NOTA: Acest desen nu constituie o obligatie de aplicare de către contractor.
El reprezintă doar un exemplu de circuit de cale utilizat la CFR si nu trebuie aplicat ca atare.

NOTE: It is not compulsory for the contractor to apply this drawing.
It is only an example of track circuit in use at CFR and shall not be applied as such.

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

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 Cheie Key Expert	P. Amodio	12.2011	

SUBCONTRACTANT / SUBCONTRACTOR

AREX
COMPANY

Aprobat Approved	Responsabil Subconsultant Subconsultant Responsible	A. Stanciu - Dinulescu	12.2011	
Întocmit Elaborated	Proiectant Designer	Angelescu Sergiu	12.2011	

Reabilitarea liniei de cale ferata Brasov - Simeria, parte componentă a coridorului IV Pan European, pentru circulația trenurilor cu viteza maximă de 160 km/h,
Tronsonul : Brasov - Sighișoara
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 : Brasov - Sighișoara

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

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

Denumire desen / Drawing Title :

Statia / Station ARCHITA
Fise de montaj rama aparataj receptie
Wiring diagrams for receiving equipment frame

Codificare / Codification System	Scara / Scale Fără / No scale	LOT / LOT	Nr. / No 01 / 10

E A 5 1 0 1 E 1 5 B X S E 0 1 5 2 0 1 3 1

RAMA APARAT

	1	2	3	4
9	12a Sil	② 12a BD	12b Sil	② 12b BD
8	2-8 Sil	③ 2-8 BD	4-6 Sil	④ 4-6 BD
7	YF-1ADa CI	④ YF-1ADa BD	024 CI	② 024 BD
6	1L CI	③ 1L BD	IIL CI	① IIL BD
5	9 Sil	③ 9 BD	11a Sil	① 11a BD
4	023 CI	③ 023 BD	033 CI	① 033 BD
	FI—FATA			
3	31 1L FC-B	32 IIL FC-B	33 IIIL FC-B	34 4L FC-B
2	21 9 FC-B	22 11a FC-B	23 11b FC-B	24 13 FC-B
1	11 023 FC-B	12 033 FC-B	13 1-7 FC-B	14 3-5 FC-B

01	011 IP-2 023/033	012 IP-2 (1-7)/(3-5)	013 IP-2 9/11a	014 IP-2 11b/13	015 IP-2 1L/IIL	016 IP-2 IIIL/4L

001	002	003	004	005	006	007	008	009	0010	0011	0012
12x100 Ω/ 0,3A											

Statia: ARCHITA

TAJ RECEPTIE (FI)

5	6	7	8	9
10a Sil	④ 10a BD	10b Sil	④ 10b BD	
Y-1ADa CI	② Y-1ADa BD	034 CI	④ 034 BD	
IIIL CI	② IIIL BD	4L CI	③ 4L BD	
11b Sil	① 11b BD	13 Sil	② 13 BD	
1-7 Sil	② 1-7 BD	3-5 Sil	③ 3-5 BD	
	FI-SPATE			
	34A	**33A**	**32A** 12b FC-B	**31A** 12a FC-B
	24A 10b FC-B	**23A** 10a FC-B	**22A** 4-6 FC-B	**21A** 2-8 FC-B
	14A 034 FC-B	**13A** Y-1ADa FC-B	**12A** 024 FC-B	**11A** YF-1ADa FC-B

016A IP-2	015A IP-2 12a/12b	014A IP-2 10a/10b	013A IP-2 (2-8)/(4-6)	012A IP-2 Y-1ADa/034	011A IP-2 YF-1ADa/024

0012A	0011A	0010A	009A	008A	007A	006A	005A	004A	003A	002A	001A
10x100Ω / 0,3A											

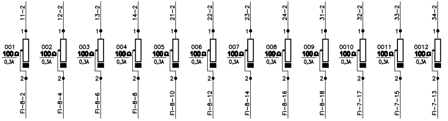
FI-FATA

31	1L-FC	32	IIL-FC	33	IIIL-FC	34	4L-FC
1	FI-8-17	1	FI-7-18	1	FI-7-16	1	FI-7-14
2	009-1	2	0010-1	2	0011-1	2	0012-1
3	015-1 61-11	3	015-5 63-11	3	016-1 65-11	3	016-5 67-11
4	015-2 61-71	4	015-6 63-71	4	016-2 65-71	4	016-6 67-71

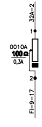
21	9-FC	22	11a-FC	23	11b-FC	24	13-FC
1	FI-8-9	1	FI-8-11	1	FI-8-13	1	FI-8-15
2	005-1	2	006-1	2	007-1	2	008-1
3	013-1 51-11	3	013-5 53-11	3	014-1 55-11	3	014-5 57-11
4	013-2 51-71	4	013-6 53-71	4	014-2 55-71	4	014-6 57-71

11	023-FC	12	033-FC	13	1-7-FC	14	3-5-FC
1	FI-8-1	1	FI-8-3	1	FI-8-5	1	FI-8-7
2	001-1	2	002-1	2	003-1	2	004-1
3	011-1 41-11	3	011-5 43-11	3	012-1 45-11	3	012-5 47-11
4	011-2 41-71	4	011-6 43-71	4	012-2 45-71	4	012-6 47-71

011	023/033-IP	012	(1-7)/(3-5)-IP	013	9/11a-IP	014	11b/13-IP	015	1L/IIL-IP	016	IIIL/4L-IP
1	11-3	1	13-3	1	21-3	1	23-3	1	31-3	1	33-3
2	11-4	2	13-4	2	21-4	2	23-4	2	31-4	2	33-4
3	FI-6-1	3	FI-6-5	3	FI-6-9	3	FI-6-13	3	FI-6-17	3	FI-6-21
4	8 FI-6-26	4	8 011-8	4	8 012-8	4	8 013-8	4	8 014-8	4	8 015-8
5	12-3	5	14-3	5	22-3	5	24-3	5	32-3	5	34-3
6	12-4	6	14-4	6	22-4	6	24-4	6	32-4	6	34-4
7	FI-6-3	7	FI-6-7	7	FI-6-11	7	FI-6-15	7	FI-6-19	7	FI-6-23
8	4 012-4	8	4 013-4	8	4 014-4	8	4 015-4	8	4 016-4	8	4 011A-4


11-2
12-2
13-2
14-2
21-2
22-2
23-2
24-2
31-2
32-2
33-2
34-2
1
001 100Ω 0,3A
002 100Ω 0,3A
003 100Ω 0,3A
004 100Ω 0,3A
005 100Ω 0,3A
006 100Ω 0,3A
007 100Ω 0,3A
008 100Ω 0,3A
009 100Ω 0,3A
0010 100Ω 0,3A
0011 100Ω 0,3A
0012 100Ω 0,3A
2
FI-8-2
FI-8-4
FI-8-6
FI-8-8
FI-8-10
FI-8-12
FI-8-14
FI-8-16
FI-8-18
FI-7-17
FI-7-15
FI-7-13

016A	
1	
2	
3	
4	
5	
6	
7	
8	


32A-2
1
0010A 100Ω 0,3A
2
FI-9-17

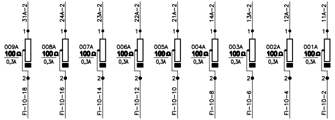
FI–SPATE

34A		33A		32A	12b–FC	31A	12a–FC
1		1		1	FI–9–18	1	FI–10–17
2		2		2	0010A–1	2	009A–1
3		3		3	015A–5 93–11	3	015A–1 91–11
4		4		4	015A–6 93–71	4	015A–2 91–71

24A	10b–FC	23A	10a–FC	22A	4–6–FC	21A	2–8–FC
1	FI–10–15	1	FI–10–13	1	FI–10–11	1	FI–10–9
2	008A–1	2	007A–1	2	006A–1	2	005A–1
3	014A–5 87–11	3	014A–1 85–11	3	013A–5 83–11	3	013A–1 81–11
4	014A–6 87–71	4	014A–2 85–71	4	013A–6 83–71	4	013A–2 81–71

14A	034–FC	13A	Y–1ADa–FC	12A	024–FC	11A	YF–1ADa–FC
1	FI–10–7	1	FI–10–5	1	FI–10–3	1	FI–10–1
2	004A–1	2	003A–1	2	002A–1	2	001A–1
3	012A–5 77–11	3	012A–1 75–11	3	011A–5 73–11	3	011A–1 71–11
4	012A–6 77–71	4	012A–2 75–71	4	011A–6 73–71	4	011A–2 71–71

015A	12a/12b–IP	014A	10a/10b–IP	013A	(2–8)/(4–6)–IP	012A	Y–1ADa/034–IP	011A	YF–1ADa/024–IP
1	31A–3	1	23A–3	1	21A–3	1	13A–3	1	11A–3
2	31A–4	2	23A–4	2	21A–4	2	13A–4	2	11A–4
3	FI–6–32	3	FI–6–36	3	FI–6–33	3	FI–6–29	3	FI–6–25
4	8 014A–8	4	8 013A–8	4	8 012A–8	4	8 011A–8	4	8 016–8
5	32A–3	5	24A–3	5	22A–3	5	14A–3	5	12A–3
6	32A–4	6	24A–4	6	22A–4	6	14A–4	6	12A–4
7	FI–6–30	7	FI–6–34	7	FI–6–35	7	FI–6–31	7	FI–6–27
8	4 FI–6–28	8	4 015A–4	8	4 014A–4	8	4 013A–4	8	4 012A–4


31A–2
24A–2
23A–2
22A–2
21A–2
14A–2
13A–2
12A–2
11A–2
1
009A
100Ω
0,3A
008A
100Ω
0,3A
007A
100Ω
0,3A
006A
100Ω
0,3A
005A
100Ω
0,3A
004A
100Ω
0,3A
003A
100Ω
0,3A
002A
100Ω
0,3A
001A
100Ω
0,3A
2
FI–10–18
FI–10–16
FI–10–14
FI–10–12
FI–10–10
FI–10–8
FI–10–6
FI–10–4
FI–10–2

FI

RANDUL 4,5

59		58		57		56		55		54		53		52		51	
			13 BD		13 Sil		11b BD		11b Sil		11a BD		11a Sil		9 BD		9 Sil
		12	0x220			12	0x220			12	0x220			12	0x220		
		11	FI–4–30	11	24–3	11	FI–4–26	11	23–3	11	FI–4–22	11	22–3	11	FI–4–18	11	21–3
				13	OVS			13	OVS			13	OVS			13	OVS
		32	7–33			32	5–33			32	3–33			32	1–33		
		31	7–53			31	5–53			31	3–53			31	1–53		
				33	8–32			33	6–32			33	4–32			33	2–32
		52	+24S2			52	+24S1			52	+24S1			52	+24S3		
		51	Ax220			51	Ax220			51	Ax220			51	Ax220		
				53	8–31			53	6–31			53	4–31			53	2–31
		72	OVS			72	OVS			72	OVS			72	OVS		
		71	FI–4–32	71	24–4	71	FI–4–28	71	23–4	71	FI–4–24	71	22–4	71	FI–4–20	71	21–4

49		48		47		46		45		44		43		42		41	
			3–5 BD		3–5 Sil		1–7 BD		1–7 Sil		033 BD		033 CI		023 BD		023 CI
		12	0x220			12	0x220			12	0x220			12	0x220		
		11	FI–4–14	11	14–3	11	FI–4–10	11	13–3	11	FI– 4–6	11	12–3	11	FI–4–2	11	11–3
				13	OVS			13	OVS			13	OVS			13	OVS
		32	7–33			32	5–33			32	3–33			32	1–33		
		31	7–53			31	5–53			31	3–53			31	1–53		
				33	8–32			33	6–32			33	4–32			33	2–32
		52	+24S3			52	+24S2			52	+24S1			52	+24S3		
		51	Ax220			51	Ax220			51	Ax220			51	Ax220		
				53	8–31			53	6–31			53	4–31			53	2–31
		72	OVS			72	OVS			72	OVS			72	OVS		
		71	FI–4–16	71	14–4	71	FI–4–12	71	13–4	71	FI–4–8	71	12–4	71	FI–4–4	71	11–4

FI

RANDUL 6,7

79	78	77	76	75	74	73	72	71
	034 BD	034 CI	Y-1ADa BD	Y-1ADa CI	024 BD	024 CI	YF-1ADa BD	YF-1ADa CI
	12 0x220		12 0x220		12 0x220		12 0x220	
	11 FI-5-14	11 14A-3	11 FI-5-10	11 13A-3	11 FI-5-6	11 12A-3	11 FI-5-2	11 11A-3
		13 OVS		13 OVS		13 OVS		13 OVS
	32 7-33		32 5-33		32 3-33		32 1-33	
	31 7-53		31 5-53		31 3-53		31 1-53	
		33 8-32		33 6-32		33 4-32		33 2-32
	52 +24S4		52 +24S2		52 +24S2		52 +24S4	
	51 Ax220		51 Ax220		51 Ax220		51 Ax220	
		53 8-31		53 6-31		53 4-31		53 2-31
	72 OVS		72 OVS		72 OVS		72 OVS	
	71 FI-5-16	71 14A-4	71 FI-5-12	71 13A-4	71 FI-5-8	71 12A-4	71 FI-5-4	71 11A-4

69	68	67	66	65	64	63	62	61
	4L BD	4L CI	IIIL BD	IIIL CI	IIL BD	IIL CI	1L BD	1L CI
	12 0x220		12 0x220		12 0x220		12 0x220	
	11 FI-4-27	11 34-3	11 FI-4-31	11 33-3	11 FI-4-35	11 32-3	11 FI-4-34	11 31-3
		13 OVS		13 OVS		13 OVS		13 OVS
	32 7-33		32 5-33		32 3-33		32 1-33	
	31 7-53		31 5-53		31 3-53		31 1-53	
		33 8-32		33 6-32		33 4-32		33 2-32
	52 +24S3		52 +24S2		52 +24S1		52 +24S3	
	51 Ax220		51 Ax220		51 Ax220		51 Ax220	
		53 8-31		53 6-31		53 4-31		53 2-31
	72 OVS		72 OVS		72 OVS		72 OVS	
	71 FI-4-25	71 34-4	71 FI-4-29	71 33-4	71 FI-4-33	71 32-4	71 FI-4-36	71 31-4

FI

RANDUL 8,9

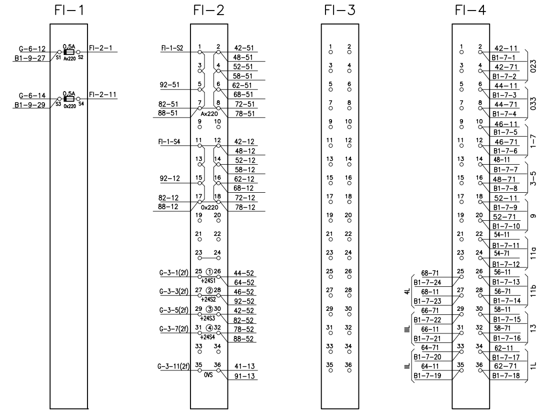
99	98	97	96	95	94	93	92	91
					12b BD	12b Sil	12a BD	12a Sil
					12 0x220		12 0x220	
					11 FI-5-35	11 32A-3	11 FI-5-34	11 31A-3
						13 OVS		13 OVS
					32 3-33		32 1-33	
					31 3-53		31 1-53	
						33 4-32		33 2-32
					52 +24S2		52 +24S2	
					51 Ax220		51 Ax220	
						53 4-31		53 2-31
					72 OVS		72 OVS	
					71 FI-5-33	71 32A-4	71 FI-5-36	71 31A-4

89	88	87	86	85	84	83	82	81
	10b BD	10b Sil	10a BD	10a Sil	4-6 BD	4-6 Sil	2-8 BD	2-8 Sil
	12 0x220		12 0x220		12 0x220		12 0x220	
	11 FI-5-30	11 24A-3	11 FI-5-26	11 23A-3	11 FI-5-22	11 22A-3	11 FI-5-18	11 21A-3
		13 OVS		13 OVS		13 OVS		13 OVS
	32 7-33		32 5-33		32 3-33		32 1-33	
	31 7-53		31 5-53		31 3-53		31 1-53	
		33 8-32		33 6-32		33 4-32		33 2-32
	52 +24S4		52 +24S4		52 +24S4		52 +24S3	
	51 Ax220		51 Ax220		51 Ax220		51 Ax220	
		53 8-31		53 6-31		53 4-31		53 2-31
	72 OVS		72 OVS		72 OVS		72 OVS	
	71 FI-5-32	71 24A-4	71 FI-5-28	71 23A-4	71 FI-5-24	71 22A-4	71 FI-5-20	71 21A-4

RAMA FI

BUCLE TENSIUNI

0VS		+24S1	+24S2	+24S3	+24S4	Ax220	0x220
FI-2-36		FI-2-26	FI-2-28	FI-2-30	FI-2-32	FI-2-2	FI-2-12
41-13	83-13	44-52	46-52	42-52	78-52	42-51	42-12
42-72	84-72	56-52	58-52	48-52	72-52	44-51	44-12
43-13	85-13	54-52	66-52	52-52	84-52	46-51	46-12
44-72	86-72	64-52	76-52	62-52	86-52	48-51	48-12
45-13	87-13		74-52	68-52	88-52	FI-2-2	FI-2-12
46-72	88-72		94-52	82-52		FI-2-4	FI-2-14
47-13	94-72		92-52			52-51	52-12
48-72	93-13					54-51	54-12
58-72	92-72					56-51	56-12
57-13	91-13					58-51	58-12
56-72						FI-2-4	FI-2-14
55-13						FI-2-6	FI-2-16
54-72						62-51	62-12
53-13						64-51	64-12
52-72						66-51	66-12
51-13						68-51	68-12
61-13						FI-2-6	FI-2-16
62-72						FI-2-8	FI-2-18
63-13						72-51	72-12
64-72						74-51	74-12
65-13						76-51	76-12
66-72						78-51	78-12
67-13						FI-2-6	FI-2-18
68-72						FI-2-7	FI-2-17
78-72						82-51	82-12
77-13						84-51	84-12
76-72						86-51	86-12
75-13						88-51	88-12
74-72						FI-2-7	FI-2-17
73-13						FI-2-5	FI-2-15
72-72						92-51	92-12
71-13						94-51	94-12
81-13							
82-72							
	FI-2-36	FI-2-26	FI-2-28	FI-2-30	FI-2-32		


FI−1
G−6−12
B1−9−27
0,5A
Ax220
S1
S2
FI−2−1
G−6−14
B1−9−29
0,5A
0x220
S3
S4
FI−2−11
FI−2
FI−1−S2
42−51
48−51
52−51
58−51
92−51
62−51
68−51
82−51
88−51
72−51
78−51
Ax220
FI−1−S4
42−12
48−12
52−12
58−12
92−12
62−12
68−12
82−12
88−12
72−12
78−12
0x220
G−3−1(2f)
①
+24S1
44−52
64−52
G−3−3(2f)
②
+24S2
46−52
92−52
G−3−5(2f)
③
+24S3
42−52
82−52
G−3−7(2f)
④
+24S4
78−52
88−52
G−3−11(2f)
0VS
41−13
91−13
FI−3
FI−4
42−11
B1−7−1
42−71
B1−7−2
023
44−11
B1−7−3
44−71
B1−7−4
033
46−11
B1−7−5
46−71
B1−7−6
1−7
48−11
B1−7−7
48−71
B1−7−8
3−5
52−11
B1−7−9
52−71
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9
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54−71
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11a
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B1−7−13
56−71
B1−7−14
11b
58−11
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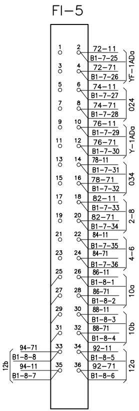
58−71
B1−7−16
13
62−11
B1−7−17
62−71
B1−7−18
1L
68−71
B1−7−24
68−11
B1−7−23
4L
66−71
B1−7−22
66−11
B1−7−21
IIIL
64−71
B1−7−20
64−11
B1−7−19
IIL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76-71
B1-7-30
78-11
B1-7-31
78-71
B1-7-32
82-11
B1-7-33
82-71
B1-7-34
84-11
B1-7-35
84-71
B1-7-36
86-11
B1-8-1
86-71
B1-8-2
88-11
B1-8-3
88-71
B1-8-4
92-11
B1-8-5
92-71
B1-8-6
YF-1ADa
024
Y-1ADa
034
2-8
4-6
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10b
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94-71
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94-11
B1-8-7
12b

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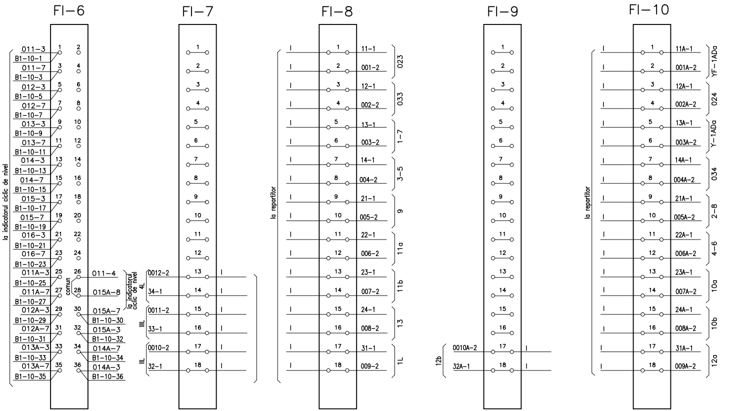
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013-7
B1-10-11
014-3
B1-10-13
014-7
B1-10-15
015-3
B1-10-17
015-7
B1-10-19
016-3
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016-7
B1-10-23
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011A-7
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012A-3
B1-10-29
012A-7
B1-10-31
013A-3
B1-10-33
013A-7
B1-10-35
la indicatorul ciclic de nivel
011-4
015A-8
comun
015A-7
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015A-3
B1-10-32
014A-7
B1-10-34
014A-3
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la indicatorul ciclic de nivel
4L
IIIL
IIL
FI-7
0012-2
34-1
0011-2
33-1
0010-2
32-1
I
FI-8
la repartitor
I
11-1
001-2
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002-2
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004-2
21-1
005-2
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006-2
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007-2
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008-2
31-1
009-2
023
033
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3-5
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11a
11b
13
1L
FI-9
12b
0010A-2
32A-1
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FI-10
la repartitor
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13A-1
003A-2
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007A-2
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008A-2
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024
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2-8
4-6
10a
10b
12a

EA51 01 E 15 BX SE 015 2 013 1 10/10