					3P+N	16	3P+N	16	3P+N	6	3P+N	6
	CURVE			C								B		B		C		C	
	Ir [A]	tr [s]		25								16		16		6		6	
	Isd [A]	tsd [s]		250								77		77		60		60	
	Ii [A]																		
	Ig [A]	tg [s]																	
DIFFERENTIAL	TYPE	CLASS																	
	Idn [A]	tdn [ms]																	
CONTACTOR	TYPE	CLASS								LC1D32	AC3								
RT CTRL SWITCH	COIL [V]	POLE N°	In [A]							230	4 poli 32								
TERMIC	TYPE	Irth [A]																	
FUSE	POLE NUMBER	In [A]				3+N	6												
OTHER MACHIN.	TYPE	MODEL																	
CONDUIT	WEATHERP. TYPE	LAYING	EPR									PVC	41	PVC	41	PVC	41	PVC	41
	SECTION FASE-N-PE/PEN [mmq]											1x6	1x6	1x6	1x6	1x6	1x6	1x6	1x6
	Ib [A]	Iz [A]										3,7	25,2	3,7	25,2	1,3	36	1,3	36
	Un [V]	Pn [kW]	400									400	2,3	400	2,3	400	0,8	400	0,8
IN LINE CABLES	Icc min [kA]	Icc max [kA]		10								0,1	0,3	0,1	0,3	0,1	0,3	0,1	0,3
	LENGTH	TOTAL V DROP[%]										290	1,6	300	1,7	250	0,5	250	0,5

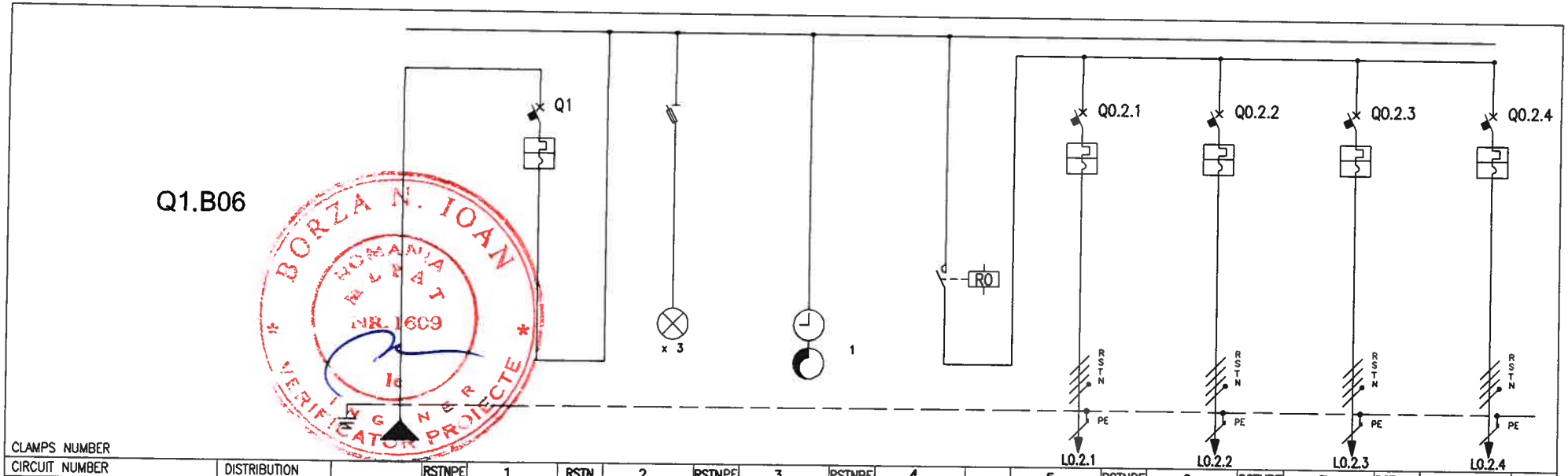
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VERIFICATOR PROIECTE

CLAMPS NUMBER																															
CIRCUIT NUMBER		DISTRIBUTION		RSTNPE		1	RSTN		2	RSTNPE		3	RSTNPE		4			5	RSTNPE		6	RSTNPE		7	RSTNPE		8	RSTNPE	
CIRCUIT DESCRIPTION						GENERAL			TENSION PRESENCE			CREPUSCOLAR			TO CREPUSCOLATE			L1			L2			L3			L4		
MACHINE TYPE						C40 N			STI									C40 N			C40 N			C40 N			C40 N		
INTERRUPTER	Icu [kA]					10												10			10			10			10		
	POLE NUMBER	In [A]				3P+N	32		3+N	32								3P+N	16		3P+N	16		3P+N	6		3P+N	6	
	CURVE					C												B			B			C			C		
	Ir [A]	tr [s]				32												16			16			6			6		
	Isd [A]	tsd [s]				320												77			77			60			60		
	Ii [A]																												
	Ig [A]	tg [s]																											
DIFFERENTIAL	TYPE	CLASS																											
	Idn [A]	tdn [ms]																											
CONTACTOR	TYPE	CLASS													LC1D32	AC3													
RT CTRL SWITCH	COIL [V]	POLE N°	In [A]												230	4 poli	32												
TERMIC	TYPE	Irth [A]																											
FUSE	POLE NUMBER	In [A]							3+N	6																			
OTHER MACHIN.	TYPE	MODEL																											
CONDUIT	WEATHERP. TYPE	LAYING		EPR														PVC	41		PVC	41		PVC	41		PVC	41	
	SECTION FASE-N-PE/PEN [mmq]																	1x6	1x6		1x6	1x6		1x6	1x6		1x6	1x6	
	Ib [A]	Iz [A]																4,2	25,2		4,2	25,2		1,3	36		1,3	36	
	Un [V]	Pn [kW]		400														400	2,6		400	2,6		400	0,8		400	0,8	
IN LINE CABLES	Icc min [kA]	Icc max [kA]			10													0,1	0,3		0,1	0,3		0,1	0,3		0,1	0,3	
	LENGTH	TOTAL V DROP[%]																320	1,8		340	1,9		250	0,5		270	0,6	

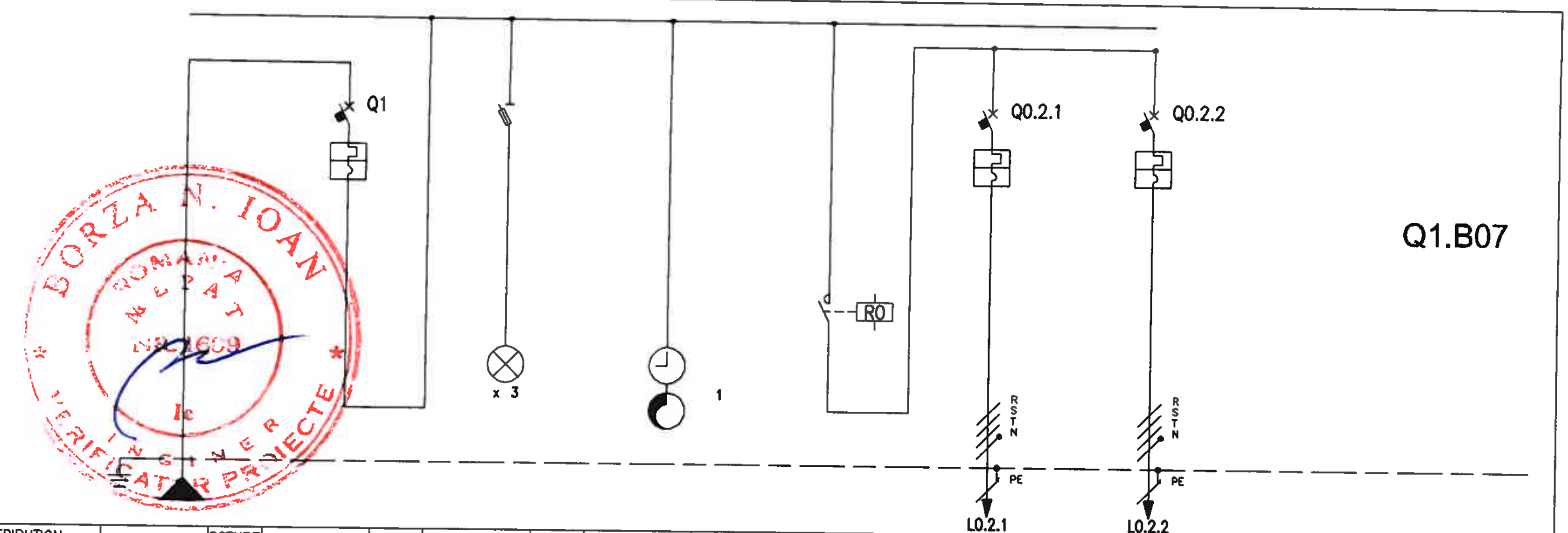
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BORZA N. IOAN
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CLAMPS NUMBER																										
CIRCUIT NUMBER		DISTRIBUTION		RSTNPE	1	RSTN	2	RSTNPE	3	RSTNPE	4		5	RSTNPE	6	RSTNPE	7	RSTNPE	8	RSTNPE						
CIRCUIT DESCRIPTION					GENERAL		TENSION PRESENCE		CREPUSCOLAR		TO CREPUSCOLATE		L1		L2		L3		L4							
MACHINE TYPE					C40 N		STI						C40 N		C40 N		C40 N		C40 N							
INTERRUPTER	Icu [kA]				10								10		10		10		10							
	POLE NUMBER	In [A]			3P+N	25	3+N	32					3P+N	10	3P+N	10	3P+N	6	3P+N	6						
	CURVE				C								B		B		C		C							
	Ir [A]	tr [s]			25								10		10		6		6							
	Isd [A]	tsd [s]			250								48		48		60		60							
	Ii [A]																									
	Ig [A]	tg [s]																								
DIFFERENTIAL	TYPE	CLASS																								
	Idn [A]	tdn [ms]																								
CONTACTOR	TYPE	CLASS									LC1D32	AC3														
RT CTRL SWITCH	COIL [V]	POLE N° In [A]									230	4 poli 32														
TERMIC	TYPE	Irth [A]																								
FUSE	POLE NUMBER	In [A]					3+N	6																		
OTHER MACHIN.	TYPE	MODEL																								
CONDUIT	WEATHERP. TYPE	LAYING	EPR										PVC	41	PVC	41	PVC	41	PVC	41						
	SECTION FASE-N-PE/PEN [mmq]												1x6	1x6	1x6	1x6	1x6	1x6	1x6	1x6						
	Ib [A]	Iz [A]											2,6	25,2	2,6	25,2	1,6	36	1,6	36						
	Un [V]	Pn [kW]	400										400	1,6	400	1,6	400	1	400	1						
IN LINE CABLES	Icc min [kA]	Icc max [kA]		10									0,1	0,3	0,1	0,3	0,1	0,3	0,1	0,3						
	LENGTH	TOTAL V DROP[%]											280	1,1	300	1,2	250	0,6	270	0,7						

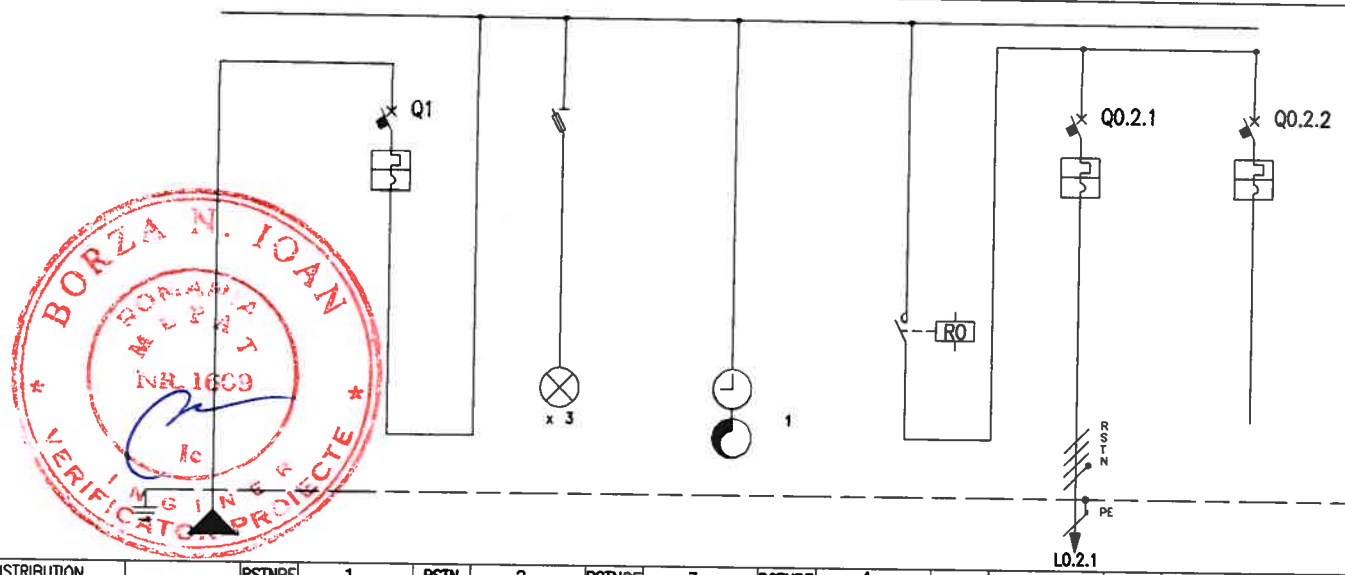
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Q1.B07

CLAMPS NUMBER																
CIRCUIT NUMBER	DISTRIBUTION			RSTNPE	1	RSTN	2	RSTNPE	3	RSTNPE	4		5	RSTNPE	6	RSTNPE
CIRCUIT DESCRIPTION					GENERAL		TENSION PRESENCE		CREPUSCOLAR		TO CREPUSCOLATE		L1		L2	
MACHINE TYPE					C60 N		STI						C40 N		C40 N	
INTERRUPTER	Icu [kA]				10								10		10	
	POLE NUMBER	In [A]			4P	63	3+N	32					3P+N	32	3P+N	32
	CURVE				C								B		B	
	Ir [A]	tr [s]			63								32		32	
	Isd [A]	tsd [s]			630								154		154	
	Ii [A]															
	Ig [A]	tg [s]														
DIFFERENTIAL	TYPE	CLASS														
	Idn [A]	tdn [ms]														
CONTACTOR	TYPE	CLASS									LC1D50	AC3				
RT CTRL SWITCH	COIL [V]	POLE N° In [A]									230 4 poli	50				
TERMIC	TYPE	Irth [A]														
FUSE	POLE NUMBER	In [A]					3+N	6								
OTHER MACHIN.	TYPE	MODEL														
CONDUIT	WEATHERP. TYPE	LAYING	EPR										PVC	41	PVC	41
	SECTION FASE-N-PE/PEN [mmq]												1x35	1x35	1x35	1x35
	Ib [A]	Iz [A]											15,7	77	15,2	77
	Un [V]	Pn [kW]	400										400	9,8	400	9,5
IN LINE CABLES	Icc min [kA]	Icc max [kA]		10									0,2	0,6	0,2	0,6
	LENGTH	TOTAL V DROP[%]											1070	3	1120	2,8

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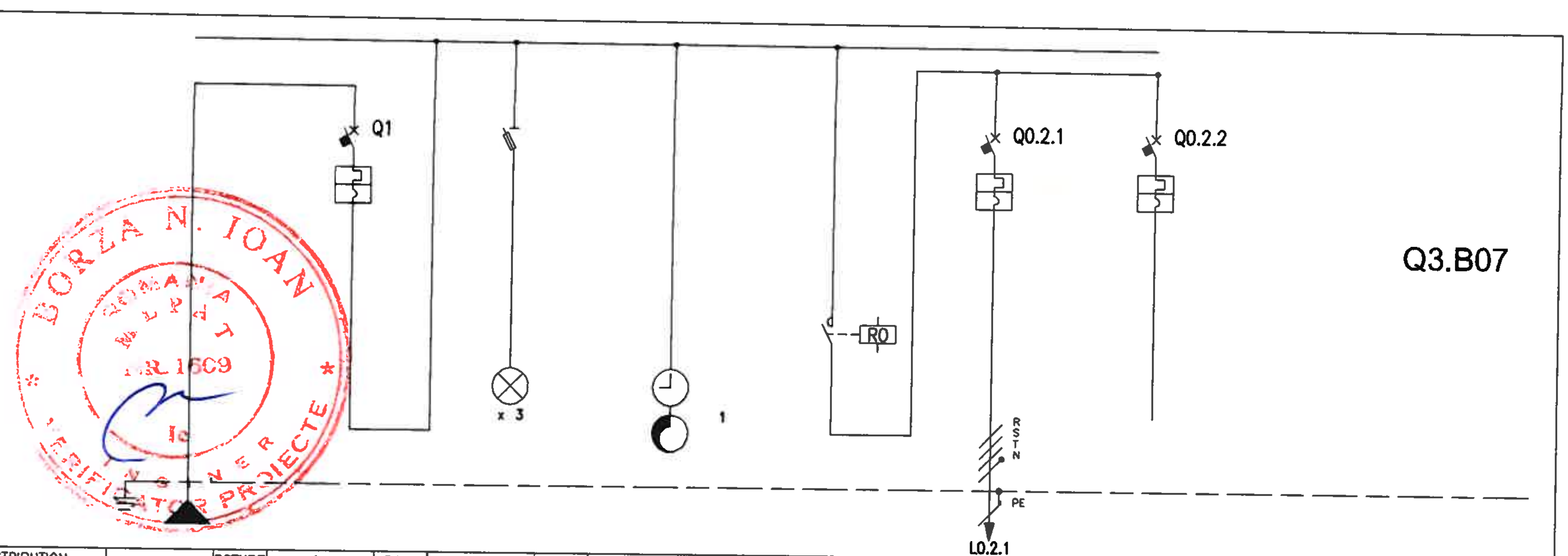


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NR. 1669
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Q2.B07

CLAMPS NUMBER																								
CIRCUIT NUMBER		DISTRIBUTION		RSTNPE	1	RSTN	2	RSTNPE	3	RSTNPE	4		5	RSTNPE	6	RSTNPE								
CIRCUIT DESCRIPTION					GENERAL		TENSION PRESENCE		CREPUSCOLAR		TO CREPUSCOLATE		L3		RESERVE									
MACHINE TYPE					C60 N		STI						C40 N		C40 N									
INTERRUPTER	Icu [kA]				10								10		10									
	POLE NUMBER	In [A]			4P	32	3+N	32					3P+N	25	3P+N	25								
	CURVE				C								B		B									
	Ir [A]	tr [s]			32								25		25									
	Isd [A]	tsd [s]			320								120		120									
	Ii [A]																							
	Ig [A]	tg [s]																						
DIFFERENTIAL	TYPE	CLASS																						
	Idn [A]	tdn [ms]																						
CONTACTOR	TYPE	CLASS									LC1D32	AC3												
RT CTRL SWITCH	COIL [V]	POLE N° In [A]									230	4 poli 32												
TERMIC	TYPE	Irth [A]																						
FUSE	POLE NUMBER	In [A]					3+N	6																
OTHER MACHIN.	TYPE	MODEL																						
CONDUIT	WEATHERP. TYPE	LAYING	EPR										PVC	41										
	SECTION FASE-N-PE/PEN [mmq]												1x16	1x16										
	Ib [A]	Iz [A]											8,8	47,6										
	Un [V]	Pn [kW]	400										400	5,5										
IN LINE CABLES	Icc min [kA]	Icc max [kA]		10									0,2	0,5										
	LENGTH	TOTAL V DROP[%]											630	2,1										

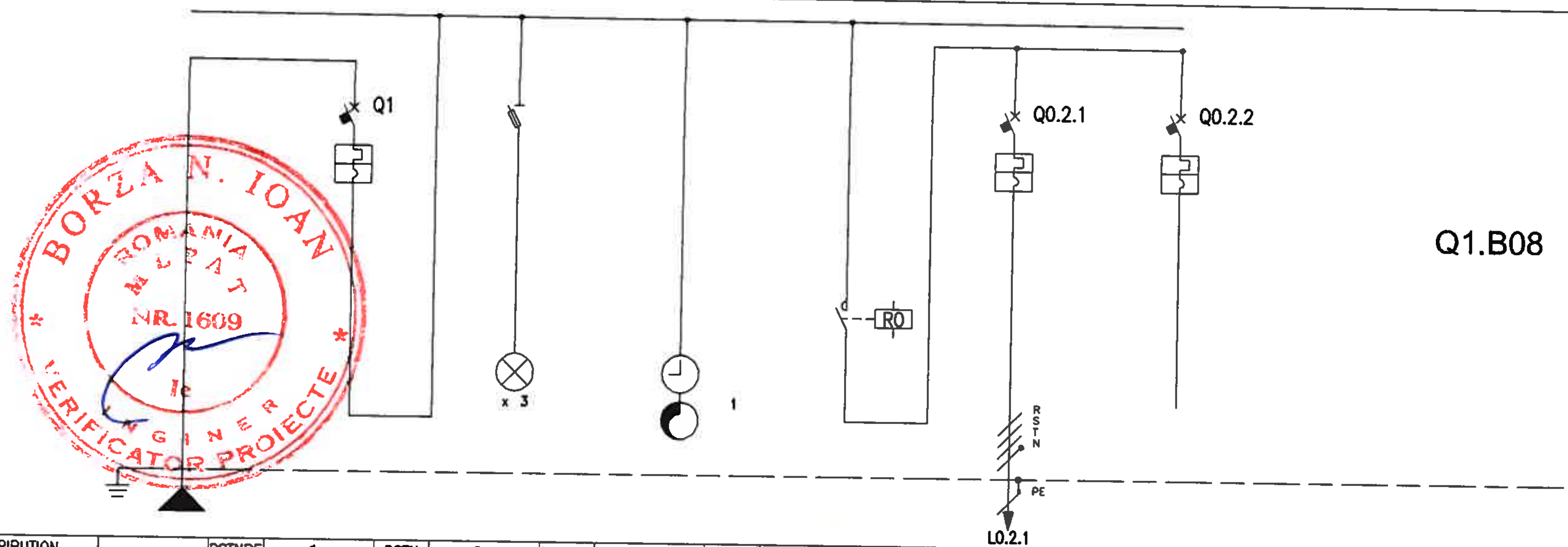
Q3.B07



Q3.B07

CLAMPS NUMBER							
CIRCUIT NUMBER	DISTRIBUTION	RSTNPE	1 RSTN	2 RSTNPE	3 RSTNPE	4	5 RSTNPE	6 RSTNPE
CIRCUIT DESCRIPTION			GENERAL	TENSION PRESENCE	CREPUSCOLAR	TO CREPUSCOLATE	L4	RESERVE
MACHINE TYPE			C60 N	STI			C40 N	C40 N
INTERRUPTER	Icu [kA]		10				10	10
	POLE NUMBER / In [A]		4P / 32	3+N / 32			3P+N / 25	3P+N / 25
	CURVE		C				B	B
	Ir [A] / tr [s]		32				25	25
	Isd [A] / tsd [s]		320				120	120
	Ii [A]							
	Ig [A] / tg [s]							
DIFFERENTIAL	TYPE / CLASS							
	Idn [A] / tdn [ms]							
CONTACTOR	TYPE / CLASS					LC1D32 / AC3		
RT CTRL SWITCH	COIL [V] / POLE N° / In [A]					230 / 4 poli / 32		
TERMIC	TYPE / Irth [A]							
FUSE	POLE NUMBER / In [A]			3+N / 6				
OTHER MACHIN.	TYPE / MODEL							
CONDUIT	WEATHERP. TYPE / LAYING	EPR					PVC / 41	
	SECTION FASE-N-PE/PEN [mmq]						1x16 / 1x16	
	Ib [A] / Iz [A]						8,3 / 47,6	
	Un [V] / Pn [kW]	400					400 / 5,2	
IN LINE CABLES	Icc min [kA] / Icc max [kA]	10					0,2 / 0,5	
	LENGTH / TOTAL V DROP[%]						420 / 2	

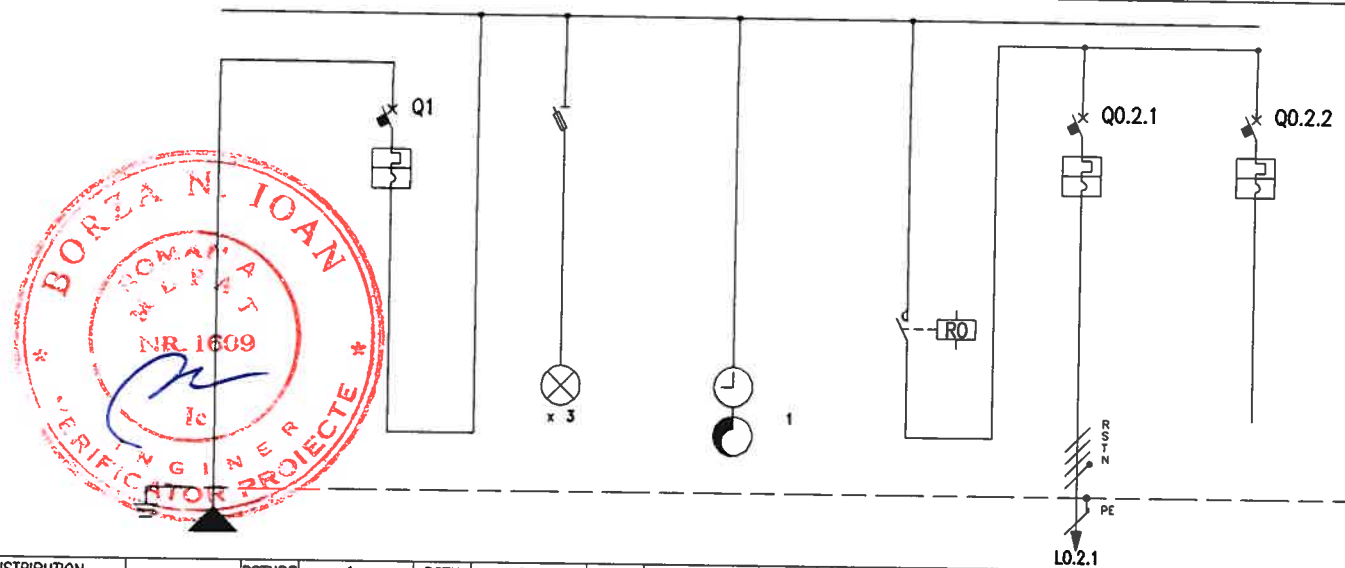
Q1.B08



Q1.B08

			DISTRIBUTION	1	2	3	4	5	6	
CLAMPS NUMBER			RSTNPE	RSTN	RSTNPE	RSTNPE		RSTNPE	RSTNPE	
CIRCUIT NUMBER				1	2	3	4	5	6	
CIRCUIT DESCRIPTION				GENERAL	TENSION PRESENCE	CREPUSCOLAR	TO CREPUSCOLATE	L1	RESERVE	
MACHINE TYPE				C60 L	STI			C40 N	C40 N	
INTERRUPTER	Icu [kA]			25				10	10	
	POLE NUMBER	In [A]		4P 32	3+N 32			3P+N 25	3P+N 32	
	CURVE			C				B	B	
	Ir [A]	tr [s]		32				25	32	
	Isd [A]	tsd [s]		320				120	154	
	Ii [A]									
	Ig [A]	tg [s]								
DIFFERENTIAL	TYPE	CLASS								
	Idn [A]	tdn [ms]								
CONTACTOR	TYPE	CLASS					LC1D32 AC3			
RT CTRL SWITCH	COIL [V]	POLE N° In [A]					230 4 poli 32			
TERMIC	TYPE	Irth [A]								
FUSE	POLE NUMBER	In [A]			3+N 6					
OTHER MACHIN.	TYPE	MODEL								
CONDUIT	WEATHERP. TYPE	LAYING	EPR					PVC 41		
	SECTION FASE-N-PE/PEN [mmq]							1x16 1x16		
	Ib [A]	Iz [A]						9,3 47,6		
	Un [V]	Pn [kW]	400					400 5,8		
IN LINE CABLES	Icc min [kA]	Icc max [kA]	10					0,1 0,4		
	LENGTH	TOTAL V DROP[%]						630 2,4		

Q2.B08

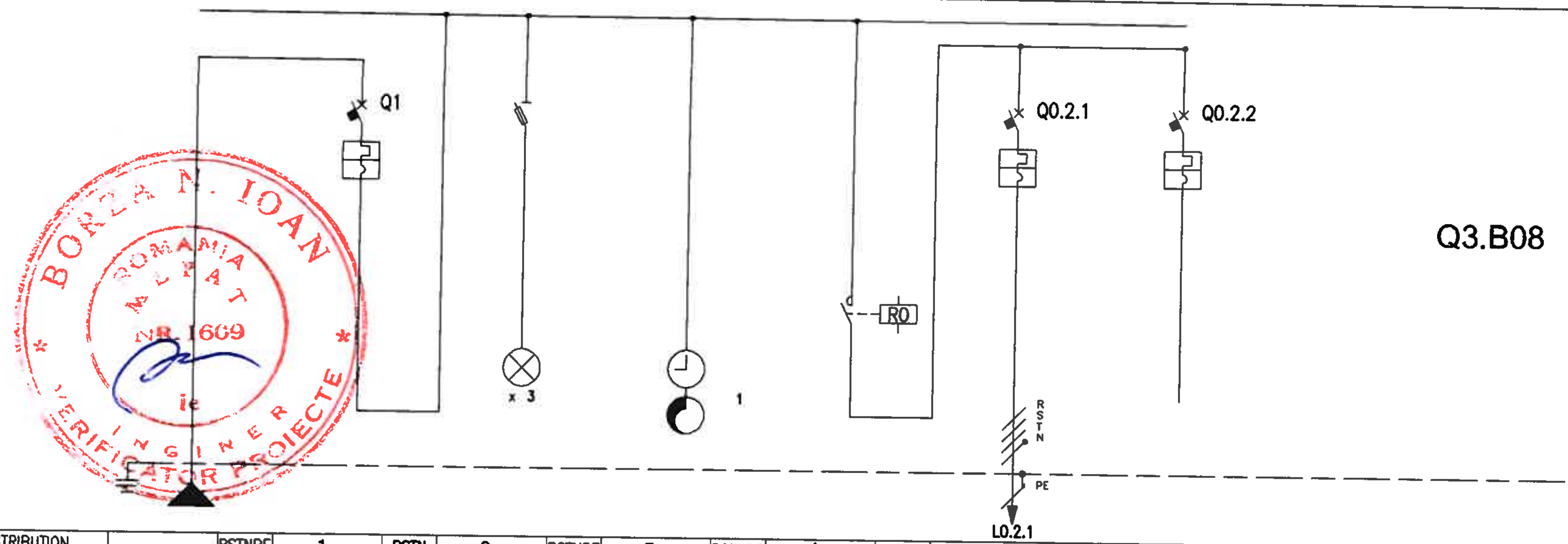


Q2.B08

BORZA N. IOAN
ROMANIA
NR. 1609
INGINER
VERIFICATOR PROIECTE

CLAMPS NUMBER																							
CIRCUIT NUMBER		DISTRIBUTION		RSTNPE	1	RSTN	2	RSTNPE	3	RSTNPE	4		5	RSTNPE	6	RSTNPE							
CIRCUIT DESCRIPTION					GENERAL		TENSION PRESENCE		CREPUSCOLAR		TO CREPUSCOLATE		L2		RESERVE								
MACHINE TYPE					C60 L		STI						C40 N		C40 N								
INTERRUPTER	Icu [kA]				25								10		10								
	POLE NUMBER	In [A]			4P	32	3+N	32					3P+N	25	3P+N	25							
	CURVE				C								B		B								
	Ir [A]	tr [s]			32								25		25								
	Isd [A]	tsd [s]			320								120		120								
	Ii [A]																						
	Ig [A]	tg [s]																					
DIFFERENTIAL	TYPE	CLASS																					
	Idn [A]	tdn [ms]																					
CONTACTOR	TYPE	CLASS									LC1D32	AC3											
RT CTRL SWITCH	COIL [V]	POLE N° In [A]									230	4 poli 32											
TERMIC	TYPE	Irth [A]																					
FUSE	POLE NUMBER	In [A]					3+N	6															
OTHER MACHIN.	TYPE	MODEL																					
CONDUIT	WEATHERP. TYPE	LAYING	EPR																				
	SECTION FASE-N-PE/PEN [mmq]												PVC	41									
	Ib [A]	Iz [A]											1x16	1x16									
	Un [V]	Pn [kW]	400										9,3	47,6									
IN LINE CABLES	Icc min [kA]	Icc max [kA]		10									400	5,8									
	LENGTH	TOTAL V DROP[%]											0,1	0,4									
													630	2,4									

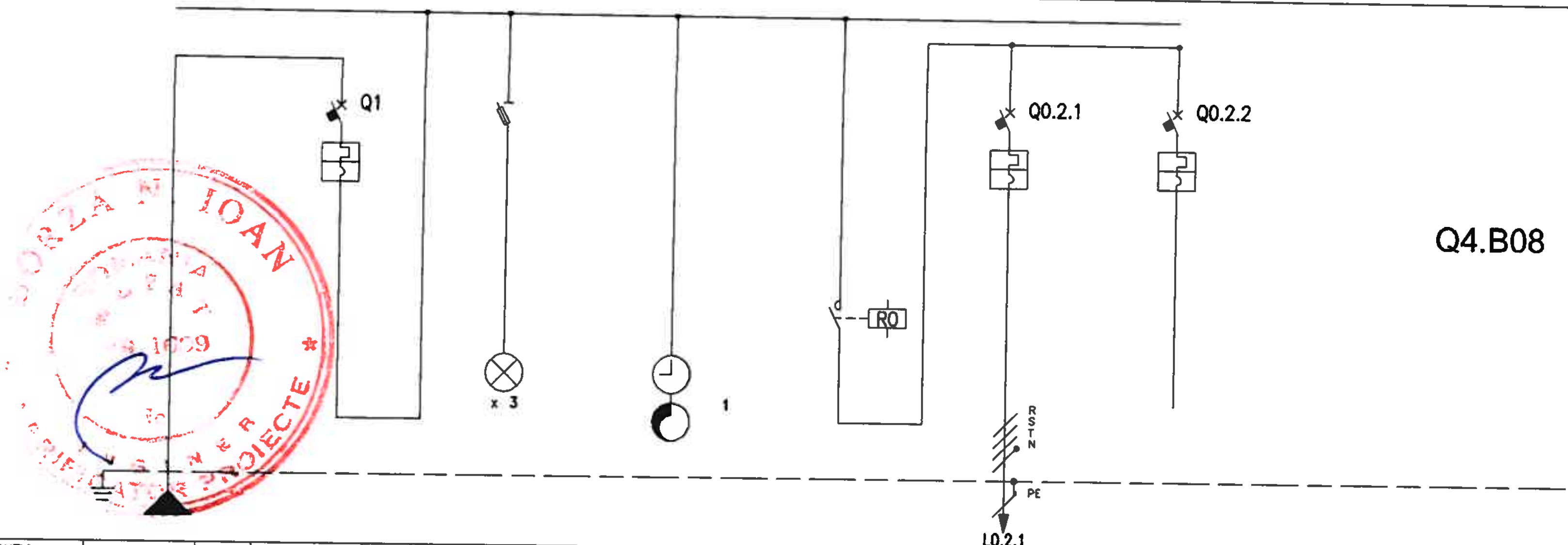
Q3.B08



Q3.B08

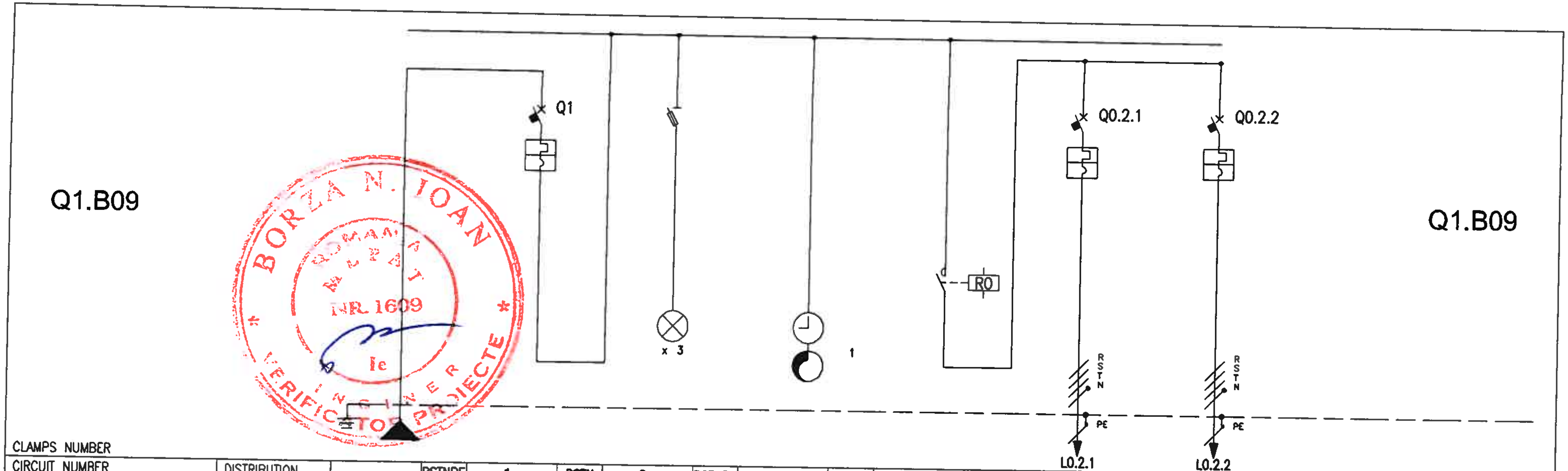
CLAMPS NUMBER			RSTNPE	RSTN	RSTNPE	RSTNPE		RSTNPE	RSTNPE	
CIRCUIT NUMBER		DISTRIBUTION		1	2	3	4	5	6	
CIRCUIT DESCRIPTION				GENERAL	TENSION PRESENCE	CREPUSCOLAR	TO CREPUSCOLATE	L3	RESERVE	
MACHINE TYPE				C60 L	STI			C40 N	C40 N	
INTERRUPTER	Icu [kA]			25				10	10	
	POLE NUMBER	In [A]		4P 32	3+N 32			3P+N 20	3P+N 20	
	CURVE			C				B	B	
	Ir [A]	tr [s]		32				20	20	
	Isd [A]	tsd [s]		320				96	96	
	Ii [A]									
	Ig [A]	tg [s]								
DIFFERENTIAL	TYPE	CLASS								
	Idn [A]	tdn [ms]								
CONTACTOR	TYPE	CLASS					LC1D32 AC3			
RT CTRL SWITCH	COIL [V]	POLE N° In [A]					230 4 poli 32			
TERMIC	TYPE	Irth [A]								
FUSE	POLE NUMBER	In [A]			3+N 6					
OTHER MACHIN.	TYPE	MODEL								
CONDUIT	WEATHERP. TYPE	LAYING	EPR					PVC 41		
	SECTION FASE-N-PE/PEN [mmq]							1x10 1x10		
	Ib [A]	Iz [A]						6,1 35		
	Un [V]	Pn [kW]	400					400 3,8		
IN LINE CABLES	Icc min [kA]	Icc max [kA]	10					0,1 0,4		
	LENGTH	TOTAL V DROP[%]						450 1,9		

Q4.B08



Q4.B08

		DISTRIBUTION	1	2	3	4	5	6
CLAMPS NUMBER		RSTNPE	RSTN	RSTNPE	RSTNPE		RSTNPE	RSTNPE
CIRCUIT NUMBER			1	2	3	4	5	6
CIRCUIT DESCRIPTION			GENERAL	TENSION PRESENCE	CREPUSCOLAR	TO CREPUSCOLATE	L4	RESERVE
MACHINE TYPE			C60 L	STI			C40 N	C40 N
INTERRUPTER	Icu [kA]		25				10	10
	POLE NUMBER / In [A]		4P / 32	3+N / 32			3P+N / 20	3P+N / 20
	CURVE		C				B	B
	Ir [A] / tr [s]		32				20	20
	Isd [A] / tsd [s]		320				96	96
	Ii [A]							
	Ig [A] / tg [s]							
DIFFERENTIAL	TYPE / CLASS							
	Idn [A] / tdn [ms]							
CONTACTOR	TYPE / CLASS					LC1D32 / AC3		
RT CTRL SWITCH	COIL [V] / POLE N° / In [A]					230 / 4 poli / 32		
TERMIC	TYPE / Irth [A]							
FUSE	POLE NUMBER / In [A]			3+N / 6				
OTHER MACHIN.	TYPE / MODEL							
CONDUIT	WEATHERP. TYPE / LAYING	EPR					PVC / 41	
	SECTION FASE-N-PE/PEN [mmq]						1x10 / 1x10	
	Ib [A] / Iz [A]						6,1 / 35	
	Un [V] / Pn [kW]	400					400 / 3,8	
IN LINE CABLES	Icc min [kA] / Icc max [kA]	10					0,1 / 0,4	
	LENGTH / TOTAL V DROP[%]						420 / 1,9	



		DISTRIBUTION	1	2	3	4	5	6
CLAMPS NUMBER		RSTNPE	RSTN	RSTNPE	RSTNPE		RSTNPE	RSTNPE
CIRCUIT NUMBER			1	2	3	4	5	6
CIRCUIT DESCRIPTION			GENERAL	TENSION PRESENCE	CREPUSCOLAR	TO CREPUSCOLATE	L1	L2
MACHINE TYPE			C40 N	STI			C40 N	C40 N
INTERRUPTER	Icu [kA]		10				10	10
	POLE NUMBER / In [A]		3P+N 32	3+N 32			3P+N 20	3P+N 20
	CURVE		C				B	B
	Ir [A] / tr [s]		32				20	20
	Isd [A] / tsd [s]		320				96	96
	Ii [A]							
	Ig [A] / tg [s]							
DIFFERENTIAL	TYPE / CLASS							
	Idn [A] / tdn [ms]							
CONTACTOR	TYPE / CLASS					LC1D32 AC3		
RT CTRL SWITCH	COIL [V] / POLE N° / In [A]					230 4 poli 32		
TERMIC	TYPE / Irth [A]							
FUSE	POLE NUMBER / In [A]			3+N 6				
OTHER MACHIN.	TYPE / MODEL							
CONDUIT	WEATHERP. TYPE / LAYING	EPR					PVC 41	PVC 41
	SECTION FASE-N-PE/PEN [mmq]						1x10 1x10	1x10 1x10
	Ib [A] / Iz [A]						6,1 35	6,1 35
	Un [V] / Pn [kW]	400					400 3,8	400 3,8
IN LINE CABLES	Icc min [kA] / Icc max [kA]	10					0,1 0,4	0,1 0,4
	LENGTH / TOTAL V DROP[%]						480 1,7	500 1,8