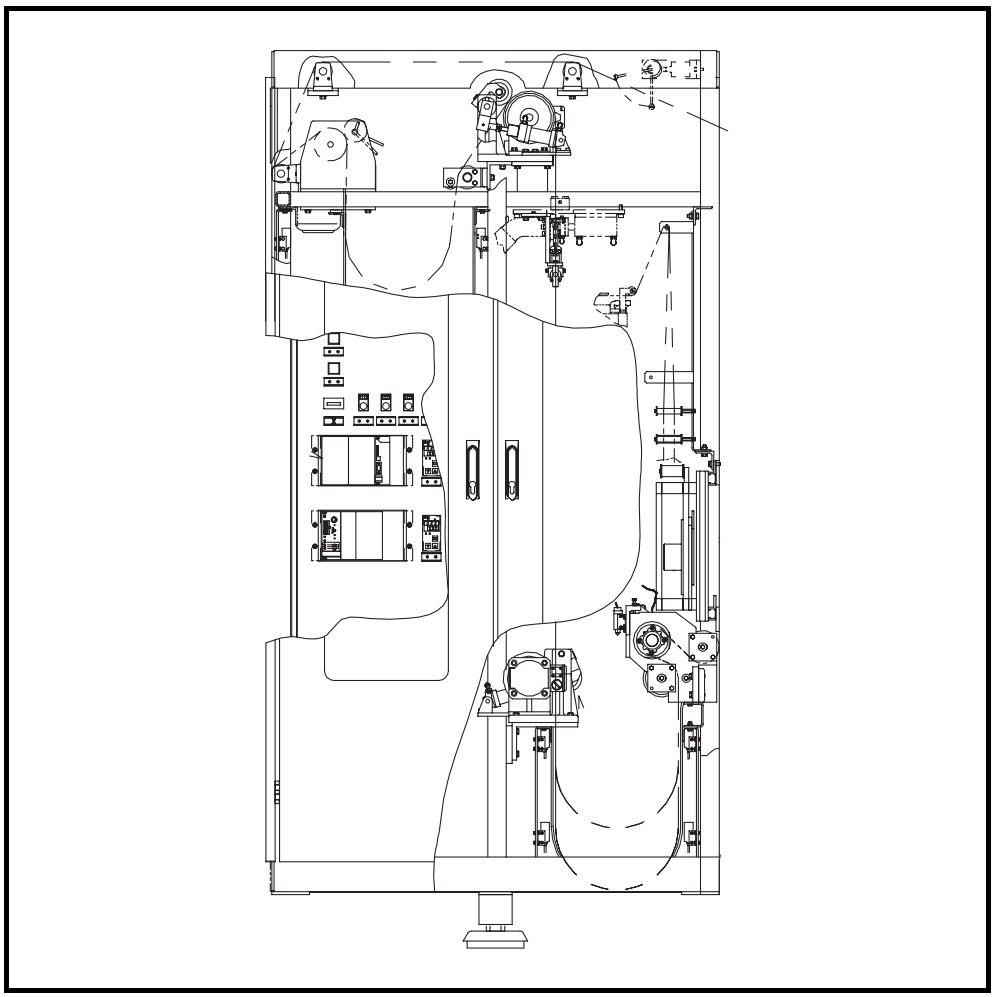
EM

Electrical Manual

PT21 030V



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Tetra Pak

Doc No. EM-81851-0101

This document is valid for:

Series No/ Machine No Sign.

PullTab Unit PT21 1282322-0100

for
TBA/21 030V

El. ECM:
117717

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1 Introduction
2 Safety precautions
3 Electrical system description
4 Component location
5 Documents list
6 Position summary
7 Circuit diagram
8 Line summary
9 Cabinet terminal summary
10 Terminal strip overview
11 Cable connection list
12 Engineering change description
13 Program documents
14 Bills of material
15 Fuse panel label
16 Other information

Issue 2003-08

Doc No. EM-81851-0101

Tetra Pak

Tetra Pak Carton Ambient

1 Introduction

To ensure maximum safety, always read the *Safety precautions* section before doing any work on the equipment or making any adjustments.

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Equipment information

Purpose

The purpose of this Tetra Pak equipment is to pack liquid food products.

Manufacturer

This Tetra Pak equipment has been manufactured by:

Tetra Pak Carton Ambient AB
Ruben Rausings gata
221 86 LUND
Sweden

or by:

Tetra Pak Carton Ambient S.p.A.
Via Delfini 1
411 00 MODENA
Italy

Service

Contact the nearest Tetra Pak service station.

Identification

The figure shows an example of the equipment sign. The sign carries data needed when contacting Tetra Pak concerning this specific equipment.

CE marking

This equipment complies with the basic health and safety regulations of the European Economic Area (EEA).

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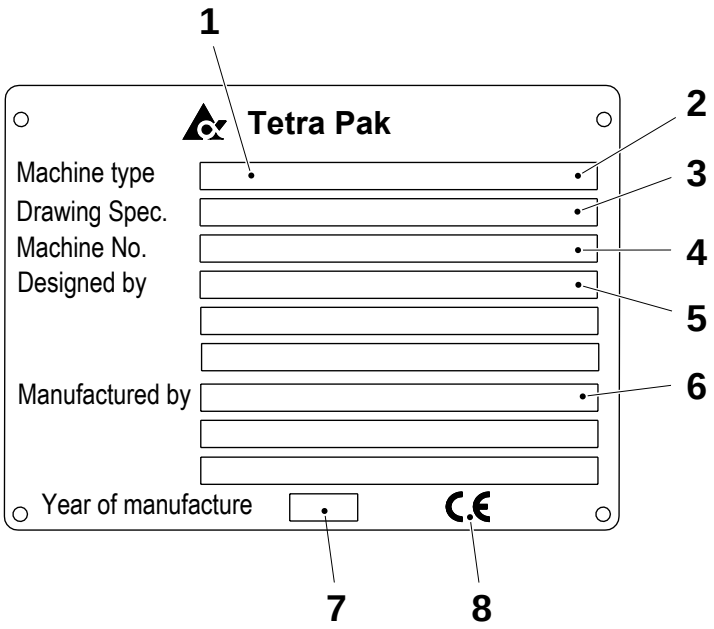

1 Machine type
2 Volume
3 Drawing specifications
4 Machine serial number
5 Designed by
6 Manufactured by
7 Year of manufacture
8 CE mark

Document information

Purpose of Electrical Manual (EM)

The purpose of this Electrical Manual is to provide service technicians and electricians with all information on the electrical equipment required for service and maintenance of this Tetra Pak equipment.

It is important to:

- keep the manual for the life of the equipment,
- pass the manual on to any subsequent holder or user of the equipment.

Design modifications

The directives in this document are in accordance with the design and construction of the equipment at the time it was delivered from the Tetra Pak production plant.

Technical publications

The technical publications for this equipment are:

- Electrical Manual (EM)
- Installation Manual (IM)
- Maintenance Manual (MM)
- Operation Manual (OM)
- Conversion Manual (CM)
- Spare Parts Catalogue (SPC)

Additional copies can be ordered from the nearest Tetra Pak service station. When ordering technical publications, always quote the **document number**.

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How to use the EM

General

How to use the EM is an explanation of how to find your way through the chapters in the EM.

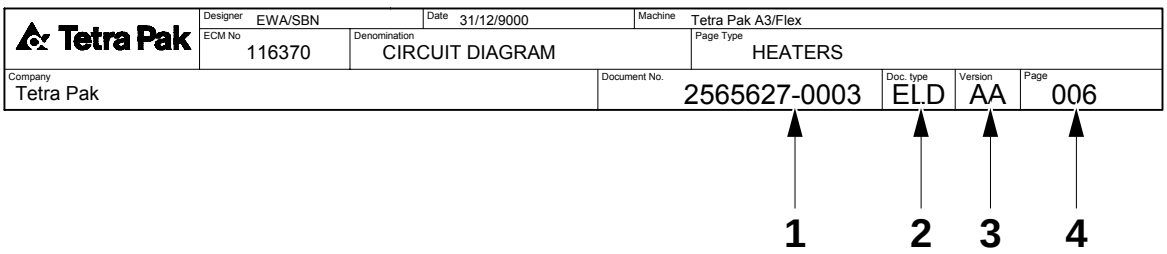
The chapters are divided as follows:

xxxxxxx-**0001**	Documents list
xxxxxxx-**0002**	Position summary
xxxxxxx-**0003**	Circuit diagram
xxxxxxx-**0004**	Line summary
xxxxxxx-**0005**	Cabinet terminal summary
xxxxxxx-**0006**	Terminal strip overview
xxxxxxx-**0007**	Cable connection list
xxxxxxx-**0008**	Mains connections
xxxxxxx-**0009**	Mounting drawing (**optional**)
xxxxxxx-**0099**	Engineering change description

The first page in each chapter is always a Table of Contents, listing all drawings included in the chapter.

The documents in the above-mentioned chapters are identified by:

- a document type number (1)
- a document type (2)
- a version number (3)
- a page number (4).



1 Document type number
2 Document type
3 Version number
4 Page number

The page number is the consecutive numbering of the pages which belong to the main number and is used as a reference in the diagrams.

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(Cont'd)

In the **Circuit diagram** the first pages are reserved for distribution terminals and last pages are reserved for pre-connected cables (cables connected to spare terminals and reserved for future use).

The **Mains connection** diagram shows how the machine should be connected to the local supply, the dimensions of the connection cable and the connection of the matching transformer (when used).

Caution! Always follow local regulations regarding the dimensions of the connection cable.

The PLC-listing in the section **Program documents** consists of lists of blocks, lists of addresses and programme lists.

Enclosed are some examples of how to use the EM.

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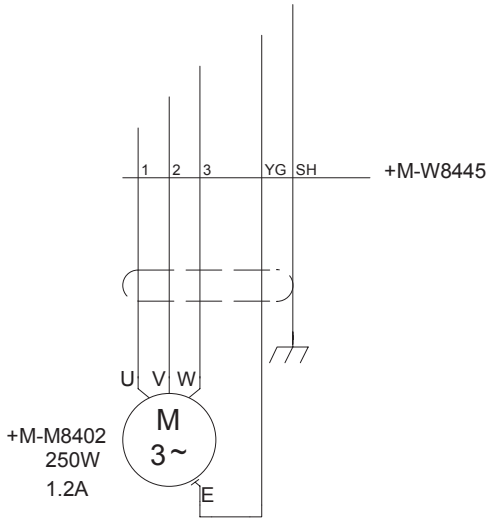
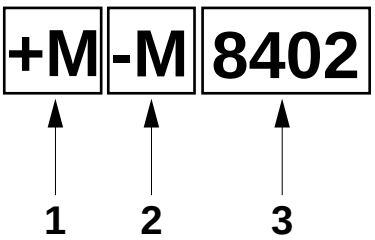
Numbering system for components

The position number is divided into three parts:

- location (1)
- function designation (2)
- running number (3).





1 Location
2 Function designation (DT prefix)
3 Running number (counter)

Location (1)

This prefix shows the location of the component.

- the prefix +M indicates that the component is fitted on the machine, outside the electrical cabinet
- the prefix +C indicates that the component is fitted on the electrical cabinet, on the TPOP or on the process panel

Note! The location +C is considered as default and it's omitted on all the **Circuit diagram** pages.

- the prefix +PCO indicates that the component belongs to the personal computer office.

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(Cont'd)

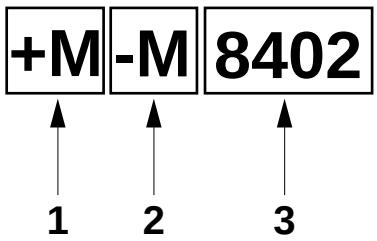
Function designation (2)

The function designation is indicated in accordance with international standards, see table below.

Designation	Signification in electrical diagram
A	Assemblies, Subassemblies
B	Transducers
C	Capacitors
D	Binary element, Delay devices, Storage devices
E	Miscellaneous
F	Protective devices
G	Generators, Power supplies
H	Signalling devices
K	Relays, Contactors
L	Inductors, Reactors
M	Motors
N	Analogue elements
P	Measuring equipment, Testing equipment
Q	Switching devices for power circuits
R	Resistors
S	Switching devices for control circuits selectors
T	Transformers
U	Modulators, Changers
V	Tubes, Semiconductors
W	Transmission paths, Waveguide aerials
X	Terminals, Plugs, Sockets
Y	Electrically operated mechanical devices
Z	Terminations, Hybrids, Filters, Equalizers, Limiters

Running number (3)

The electrical components are numbered in a consecutive non-logical order.



1 Location
2 Function designation (DT prefix)
3 Running number (counter)

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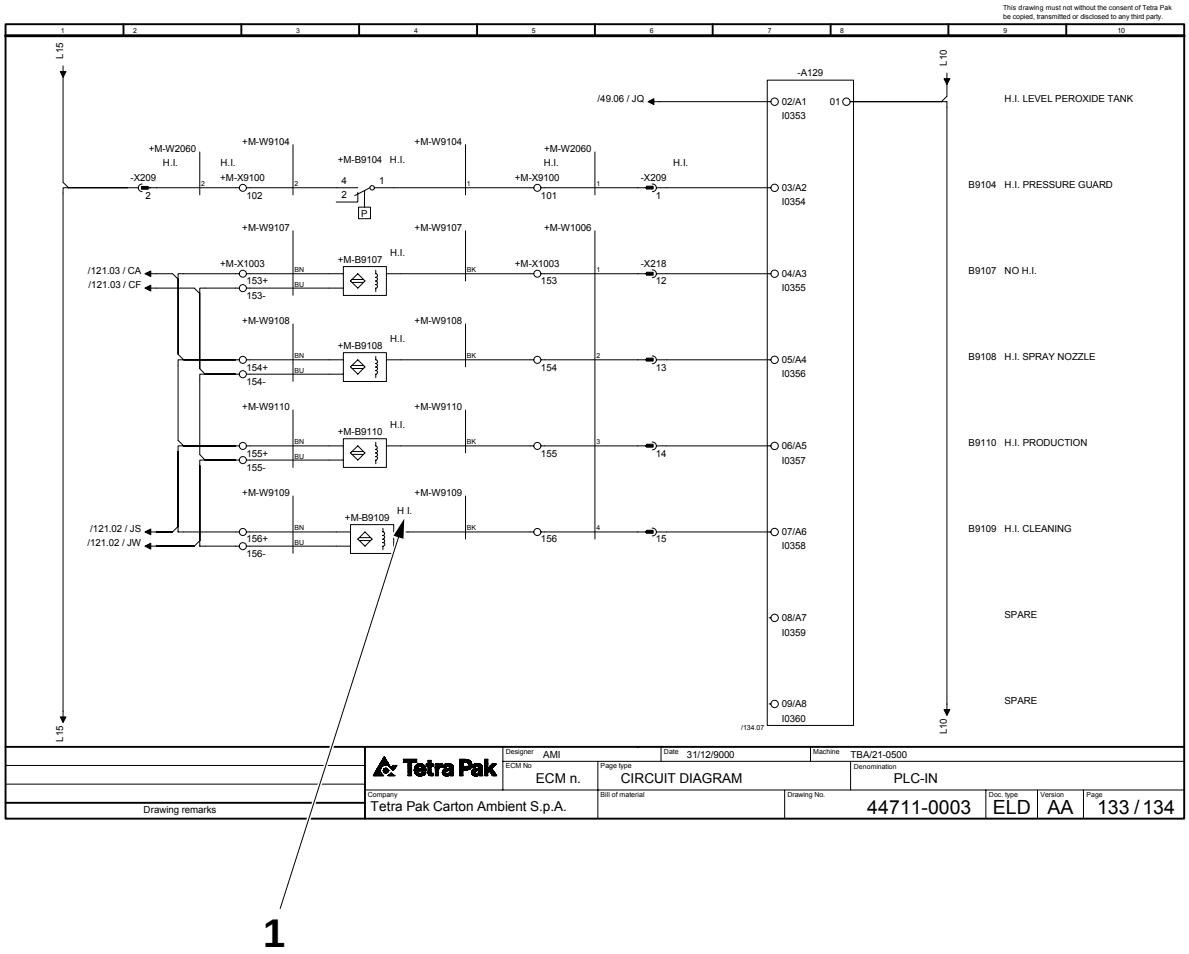
Optional equipment

This prefix shows if the component belongs to specific optional equipment.

The legend for all optional equipment' prefix is the *Abbreviations and terminology* section on page *1-21*.



1 Optional equipment designation

How to trace a cable

Example: How to trace cable No. +M-W8202

a) Go to the **Cable Connection list**, see chapter 2557519-0007.

b) On the right side of the table, find the circuit diagram reference page where the cable +M-W8202 is located (page 005, column 5).

Note! The cables are listed in alphanumerical order.

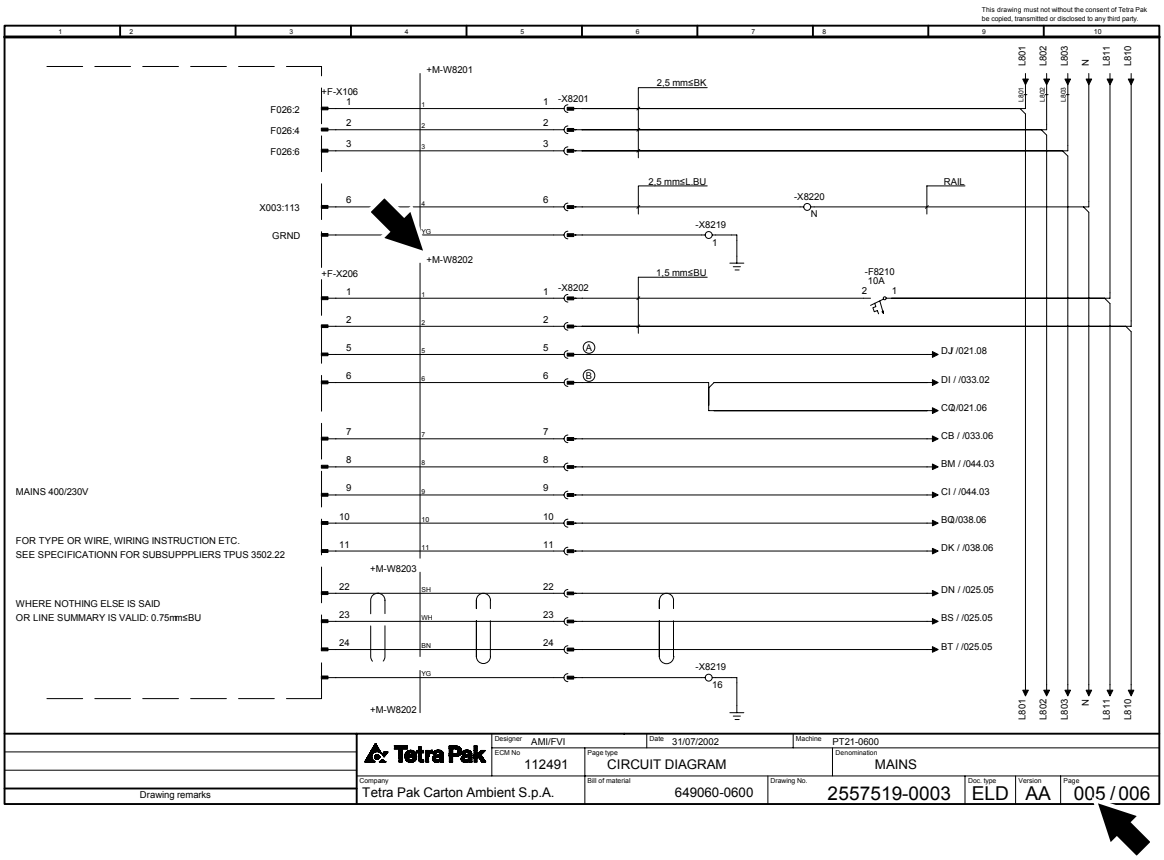
c) Go to page 005 in the **Circuit diagram**, see chapter 2557519-0003.

d) Find the cable +M-W8202.

Note! In the cable connection list the spare cores are shown.

Cable Connection List of 2557519-0003

Cable	Core	From	To	Page.Col.	Option
+M-W8201	4	+F-X106:6	+C-X8201:6	005 .5	
+M-W8201	YG	+F-X106:	+C-X8201:	005 .5	
+M-W8202	1	+F-X206:1	+C-X8202:1	005 .5	
+M-W8202	2	+F-X206:2	+C-X8202:2	005 .5	
	3				
	4				
+M-W8202	5	+F-X206:5	+C-X8202:5	005 .5	
+M-W8202	6	+F-X206:6	+C-X8202:6	005 .5	
+M-W8202	7	+F-X206:7	+C-X8202:7	005 .5	
+M-W8202	8	+F-X206:8	+C-X8202:8	005 .5	
+M-W8202	9	+F-X206:9	+C-X8202:9	005 .5	
+M-W8202	10	+F-X206:10	+C-X8202:10	005 .5	
+M-W8202	11	+F-X206:11	+C-X8202:11	005 .5	
+M-W8202	YG	+F-X206:	+C-X8202:	005 .5	
+M-W8203	WH	+F-X206:23	+C-X8202:23	005 .5	



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How to trace a component

Example 1: How to trace sensor +M-B8405

a) Go to the **Position summary**, see chapter 2557519-0002.

b) On the right side of the table, find the circuit diagram reference page where the component +M-B8405 is located (page 035, column 4).

c) Go to page 035 in the **Circuit diagram**, see chapter 2557519-0003.

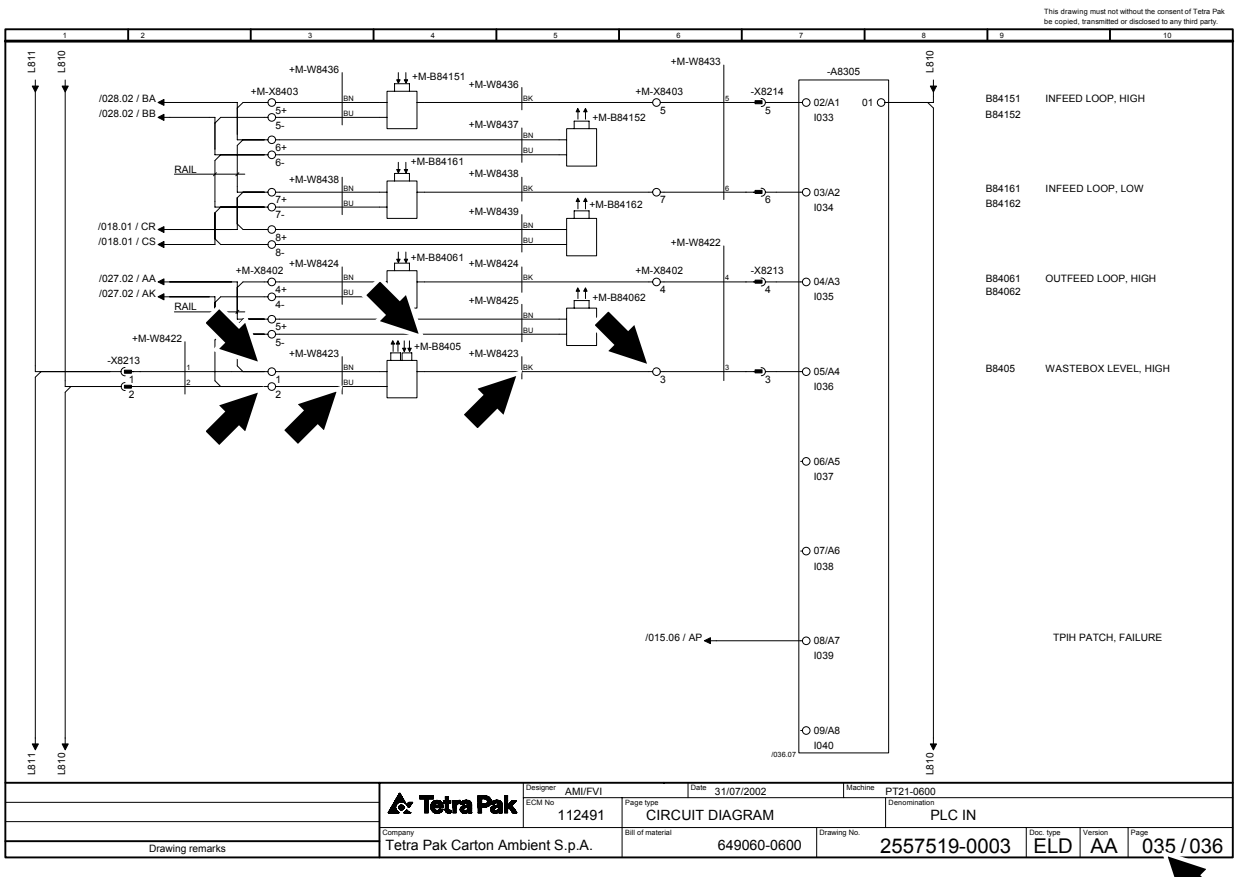
d) Find the component +M-B8405.

e) Note the connections +M-X8402 :1, :2, :3.

f) Note the cable +M-W8423.

Position summary of 2557519-0003

Component	Page .Col.	Opt.	Component	Page .Col.	Opt.
+C-A8201	006 .7		+M-B8405	035 .4	
+C-A8202	021 .7		+M-B8408	037 .5	
+C-A8205	015 .4		+M-B8409	028 .4	
+C-A8210	016 .3		+M-B8411	028 .4	
+C-A8211	017 .4		+M-B8413	037 .5	
+C-A8212	017 .4		+M-B8414	028 .4	
+C-A8216	007 .5		+M-B8421	027 .4	
+C-A8233	008 .7		+M-B8422	028 .4	
+C-A8250	018 .7		+M-B8423	027 .4	
+C-A8251	017 .8		+M-B8424	027 .4	
+C-A8252	022 .6		+M-B8426	034 .3	
+C-A8301	028 .7		+M-B8427	041 .3	



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g) Go to the **Terminal strip overview**, see chapter 2557519-0006.

h) Find the connections +M-X8402 :1, :2, :3 (on the right side of the table find the circuit diagram reference page where the connections are located).

Note! The **Terminal strip overview** shows how the sensor is connected (in this case via a connection box).

Terminal strip of 2557519-0003
+M-X8402

From	Cable	Terminal	Cable	To	Page.Col.	Option	Function text
+C-X8213:1	+M-W8422:1	1	+M-W8423:BN	+M-B8405:	035 .3		WASTEBOX LEVEL, HIGH
+C-X8213:2	+M-W8422:2	2	+M-W8423:BU	+M-B8405:	035 .3		WASTEBOX LEVEL, HIGH
+C-X8213:3	+M-W8422:3	3	+M-W8423:BK	+M-B8405:	035 .6		WASTEBOX LEVEL, HIGH
+C-X8213:4	+M-W8422:4	4	+M-W8424:BK	+M-B84061:	035 .6		OUTFEED LOOP, HIGH
		4+	+M-W8424:BN	+M-B84061:	035 .3		OUTFEED LOOP, HIGH
		4-	+M-W8424:BU	+M-B84061:	035 .3		OUTFEED LOOP, HIGH
		5					
		5+	+M-W8425:BN	+M-B84062:	035 .3		OUTFEED LOOP, HIGH
		5-	+M-W8425:BU	+M-B84062:	035 .3		OUTFEED LOOP, HIGH
+C-X8213:5	+M-W8422:5	6	+M-W8426:BK	+M-B84071:	027 .5		OUTFEED LOOP, LOW
		6+	+M-W8426:BN	+M-B84071:	027 .2		OUTFEED LOOP, LOW
		6-	+M-W8426:BU	+M-B84071:	027 .2		OUTFEED LOOP, LOW
		7					
		7+	+M-W8427:BN	+M-B84072:	027 .2		OUTFEED LOOP, LOW
		7-	+M-W8427:BU	+M-B84072:	027 .2		OUTFEED LOOP, LOW
+C-X8213:6	+M-W8422:6	8			040 .6		
		8+			040 .4		
		8-			040 .4		
+C-X8213:7	+M-W8422:7	9			040 .6		
		9+			040 .4		
		9-			040 .4		
+C-X8213:8	+M-W8422:8	10			040 .6		
		10+			040 .4		
		10-			040 .4		
+C-X8213:9	+M-W8422:9	11	+M-W8431:WH	+M-B8411:	028 .6		BLACK TAPE, DETECTED
		11+	+M-W8431:RD	+M-B8411:	028 .3		BLACK TAPE, DETECTED
		11-	+M-W8431:BK	+M-B8411:	028 .3		BLACK TAPE, DETECTED
+C-X8213:10	+M-W8422:10	12			040 .6		
		12+			040 .4		
		12-			040 .4		

Note! When a cable is supplied with the component (i.e. sensors and photocells) the pin configuration is removed from the symbol in the **Circuit diagram**. The connection information is kept from the cable cores.

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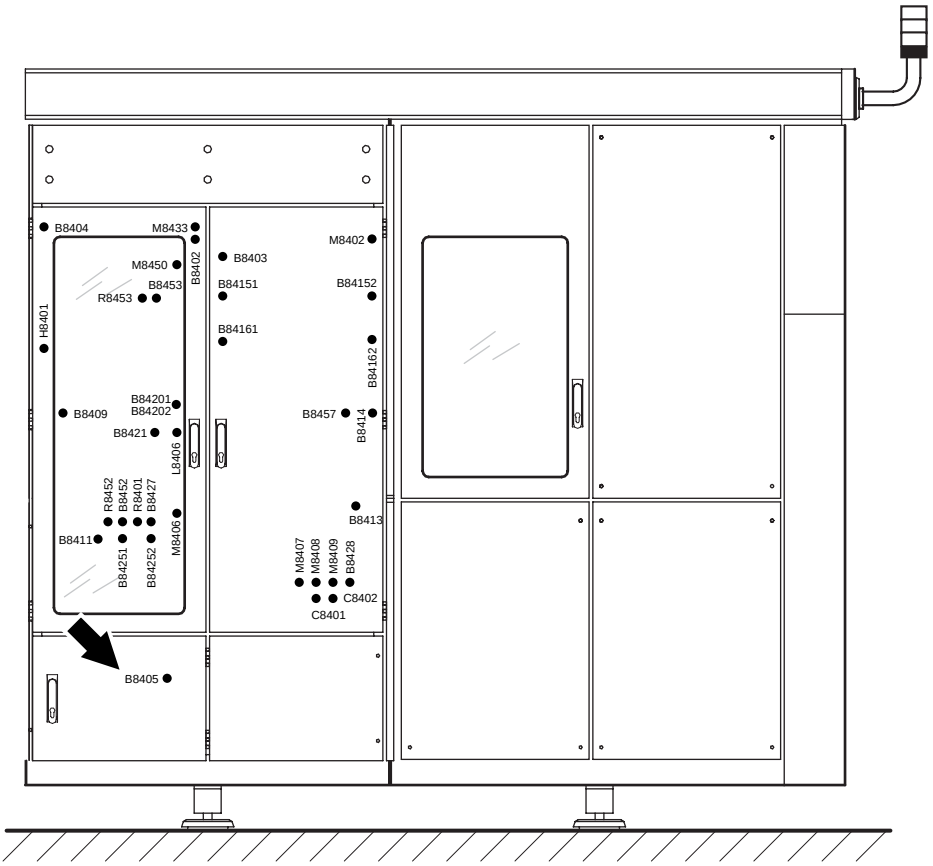
i) The location +M indicates that the component is fitted on the machine.

j) Go to the **Component location** chapter to find the position of the component B8405.



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Example 2: How to trace contactor +C-K8201

a) Go to the **Position summary**, see chapter 2557519-0002.

b) On the right side of the table, find the circuit diagram reference page where the component +C-K8201 is located (page 043, column 4).

c) Go to page 043 in the **Circuit diagram**, see chapter 2557519-0003.

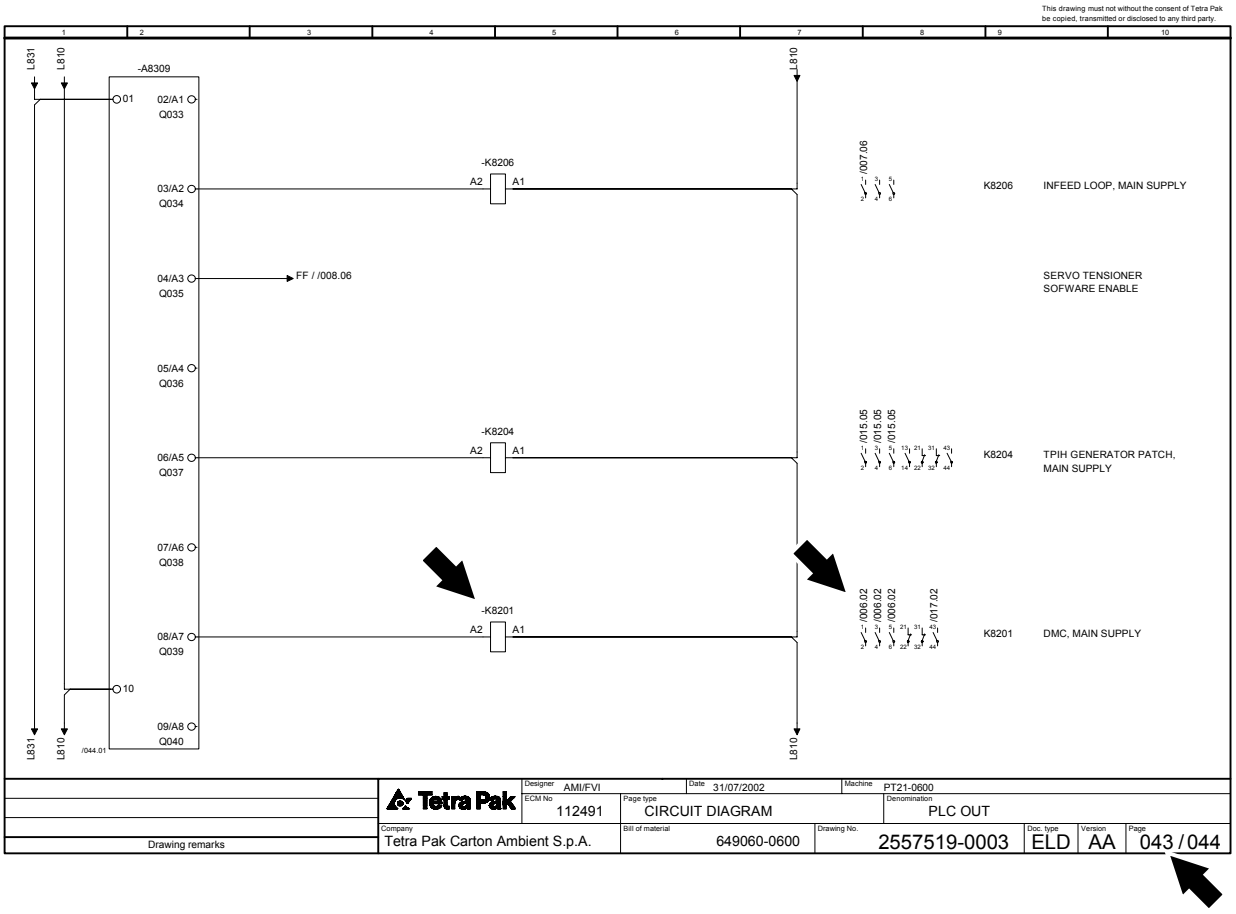
d) Find the component +C-K8201.

e) Note the contact image on the right side and find the relative contacts page references.

+C-A8311	047 .1	+M-B8457	018 .3	+C-F8252	012 .6	+C-P8201	045 .4
+C-A8313	051 .1	+M-B84061	035 .4	+C-F8253	012 .9	+C-Q8201	006 .2
+C-B8201	041 .3	+M-B84062	035 .5	+C-G8301	010 .1	+C-R8301	025 .3
+C-B8202	033 .4	+M-B84071	027 .4	+C-G8302	010 .4	+M-R8401	012 .3
+M-B8401	021 .5	+M-B84072	027 .4	+C-G8303	010 .7	+M-R8452	012 .6
+M-B8402	021 .2	+M-B84151	035 .4	+M-H8401	011 .1	+M-R8453	012 .9
+M-B8403	021 .2	+M-B84152	035 .5	+C-HS820	045 .5	+C-S8201	038 .4
+M-B8404	033 .4	+M-B84161	035 .4	+C-K8201	043 .4	+C-S8202	021 .5

Drawing remarks

Tetra Pak | Designer AMI/FVI | Date 31/07/2002 | Machine PT21-0600
ECM No 112491 | Page type POSITION SUMMARY | Denomination POSITION SUMMARY
Company Tetra Pak Carton Ambient S.p.A. | Bill of material 649060-0600 | Drawing No. 2557519-0002 | Doc. type ELD | Version AA | Page 001 / 002



Drawing remarks

Tetra Pak | Designer AMI/FVI | Date 31/07/2002 | Machine PT21-0600
ECM No 112491 | Page type CIRCUIT DIAGRAM | Denomination PLC OUT
Company Tetra Pak Carton Ambient S.p.A. | Bill of material 649060-0600 | Drawing No. 2557519-0003 | Doc. type ELD | Version AA | Page 043 / 044

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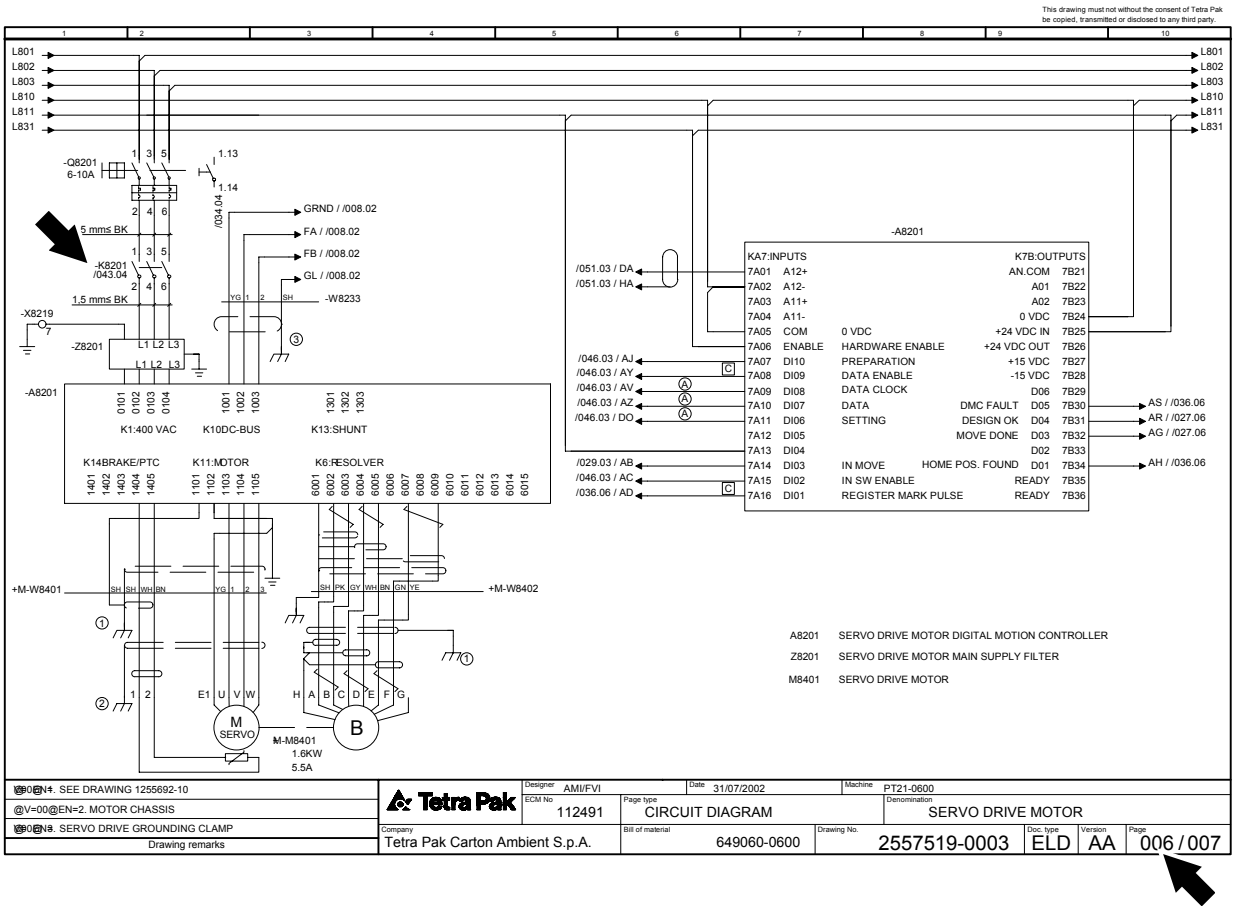
f) Go to page 006, column 2 in the **Circuit diagram**, see chapter 2557519-0003.

g) Find the contacts +C-K8201.

Note! In case of master and slave component (i.e. coils and contacts), only the master is reported in the **Position summary**. The slave shows the page and the column reference of the master.



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Supply voltage/Line connection order

The supply voltage in the electrical cabinet is named:

- L01 - L09: Power voltage
- L10 - : Control voltage

  L10 is reserved for 0Vdc, control voltage.

  L11 is reserved for 24Vdc, control voltage.

  L12 is reserved for 24Vdc, control voltage.

  L13 is reserved for 24Vdc, control voltage.

  L14 is reserved for 24Vdc, control voltage.

  L15 is reserved for 24Vdc, control voltage.

  L50 is reserved for 0Vac, control voltage.

  L51 is reserved for 220Vac, control voltage.

  L52 is reserved for 220Vac, control voltage.

The line connection order is shown in the **Line summary**, see chapter 2557519-0004.

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How to trace a line

Example: Line connection L810 to the component +C-A8305

a) Go to the **Circuit diagram**, see chapter 2557519-0003.

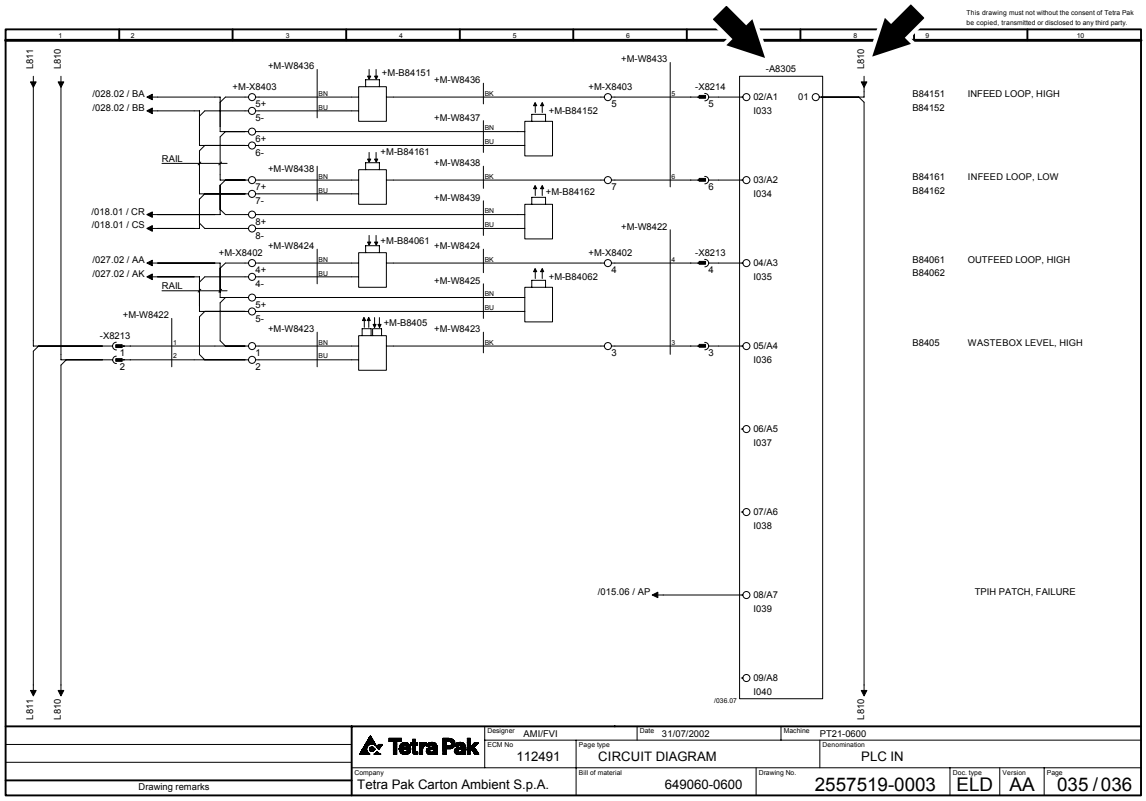
b) Find the component +C-A8305 (Input module).

c) Note which terminal of +C-A8305 is connected to the line connection L810 (pin 01).

d) Go to the **Line summary**, see chapter 2557519-0004.

e) Find the component terminal +C-A8305:01.

f) Note the relative upward line terminal connection order +C-XL810:7.



Line summary of 2557519-0003

Line	From	Page.Col.	To	Page.Col.	Area/Color	Opt.
L801	+C-X8201:1	005 .5	+C-F8201:1	007 .6	2.5 mm² BK	
L801	+C-F8201:1	007 .6	+C-F8207.1:1	015 .5		
L801	+C-F8207.1:1	015 .5	+C-F8211:1	010 .2		
L801	+C-F8211:1	010 .2	+C-Q8201:	006 .2		
L801	+C-Q8201:1	006 .2	+C-F8250:1	012 .3		
L802	+C-X8201:2	005 .5	+C-F8202:1	011 .1	2.5 mm² BK	
L802	+C-F8202:1	011 .1	+C-F8207.2:1	015 .5		
L802	+C-F8207.2:1	015 .5	+C-Q8203:	006 .2		
L803	+C-X8201:3	005 .5	+C-F8203:1	011 .7	2.5 mm² BK	
L803	+C-F8203:1	011 .7	+C-F8207.3:1	015 .5		
L803	+C-F8207.3:1	015 .5	+C-F8206:1	015 .3		
L803	+C-F8206:1	015 .3	+C-Q8205:	006 .2		
L810	+C-XL810:1	001 .1	+C-X8202:2	005 .5	1.50 mm² BU	
L810	+C-XL810:2	001 .1	+C-A8252:A2	022 .6	0.75 mm² BU	
L810	+C-A8252:A2	022 .6	+C-A8252:S24	022 .6		
L810	+C-XL810:3	001 .2	+C-XL810:4	001 .2	1.50 mm² BU	
L810	+C-XL810:5	001 .2	+C-A8211:18	017 .4	0.75 mm² BU	
L810	+C-A8211:18	017 .4	+C-A8301:01	027 .8		
L810	+C-A8301:01	027 .8	+C-A8211:20	017 .4		
L810	+C-A8211:20	017 .4	+C-A8212:18	017 .4		
L810	+C-A8212:18	017 .4	+C-A8212:20	017 .4		

	From	Page.Col.	To	Page.Col.	Area/Color	Opt.
	+C-A8303:10		+C-A8303:20	032 .1		
L810	+C-XL810:7	00	+C-A8304:01	033 .8	0.75 mm² BU	
L810	+C-A8304:01	033 .8	+C-A8305:01	035 .8		
L810	+C-A8305:01	035 .8	+C-A8306:01	037 .8		
L810	+C-XL810:8	001 .3	+C-A8309:10	043 .1	0.75 mm² BU	
L810	+C-A8309:10	043 .1	+C-A8309:20	044 .1		
L810	+C-A8309:20	044 .1	+C-A8310:10	045 .1		
L810	+C-A8310:10	045 .1	+C-A8310:20	046 .1		
L810	+C-A8310:20	046 .1	+C-A8313:18	051 .1		
L810	+C-A8313:18	051 .1	+C-A8311:10	047 .1		
L810	+C-A8311:10	047 .1	+C-A8311:20	048 .1		
L810	+C-XL810:9	001 .3	+C-K8206:A1	043 .4	0.75 mm² BU	
L810	+C-K8206:A1	043 .4	+C-K8207:10	044 .4		
L810	+C-K8207:10	044 .4	+C-K8208:10	044 .4		
L810	+C-K8208:10	044 .4	+C-K8209:10	044 .4		
L810	+C-K8209:10	044 .4	+C-K8214:10	045 .4		
L810	+C-K8214:10	045 .4	+C-K8250:10	047 .4		
L810	+C-XL810:10	001 .4	+C-K8213:4	012 .3	0.75 mm² BU	
L810	+C-K8213:4	012 .3	+C-K8252:4	012 .5		
L810	+C-K8252:4	012 .5	+C-K8253:4	012 .8		
L810	+C-XL810:11	001 .4	+C-K8201:A1	043 .4	0.75 mm² BU	

How to trace a terminal

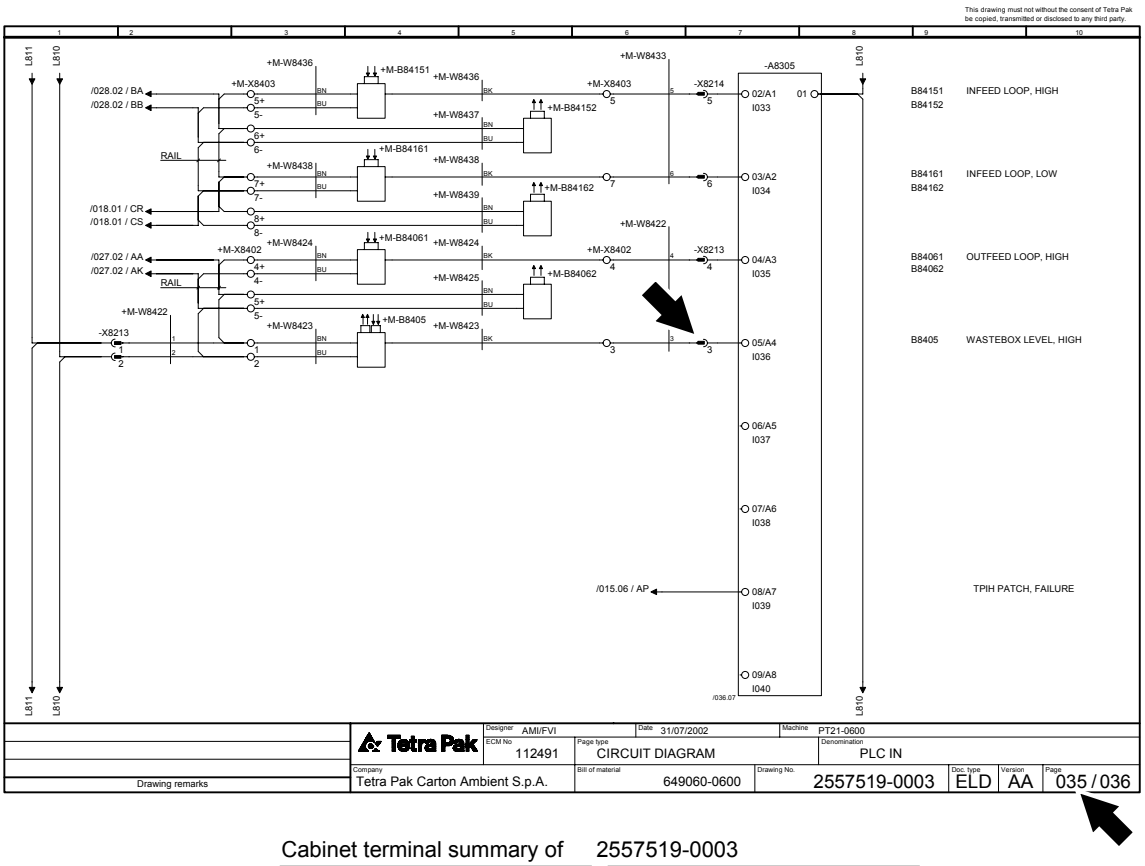
Example 1: Terminal in the electrical cabinet +C-X8213:3

a) Go to the **Cabinet terminal summary**, see chapter 2557519-0005.

b) Find the terminal +C-X8213:3.

c) On the right side of the table, find the circuit diagram reference page where the terminal +C-X8213:3 is located (page 035, column 7).

d) Go to the **Circuit diagram**, see chapter 2557519-0003.



Cabinet terminal summary of 2557519-0003

Terminal	Page .Col.	Opt.
+C-X8212:15	032 .4	
+C-X8212:16		
+C-X8212:17	031 .3	
+C-X8212:18	031 .3	
+C-X8212:19	032 .8	
+C-X8212:20	039 .7	
+C-X8212:21	031 .7	
+C-X8212:22	031 .7	
+C-X8212:23	034 .2	
+C-X8212:24	034 .5	
+C-X8212:	031 .7	
+C-X8213:1	035 .1	
+C-X8213:2	035 .7	
+C-X8213:3	035 .7	
+C-X8213:4	035 .7	
+C-X8213:5	027 .6	
+C-X8213:6	040 .7	
+C-X8213:7	040 .7	
+C-X8213:8	040 .7	
+C-X8213:9	028 .6	
+C-X8213:10	040 .7	

Terminal	Page .Col.	Opt.
+C-X8214:7	018 .5	
+C-X8214:8	040 .7	
+C-X8214:9	040 .7	
+C-X8214:10	040 .7	
+C-X8214:	040 .7	
+C-X8215:1	011 .7	
+C-X8215:2	011 .8	
+C-X8215:3	011 .4	
+C-X8215:4	011 .4	
+C-X8215:5	011 .10	
+C-X8215:6	011 .9	
+C-X8215:	011 .9	
+C-X8216:1	027 .2	
+C-X8216:2	027 .2	
+C-X8216:3	027 .6	
+C-X8217:+	041 .4	
+C-X8217:-	041 .4	
+C-X8219:1	005 .7	
+C-X8219:2	053 .4	
+C-X8219:3	053 .4	
+C-X8219:4		

(Cont'd)

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(Cont'd)

Example 2: Terminal outside the electrical cabinet +M-X8402:1, :2, :3

a) Go to the **Terminal strip overview**, see chapter 2557519-0006.

b) Find the terminal strip page where +M-X8402 is located.

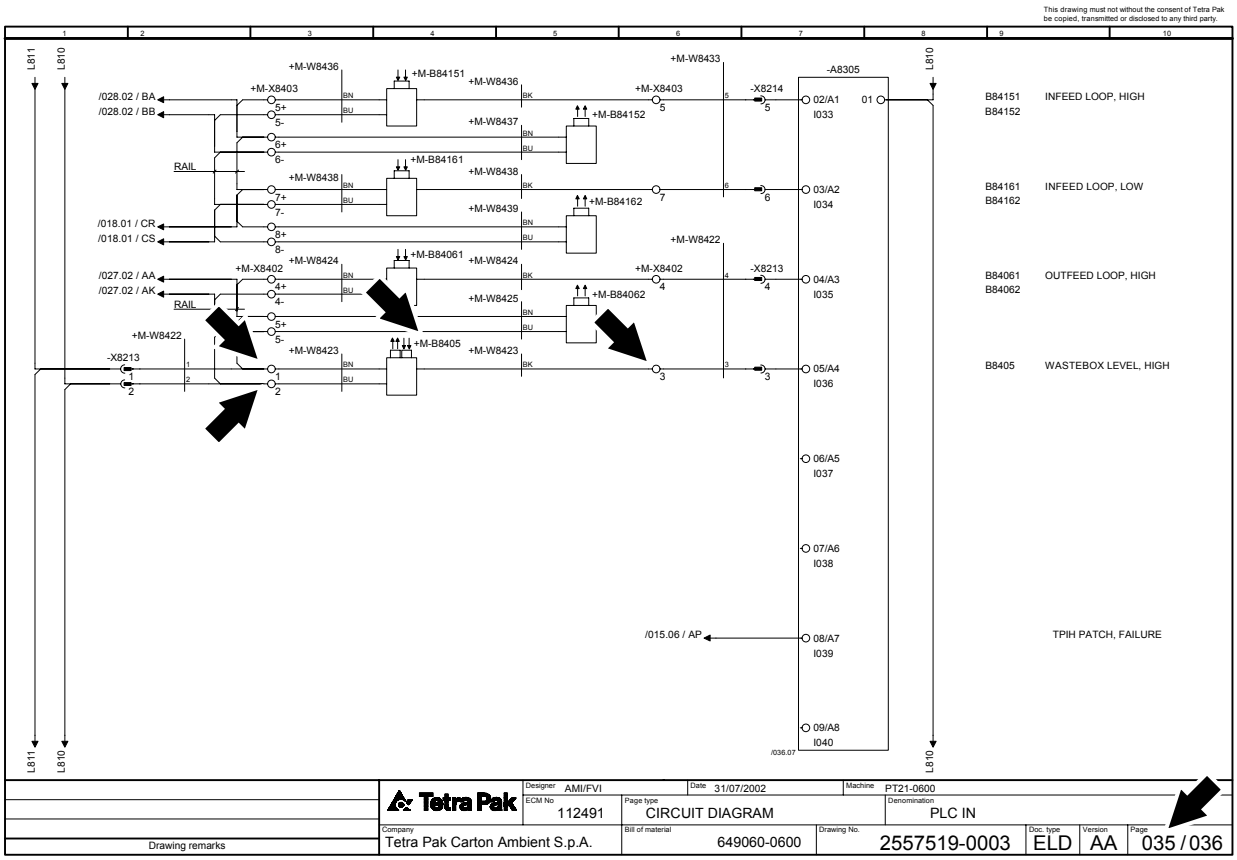
c) On the right side of the table, find the circuit diagram reference page where the terminals +M-X8402:1, :2, :3 are located (page 035, column 3).

d) Go to the **Circuit diagram**, see chapter 2557519-0003.

e) Note the component connected +M-B8405.

Terminal str… 2557519-0003
+M-X8402

From	Cable	Terminal	External Jumper	Cable	To	Page.Col.	Option	Function text
+C-X8213:1	+M-W8422:1	1		+M-W8423:BN	+M-B8405:	035 .3		WASTEBOX LEVEL, HIGH
+C-X8213:2	+M-W8422:2	2		+M-W8423:BU	+M-B8405:	035 .3		WASTEBOX LEVEL, HIGH
+C-X8213:3	+M-W8422:3	3		+M-W8423:BK	+M-B8405:	035 .6		WASTEBOX LEVEL, HIGH
+C-X8213:4	+M-W8422:4	4		+M-W8424:BK	+M-B84061:	035 .6		OUTFEED LOOP, HIGH
		4+		+M-W8424:BN	+M-B84061:	035 .3		OUTFEED LOOP, HIGH
		4-		+M-W8424:BU	+M-B84061:	035 .3		OUTFEED LOOP, HIGH
		5						
		5+		+M-W8425:BN	+M-B84062:	035 .3		OUTFEED LOOP, HIGH
		5-		+M-W8425:BU	+M-B84062:	035 .3		OUTFEED LOOP, HIGH
+C-X8213:5	+M-W8422:5	6		+M-W8426:BK	+M-B84071:	027 .5		OUTFEED LOOP, LOW
		6+		+M-W8426:BN	+M-B84071:	027 .2		OUTFEED LOOP, LOW
		6-		+M-W8426:BU	+M-B84071:	027 .2		OUTFEED LOOP, LOW
		7						
		7+		+M-W8427:BN	+M-B84072:	027 .2		OUTFEED LOOP, LOW
		7-		+M-W8427:BU	+M-B84072:	027 .2		OUTFEED LOOP, LOW



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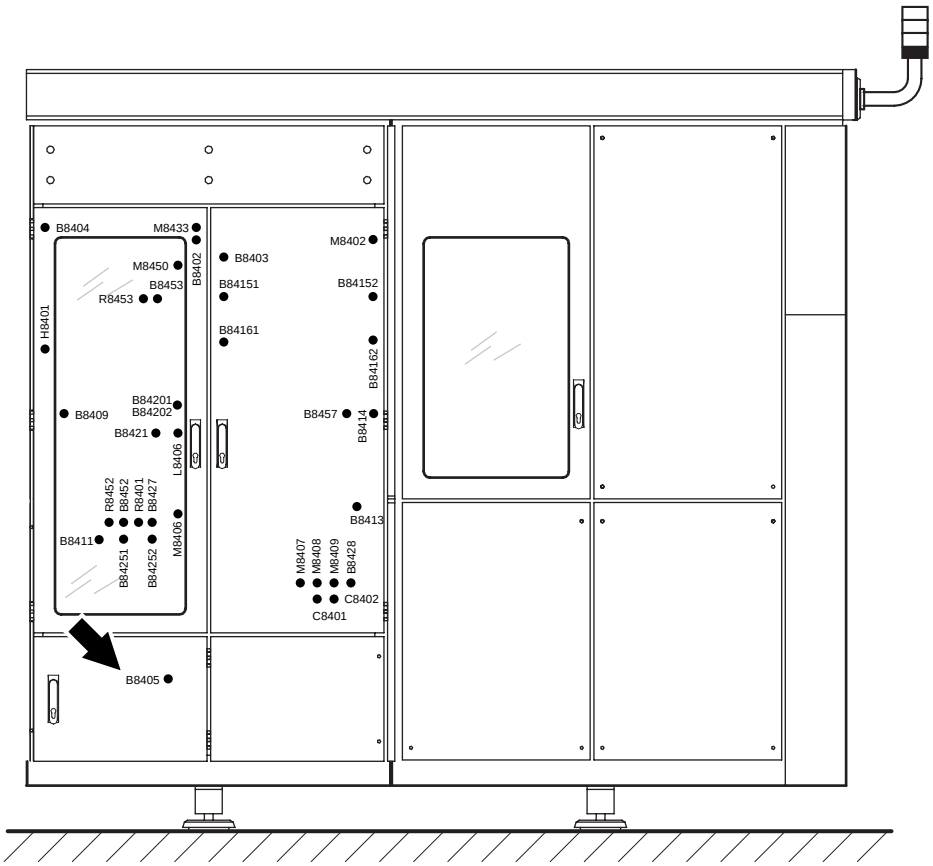
f) The location +M indicates that the component is fitted on the machine.

g) Go to the **Component location** chapter to find the position of the component B8405.



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Abbreviations and terminology

Abbreviations and terminology used in this manual.

Abbreviation	Explanation
AB	Aseptic Brik (Step Production)
AP	Aseptic Product
ASSU	Automatic Strip Splicing Unit
AS room	Automatic Splicing Unit in Separate Room
C	Cabinet
CIP SUP	Cleaning In Place Supervision
CPU	Central Processing Unit
DMC	Digital Motion Controller
DO	Dairy Office
ECN	Engineering Change Notice
F	Filler
FF	Final Folder
HF	High Frequency
HI	Headspace by Gas Injection
IH	Induction Heating
JUM	Jaw Unit Module
LRF	Level Regulated Filling
LS	Longitudinal Seal(ing)
M	Machine
M Floater	Magnetic Floater Filling system
MM	Main Motor
O. PATCH	Outer Patch
PE H	Perforation Heater
PLC	Programmable Logic Controller
PLE	Packaging Line Equipment (Distribution Equipment)
PLMS	Production Line Monitoring System
PR REC	Production Recorder
PT	PullTab
SA	Strip Applicator
SASP	Sales Administration Spare Parts
S COMM	TPOP Serial Communication
SS	Short Stop
SU	Splicing Unit
TBA	Tetra Brik Aseptic
TMCC	Tetra Pak Multipurpose Compact Controller
TPIH	Tetra Pak Induction Heating
TS	Transversal Seal(ing)
UPG CL	Upgraded Cleaning
WEAC	Work Environment Aseptic Chamber

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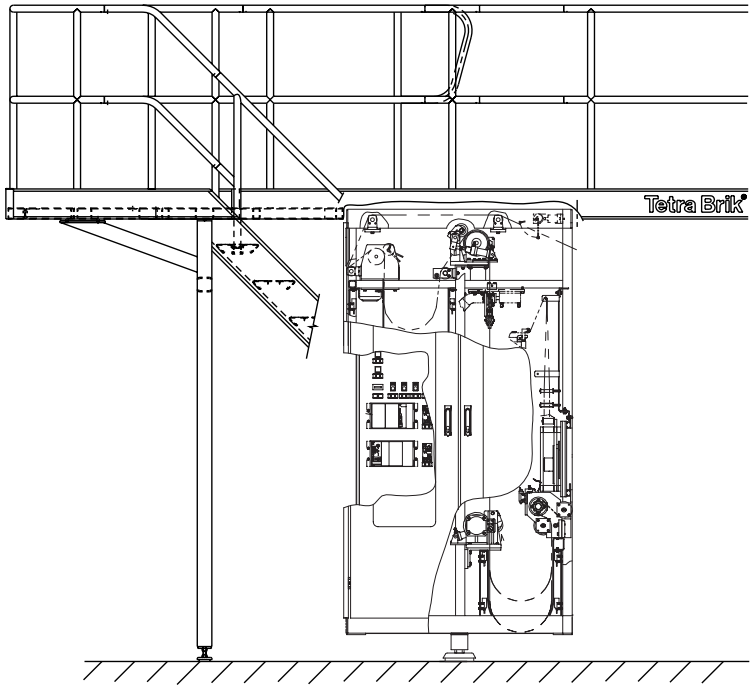
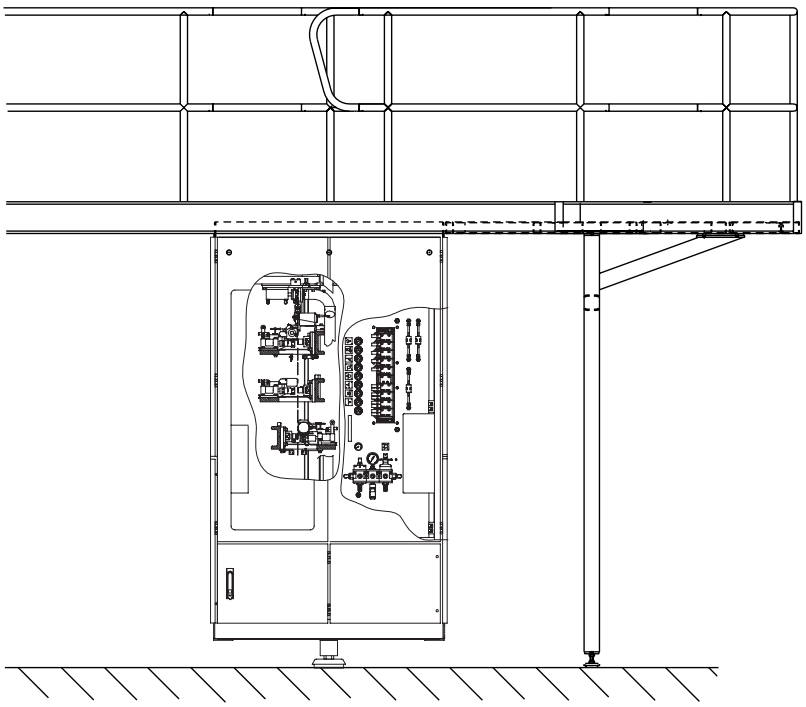
Machine orientation



LH SIDE



RH SIDE

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2 Safety precautions

To ensure maximum safety, always read this section carefully before doing any work on the equipment or making any adjustments.

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Hazard information

General



Failure to observe information marked “DANGER!” **puts your life at risk**.



Failure to observe information marked “WARNING!” can result in **personal injury and/or serious damage to or destruction of equipment**.

Caution! Failure to observe information marked “Caution!” can result in **damage to equipment**.

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Mandatory signs

 **Wear eye protection**	 **Wear hearing protection**
 **Wear head protection**	 **Wear protective gloves**
 **Disinfect hands/gloves**	

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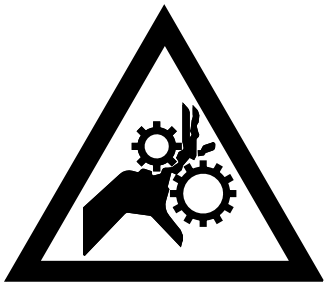
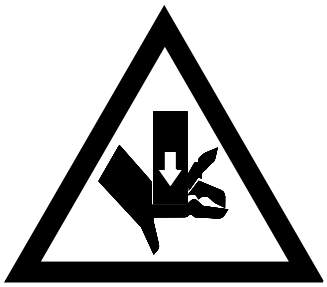
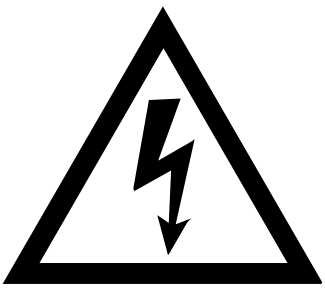
Danger and warning signs

 **Risk of entanglement!**	 **Risk of corrosion!**
 **Risk of hand crushing!**	 **Risk of cutting/amputation!**
 **Risk of burns!**	 **Risk of electrocution!**

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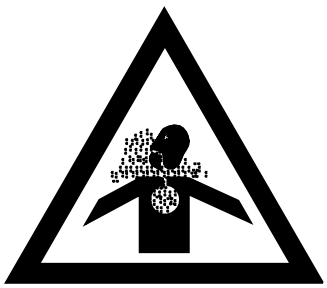
 **Risk of crushing!**	 **Risk of intoxication!**
 **Risk of falling!**	 **Risk of residual voltage!**

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Personnel

Only skilled or instructed persons are allowed to work on the equipment.

The manufacturer declines all responsibility for injury or damage if the instructions in this manual are not followed.

Personnel are responsible for:

- the equipment and the work area around the equipment
- all personnel in the vicinity of the equipment
- making sure that all safety devices are fully operational

Personnel must regard all electrical equipment as **live**. In general switch the equipment off at the mains power and padlock the switch before carrying out maintenance or repair work.

Electricians should be certified and qualified according to local regulations and have experience of a similar kind of installation, proven skills in reading, working from drawings and cable lists, and knowledge of local safety regulations regarding power and automation. Work with the electrical equipment must be performed only by skilled or instructed technicians.

According to EN 60204-1:1997 clause 3.52 a skilled person is:

– *a person with relevant education and experience to enable him or her to perceive risks and to avoid hazards which electricity can create.*

According to EN 60204-1:1997 clause 3.28 an (electrically) instructed person is:

– *a person adequately advised or supervised by an electrically skilled person to enable him or her to perceive risks and to avoid hazards which electricity can create.*

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General safety precautions



Wear hearing protection while the equipment is running.

Hygiene

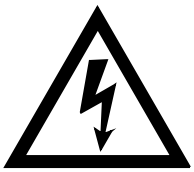
It is important to keep hands and/or gloves clean.

Disinfect hands and/or gloves before touching the packaging material, the strip(s) or any other equipment parts that may come into contact with the product.

Clean the platforms, the ladder and the area around the equipment.

To avoid production faults, it is important that the packaging material and the strip(s) never touch the floor, the platform or the area around the equipment.

High voltage



Work with parts marked with this symbol must be performed by **skilled or instructed** people **only**.

Make sure that the mains power is disconnected before starting any work on electrical equipment marked with this symbol.

In case of an accident, call for medical attention immediately.

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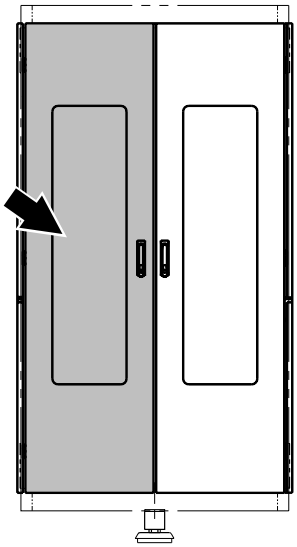
Electrical cabinet



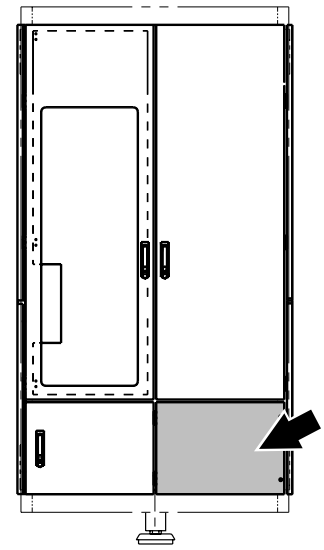
There is high voltage in the electrical cabinet (up to 400 V).

Work inside the electrical cabinet must be performed by skilled or instructed people only.

Electrical cabinet doors locked with screws may be opened only by skilled or instructed people.



LH side



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TPIH generator



There is high voltage in the electrical cabinet (up to 2000 V).

Never open the TPIH generator. Remove and return the unit to an authorised service centre for servicing and repair.

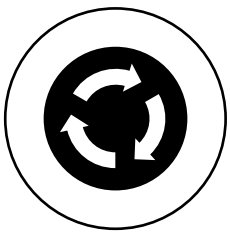
Machine safety devices

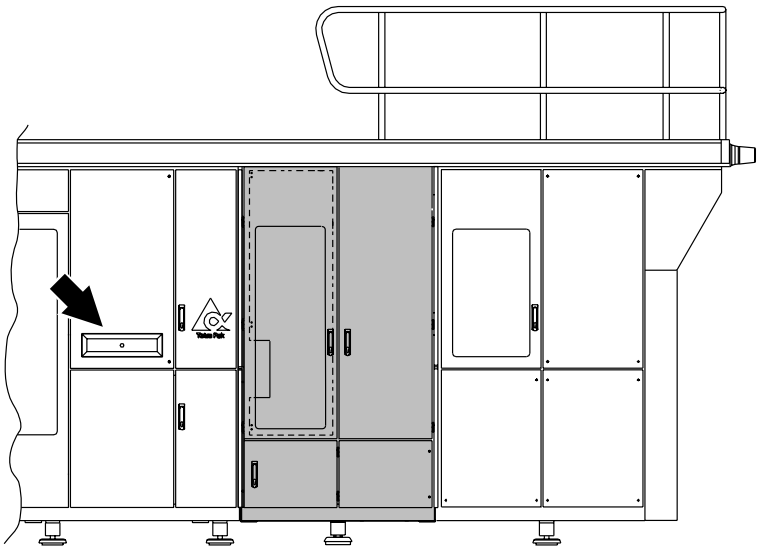
Emergency stop buttons

Learn the position of the **Emergency stop** buttons in order to stop the equipment immediately in case of danger to people or damage to the equipment.

The **Emergency stop** buttons do not switch off the power at the mains power switch.

Pushing the **Emergency stop** buttons will reset the equipment program to **Zero** position and deactivate all pneumatic cylinders.





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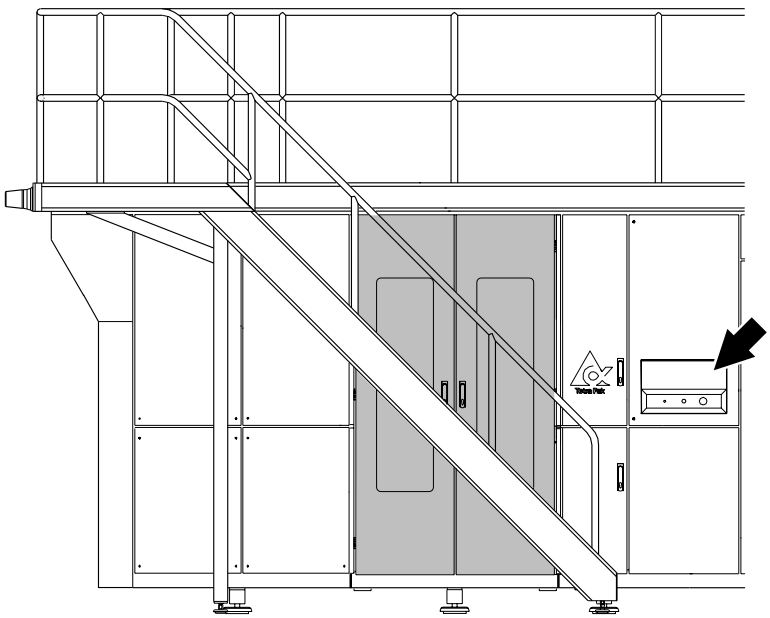

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Doors, covers and guards



WARNING!

Make sure that all doors, covers and guards are in place and functioning.

Never remove covers or guards while the equipment is operating.

Certain doors, covers and guards are fitted with safety switches. These switches are part of the safety system and must **never** be bridged, by-passed or otherwise made non-operational.

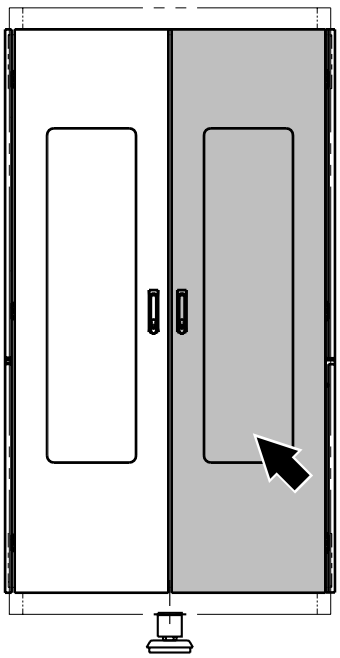


WARNING!

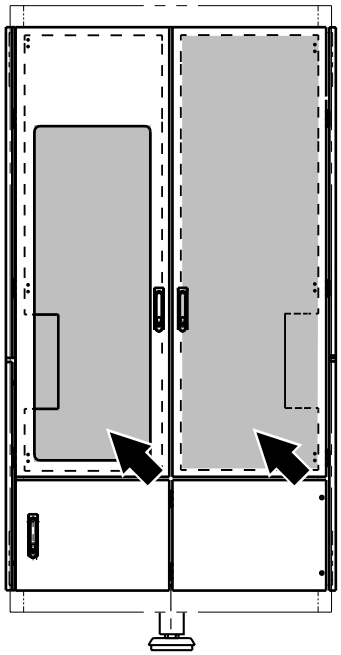
Never stop the equipment by opening a door or cover with a safety switch.

The equipment may perform a reciprocating movement during the first few seconds after a stop. Some equipment parts may also be hot.

In case of an accident, call for medical attention.



LH side



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Cooling system (PT21 electrical cabinet)

WARNING!

Risk of personal injury!
Cooling media R134A.
Carefully follow the supplier's instructions for handling and disposal of the R134A (freon).

Cooling media R134A container

- Ensure good ventilation
- Keep the container well closed and in a cool and dry place away from sources of heat
- Avoid direct contact with the product
- Wear suitable protective clothing, gloves, goggles, and eye/face protection
- In case of contact with eyes, rinse immediately with plenty of water for 15 minutes and call for medical attention
- Inhalation of a high concentration can cause shortage of breath and unconsciousness
- In case of inhalation move into fresh air; if needed use an oxygen mask or artificial respiration
- Very fast evaporation can cause freezing injuries

Caution! Only specially trained personnel is allowed to operate with the compressor unit in case of compressor leakages.

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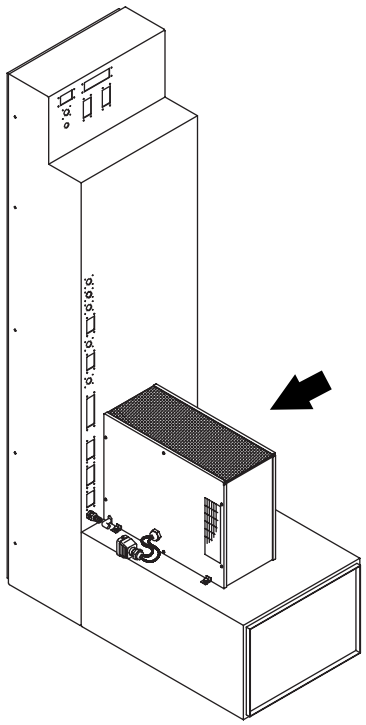

Equipment for lifting and moving loads



WARNING!

Make sure that the capacity of the lifting equipment is adequate and that the equipment itself is in good working order.

If lifting tackle has to be joined to make up the necessary lengths, make sure that the joints are secure and have the same lifting capacity as the rest of the tackle.

Always engage the safety clip on lifting hooks to prevent the tackle from slipping off.

Use ropes or poles to steady and manoeuvre loads. Do **not** use hands or feet.

Make sure that the route and the destination are free from obstacles before moving a suspended load. It must be possible to lower the load to the floor quickly and safely in an emergency.

When depositing loads, keep the lifting equipment in place until the stability of the load has been checked.

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3 Electrical system description

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Safety system 3-3

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Safety system

The safety system is controlled by a safety relay module plus an emergency stop time relay. When the modules are not in a safety condition, the relay outputs contacts are logically false.

An emergency condition is created by pressing the emergency stop buttons. A safety condition is created by opening a door fitted with a safety switch, see the *Safety precautions* section.

To reset the machine from the emergency condition, release the emergency stop buttons and push **Alarm reset**.

To reset the machine from the safety condition, close the door and push **Alarm reset**.

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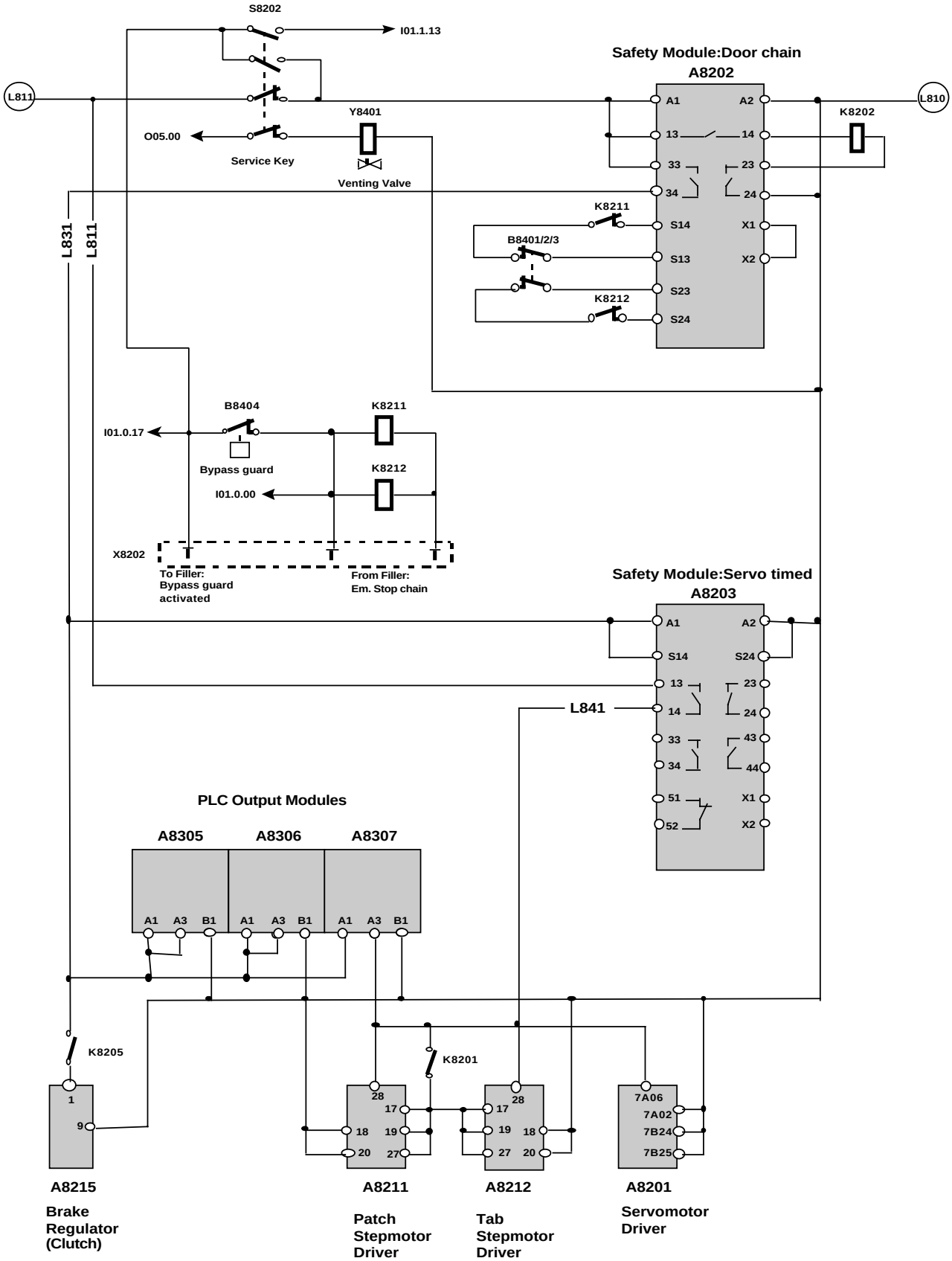

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4 Component location

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Components on the machine 4-3

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Components on the machine

Comp.	Description	Drawing No.	Part n°	Option
A8403	Tensioner clutch	4-595011-	1	
B8401	Door guard, left side	4-595011-	2	
B8402	Door guard, right - front side	4-595011-	1	
B8403	Door guard, right - rear side	4-595011-	1	
B8404	Bypass guard switch	4-595011-	1	
B8405	Waste box full	4-595011-	1	
B84061	Outfeed loop high	4-595011-	2	
B84062	Outfeed loop high	4-595011-	2	
B84071	Outfeed loop low	4-595011-	2	
B84072	Outfeed loop low	4-595011-	2	
B8408	Patch material low	4-595011-	1	
B8409	Patch rotation monitor	4-595011-	1	
B8411	Black tape detector	4-595011-	1	
B8413	Tab material low	4-595011-	1	
B8414	Tab rotation monitor	4-595011-	1	
B84151	Infeed loop high	4-595011-	1	
B84152	Infeed loop high	4-595011-	1	
B84161	Infeed loop low	4-595011-	1	
B84162	Infeed loop low	4-595011-	1	
B84201	Register mark data photocell	4-595011-	1	
B84202	Register mark clock photocell	4-595011-	1	
B8421	Patch jaw closed	4-595011-	1	
B8422	Patch missing	4-595011-	2	
B8423	Reseal jaw closed	4-595011-	1	
B8424	Tab jaw closed	4-595011-	2	
B84251	Tab missing sensor	4-595011-	1	
B84252	Tab missing sensor	4-595011-	1	
B8426	PT21 air pressure monitor	4-595011-	1	
B8427	Tab sealing pad heater temperature probe	4-595011-	1	
B8428	Icing monitor	4-595011-	1	
B8429	Punch closed	4-595011-	2	
C8401	Condenser fan starting capacitor	4-595011-	1	
C8402	Evaporator fan starting capacitor	4-595011-	1	
H8401	Machine lighting	4-595011-	1	
L8404	Tab IH inductor	4-595011-		
L8405	Reseal IH inductor	4-595011-	1	
L8406	Patch IH inductor	4-595011-	1	

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4 Component location

Comp.	Description	Drawing No.	Part n°	Option
M8401	Servo motor	4-595011-	2	
M8402	Infeed motor	4-595011-	1	
M8403	Tensioner motor	4-595011-	1	
M8405	Patch feed stepper motor	4-595011-	2	
M8406	Tab feed stepper motor	4-595011-	1	
M8407	Evaporator fan (air cooler)	4-595011-	1	
M8408	Compressor (air cooler)	4-595011-	1	
M8409	Condenser fan (air cooler)	4-595011-	1	
R8401	Tab sealing pad heater	4-595011-	1	
T8404	Tab IH transformer	4-595011-	2	
T8405	Reseal IH transformer	4-595011-	2	
T8406	Patch IH transformer	4-595011-	2	
X8401	Door guards terminal box	4-595011-	1	
X8402	Outfeed loop terminal box	4-595011-	1	
X8403	Infeed loop terminal box	4-595011-	1	
X8411	Air cooler terminal box	4-595011-	1	
Y8401	Venting valve	4-595011-	1	
Y8403	Cap blowing	4-595011-	1	
Y8404	Waste blowing	4-595011-	1	
Y8405	Tab folding	4-595011-	1	
Y8406	Strip suction	4-595011-	1	
Y8407	Punch blowing	4-595011-	1	
Y84091	Punch out	4-595011-	1	
Y84092	Punch in	4-595011-	1	
Y84101	Patch out	4-595011-	1	
Y84102	Patch in	4-595011-	1	
Y84111	Reseal out	4-595011-	1	
Y84112	Reseal in	4-595011-	1	
Y84121	Tab out	4-595011-	1	
Y84122	Tab in	4-595011-	1	

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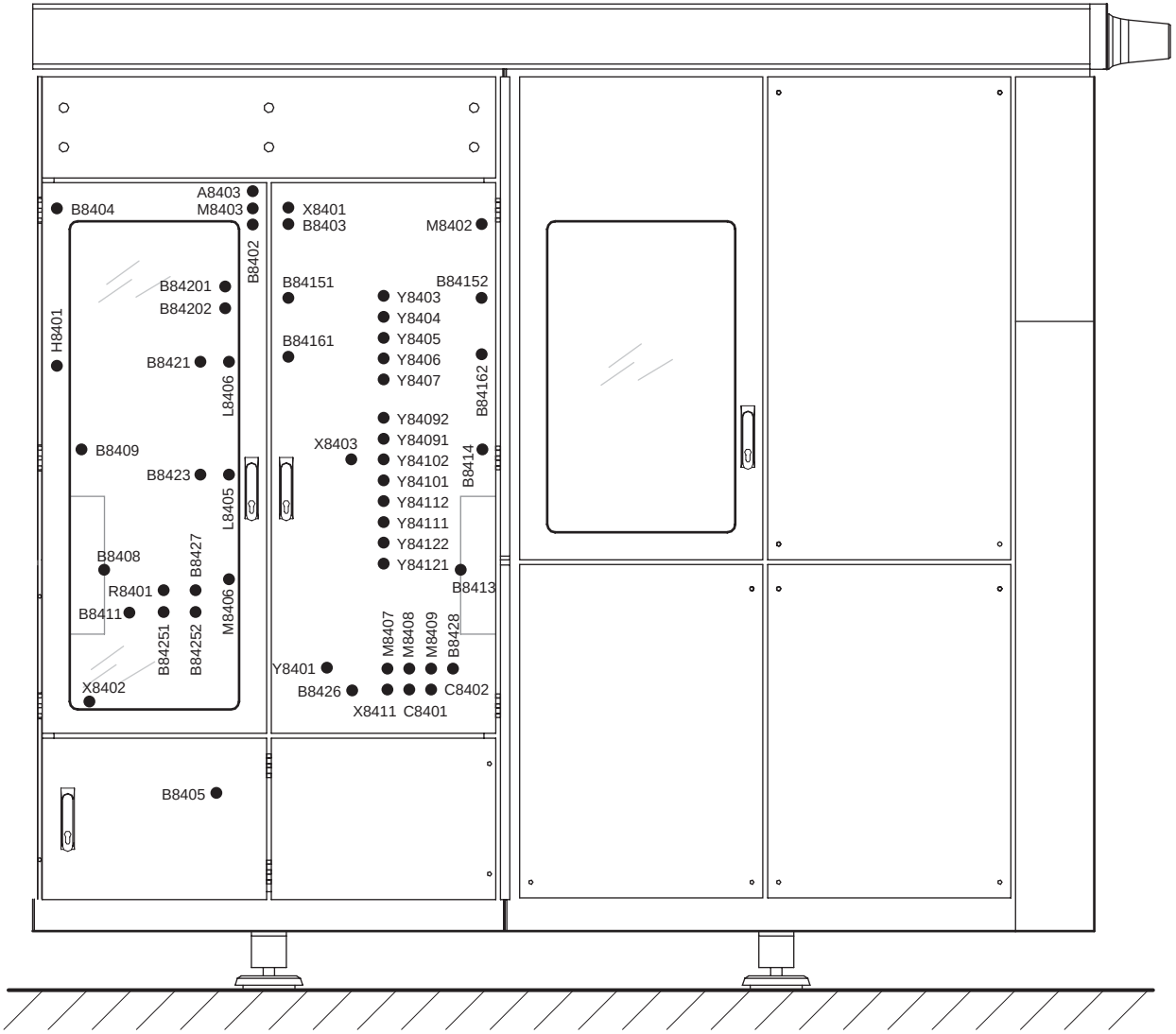
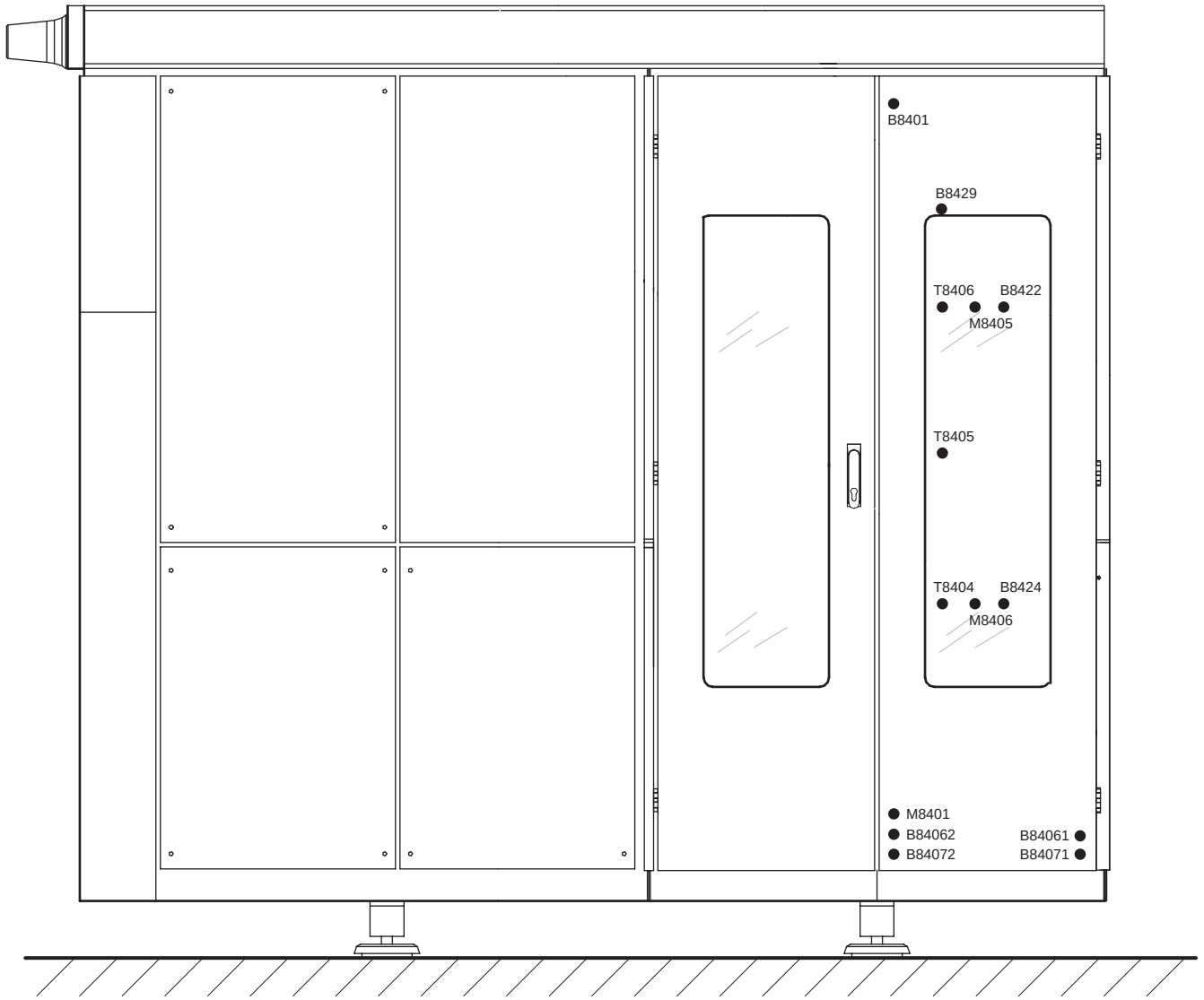


Component location on the PullTab Unit

Designer: MRI	Date: 990210	Mach.: TBA/21-0300	4-595011-0000 001
Approval: BGZ	Date: 990210		ECN 72084 Version 02



Component location on the PullTab Unit

Designer: MRI Date: 990210 Mach.: TBA/21-0300 4-595011-0000 002

Approval: BGZ Date: 990210 ECN 72084 Version 02

5 Documents list

EM3.0TB058511en.fm

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Documents list 2635106-0001

EM3.0TB058511en.fm

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Documents list

Drawing No	Denomination	Page type	Version
2635106-0001:001	DOCUMENTS LIST	DOCUMENTS LIST	AA
2635106-0001:002	DOCUMENTS LIST	DOCUMENTS LIST	AA
2635106-0002:001	POSITION SUMMARY	POSITION SUMMARY	AA
2635106-0002:002	POSITION SUMMARY	POSITION SUMMARY	AA
2635106-0003:1	CIRCUIT DIAGRAM	CIRCUIT DIAGRAM	AA
2635106-0003:5	CIRCUIT DIAGRAM	MAINS	AA
2635106-0003:6	CIRCUIT DIAGRAM	OUTFEED SERVO MOTOR	AA
2635106-0003:7	CIRCUIT DIAGRAM	INFEED MOTOR	AA
2635106-0003:8	CIRCUIT DIAGRAM	SERVO TENSIONER MOTOR	AA
2635106-0003:9	CIRCUIT DIAGRAM	DC LINES GENERATION	AA
2635106-0003:10	CIRCUIT DIAGRAM	PLC POWER/TPOP COMMUNICATIONS	AA
2635106-0003:11	CIRCUIT DIAGRAM	LIGTHING/AIR COOLER	AA
2635106-0003:12	CIRCUIT DIAGRAM	TAB SEALING PAD HEATER	AA
2635106-0003:14	CIRCUIT DIAGRAM	IH GENERATOR: TAB	AA
2635106-0003:15	CIRCUIT DIAGRAM	IH GENERATOR: PATCH/RESEAL	AA
2635106-0003:20	CIRCUIT DIAGRAM	REG. MARK/PATCH TAB FEEDERS	AA
2635106-0003:23	CIRCUIT DIAGRAM	TEMPERATURE REGULATORS	AA
2635106-0003:25	CIRCUIT DIAGRAM	FILLER INTERFACE	AA
2635106-0003:27	CIRCUIT DIAGRAM	SAFETY MODLE: DOOR CHAIN	AA
2635106-0003:28	CIRCUIT DIAGRAM	SAFETY MODLE: SERVO TIMED	AA
2635106-0003:30	CIRCUIT DIAGRAM	PLC - IN	AA
2635106-0003:31	CIRCUIT DIAGRAM	PLC - IN	AA
2635106-0003:32	CIRCUIT DIAGRAM	PLC - IN	AA
2635106-0003:33	CIRCUIT DIAGRAM	PLC - IN	AA
2635106-0003:34	CIRCUIT DIAGRAM	PLC - IN	AA
2635106-0003:35	CIRCUIT DIAGRAM	PLC - IN	AA
2635106-0003:36	CIRCUIT DIAGRAM	PLC - IN	AA
2635106-0003:37	CIRCUIT DIAGRAM	PLC - IN	AA
2635106-0003:45	CIRCUIT DIAGRAM	PLC - OUT	AA
2635106-0003:46	CIRCUIT DIAGRAM	PLC - OUT	AA
2635106-0003:47	CIRCUIT DIAGRAM	PLC - OUT: VALVES	AA
2635106-0003:48	CIRCUIT DIAGRAM	PLC - OUT: VALVES	AA
2635106-0003:49	CIRCUIT DIAGRAM	PLC - OUT	AA
2635106-0003:50	CIRCUIT DIAGRAM	PLC - OUT	AA
2635106-0003:51	CIRCUIT DIAGRAM	PLC - OUT	AA
2635106-0003:52	CIRCUIT DIAGRAM	PLC - OUT	AA
2635106-0003:55	CIRCUIT DIAGRAM	PRECONNECTED CABLES	AA
2635106-0003:56	CIRCUIT DIAGRAM	PRECONNECTED CABLES	AA
2635106-0003:60	CIRCUIT DIAGRAM	GROUNDING CONNECTIONS	AA
2635106-0004:001	LINE SUMMARY	LINE SUMMARY	AA
2635106-0004:002	LINE SUMMARY	LINE SUMMARY	AA
2635106-0004:003	LINE SUMMARY	LINE SUMMARY	AA
2635106-0005:001	CABINET TERMINAL SUMMARY	CABINET TERMINAL SUMMARY	AA
2635106-0005:002	CABINET TERMINAL SUMMARY	CABINET TERMINAL SUMMARY	AA
2635106-0006:001	TERMINAL STRIP OVERVIEW	FILLER INTERFACE	AA
2635106-0006:002	TERMINAL STRIP OVERVIEW	FILLER INTERFACE	AA

Tetra Pak

Company: Tetra Pak Carton Ambient S.p.A.

Designer: LUP | ECM No: 117717 | Denomination: DOCUMENTS LIST | Date: 26/06/2003

Machine: PT21 030V | Page Type: DOCUMENTS LIST | Document No.: 2635106-0001 | Doc. type: ELD | Version: AA | Page: 001

Drawing remarks

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Documents list

Drawing No	Denomination	Page type	Version
2635106-0006:003	TERMINAL STRIP OVERVIEW	DOOR/GUARDS	AA
2635106-0006:004	TERMINAL STRIP OVERVIEW	OUTFEED LOOP BOX	AA
2635106-0006:005	TERMINAL STRIP OVERVIEW	OUTFEED LOOP BOX	AA
2635106-0006:006	TERMINAL STRIP OVERVIEW	INFEED LOOP BOX	AA
2635106-0006:007	TERMINAL STRIP OVERVIEW	INFEED LOOP BOX	AA
2635106-0006:008	TERMINAL STRIP OVERVIEW	VALVES-BANK 1	AA
2635106-0006:009	TERMINAL STRIP OVERVIEW	VALVES-BANK 2	AA
2635106-0006:010	TERMINAL STRIP OVERVIEW	SEALING PAD HEATING	AA
2635106-0006:011	TERMINAL STRIP OVERVIEW	CABINET COOLING SYSTEM	AA
2635106-0006:012	TERMINAL STRIP OVERVIEW	REGISTER MARK / FEEDERS	AA
2635106-0006:013	TERMINAL STRIP OVERVIEW	REGISTER MARK / FEEDERS	AA
2635106-0007:001	CABLE CONNECTION LIST	CABLE CONNECTION LIST	AA
2635106-0007:002	CABLE CONNECTION LIST	CABLE CONNECTION LIST	AA
2635106-0007:003	CABLE CONNECTION LIST	CABLE CONNECTION LIST	AA
2635106-0007:004	CABLE CONNECTION LIST	CABLE CONNECTION LIST	AA
2635106-0007:005	CABLE CONNECTION LIST	CABLE CONNECTION LIST	AA
2635106-0007:006	CABLE CONNECTION LIST	CABLE CONNECTION LIST	AA

Tetra Pak

Company: Tetra Pak Carton Ambient S.p.A.

Designer: LUP | ECM No: 117717 | Denomination: DOCUMENTS LIST | Date: 26/06/2003

Machine: PT21 030V | Page Type: DOCUMENTS LIST | Document No.: 2635106-0001 | Doc. type: ELD | Version: AA | Page: 002

Drawing remarks

6 Position summary

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Position summary 2635106-0002

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Position summary of 2635106-0003

Component	Page .Col.	Opt.
+C-A8201	6 .7	
+C-A8202	27 .7	
+C-A8203	28 .7	
+C-A8204	14 .4	
+C-A8205	15 .4	
+C-A8210	20 .6	
+C-A8211	20 .4	
+C-A8212	20 .4	
+C-A8214	15 .6	
+C-A8216	7 .5	
+C-A8218	23 .6	
+C-A8219	23 .6	
+C-A8233	8 .7	
+C-A8301	30 .7	
+C-A8302	34 .7	
+C-A8304	45 .1	
+C-A8305	47 .1	
+C-A8306	49 .1	
+C-A8307	51 .1	
+C-B8201	23 .2	
+C-B8202	30 .4	
+M-B8401	27 .5	
+M-B8402	27 .2	
+M-B8403	27 .2	
+M-B8404	31 .4	
+M-B8405	30 .4	
+M-B8408	32 .5	
+M-B8409	35 .4	

Component	Page .Col.	Opt.
+M-B8411	35 .4	
+M-B8413	32 .5	
+M-B8414	35 .4	
+M-B8421	34 .4	
+M-B8422	35 .4	
+M-B8423	34 .4	
+M-B8424	34 .4	
+M-B8426	31 .3	
+M-B8427	23 .2	
+M-B8428	11 .9	
+M-B8429	34 .4	
+M-B84061	34 .4	
+M-B84062	34 .5	
+M-B84071	34 .4	
+M-B84072	34 .5	
+M-B84151	34 .4	
+M-B84152	34 .5	
+M-B84161	34 .4	
+M-B84162	34 .5	
+M-B84201	20 .10	
+M-B84202	20 .10	
+M-B84251	35 .4	
+M-B84252	35 .5	
+M-C8401	11 .6	
+M-C8402	11 .8	
+C-D8301	10 .4	
+C-F8201	7 .6	
+C-F8202	11 .1	

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+C-F8206	15 .2	
+C-F8207.1	15 .4	
+C-F8207.2	15 .4	
+C-F8207.3	15 .4	
+C-F8210	9 .4	
+C-F8211	10 .2	
+C-F8213	12 .4	
+C-G8301	10 .2	
+M-H8401	11 .1	
+C-HS8202	45 .5	
+C-K8201	52 .4	
+C-K8202	27 .8	
+C-K8203	51 .4	
+C-K8204	51 .4	
+C-K8207	46 .5	
+C-K8208	46 .5	
+C-K8209	46 .5	
+C-K8210	52 .4	
+C-K8211	25 .5	
+C-K8212	25 .6	
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+C-K8214	25 .6	
+M-L8404	14 .6	

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+M-L8406	15 .6	
+M-M8401	6 .2	
+M-M8402	7 .6	
+M-M8405	20 .1	
+M-M8406	20 .1	
+M-M8407	11 .7	
+M-M8408	11 .4	
+M-M8409	11 .5	
+M-M8433	8 .2	
+C-P8201	45 .5	
+C-Q8201	6 .2	
+C-Q8202	9 .5	
+C-R8201	6 .5	
+C-R8204	14 .7	
+C-R8205	15 .9	
+C-R8206	15 .8	
+C-R8301	10 .6	
+M-R8401	12 .3	
+C-S8201	31 .4	
+C-S8202	33 .3	
+C-SH8202	36 .4	
+C-T8201	9 .4	
+M-T8404	14 .5	
+M-T8405	15 .7	
+M-T8406	15 .6	
+C-V8201	9 .5	
+M-Y8401	47 .5	

Drawing remarks

Tetra Pak

Designer LUP	Date 26/06/2003	Machine PT21 030V	
ECM No 117717	Denomination POSITION SUMMARY	Page Type POSITION SUMMARY	
Company Tetra Pak Carton Ambient S.p.A.	Document No. 2635106-0002	Doc. type ELD	Version AA	Page 001

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Position summary of 2635106-0003

Component	Page .Col.	Opt.
+M-Y8403	47 .4	
+M-Y8404	47 .4	
+M-Y8405	47 .4	
+M-Y8406	47 .4	
+M-Y8407	47 .4	
+M-Y84091	48 .4	
+M-Y84092	48 .4	
+M-Y84101	48 .4	
+M-Y84102	48 .4	
+M-Y84111	48 .4	
+M-Y84112	48 .4	
+M-Y84121	48 .4	
+M-Y84122	48 .4	
+C-Z8201	6 .1	

Component	Page .Col.	Opt.

Component	Page .Col.	Opt.

Component	Page .Col.	Opt.

Drawing remarks

Tetra Pak

Designer LUP	Date 26/06/2003	Machine PT21 030V	
ECM No 117717	Denomination POSITION SUMMARY	Page Type POSITION SUMMARY	
Company Tetra Pak Carton Ambient S.p.A.	Document No. 2635106-0002	Doc. type ELD	Version AA	Page 002

7 Circuit diagram

EM3.0TB078511en.fm

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Circuit diagram 2635106-0003

EM3.0TB078511en.fm

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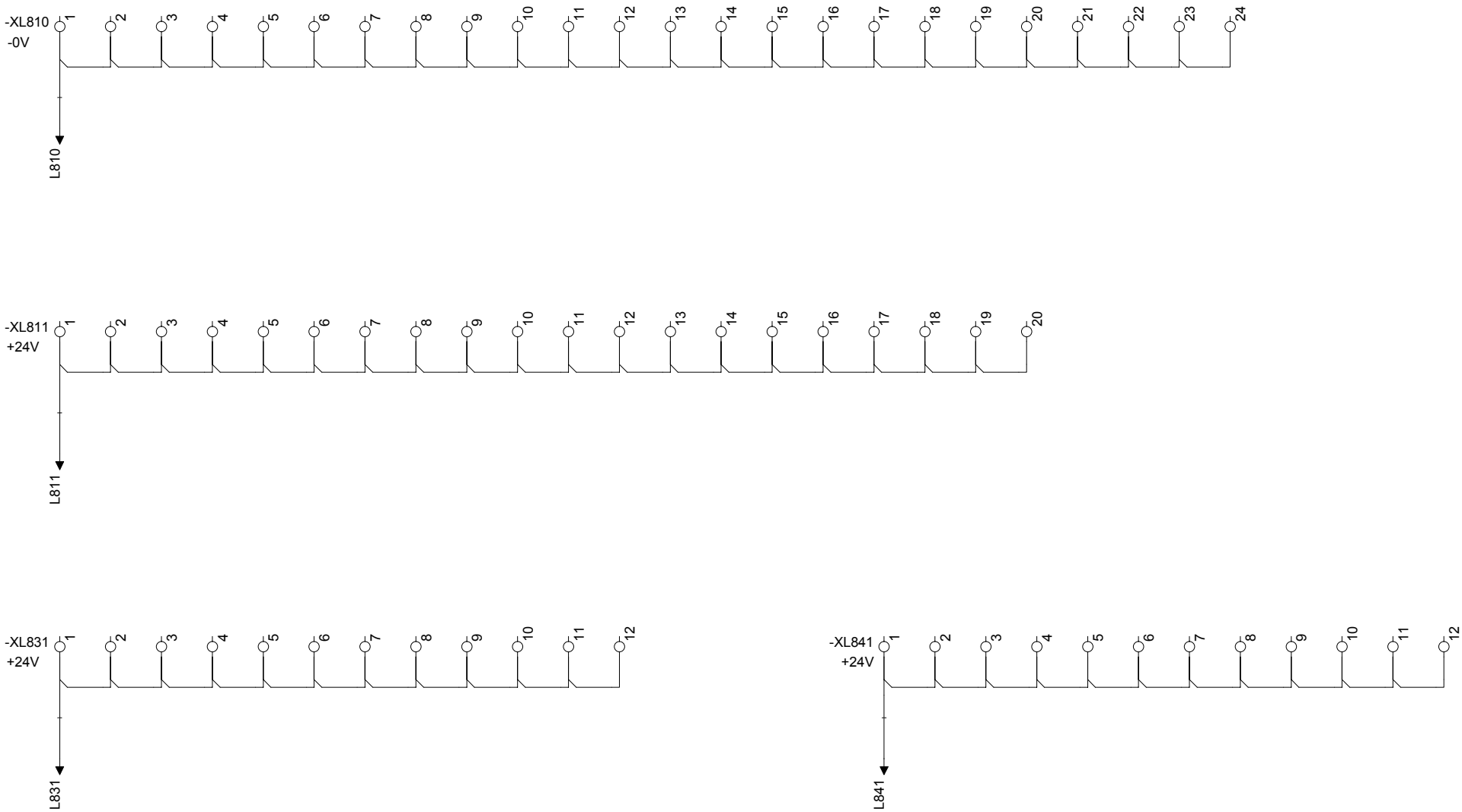

Drawing remarks	Tetra Pak	Designer LUP	Date 26/06/2003	Machine PT21 030V
		ECM No 117717	Denomination CIRCUIT DIAGRAM	Page Type CIRCUIT DIAGRAM
	Company Tetra Pak Carton Ambient S.p.A.	Document No. 2635106-0003	Doc. type ELD	Version AA / Page 1

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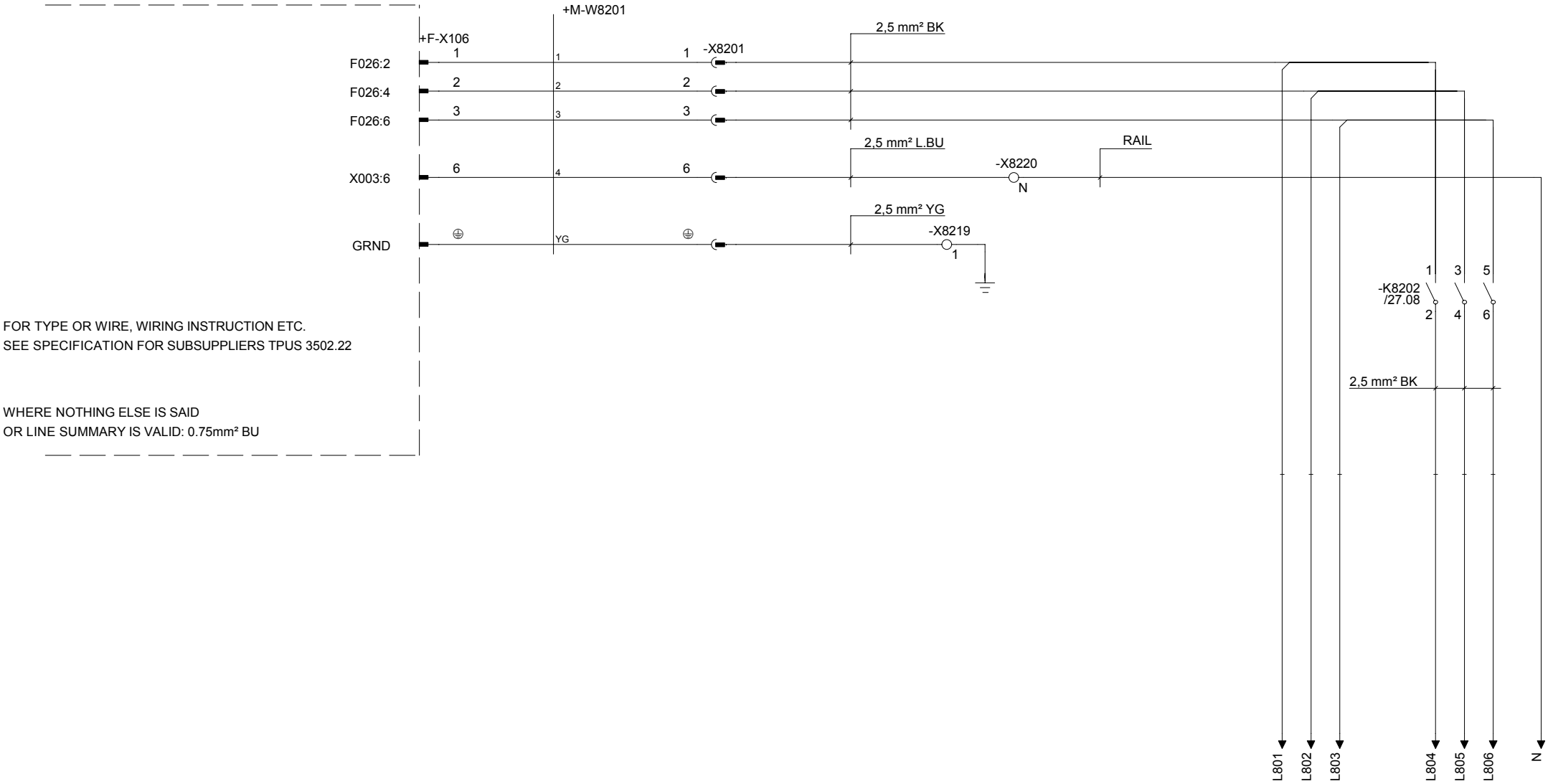
be copied, transmitted or disclosed to any third party.

1	2	3	4	5	6	7	8	9	10



FOR TYPE OR WIRE, WIRING INSTRUCTION ETC.
SEE SPECIFICATION FOR SUBSUPPLIERS TPUS 3502.22

WHERE NOTHING ELSE IS SAID
OR LINE SUMMARY IS VALID: 0.75mm² BU

Drawing remarks	Tetra Pak	Designer LUP	Date 26/06/2003	Machine PT21 030V	
		ECM No 117717	Denomination CIRCUIT DIAGRAM	Page Type MAINS	
	Company Tetra Pak Carton Ambient S.p.A.	Document No. 2635106-0003	Doc. type ELD	Version AA	Page 5

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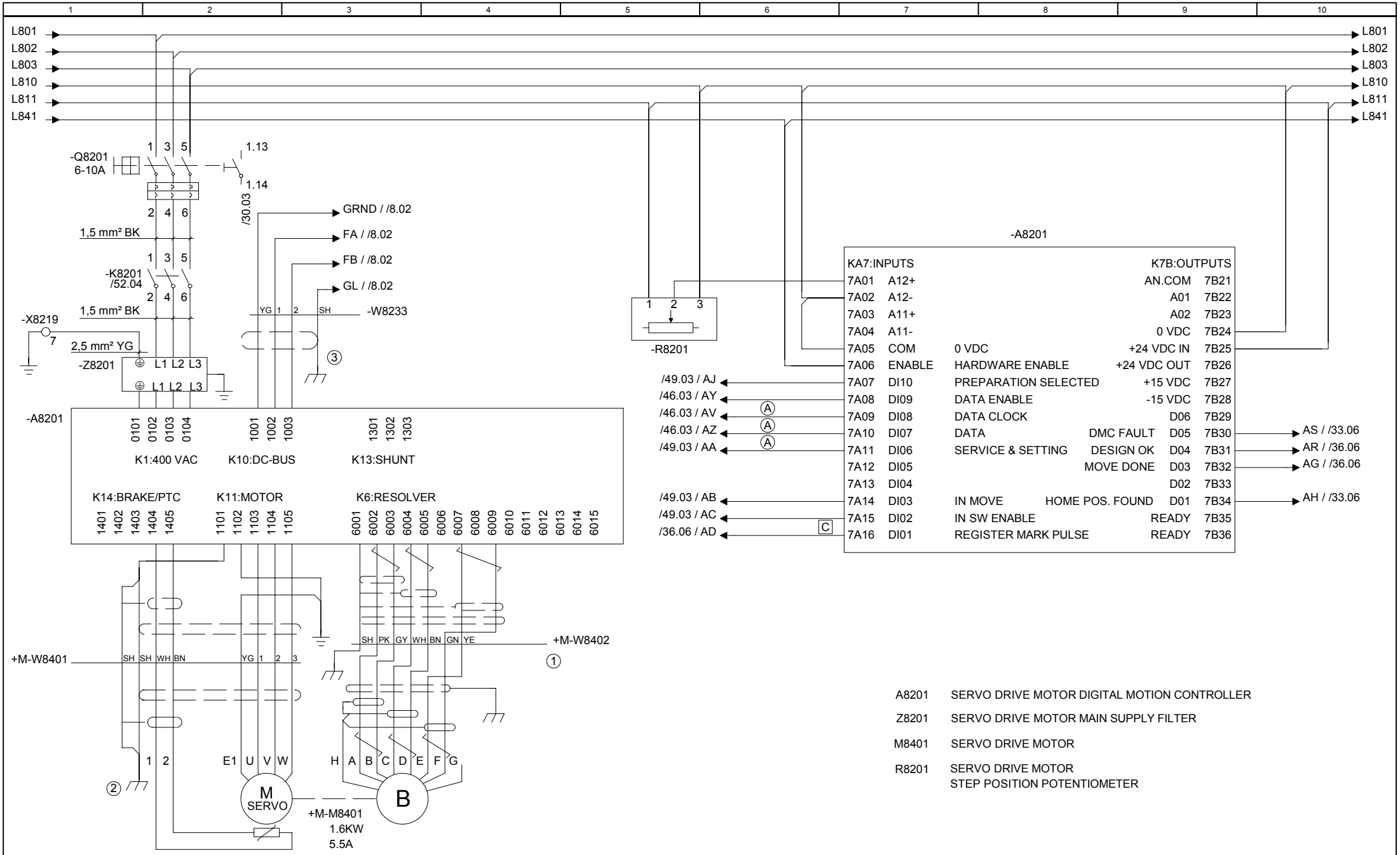

A8201	SERVO DRIVE MOTOR DIGITAL MOTION CONTROLLER
Z8201	SERVO DRIVE MOTOR MAIN SUPPLY FILTER
M8401	SERVO DRIVE MOTOR
R8201	SERVO DRIVE MOTOR STEP POSITION POTENTIOMETER

1. SEE DRAWING 1255692-10
2. MOTOR CHASSIS
3. SERVO DRIVE GROUNDING CLAMP

Drawing remarks

Tetra Pak

Designer LUP	Date 26/06/2003	Machine PT21 030V			
ECM No 117717	Denomination CIRCUIT DIAGRAM	Page Type OUTFEED SERVO MOTOR			
Company Tetra Pak Carton Ambient S.p.A.	Document No. 2635106-0003	Doc. type ELD	Version AA	Page 6	

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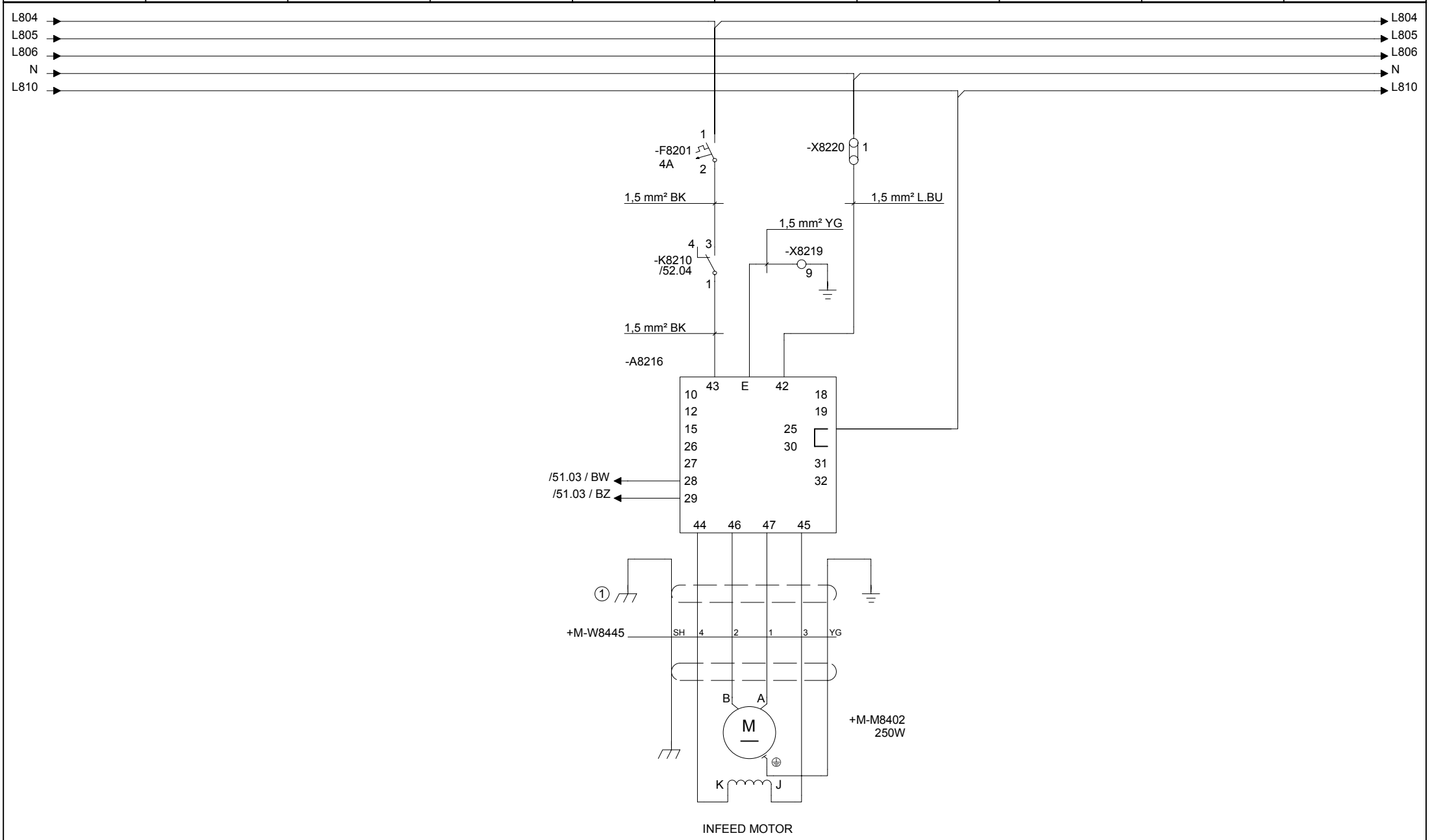

INFEED MOTOR

1. TO BE CONNECTED TO RACK GROUNDING RAIL

Drawing remarks

Tetra Pak

Designer	Date	Machine
LUP	26/06/2003	PT21 030V

ECM No	Denomination	Page Type
117717	CIRCUIT DIAGRAM	INFEED MOTOR

Company	Document No.	Doc. type	Version	Page
Tetra Pak Carton Ambient S.p.A.	2635106-0003	ELD	AA	7

RELEASED

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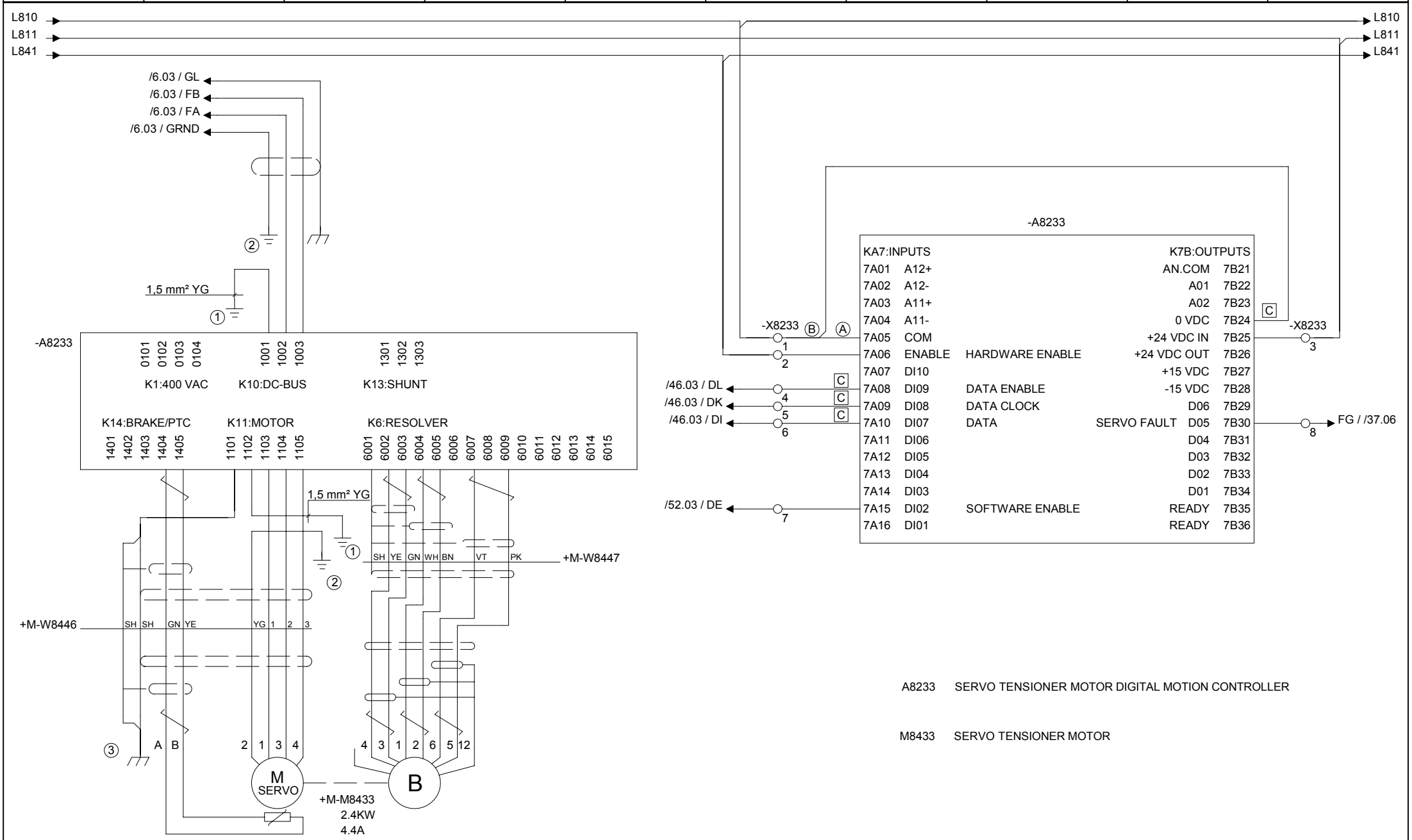

A8233 SERVO TENSIONER MOTOR DIGITAL MOTION CONTROLLER

M8433 SERVO TENSIONER MOTOR

1. CONNECT TO GROUND CLAMP
2. CONNECT TO HOLDER GROUND SCREW
3. MOTOR CHASSIS VIA CONNECTOR

Drawing remarks

Tetra Pak

Designer	Date	Machine
LUP	26/06/2003	PT21 030V

ECM No	Denomination	Page Type
117717	CIRCUIT DIAGRAM	SERVO TENSIONER MOTOR

Company	Document No.	Doc. type	Version	Page
Tetra Pak Carton Ambient S.p.A.	2635106-0003	ELD	AA	8

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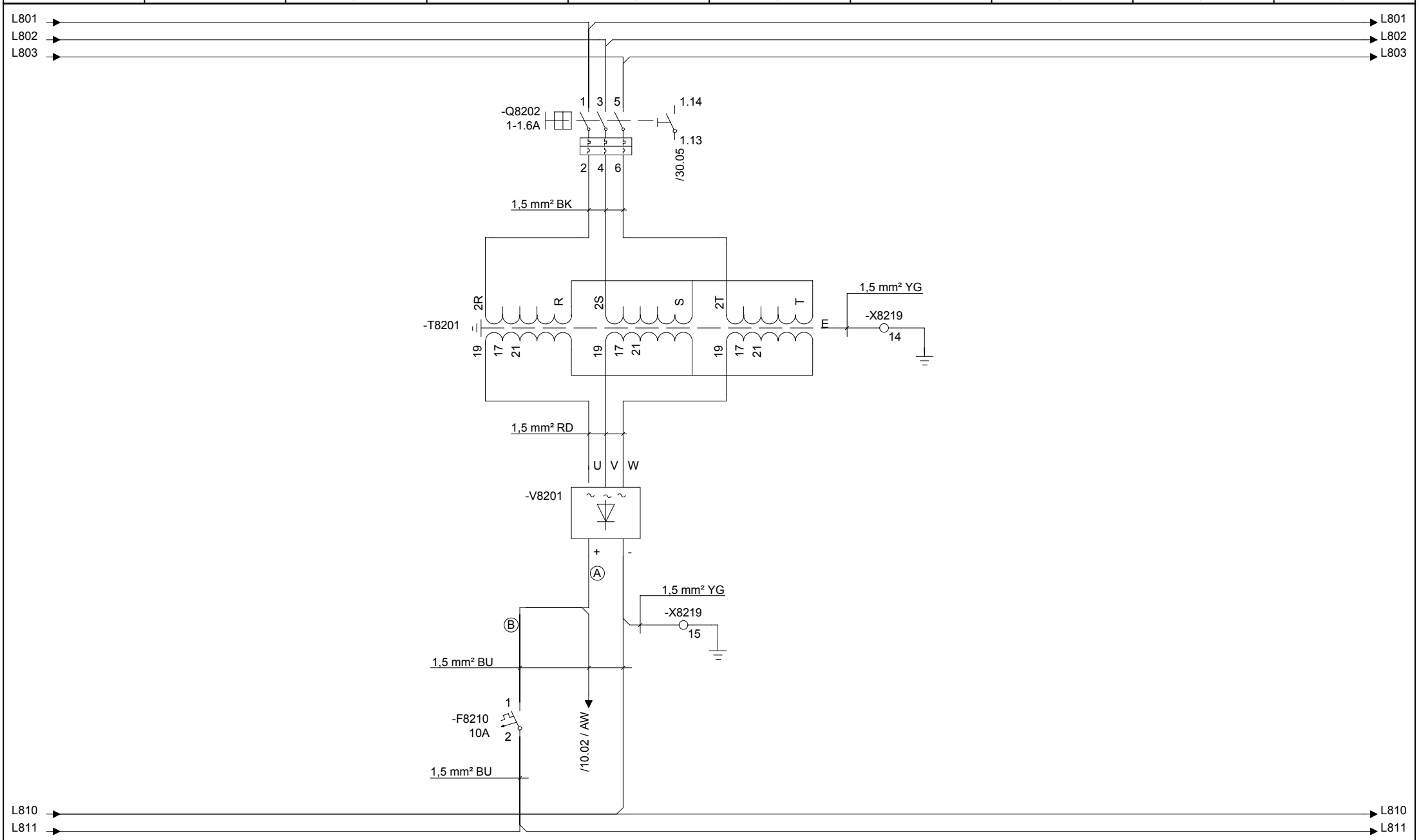

	Designer LUP	Date 26/06/2003	Machine PT21 030V		
Tetra Pak	ECM No 117717	Denomination CIRCUIT DIAGRAM	Page Type DC LINES GENERATION		
Drawing remarks	Company Tetra Pak Carton Ambient S.p.A.	Document No. 2635106-0003	Doc. type ELD	Version AA	Page 9

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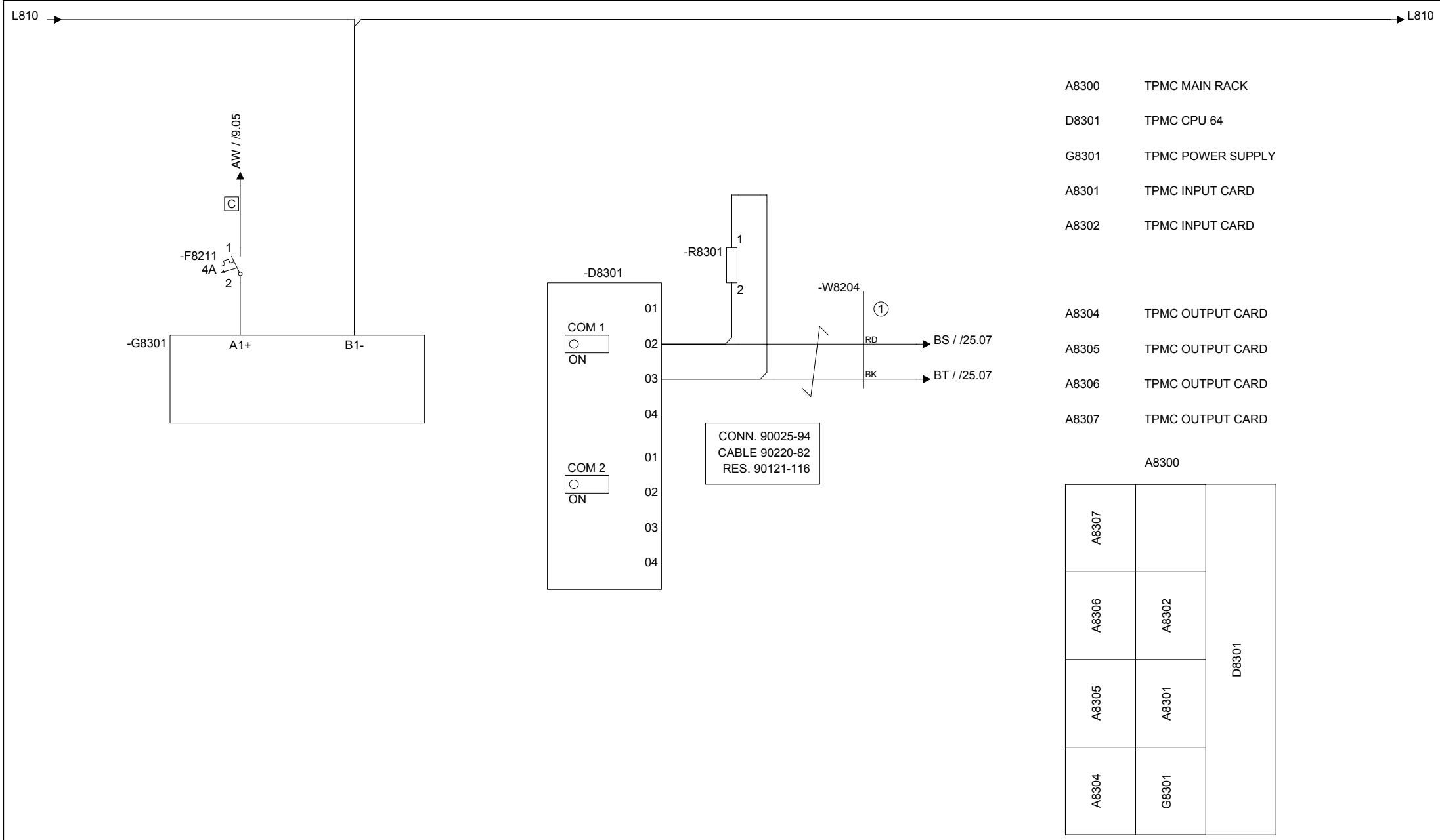

A8300	TPMC MAIN RACK
D8301	TPMC CPU 64
G8301	TPMC POWER SUPPLY
A8301	TPMC INPUT CARD
A8302	TPMC INPUT CARD
A8304	TPMC OUTPUT CARD
A8305	TPMC OUTPUT CARD
A8306	TPMC OUTPUT CARD
A8307	TPMC OUTPUT CARD

A8300

A8307		D8301
A8306	A8302	
A8305	A8301	
A8304	G8301	

1. DRAWING PART NUMBER 1260396

Drawing remarks

Tetra Pak

Designer LUP	Date 26/06/2003	Machine PT21 030V			
ECM No 117717	Denomination CIRCUIT DIAGRAM	Page Type PLC POWER/TPOP COMMUNICATIONS			
Company Tetra Pak Carton Ambient S.p.A.	Document No. 2635106-0003	Doc. type ELD	Version AA	Page 10	

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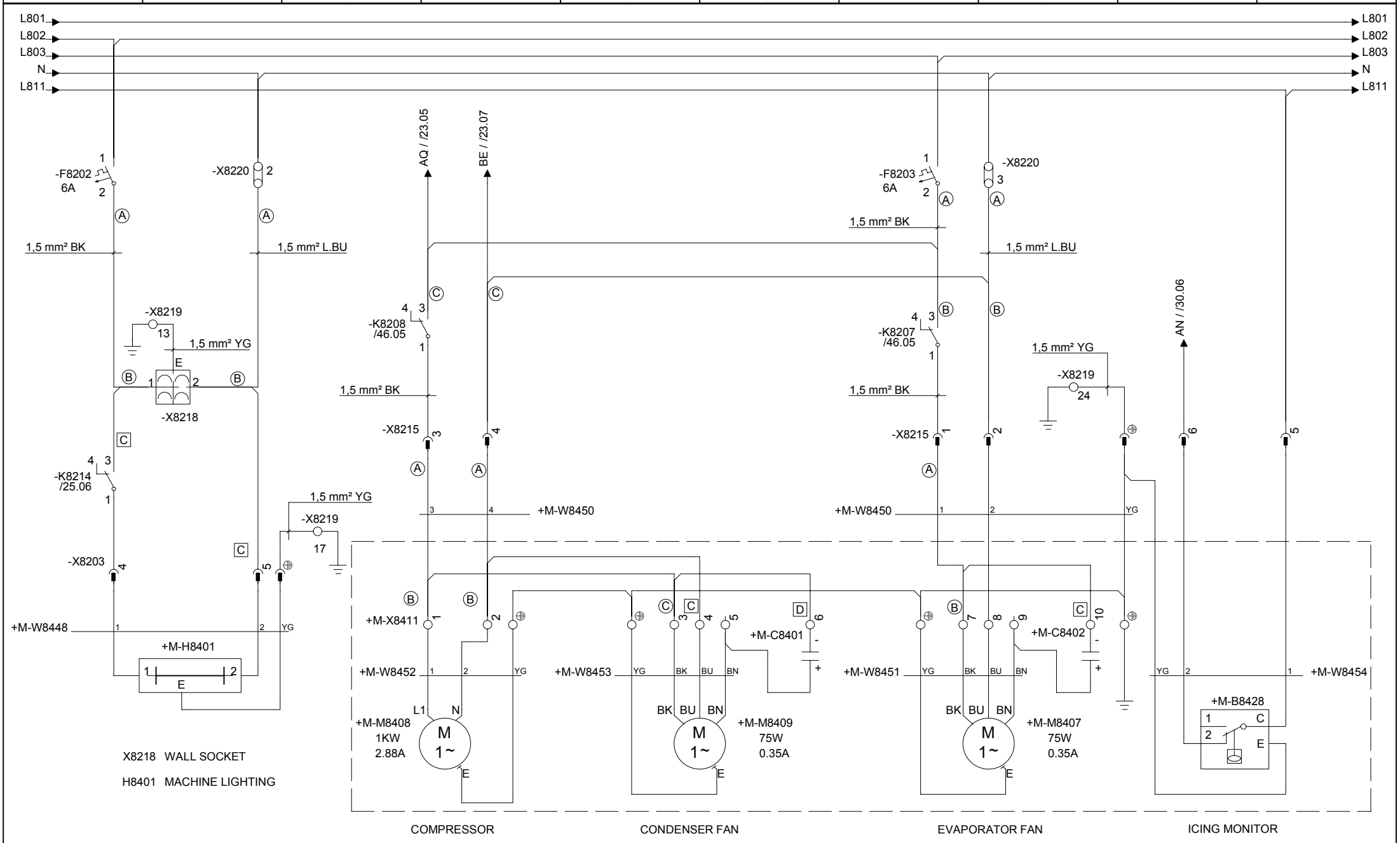

Tetra Pak	Designer LUP	Date 26/06/2003	Machine PT21 030V	
	ECM No 117717	Denomination CIRCUIT DIAGRAM	Page Type LIGTHING/AIR COOLER	
Drawing remarks	Company Tetra Pak Carton Ambient S.p.A.	Document No. 2635106-0003	Doc. type ELD	Version AA	Page 11

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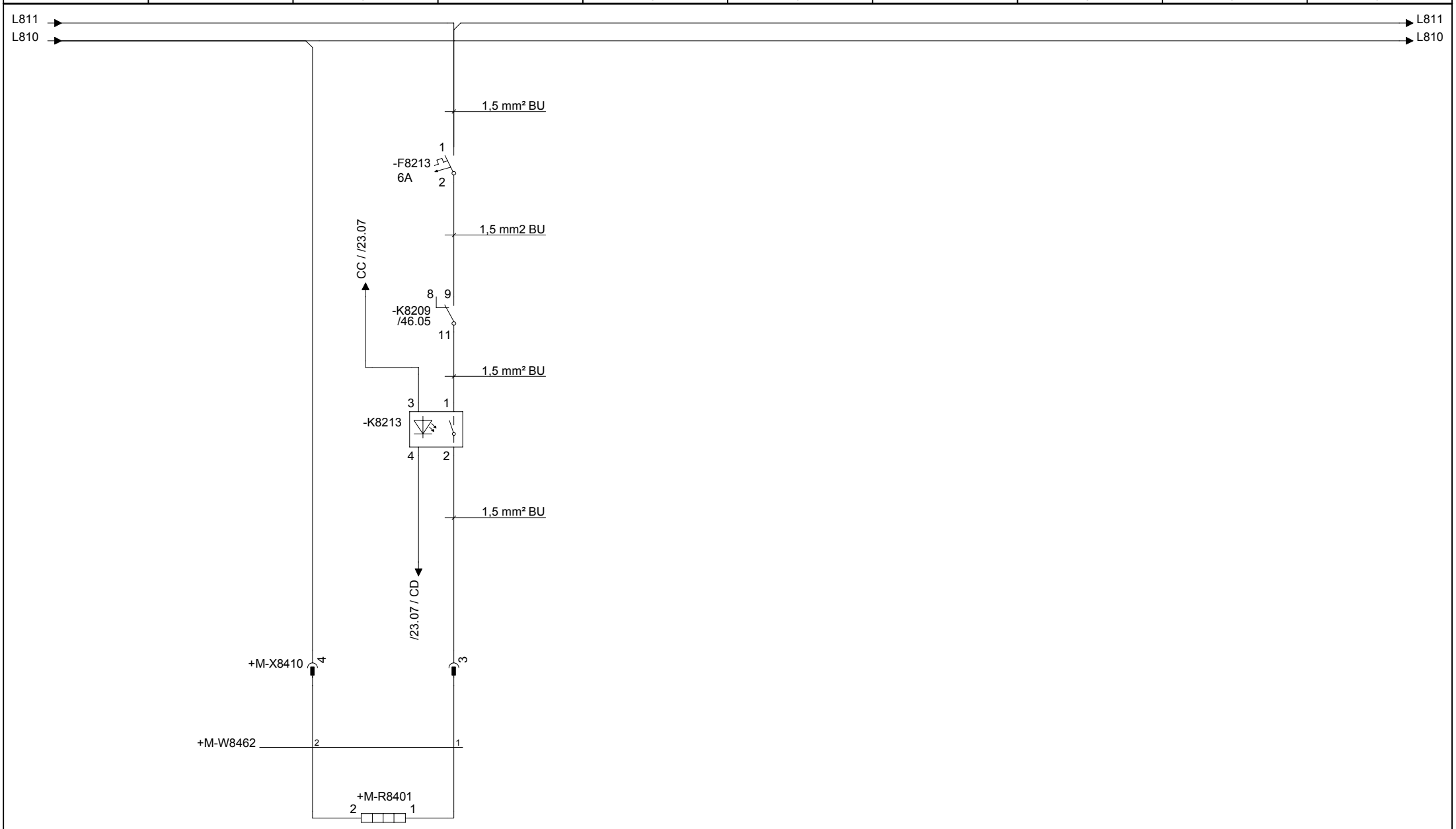

TAB SEALING PAD HEATER

Drawing remarks	Tetra Pak	Designer LUP	Date 26/06/2003	Machine PT21 030V			
		ECM No 117717	Denomination CIRCUIT DIAGRAM	Page Type TAB SEALING PAD HEATER			
		Company Tetra Pak Carton Ambient S.p.A.	Document No. 2635106-0003	Doc. type ELD	Version AA	Page 12	

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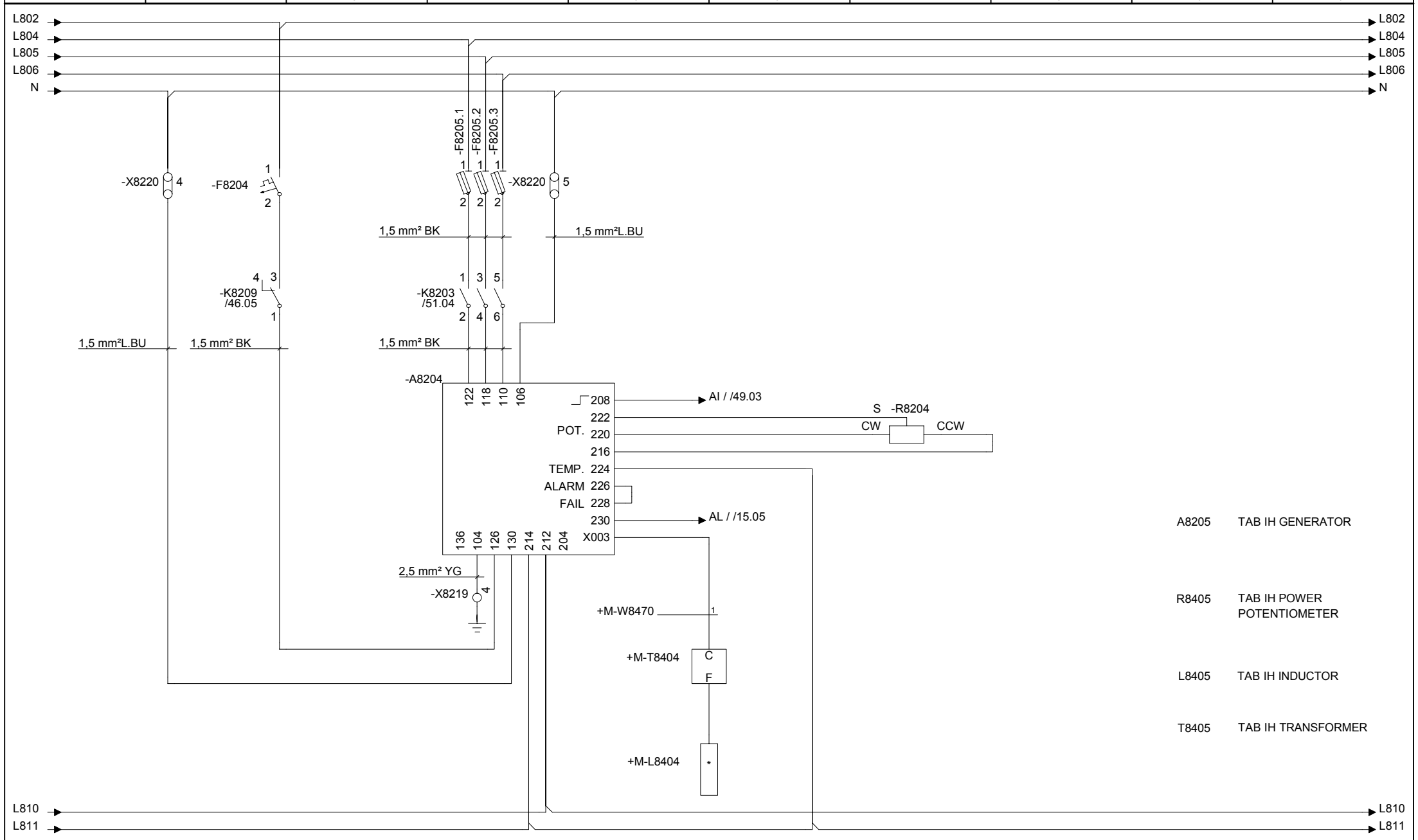

A8205	TAB IH GENERATOR
R8405	TAB IH POWER POTENTIOMETER
L8405	TAB IH INDUCTOR
T8405	TAB IH TRANSFORMER

Drawing remarks

Tetra Pak

Designer LUP	Date 26/06/2003	Machine PT21 030V			
ECM No 117717	Denomination CIRCUIT DIAGRAM	Page Type IH GENERATOR: TAB			
Company Tetra Pak Carton Ambient S.p.A.	Document No. 2635106-0003	Doc. type ELD	Version AA	Page 14	

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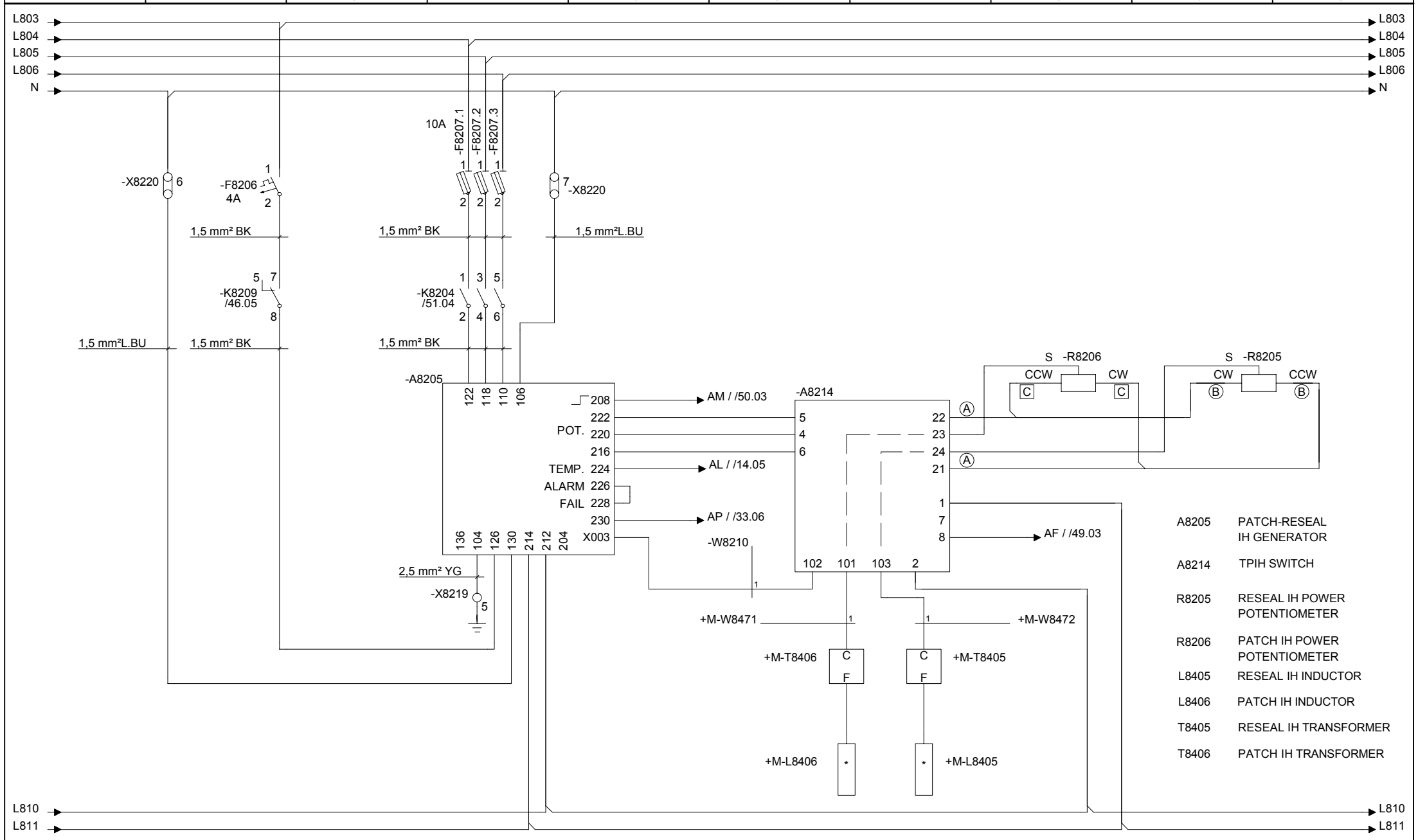

A8205	PATCH-RESEAL IH GENERATOR
A8214	TPIH SWITCH
R8205	RESEAL IH POWER POTENTIOMETER
R8206	PATCH IH POWER POTENTIOMETER
L8405	RESEAL IH INDUCTOR
L8406	PATCH IH INDUCTOR
T8405	RESEAL IH TRANSFORMER
T8406	PATCH IH TRANSFORMER

Drawing remarks

Tetra Pak

Designer LUP	Date 26/06/2003	Machine PT21 030V			
ECM No 117717	Denomination CIRCUIT DIAGRAM	Page Type IH GENERATOR: PATCH/RESEAL			
Company Tetra Pak Carton Ambient S.p.A.	Document No. 2635106-0003	Doc. type ELD	Version AA	Page 15	

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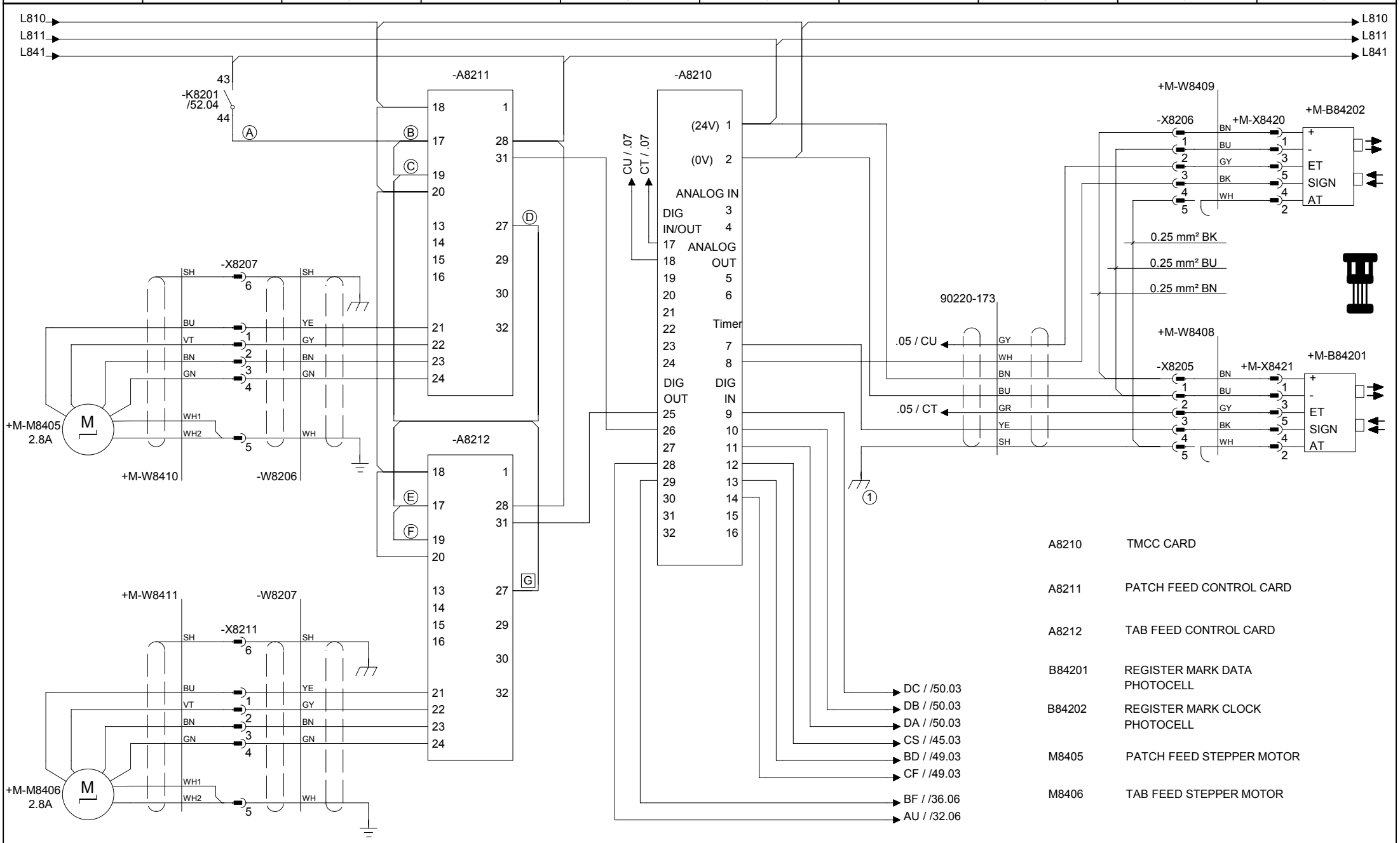

A8210	TMCC CARD
A8211	PATCH FEED CONTROL CARD
A8212	TAB FEED CONTROL CARD
B84201	REGISTER MARK DATA PHOTOCELL
B84202	REGISTER MARK CLOCK PHOTOCELL
M8405	PATCH FEED STEPPER MOTOR
M8406	TAB FEED STEPPER MOTOR

1. CONNECT TO EARTH BAR

Drawing remarks

Tetra Pak

Designer	Date	Machine
LUP	26/06/2003	PT21 030V

ECM No	Denomination	Page Type
117717	CIRCUIT DIAGRAM	REG. MARK/PATCH TAB FEEDERS

Company	Document No.	Doc. type	Version	Page
Tetra Pak Carton Ambient S.p.A.	2635106-0003	ELD	AA	20

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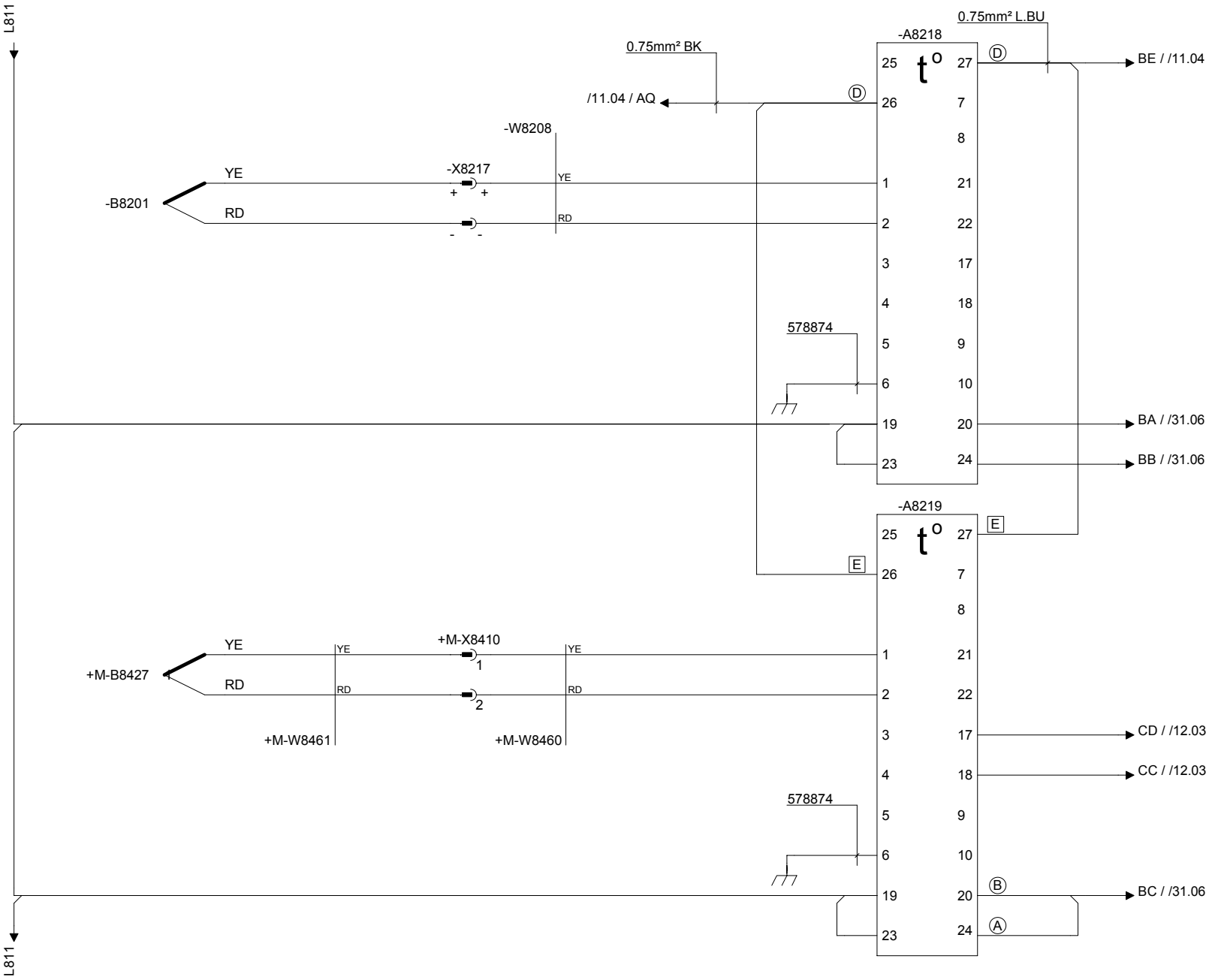

A8218 ELECTRICAL CABINET COOLER TEMPERATURE REGULATOR

B8201 ELECTRICAL CABINET COOLER TEMPERATURE PROBE

A8219 TAB SEALING PAD HEATER TEMPERATURE REGULATOR

B8427 TAB SEALING PAD HEATER TEMPERATURE PROBE

Drawing remarks	Tetra Pak	Designer LUP	Date 26/06/2003	Machine PT21 030V
		ECM No 117717	Denomination CIRCUIT DIAGRAM	Page Type TEMPERATURE REGULATORS
	Company Tetra Pak Carton Ambient S.p.A.	Document No. 2635106-0003	Doc. type ELD	Version AA / Page 23

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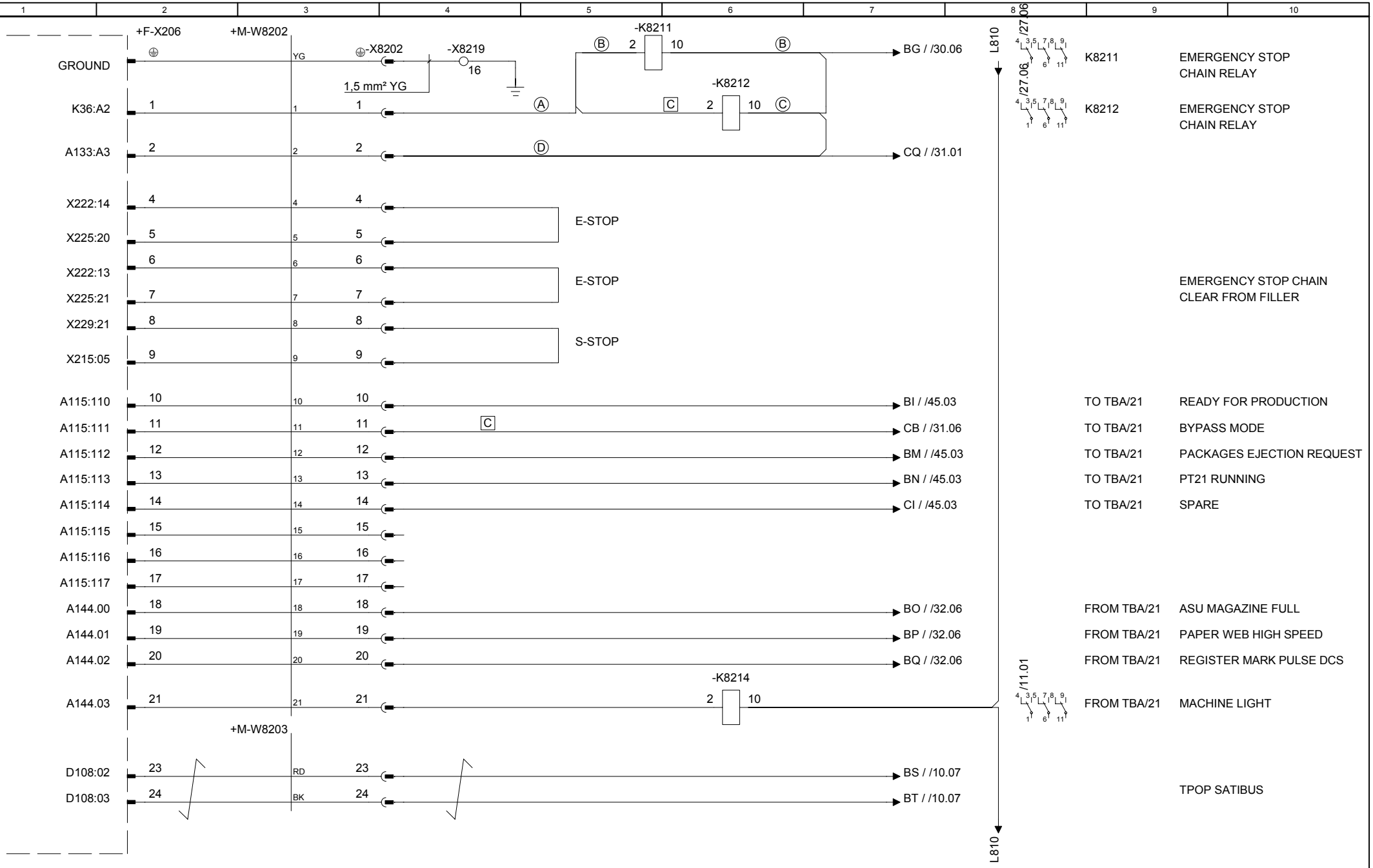

Drawing remarks	Tetra Pak	Designer LUP	Date 26/06/2003	Machine PT21 030V	
		ECM No 117717	Denomination CIRCUIT DIAGRAM	Page Type FILLER INTERFACE	
		Company Tetra Pak Carton Ambient S.p.A.	Document No. 2635106-0003	Doc. type ELD	Version AA	Page 25

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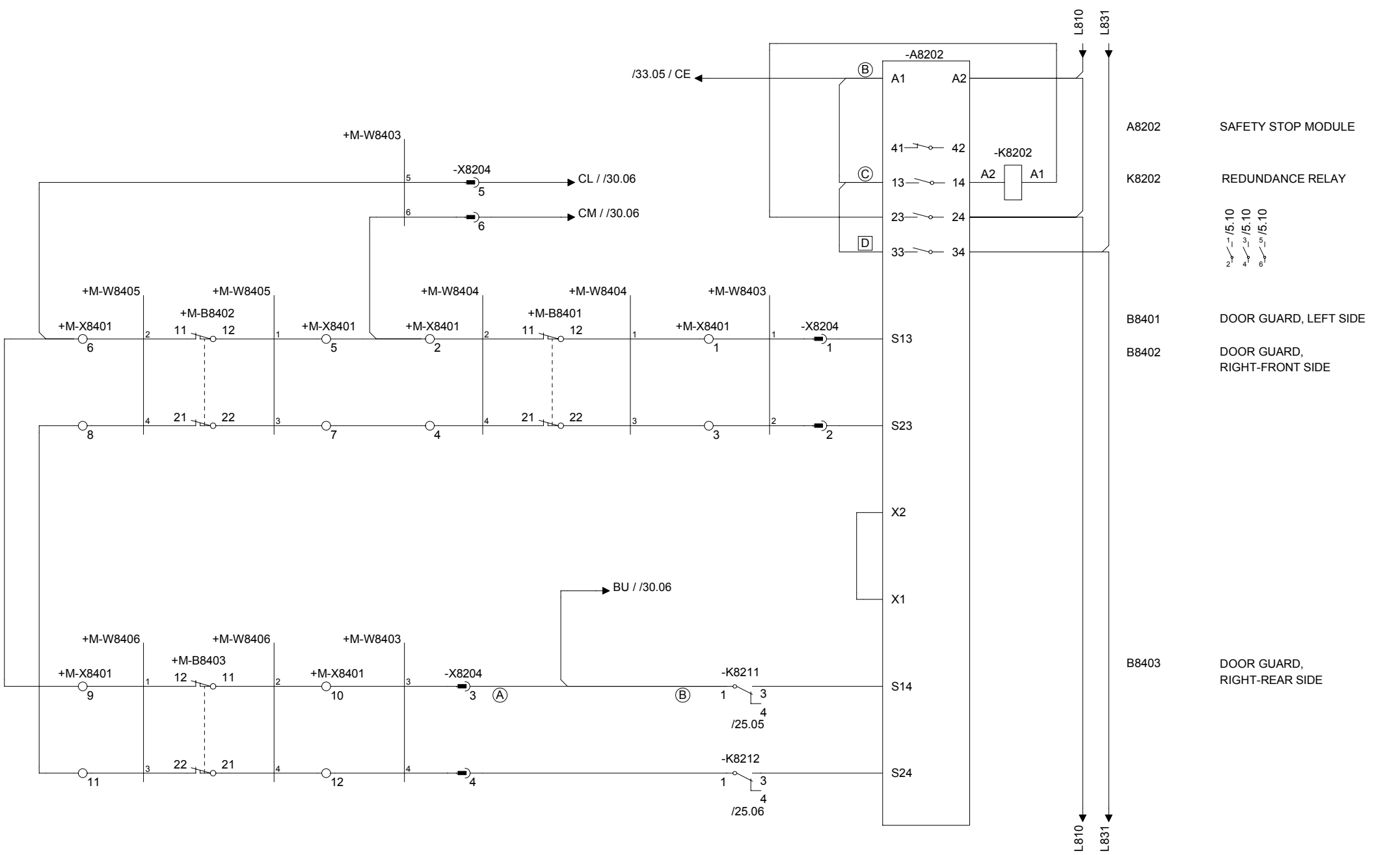

A8202	SAFETY STOP MODULE
K8202	REDUNDANCE RELAY
B8401	DOOR GUARD, LEFT SIDE
B8402	DOOR GUARD, RIGHT-FRONT SIDE
B8403	DOOR GUARD, RIGHT-REAR SIDE

Drawing remarks

Tetra Pak

Designer LUP	Date 26/06/2003	Machine PT21 030V			
ECM No 117717	Denomination CIRCUIT DIAGRAM	Page Type SAFETY MODLE: DOOR CHAIN			
Company Tetra Pak Carton Ambient S.p.A.	Document No. 2635106-0003	Doc. type ELD	Version AA	Page 27	

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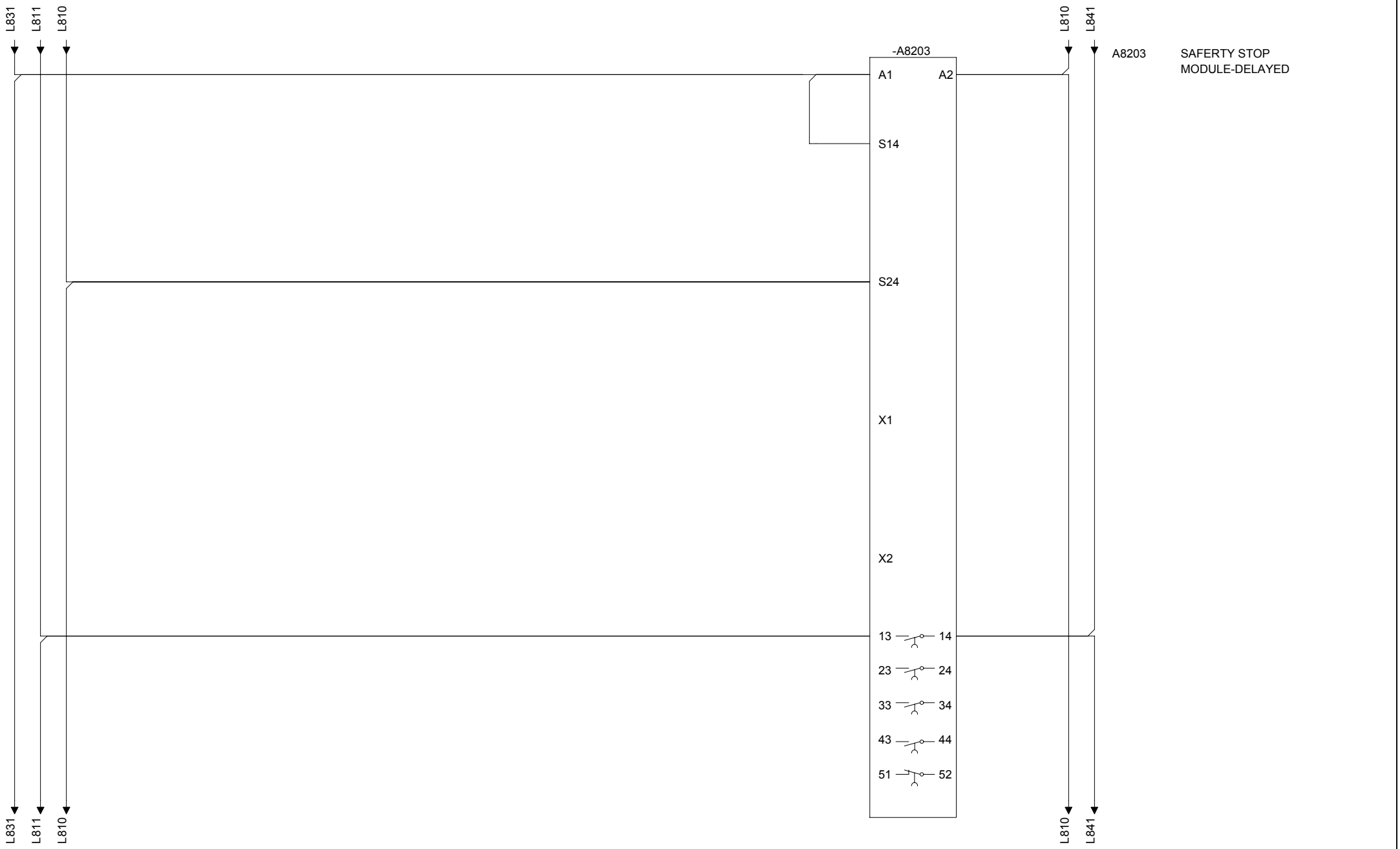

Drawing remarks	Tetra Pak	Designer LUP	Date 26/06/2003	Machine PT21 030V			
		ECM No 117717	Denomination CIRCUIT DIAGRAM	Page Type SAFETY MODLE: SERVO TIMED			
	Company Tetra Pak Carton Ambient S.p.A.		Document No. 2635106-0003	Doc. type ELD	Version AA	Page 28	

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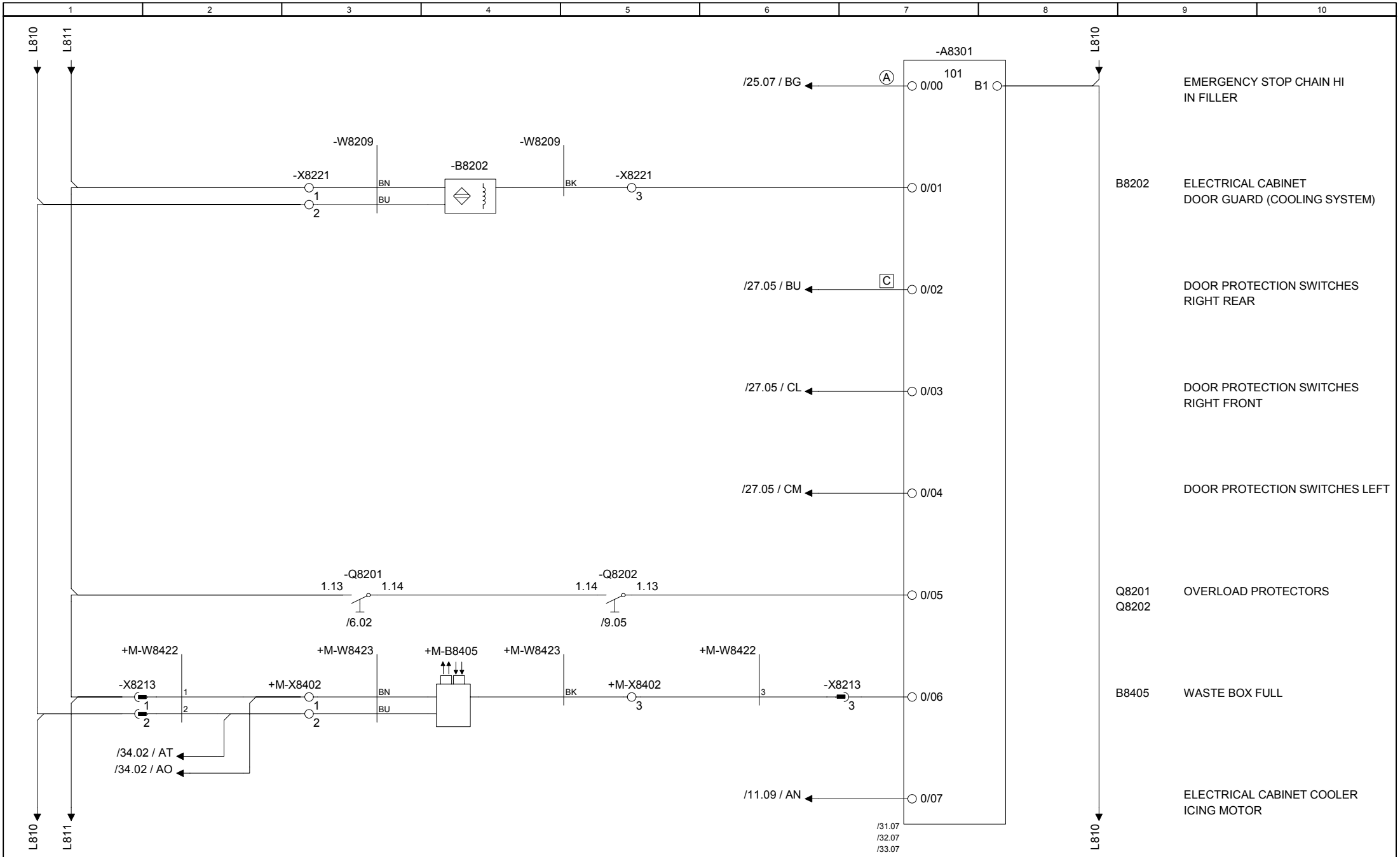

Drawing remarks	Tetra Pak	Designer LUP	Date 26/06/2003	Machine PT21 030V
		ECM No 117717	Denomination CIRCUIT DIAGRAM	Page Type PLC - IN
	Company Tetra Pak Carton Ambient S.p.A.	Document No. 2635106-0003	Doc. type ELD	Version AA	Page 30

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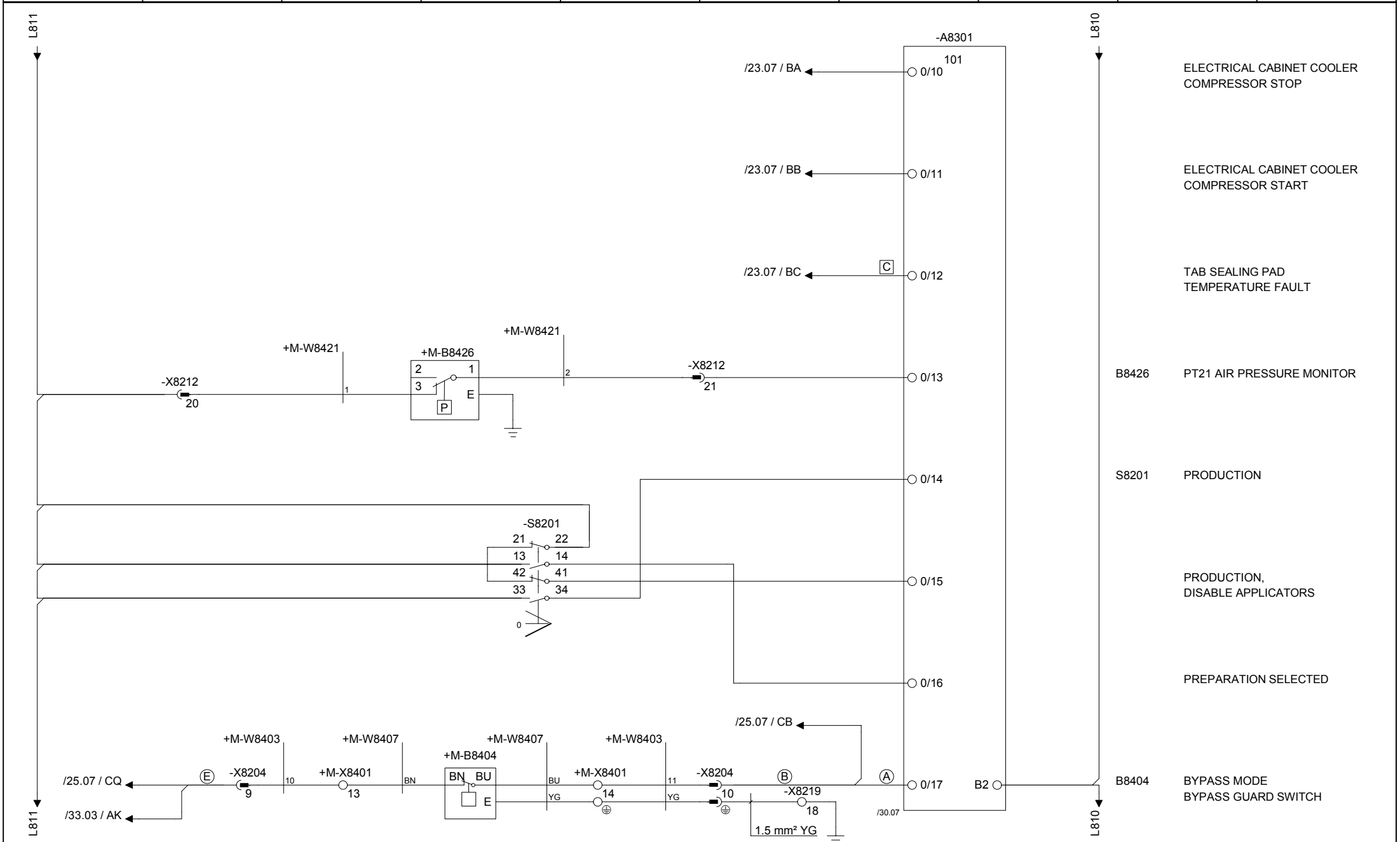

Drawing remarks	Tetra Pak	Designer LUP	Date 26/06/2003	Machine PT21 030V	
		ECM No 117717	Denomination CIRCUIT DIAGRAM	Page Type PLC - IN	
	Company Tetra Pak Carton Ambient S.p.A.	Document No. 2635106-0003	Doc. type ELD	Version AA	Page 31

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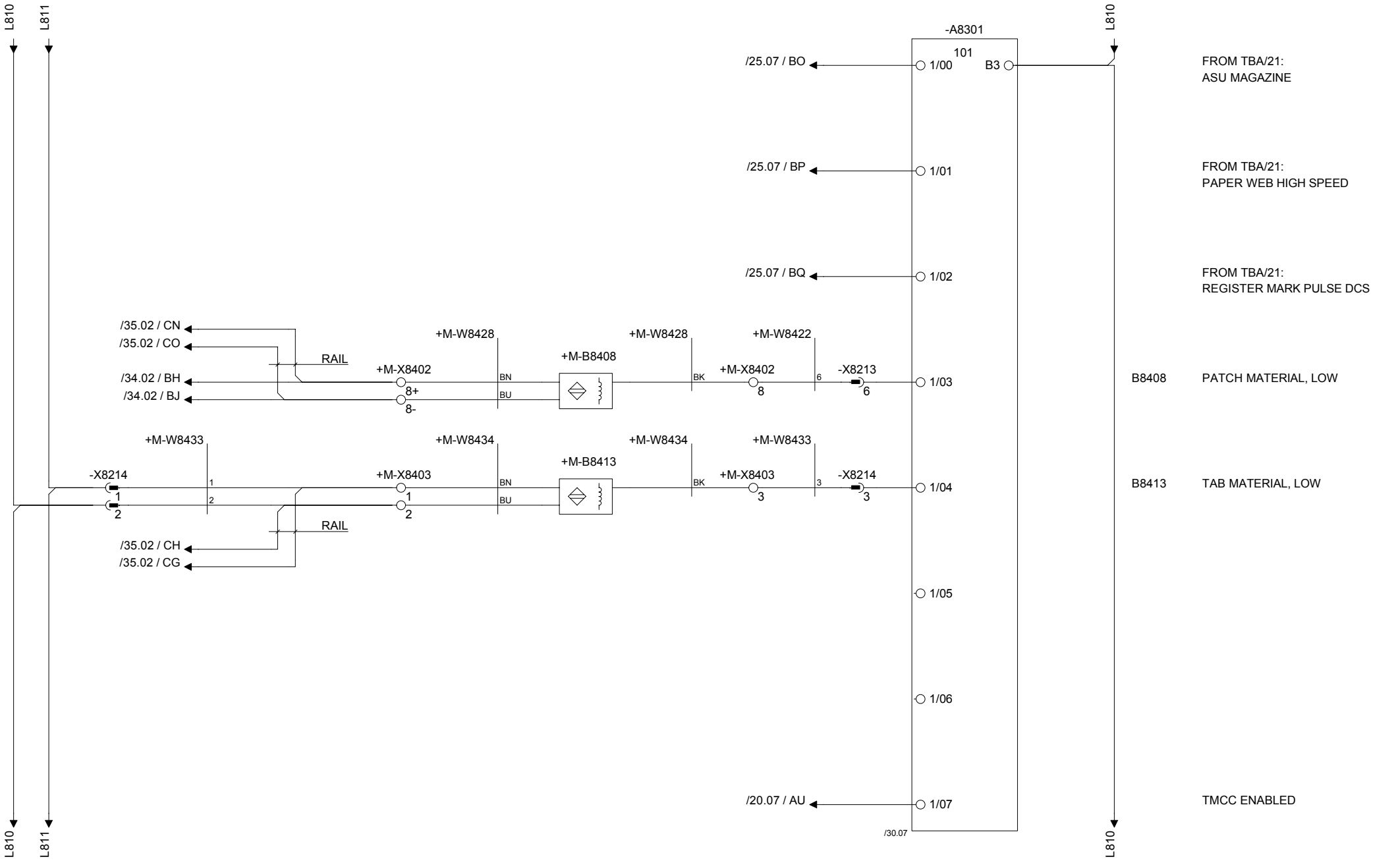

Drawing remarks	Tetra Pak	Designer LUP	Date 26/06/2003	Machine PT21 030V
		ECM No 117717	Denomination CIRCUIT DIAGRAM	Page Type PLC - IN
	Company Tetra Pak Carton Ambient S.p.A.	Document No. 2635106-0003	Doc. type ELD	Version AA	Page 32

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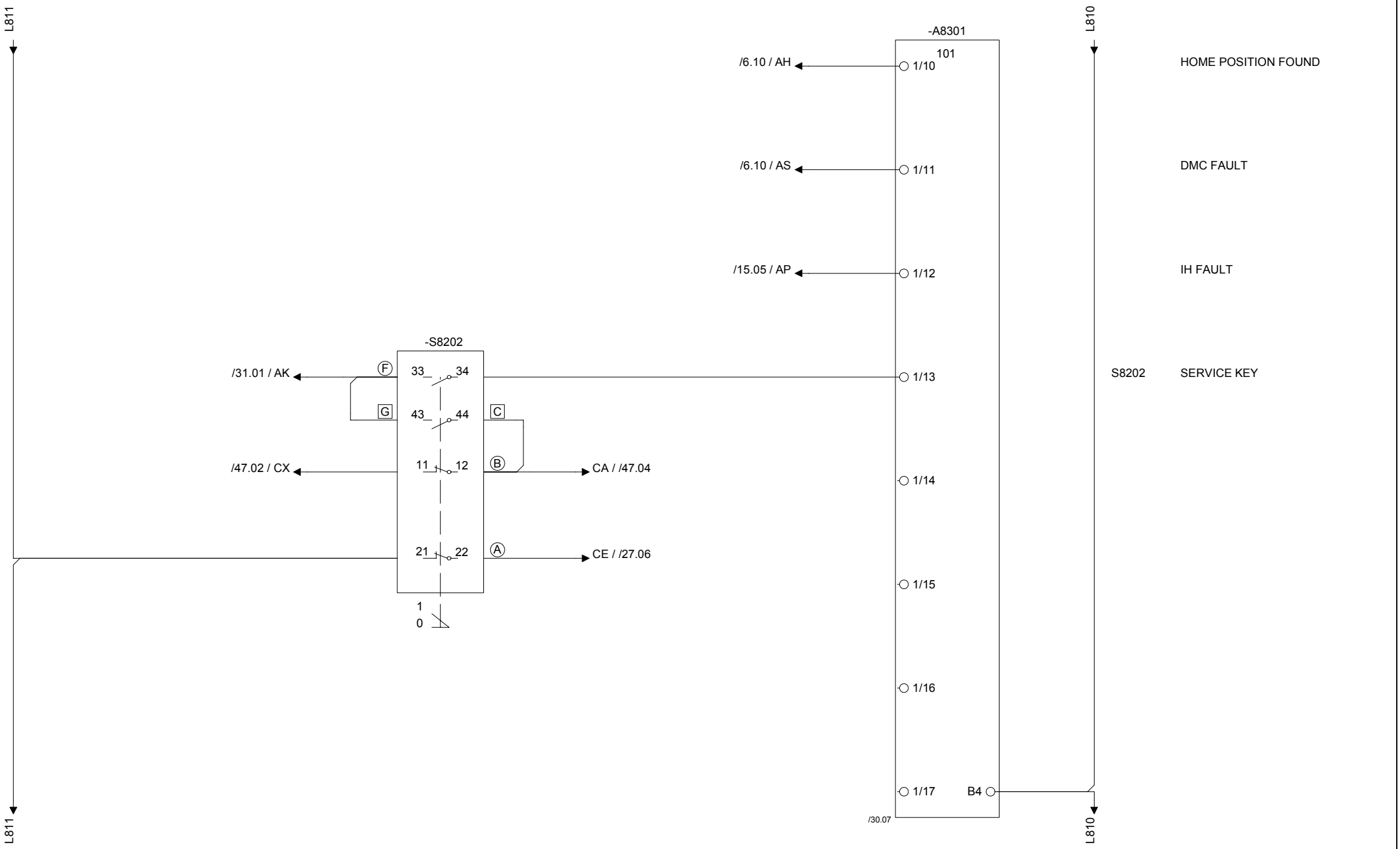

	Tetra Pak	Designer LUP	Date 26/06/2003	Machine PT21 030V	
		ECM No 117717	Denomination CIRCUIT DIAGRAM	Page Type PLC - IN	
Drawing remarks		Company Tetra Pak Carton Ambient S.p.A.	Document No. 2635106-0003	Doc. type ELD	Version AA	Page 33

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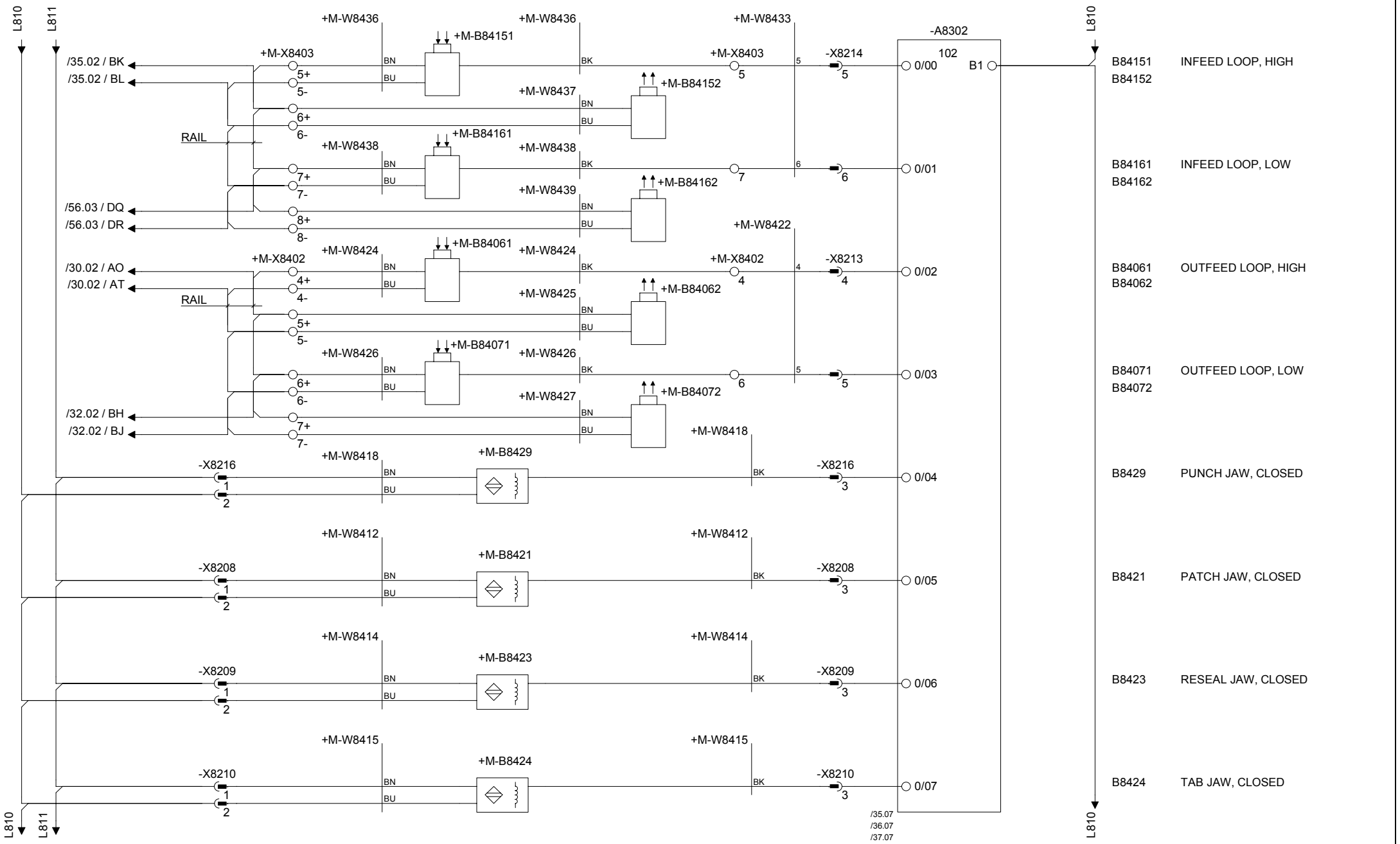

Drawing remarks	Tetra Pak	Designer LUP	Date 26/06/2003	Machine PT21 030V			
		ECM No 117717	Denomination CIRCUIT DIAGRAM	Page Type PLC - IN			
		Company Tetra Pak Carton Ambient S.p.A.	Document No. 2635106-0003	Doc. type ELD	Version AA	Page 34	

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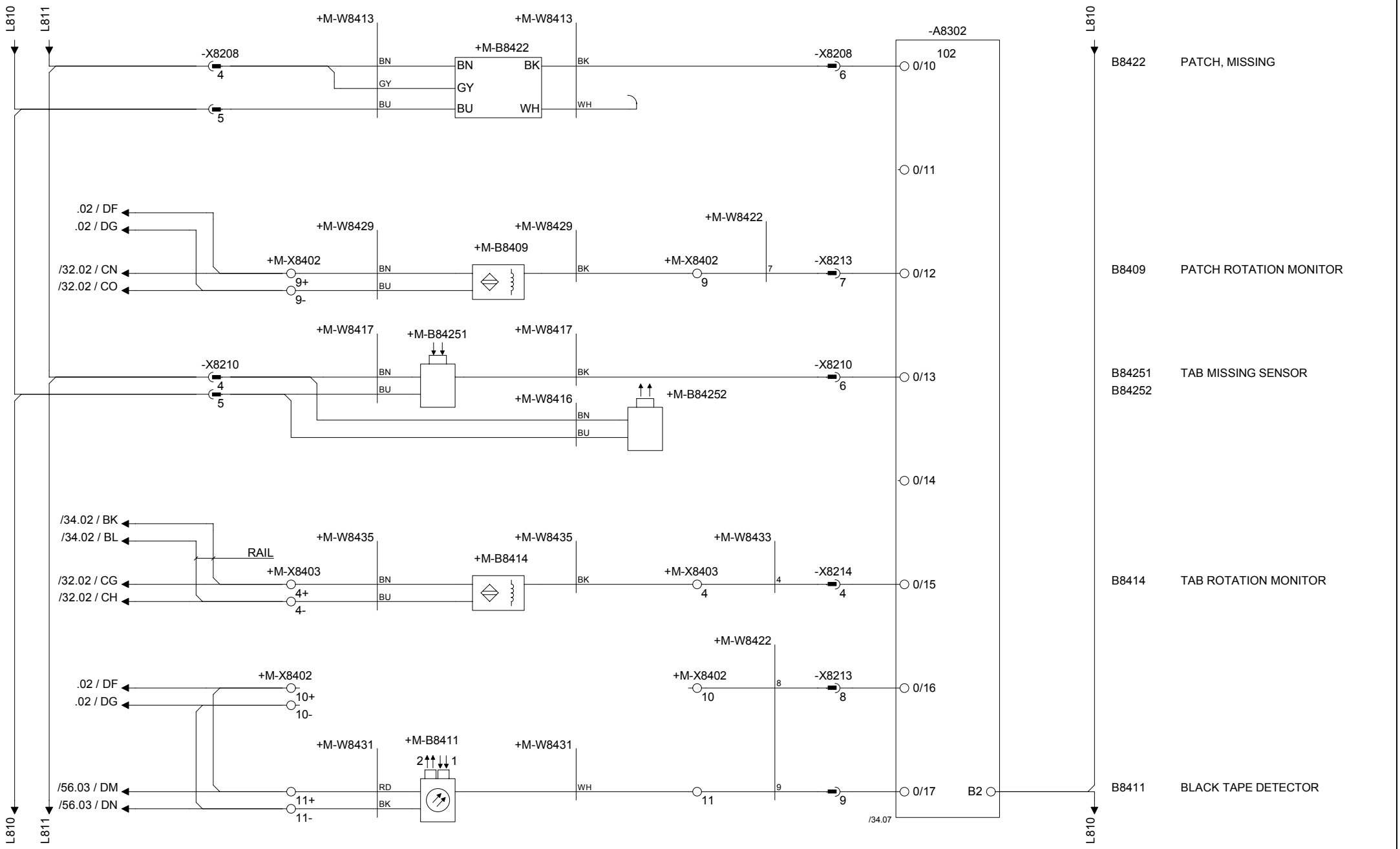

Drawing remarks	Tetra Pak	Designer LUP	Date 26/06/2003	Machine PT21 030V
		ECM No 117717	Denomination CIRCUIT DIAGRAM	Page Type PLC - IN
	Company Tetra Pak Carton Ambient S.p.A.	Document No. 2635106-0003	Doc. type ELD	Version AA	Page 35

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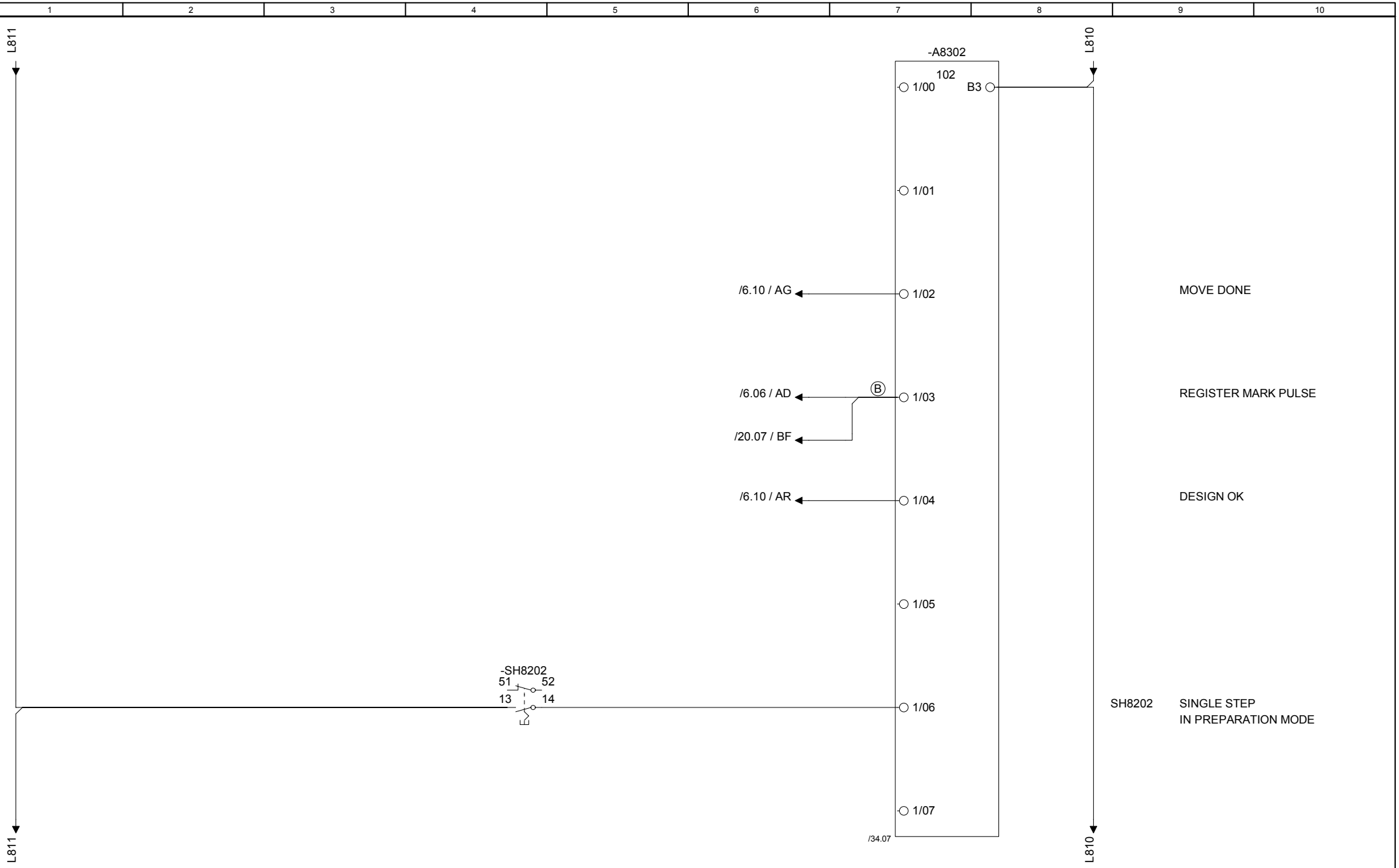

	Tetra Pak	Designer LUP	Date 26/06/2003	Machine PT21 030V			
		ECM No 117717	Denomination CIRCUIT DIAGRAM	Page Type PLC - IN			
Drawing remarks		Company Tetra Pak Carton Ambient S.p.A.		Document No. 2635106-0003	Doc. type ELD	Version AA	Page 36

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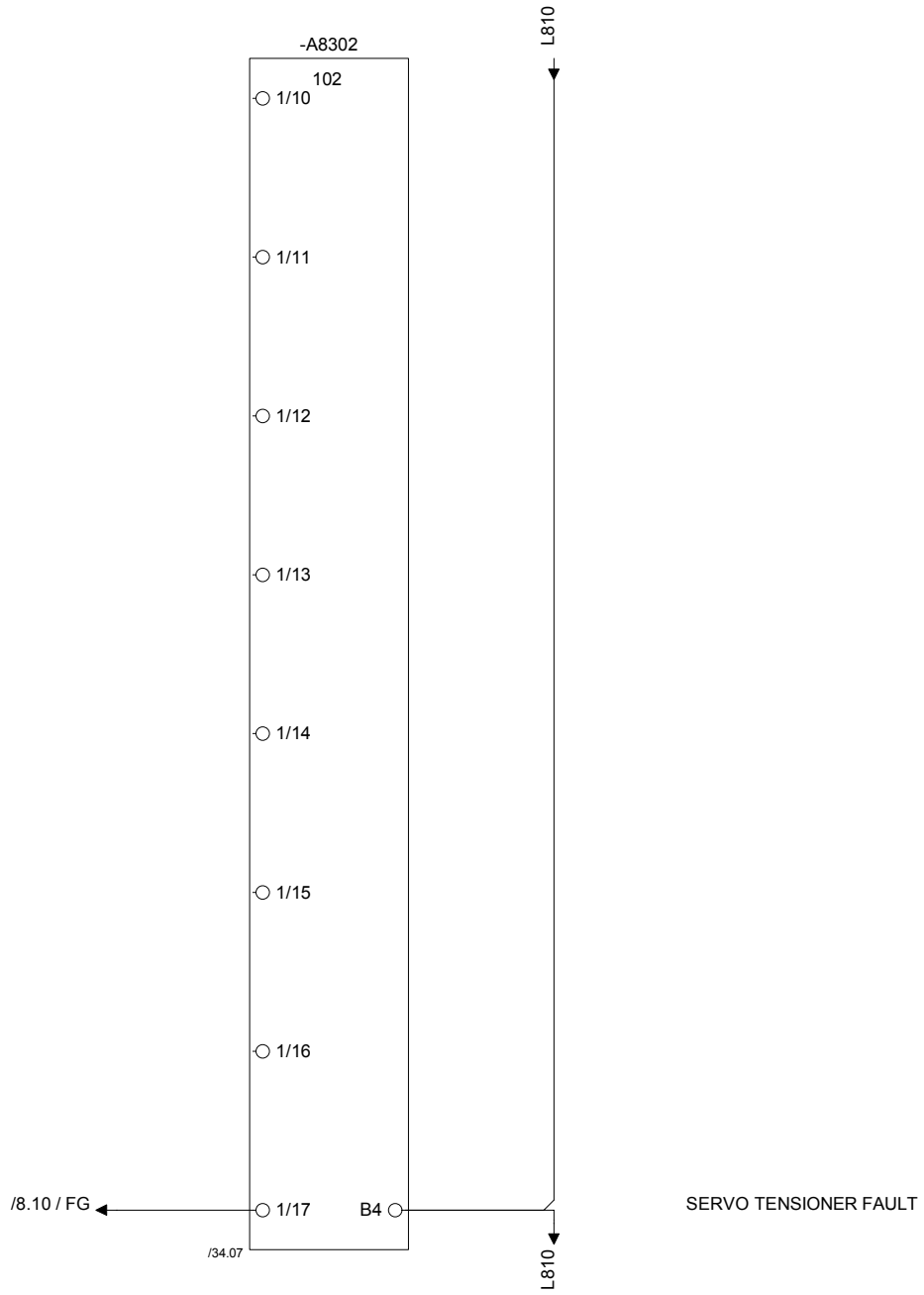

Drawing remarks	Tetra Pak	Designer LUP	Date 26/06/2003	Machine PT21 030V	
		ECM No 117717	Denomination CIRCUIT DIAGRAM	Page Type PLC - IN	
		Company Tetra Pak Carton Ambient S.p.A.	Document No. 2635106-0003	Doc. type ELD	Version AA	Page 37

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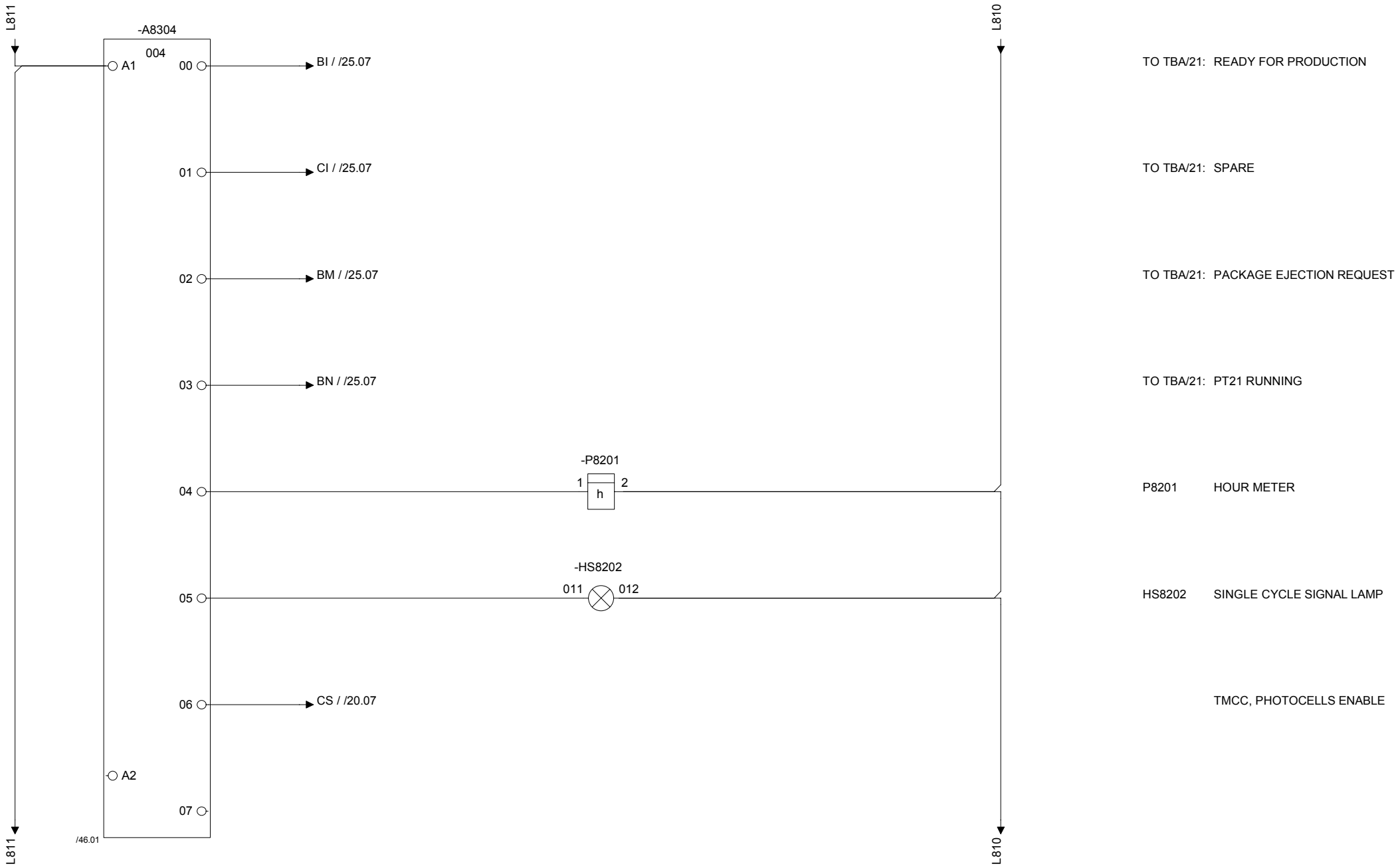

Drawing remarks	Tetra Pak	Designer LUP	Date 26/06/2003	Machine PT21 030V			
		ECM No 117717	Denomination CIRCUIT DIAGRAM	Page Type PLC - OUT			
	Company Tetra Pak Carton Ambient S.p.A.		Document No. 2635106-0003	Doc. type ELD	Version AA	Page 45	

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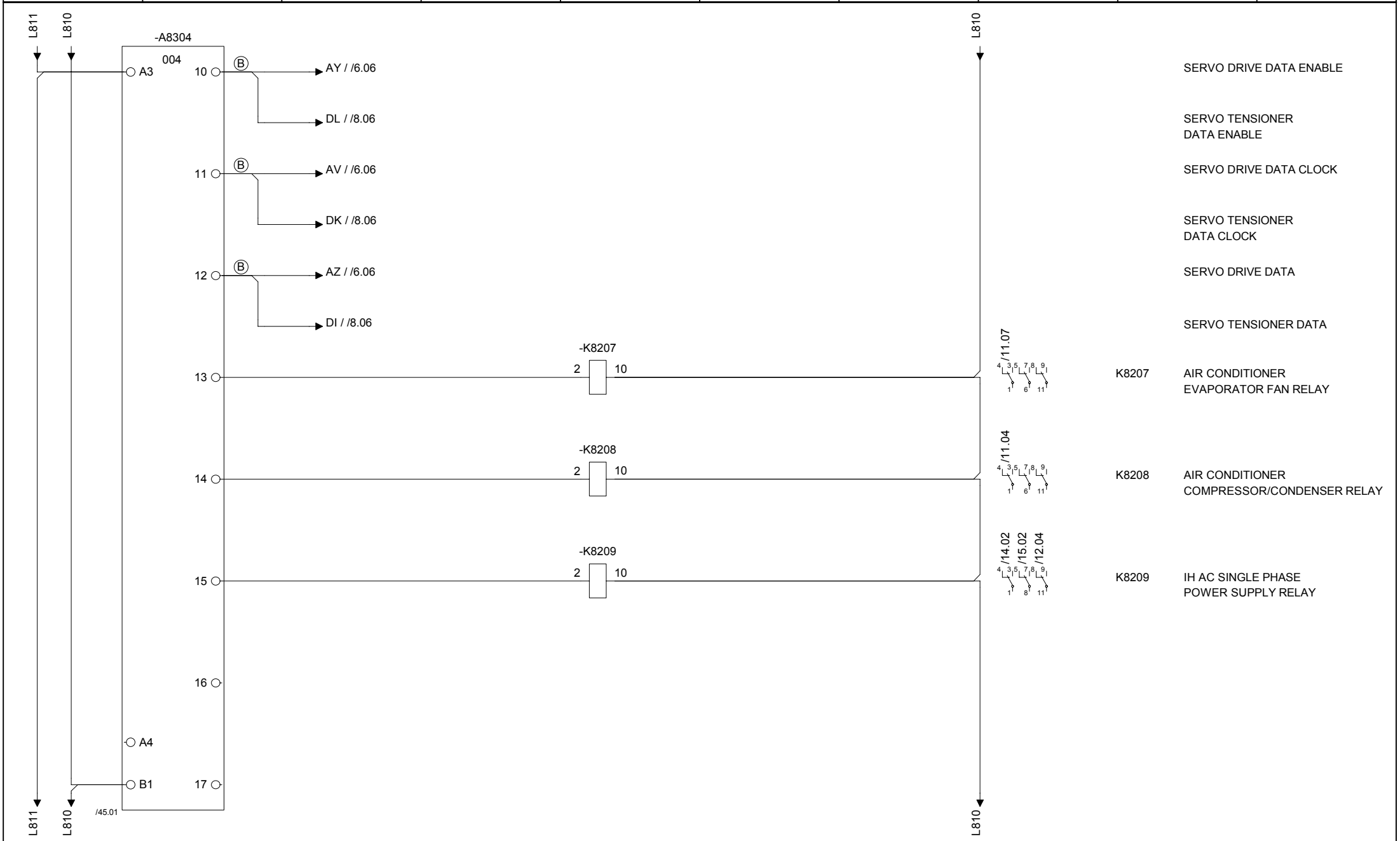

Drawing remarks	Tetra Pak	Designer LUP	Date 26/06/2003	Machine PT21 030V			
		ECM No 117717	Denomination CIRCUIT DIAGRAM	Page Type PLC - OUT			
	Company Tetra Pak Carton Ambient S.p.A.		Document No. 2635106-0003	Doc. type ELD	Version AA	Page 46	

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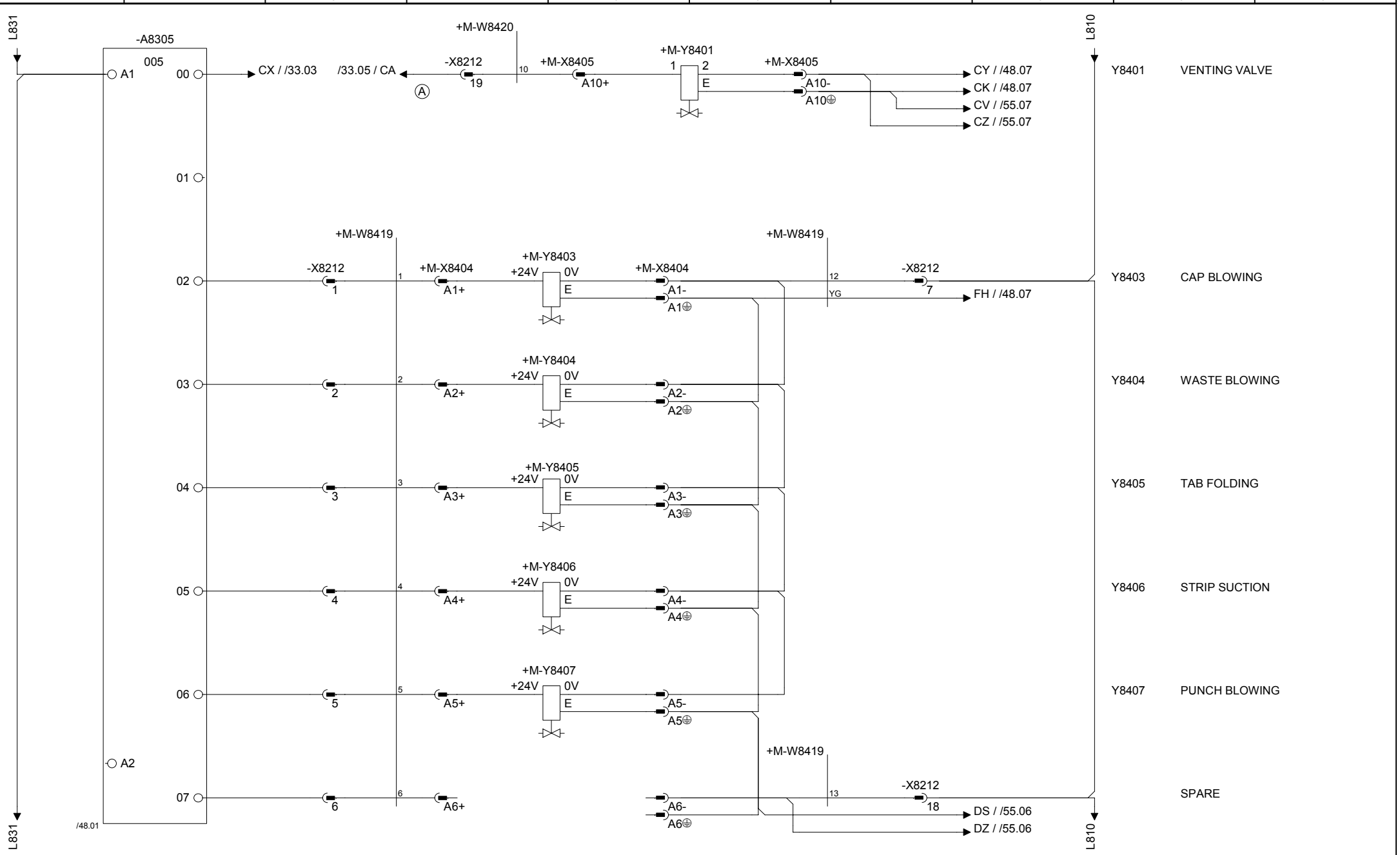

Drawing remarks	Tetra Pak	Designer LUP	Date 26/06/2003	Machine PT21 030V			
		ECM No 117717	Denomination CIRCUIT DIAGRAM	Page Type PLC - OUT: VALVES			
	Company Tetra Pak Carton Ambient S.p.A.		Document No. 2635106-0003	Doc. type ELD	Version AA	Page 47	

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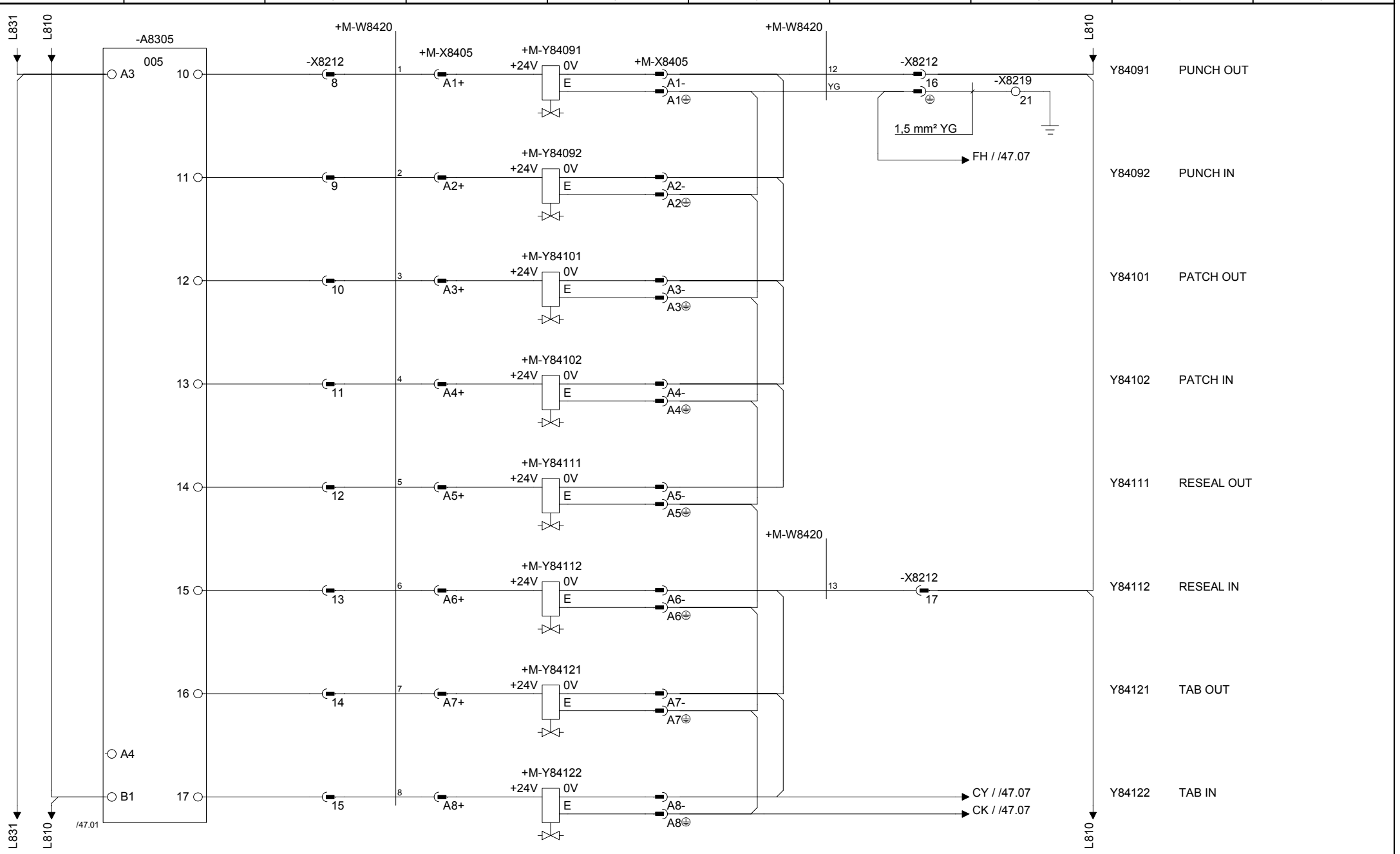

Drawing remarks	Tetra Pak	Designer LUP	Date 26/06/2003	Machine PT21 030V	
		ECM No 117717	Denomination CIRCUIT DIAGRAM	Page Type PLC - OUT: VALVES	
		Company Tetra Pak Carton Ambient S.p.A.	Document No. 2635106-0003	Doc. type ELD	Version AA	Page 48

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Drawing remarks	Tetra Pak	Designer LUP	Date 26/06/2003	Machine PT21 030V			
		ECM No 117717	Denomination CIRCUIT DIAGRAM	Page Type PLC - OUT			
	Company Tetra Pak Carton Ambient S.p.A.		Document No. 2635106-0003	Doc. type ELD	Version AA	Page 49	

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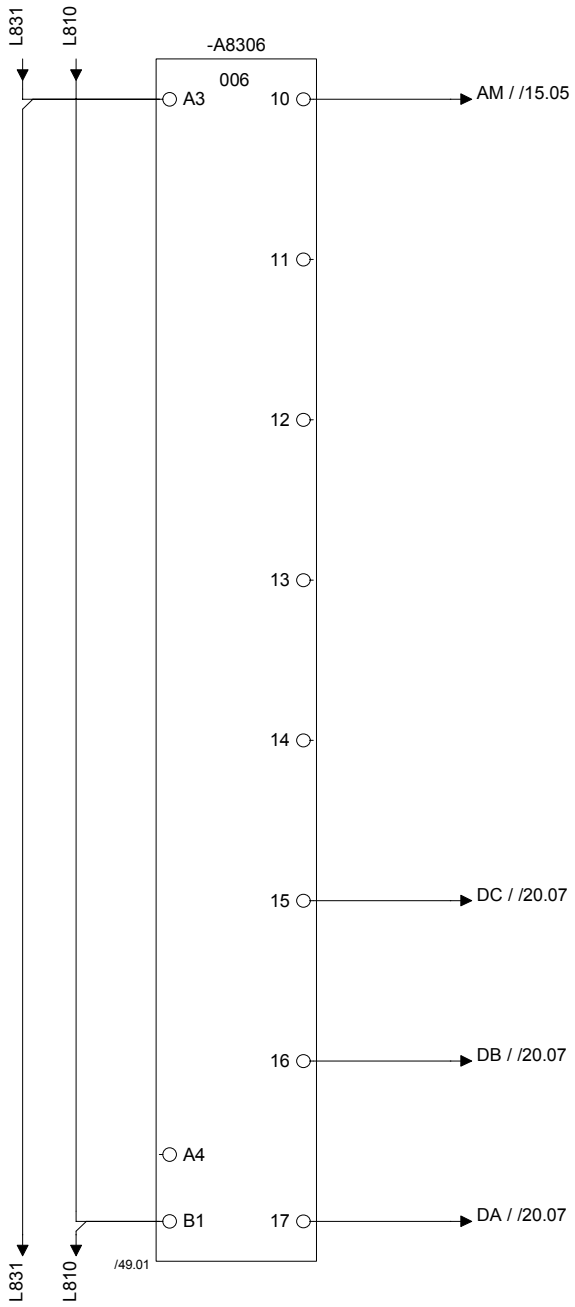

PATCH/RESEAL IH PULSE

TMCC, DATA ENABLE

TMCC, DATA CLOCK

TMCC, DATA

Drawing remarks

Tetra Pak

Designer LUP	Date 26/06/2003	Machine PT21 030V		
ECM No 117717	Denomination CIRCUIT DIAGRAM	Page Type PLC - OUT		
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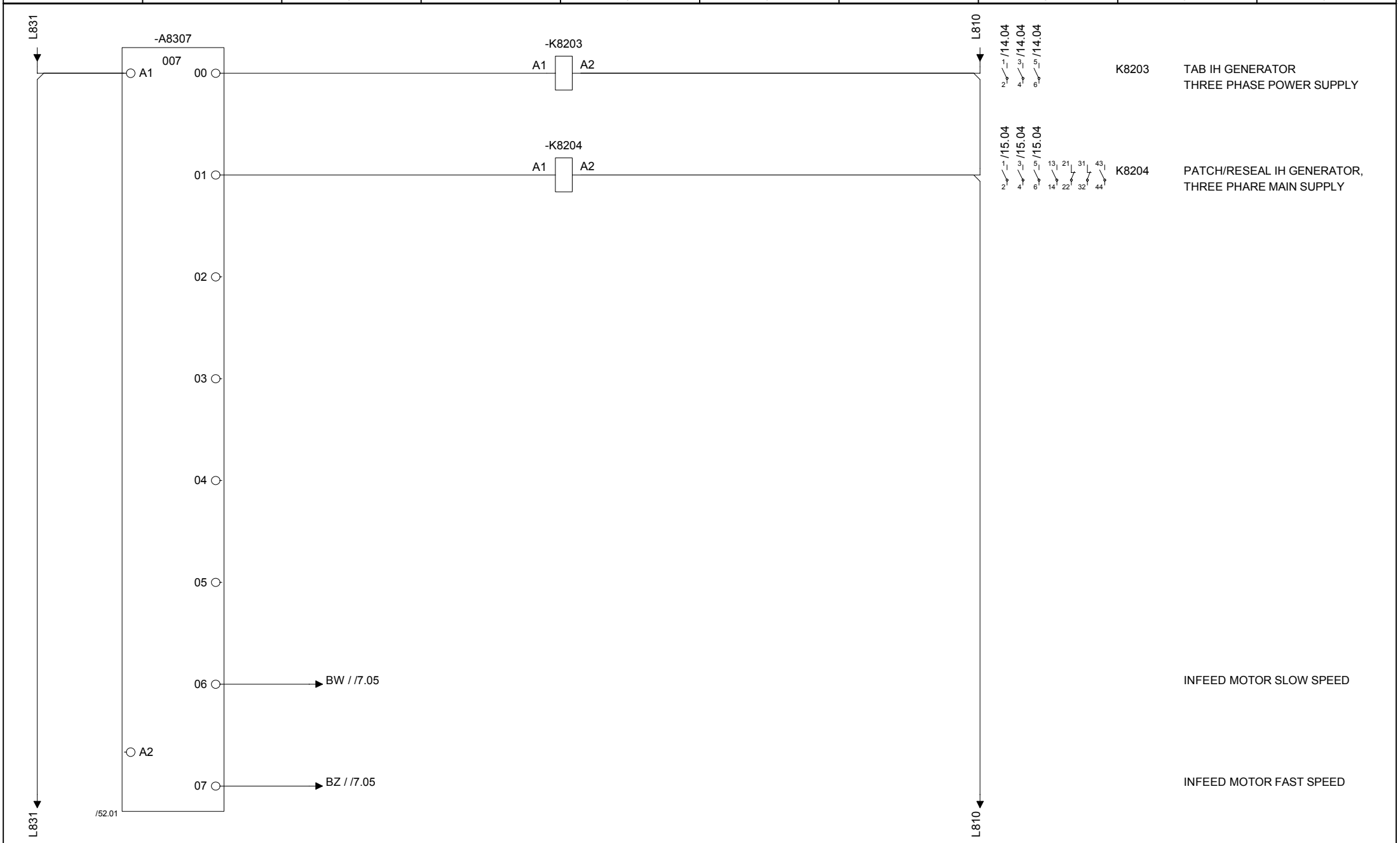

Drawing remarks	Tetra Pak	Designer LUP	Date 26/06/2003	Machine PT21 030V	
		ECM No 117717	Denomination CIRCUIT DIAGRAM	Page Type PLC - OUT	
	Company Tetra Pak Carton Ambient S.p.A.		Document No. 2635106-0003	Doc. type ELD	Version AA	Page 51

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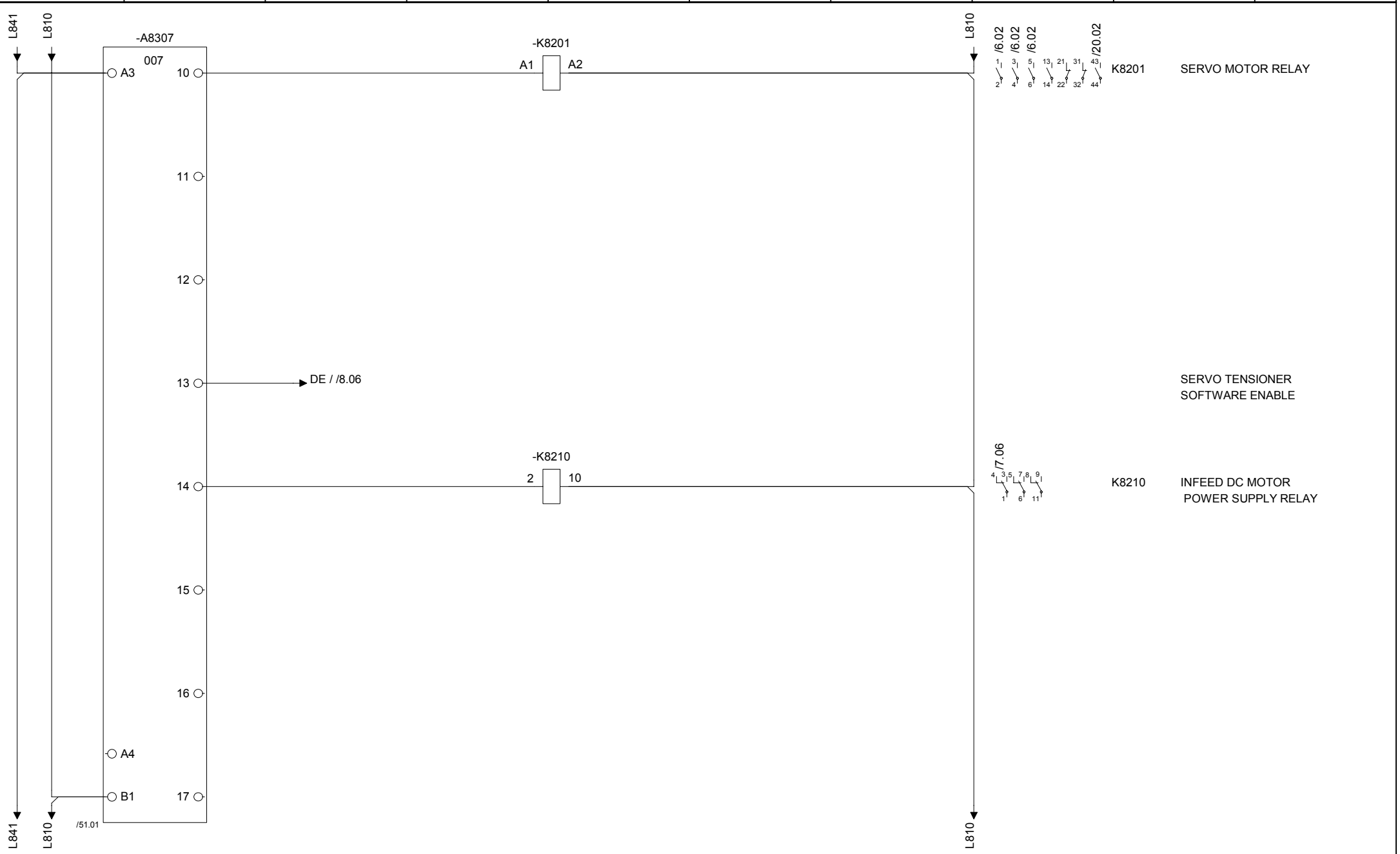

Drawing remarks	Tetra Pak	Designer LUP	Date 26/06/2003	Machine PT21 030V
		ECM No 117717	Denomination CIRCUIT DIAGRAM	Page Type PLC - OUT
	Company Tetra Pak Carton Ambient S.p.A.	Document No. 2635106-0003	Doc. type ELD	Version AA	Page 52

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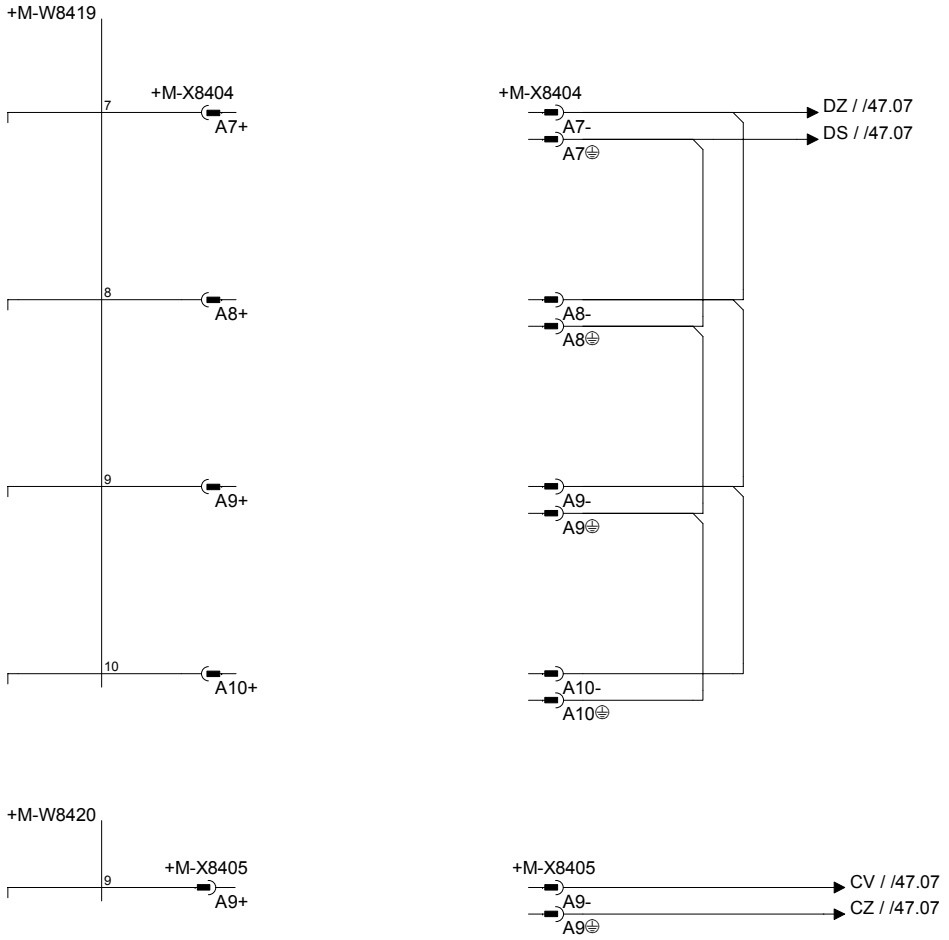

Drawing remarks	Tetra Pak	Designer LUP	Date 26/06/2003	Machine PT21 030V			
		ECM No 117717	Denomination CIRCUIT DIAGRAM	Page Type PRECONNECTED CABLES			
	Company Tetra Pak Carton Ambient S.p.A.		Document No. 2635106-0003	Doc. type ELD	Version AA	Page 55	

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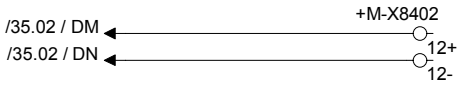

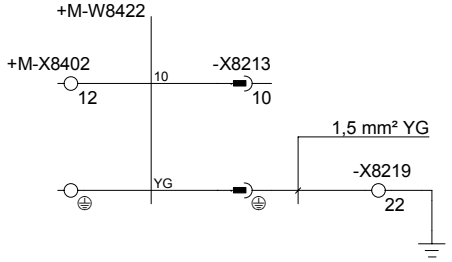

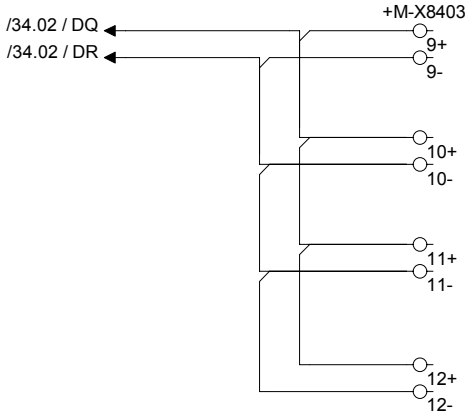

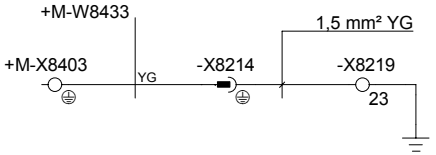

Drawing remarks	Tetra Pak	Designer LUP	Date 26/06/2003	Machine PT21 030V			
		ECM No 117717	Denomination CIRCUIT DIAGRAM	Page Type PRECONNECTED CABLES			
		Company Tetra Pak Carton Ambient S.p.A.		Document No. 2635106-0003	Doc. type ELD	Version AA	Page 56

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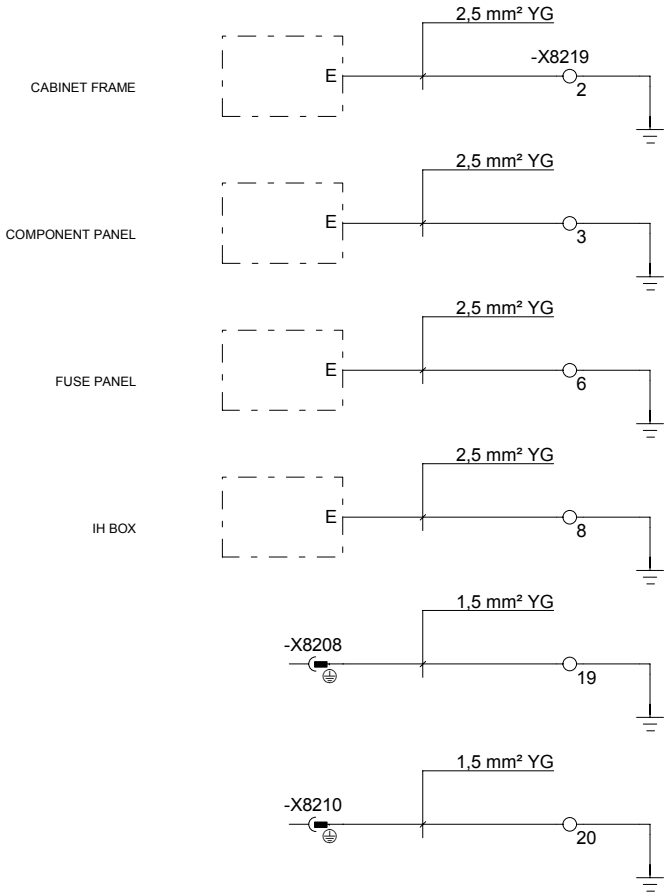

Drawing remarks

Tetra Pak

Designer LUP	Date 26/06/2003	Machine PT21 030V		
ECM No 117717	Denomination CIRCUIT DIAGRAM	Page Type GROUNDING CONNECTIONS		
Company Tetra Pak Carton Ambient S.p.A.	Document No. 2635106-0003	Doc. type ELD	Version AA	Page 60

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8 Line summary

EM3.0TB088511en.fm

Table of contents

Line summary 2635106-0004

EM3.0TB088511en.fm

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Line summary of 2635106-0003

Line	From	Page.Col.	To	Page.Col.	Area/Color	Opt.
L801	+C-X8201:1	5 .5	+C-K8202:1	5 .10	2.5 BK	
L801	+C-K8202:1	5 .10	+C-Q8201:1	6 .2		
L801	+C-Q8201:1	6 .2	+C-Q8202:1	9 .5		
L802	+C-X8201:2	5 .5	+C-K8202:3	5 .10	2.5 BK	
L802	+C-K8202:3	5 .10	+C-F8202:1	11 .1		
L802	+C-F8202:1	11 .1	+C-F8204:1	14 .2		
L802	+C-F8204:1	14 .2	+C-Q8201:3	6 .2		
L802	+C-Q8201:3	6 .2	+C-Q8202:3	9 .5		
L803	+C-X8201:3	5 .5	+C-K8202:5	5 .10	2.5 BK	
L803	+C-K8202:5	5 .10	+C-F8203:1	11 .7		
L803	+C-F8203:1	11 .7	+C-F8206:1	15 .2		
L803	+C-F8206:1	15 .2	+C-Q8201:5	6 .2		
L803	+C-Q8201:5	6 .2	+C-Q8202:5	9 .5		
L804	+C-K8202:2	5 .10	+C-F8201:1	7 .6	2.5 BK	
L804	+C-F8201:1	7 .6	+C-F8205.1:1	14 .4		
L804	+C-F8205.1:1	14 .4	+C-F8207.1:1	15 .4		
L805	+C-K8202:4	5 .10	+C-F8205.2:1	14 .4	2.5 BK	
L805	+C-F8205.2:1	14 .4	+C-F8207.2:1	15 .4		
L806	+C-K8202:6	5 .10	+C-F8205.3:1	14 .4	2.5 BK	
L806	+C-F8205.3:1	14 .4	+C-F8207.3:1	15 .4		
L810	+C-XL810:1	1 .1	+C-XL810:2	1 .1	1.5 BU	
L810	+C-XL810:2	1 .1	+C-V8201:-	9 .5		
L810	+C-XL810:3	1 .2	+C-A8216:25	7 .5	0.75 BU	
L810	+C-A8216:25	7 .5	+C-A8214:2	15 .6		
L810	+C-XL810:4	1 .2	+C-A8211:18	20 .4	0.75 BU	
L810	+C-A8211:18	20 .4	+C-A8211:20	20 .4		
L810	+C-A8211:20	20 .4	+C-A8212:18	20 .4		
L810	+C-A8212:18	20 .4	+C-A8212:20	20 .4		

Line	From	Page.Col.	To	Page.Col.	Area/Color	Opt.
L810	+C-A8212:20	20 .4	+C-A8210:2	20 .6		
L810	+C-XL810:5	1 .2	+C-A8301:B1	30 .8	0.75 BU	
L810	+C-A8301:B1	30 .8	+C-A8301:B2	31 .8		
L810	+C-A8301:B2	31 .8	+C-A8301:B3	32 .8		
L810	+C-A8301:B3	32 .8	+C-A8301:B4	33 .8		
L810	+C-XL810:6	1 .3	+C-A8302:B1	34 .8	0.75 BU	
L810	+C-A8302:B1	34 .8	+C-A8302:B2	35 .8		
L810	+C-A8302:B2	35 .8	+C-A8302:B3	36 .8		
L810	+C-A8302:B3	36 .8	+C-A8302:B4	37 .8		
L810	+C-XL810:7	1 .3	+C-K8208:10	46 .5	0.75 BU	
L810	+C-K8208:10	46 .5	+C-K8207:10	46 .5		
L810	+C-K8207:10	46 .5	+C-K8209:10	46 .5		
L810	+C-K8209:10	46 .5	+C-K8210:10	52 .4		
L810	+C-K8210:10	52 .4	+C-K8214:10	25 .6		
L810	+C-XL810:8	1 .3	+C-A8202:24	27 .7	0.75 BU	
L810	+C-A8202:24	27 .7	+C-A8202:A2	27 .7		
L810	+C-A8202:A2	27 .7	+C-A8203:A2	28 .7		
L810	+C-A8203:A2	28 .7	+C-A8203:S24	28 .7		
L810	+C-XL810:9	1 .3	+C-G8301:B1-	10 .3	0.75 BU	
L810	+C-G8301:B1-	10 .3	+C-A8304:B1	46 .1		
L810	+C-A8304:B1	46 .1	+C-A8305:B1	48 .1		
L810	+C-A8305:B1	48 .1	+C-A8306:B1	50 .1		
L810	+C-A8306:B1	50 .1	+C-A8307:B1	52 .1		
L810	+C-XL810:10	1 .4	+C-K8201:A2	52 .4	0.75 BU	
L810	+C-K8201:A2	52 .4	+C-K8203:A2	51 .4		
L810	+C-K8203:A2	51 .4	+C-K8204:A2	51 .4		
L810	+C-XL810:11	1 .4	+C-HS8202:012	45 .5	0.75 BU	
L810	+C-HS8202:012	45 .5	+C-P8201: 2	45 .5		

Drawing remarks

Tetra Pak

Designer	Date	Machine
LUP	26/06/2003	PT21 030V

ECM No	Denomination	Page Type
117717	LINE SUMMARY	LINE SUMMARY

Company	Document No.	Doc. type	Version	Page
Tetra Pak Carton Ambient S.p.A.	2635106-0004	ELD	AA	001

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Line summary of 2635106-0003

Line	From	Page.Col.	To	Page.Col.	Area/Color	Opt.
L810	+C-P8201: 2	45 .5	+C-R8201:3	6 .5		
L810	+C-XL810:12	1 .4	+C-X8221:2	30 .3	0.75 BU	
L810	+C-X8221:2	30 .3	+C-X8208:2	34 .2		
L810	+C-X8208:2	34 .2	+C-X8208:5	35 .2		
L810	+C-X8208:5	35 .2	+C-X8210:5	35 .2		
L810	+C-X8210:5	35 .2	+C-X8210:2	34 .2		
L810	+C-XL810:13	1 .5	+C-X8209:2	34 .2	0.75 BU	
L810	+C-XL810:14	1 .5	+C-X8212:7	47 .7	0.75 BU	
L810	+C-X8212:7	47 .7	+C-X8212:16	48 .7		
L810	+C-X8212:16	48 .7	+C-X8212:17	48 .7		
L810	+C-X8212:17	48 .7	+C-X8212:18	47 .7		
L810	+C-X8212:18	47 .7	+C-X8213:2	30 .1		
L810	+C-X8213:2	30 .1	+C-X8214:2	32 .1		
L810	+C-XL810:15	1 .5	+C-X8216:2	34 .2	0.75 BU	
L810	+C-XL810:16	1 .6	+C-X8233:1	8 .6	0.75 BU	
L810	+C-XL810:17	1 .6	+C-A8201:7A02	6 .7	0.75 BU	
L810	+C-XL810:18	1 .6	+C-A8201:7A05	6 .7	0.75 BU	
L810	+C-XL810:19	1 .7	+C-A8201:7B24	6 .9	0.75 BU	
L810	+C-XL810:20	1 .7	+C-A8204:212	14 .4	0.75 BU	
L810	+C-XL810:21	1 .7	+C-A8205:212	15 .4	0.75 BU	
L810	+C-XL810:22	1 .7	+M-X8410:4	12 .3	1.5 BU	
L811	+C-XL811:1	1 .1	+C-XL811:2	1 .1	1.5 BU	
L811	+C-XL811:2	1 .1	+C-F8210:2	9 .4		
L811	+C-XL811:3	1 .2	+C-A8214:1	15 .6	0.75 BU	
L811	+C-A8214:1	15 .6	+C-A8210:1	20 .6		
L811	+C-XL811:4	1 .2	+C-A8218:19	23 .6	0.75 BU	
L811	+C-A8218:19	23 .6	+C-A8218:23	23 .6		
L811	+C-A8218:23	23 .6	+C-A8219:19	23 .6		

Line	From	Page.Col.	To	Page.Col.	Area/Color	Opt.
L811	+C-A8219:19	23 .6	+C-A8219:23	23 .6		
L811	+C-XL811:5	1 .2	+C-Q8201:1.13	30 .3	0.75 BU	
L811	+C-XL811:6	1 .3	+C-X8221:1	30 .3	0.75 BU	
L811	+C-X8221:1	30 .3	+C-X8208:1	34 .2		
L811	+C-X8208:1	34 .2	+C-X8208:4	35 .2		
L811	+C-X8208:4	35 .2	+C-X8210:4	35 .2		
L811	+C-X8210:4	35 .2	+C-X8210:1	34 .2		
L811	+C-XL811:7	1 .3	+C-X8212:20	31 .2	0.75 BU	
L811	+C-X8212:20	31 .2	+C-X8213:1	30 .1		
L811	+C-X8213:1	30 .1	+C-X8214:1	32 .1		
L811	+C-X8214:1	32 .1	+C-X8215:5	11 .10		
L811	+C-XL811:8	1 .3	+C-A8203:13	28 .7	0.75 BU	
L811	+C-XL811:9	1 .3	+C-A8304:A1	45 .1	0.75 BU	
L811	+C-A8304:A1	45 .1	+C-A8304:A3	46 .1		
L811	+C-XL811:10	1 .4	+C-A8204:214	14 .4	0.75 BU	
L811	+C-XL811:11	1 .4	+C-A8204:224	14 .4	0.75 BU	
L811	+C-XL811:12	1 .4	+C-A8205:214	15 .4	0.75 BU	
L811	+C-XL811:13	1 .5	+C-SH8202:13	36 .4	0.75 BU	
L811	+C-SH8202:13	36 .4	+C-S8201:13	31 .4		
L811	+C-S8201:13	31 .4	+C-S8201:22	31 .4		
L811	+C-S8201:22	31 .4	+C-S8201:33	31 .4		
L811	+C-S8201:33	31 .4	+C-R8201:1	6 .5		
L811	+C-XL811:14	1 .5	+C-X8209:1	34 .2	0.75 BU	
L811	+C-XL811:15	1 .5	+C-X8216:1	34 .2	0.75 BU	
L811	+C-XL811:16	1 .6	+C-F8213:1	12 .4	0.75 BU	
L811	+C-XL811:17	1 .6	+C-A8201:7B25	6 .9	0.75 BU	
L811	+C-XL811:18	1 .6	+C-S8202:21	33 .3	0.75 BU	
L811	+C-XL811:19	1 .7	+C-X8233:3	8 .10	0.75 BU	

Drawing remarks

Tetra Pak

Designer	Date	Machine
LUP	26/06/2003	PT21 030V

ECM No	Denomination	Page Type
117717	LINE SUMMARY	LINE SUMMARY

Company	Document No.	Doc. type	Version	Page
Tetra Pak Carton Ambient S.p.A.	2635106-0004	ELD	AA	002

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Line summary of 2635106-0003

Line	From	Page.Col.	To	Page.Col.	Area/Color	Opt.
L831	+C-A8202:34	27 .7	+C-XL831:1	1 .1	0.75 BU	
L831	+C-XL831:1	1 .1	+C-XL831:2	1 .1		
L831	+C-XL831:3	1 .2	+C-A8305:A1	47 .1	0.75 BU	
L831	+C-A8305:A1	47 .1	+C-A8305:A3	48 .1		
L831	+C-XL831:4	1 .2	+C-A8306:A1	49 .1	0.75 BU	
L831	+C-A8306:A1	49 .1	+C-A8306:A3	50 .1		
L831	+C-XL831:5	1 .2	+C-A8307:A1	51 .1	0.75 BU	
L831	+C-XL831:8	1 .3	+C-A8203:A1	28 .7	0.75 BU	
L831	+C-A8203:A1	28 .7	+C-A8203:S14	28 .7		
L841	+C-A8203:14	28 .7	+C-XL841:1	1 .6	0.75 BU	
L841	+C-XL841:1	1 .6	+C-XL841:2	1 .6		
L841	+C-XL841:3	1 .7	+C-A8307:A3	52 .1	0.75 BU	
L841	+C-XL841:4	1 .7	+C-A8212:28	20 .4	0.75 BU	
L841	+C-A8212:28	20 .4	+C-A8211:28	20 .4		
L841	+C-XL841:5	1 .7	+C-K8201:43	20 .2	0.75 BU	
L841	+C-XL841:6	1 .8	+C-A8201:7A06	6 .7	0.75 BU	
L841	+C-XL841:7	1 .8	+C-X8233:2	8 .6	0.75 BU	

Line	From	Page.Col.	To	Page.Col.	Area/Color	Opt.

Drawing remarks

Tetra Pak

Designer: LUP	Date: 26/06/2003	Machine: PT21 030V	
ECM No: 117717	Denomination: LINE SUMMARY	Page Type: LINE SUMMARY	
Company: Tetra Pak Carton Ambient S.p.A.	Document No.: 2635106-0004	Doc. type: ELD	Version: AA	Page: 003

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9 Cabinet terminal summary

EM3.0TB098511en.fm

Table of contents

Cabinet terminal summary 2635106-0005

EM3.0TB098511en.fm

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Cabinet terminal summary of 2635106-0003

Terminal	Page .Col.	Opt.
+C-X8201:1	5 .5	
+C-X8201:2	5 .5	
+C-X8201:3	5 .5	
+C-X8201:4		
+C-X8201:5		
+C-X8201:6	5 .5	
+C-X8201:⏚	5 .5	
+C-X8202:1	25 .4	
+C-X8202:2	25 .4	
+C-X8202:3		
+C-X8202:4	25 .4	
+C-X8202:5	25 .4	
+C-X8202:6	25 .4	
+C-X8202:7	25 .4	
+C-X8202:8	25 .4	
+C-X8202:9	25 .4	
+C-X8202:10	25 .4	
+C-X8202:11	25 .4	
+C-X8202:12	25 .4	
+C-X8202:13	25 .4	
+C-X8202:14	25 .4	
+C-X8202:15	25 .4	
+C-X8202:16	25 .4	
+C-X8202:17	25 .4	
+C-X8202:18	25 .4	
+C-X8202:19	25 .4	
+C-X8202:20	25 .4	
+C-X8202:21	25 .4	

Terminal	Page .Col.	Opt.
+C-X8202:22		
+C-X8202:23	25 .4	
+C-X8202:24	25 .4	
+C-X8202:⏚	25 .4	
+C-X8203:1		
+C-X8203:2		
+C-X8203:3		
+C-X8203:4	11 .1	
+C-X8203:5	11 .2	
+C-X8203:6		
+C-X8203:7		
+C-X8203:8		
+C-X8203:9		
+C-X8203:10		
+C-X8203:⏚	11 .2	
+C-X8204:1	27 .6	
+C-X8204:2	27 .6	
+C-X8204:3	27 .4	
+C-X8204:4	27 .4	
+C-X8204:5	27 .4	
+C-X8204:6	27 .4	
+C-X8204:7		
+C-X8204:8		
+C-X8204:9	31 .2	
+C-X8204:10	31 .6	
+C-X8204:⏚	31 .6	
+C-X8205:1	20 .9	
+C-X8205:2	20 .9	

Terminal	Page .Col.	Opt.
+C-X8205:3	20 .9	
+C-X8205:4	20 .9	
+C-X8205:5	20 .9	
+C-X8205:6		
+C-X8206:1	20 .9	
+C-X8206:2	20 .9	
+C-X8206:3	20 .9	
+C-X8206:4	20 .9	
+C-X8206:5	20 .9	
+C-X8206:6		
+C-X8207:1	20 .2	
+C-X8207:2	20 .2	
+C-X8207:3	20 .2	
+C-X8207:4	20 .2	
+C-X8207:5	20 .2	
+C-X8207:6	20 .2	
+C-X8208:1	34 .2	
+C-X8208:2	34 .2	
+C-X8208:3	34 .7	
+C-X8208:4	35 .2	
+C-X8208:5	35 .2	
+C-X8208:6	35 .7	
+C-X8208:⏚	60 .3	
+C-X8209:1	34 .2	
+C-X8209:2	34 .2	
+C-X8209:3	34 .7	
+C-X8209:4		
+C-X8209:5		

Terminal	Page .Col.	Opt.
+C-X8209:6		
+C-X8210:1	34 .2	
+C-X8210:2	34 .2	
+C-X8210:3	34 .7	
+C-X8210:4	35 .2	
+C-X8210:5	35 .2	
+C-X8210:6	35 .7	
+C-X8210:⏚	60 .3	
+C-X8211:1	20 .2	
+C-X8211:2	20 .2	
+C-X8211:3	20 .2	
+C-X8211:4	20 .2	
+C-X8211:5	20 .2	
+C-X8211:6	20 .2	
+C-X8212:1	47 .3	
+C-X8212:2	47 .3	
+C-X8212:3	47 .3	
+C-X8212:4	47 .3	
+C-X8212:5	47 .3	
+C-X8212:6	47 .3	
+C-X8212:7	47 .7	
+C-X8212:8	48 .3	
+C-X8212:9	48 .3	
+C-X8212:10	48 .3	
+C-X8212:11	48 .3	
+C-X8212:12	48 .3	
+C-X8212:13	48 .3	
+C-X8212:14	48 .3	

Drawing remarks

Tetra Pak

Designer LUP	Date 26/06/2003	Machine PT21 030V	
ECM No 117717	Denomination CABINET TERMINAL SUMMARY	Page Type CABINET TERMINAL SUMMARY	
Company Tetra Pak Carton Ambient S.p.A.	Document No. 2635106-0005	Doc. type ELD	Version AA	Page 001

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Cabinet terminal summary of 2635106-0003

Terminal	Page .Col.	Opt.
+C-X8212:15	48 .3	
+C-X8212:16	48 .7	
+C-X8212:17	48 .7	
+C-X8212:18	47 .7	
+C-X8212:19	47 .4	
+C-X8212:20	31 .2	
+C-X8212:21	31 .6	
+C-X8212:22		
+C-X8212:23		
+C-X8212:24		
+C-X8212:⏚	48 .7	
+C-X8213:1	30 .1	
+C-X8213:2	30 .1	
+C-X8213:3	30 .7	
+C-X8213:4	34 .7	
+C-X8213:5	34 .7	
+C-X8213:6	32 .7	
+C-X8213:7	35 .7	
+C-X8213:8	35 .7	
+C-X8213:9	35 .7	
+C-X8213:10	56 .7	
+C-X8213:⏚	56 .7	
+C-X8214:1	32 .1	
+C-X8214:2	32 .1	
+C-X8214:3	32 .7	
+C-X8214:4	35 .7	
+C-X8214:5	34 .7	
+C-X8214:6	34 .7	

Terminal	Page .Col.	Opt.
+C-X8214:7		
+C-X8214:8		
+C-X8214:9		
+C-X8214:10		
+C-X8214:⏚	56 .7	
+C-X8215:1	11 .7	
+C-X8215:2	11 .8	
+C-X8215:3	11 .4	
+C-X8215:4	11 .4	
+C-X8215:5	11 .10	
+C-X8215:6	11 .9	
+C-X8215:⏚	11 .9	
+C-X8216:1	34 .2	
+C-X8216:2	34 .2	
+C-X8216:3	34 .7	
+C-X8216:4		
+C-X8216:5		
+C-X8216:6		
+C-X8217:+	23 .4	
+C-X8217:-	23 .4	
+C-X8219:1	5 .7	
+C-X8219:2	60 .4	
+C-X8219:3	60 .4	
+C-X8219:4	14 .4	
+C-X8219:5	15 .4	
+C-X8219:6	60 .4	
+C-X8219:7	6 .1	
+C-X8219:8	60 .4	

Terminal	Page .Col.	Opt.
+C-X8219:9	7 .6	
+C-X8219:10		
+C-X8219:11		
+C-X8219:12		
+C-X8219:13	11 .2	
+C-X8219:14	9 .7	
+C-X8219:15	9 .5	
+C-X8219:16	25 .4	
+C-X8219:17	11 .3	
+C-X8219:18	31 .6	
+C-X8219:19	60 .4	
+C-X8219:20	60 .4	
+C-X8219:21	48 .8	
+C-X8219:22	56 .8	
+C-X8219:23	56 .8	
+C-X8219:24	11 .8	
+C-X8220:1	7 .6	
+C-X8220:2	11 .2	
+C-X8220:3	11 .8	
+C-X8220:4	14 .2	
+C-X8220:7	15 .4	
+C-X8220:6	15 .2	
+C-X8220:5	14 .4	
+C-X8220:8		
+C-X8220:9		
+C-X8220:10		
+C-X8220:11		
+C-X8220:12		

Terminal	Page .Col.	Opt.
+C-X8220:N	5 .7	
+C-X8221:1	30 .3	
+C-X8221:2	30 .3	
+C-X8221:3	30 .5	
+C-X8233:1	8 .6	
+C-X8233:2	8 .6	
+C-X8233:3	8 .10	
+C-X8233:4	8 .6	
+C-X8233:5	8 .6	
+C-X8233:6	8 .6	
+C-X8233:7	8 .6	
+C-X8233:8	8 .10	
+C-X8233:9		
+C-X8233:10		
+C-X8233:11		
+C-X8233:12		

Drawing remarks

Tetra Pak

Designer	LUP	Date	26/06/2003	Machine	PT21 030V
ECM No	117717	Denomination	CABINET TERMINAL SUMMARY	Page Type	CABINET TERMINAL SUMMARY
Company	Tetra Pak Carton Ambient S.p.A.	Document No.	2635106-0005	Doc. type	ELD
				Version	AA
				Page	002

10 Terminal strip overview

EM3.0TB108511en.fm

Table of contents

Terminal strip overview 2635106-0006

EM3.0TB108511en.fm

RELEASED

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1 2 3 4 5 6 7 8 9 10

Terminal strip of 2635106-0003

+F-X106

From	Cable	Internal Jumper	Terminal	External Jumper	Cable	To	Page.Col.	Option	Function text
			1		-W8201:1	+C-X8201:1	5 .3		
			2		-W8201:2	+C-X8201:2	5 .3		
			3		-W8201:3	+C-X8201:3	5 .3		
			4						
			5						
			6		-W8201:4	+C-X8201:6	5 .3		
			⏚		-W8201:YG	+C-X8201:⏚	5 .3		

Drawing remarks

Tetra Pak

Designer LUP	Date 26/06/2003	Machine PT21 030V	
ECM No 117717	Denomination TERMINAL STRIP OVERVIEW	Page Type FILLER INTERFACE	
Company Tetra Pak Carton Ambient S.p.A.	Document No. 2635106-0006	Doc. type ELD	Version AA	Page 001

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1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10

Terminal strip of 2635106-0003

+F-X206

From	Cable	Internal Jumper	Terminal	External Jumper	Cable	To	Page.Col.	Option	Function text
			1		-W8202:1	+C-X8202:1	25 .2		
			2		-W8202:2	+C-X8202:2	25 .2		
			3						
			4		-W8202:4	+C-X8202:4	25 .2		
			5		-W8202:5	+C-X8202:5	25 .2		
			6		-W8202:6	+C-X8202:6	25 .2		
			7		-W8202:7	+C-X8202:7	25 .2		
			8		-W8202:8	+C-X8202:8	25 .2		
			9		-W8202:9	+C-X8202:9	25 .2		
			10		-W8202:10	+C-X8202:10	25 .2		
			11		-W8202:11	+C-X8202:11	25 .2		
			12		-W8202:12	+C-X8202:12	25 .2		
			13		-W8202:13	+C-X8202:13	25 .2		
			14		-W8202:14	+C-X8202:14	25 .2		
			15		-W8202:15	+C-X8202:15	25 .2		
			16		-W8202:16	+C-X8202:16	25 .2		
			17		-W8202:17	+C-X8202:17	25 .2		
			18		-W8202:18	+C-X8202:18	25 .2		
			19		-W8202:19	+C-X8202:19	25 .2		
			20		-W8202:20	+C-X8202:20	25 .2		
			21		-W8202:21	+C-X8202:21	25 .2		
			22						
			23		-W8203:RD	+C-X8202:23	25 .2		
			24		-W8203:BK	+C-X8202:24	25 .2		
			⏚		-W8202:YG	+C-X8202:⏚	25 .2		

Drawing remarks

Tetra Pak

Designer LUP	Date 26/06/2003	Machine PT21 030V	
ECM No 117717	Denomination TERMINAL STRIP OVERVIEW	Page Type FILLER INTERFACE	
Company Tetra Pak Carton Ambient S.p.A.	Document No. 2635106-0006	Doc. type ELD	Version AA	Page 002

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1 2 3 4 5 6 7 8 9 10

Terminal strip of 2635106-0003

+M-X8401

From	Cable	Internal Jumper	Terminal	External Jumper	Cable	To	Page.Col.	Option	Function text
+C-X8204:1	-W8403:1		1		-W8404:1	+M-B8401:12	27 .6		DOOR GUARD, LEFT SIDE
+C-X8204:6	-W8403:6		2		-W8404:2	+M-B8401:11	27 .4		DOOR GUARD, LEFT SIDE
+C-X8204:2	-W8403:2		3		-W8404:3	+M-B8401:22	27 .6		DOOR GUARD, LEFT SIDE
			4		-W8404:4	+M-B8401:21	27 .4		DOOR GUARD, LEFT SIDE
			5		-W8405:1	+M-B8402:12	27 .3		DOOR GUARD,RIGHT-FRONT SIDE
+C-X8204:5	-W8403:5		6		-W8405:2	+M-B8402:11	27 .1		DOOR GUARD,RIGHT-FRONT SIDE
			7		-W8405:3	+M-B8402:22	27 .3		DOOR GUARD,RIGHT-FRONT SIDE
			8		-W8405:4	+M-B8402:21	27 .1		DOOR GUARD,RIGHT-FRONT SIDE
			9		-W8406:1	+M-B8403:12	27 .1		DOOR GUARD,RIGHT-REAR SIDE
+C-X8204:3	-W8403:3		10		-W8406:2	+M-B8403:11	27 .3		DOOR GUARD,RIGHT-REAR SIDE
			11		-W8406:3	+M-B8403:22	27 .1		DOOR GUARD,RIGHT-REAR SIDE
+C-X8204:4	-W8403:4		12		-W8406:4	+M-B8403:21	27 .3		DOOR GUARD,RIGHT-REAR SIDE
+C-X8204:9	-W8403:10		13		-W8407:BN	+M-B8404:BN	31 .3		BYPASS, ACTIVATED
+C-X8204:10	-W8403:11		14		-W8407:BU	+M-B8404:BU	31 .5		BYPASS, ACTIVATED
+C-X8204:⏚	-W8403:YG		⏚		-W8407:YG	+M-B8404:E	31 .5		BYPASS, ACTIVATED

Drawing remarks

Tetra Pak

Designer LUP	Date 26/06/2003	Machine PT21 030V	
ECM No 117717	Denomination TERMINAL STRIP OVERVIEW	Page Type DOOR/GUARDS	
Company Tetra Pak Carton Ambient S.p.A.	Document No. 2635106-0006	Doc. type ELD	Version AA	Page 003

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1 2 3 4 5 6 7 8 9 10

Terminal strip of 2635106-0003

+M-X8402

From	Cable	Internal Jumper	Terminal	External Jumper	Cable	To	Page.Col.	Option	Function text
+C-X8213:1	-W8422:1		1		-W8423:BN	+M-B8405:	30 .3		WASTEBOX LEVEL, HIGH
+C-X8213:2	-W8422:2		2		-W8423:BU	+M-B8405:	30 .3		WASTEBOX LEVEL, HIGH
+C-X8213:3	-W8422:3		3		-W8423:BK	+M-B8405:	30 .5		WASTEBOX LEVEL, HIGH
+C-X8213:4	-W8422:4		4		-W8424:BK	+M-B84061:	34 .6		OUTFEED LOOP, HIGH
			4+		-W8424:BN	+M-B84061:	34 .3		OUTFEED LOOP, HIGH
			4-		-W8424:BU	+M-B84061:	34 .3		OUTFEED LOOP, HIGH
			5						
			5+		-W8425:BN	+M-B84062:	34 .3		OUTFEED LOOP, HIGH
			5-		-W8425:BU	+M-B84062:	34 .3		OUTFEED LOOP, HIGH
+C-X8213:5	-W8422:5		6		-W8426:BK	+M-B84071:	34 .6		OUTFEED LOOP, LOW
			6+		-W8426:BN	+M-B84071:	34 .3		OUTFEED LOOP, LOW
			6-		-W8426:BU	+M-B84071:	34 .3		OUTFEED LOOP, LOW
			7						
			7+		-W8427:BN	+M-B84072:	34 .3		OUTFEED LOOP, LOW
			7-		-W8427:BU	+M-B84072:	34 .3		OUTFEED LOOP, LOW
+C-X8213:6	-W8422:6		8		-W8428:BK	+M-B8408:	32 .6		PATCH MATERIAL, LOW
			8+		-W8428:BN	+M-B8408:	32 .3		PATCH MATERIAL, LOW
			8-		-W8428:BU	+M-B8408:	32 .3		PATCH MATERIAL, LOW
+C-X8213:7	-W8422:7		9		-W8429:BK	+M-B8409:	35 .6		PATCH ROTATION MONITOR
			9+		-W8429:BN	+M-B8409:	35 .3		PATCH ROTATION MONITOR
			9-		-W8429:BU	+M-B8409:	35 .3		PATCH ROTATION MONITOR
+C-X8213:8	-W8422:8		10				35 .6		
			10+				35 .3		
			10-				35 .3		
+C-X8213:9	-W8422:9		11		-W8431:WH	+M-B8411:	35 .6		BLACK TAPE DETECTOR
			11+		-W8431:RD	+M-B8411:	35 .3		BLACK TAPE DETECTOR
			11-		-W8431:BK	+M-B8411:	35 .3		BLACK TAPE DETECTOR
+C-X8213:10	-W8422:10		12				56 .6		
			12+				56 .4		
			12-				56 .4		

Drawing remarks

Tetra Pak

Designer: LUP	Date: 26/06/2003	Machine: PT21 030V	
ECM No: 117717	Denomination: TERMINAL STRIP OVERVIEW	Page Type: OUTFEED LOOP BOX	
Company: Tetra Pak Carton Ambient S.p.A.	Document No.: 2635106-0006	Doc. type: ELD	Version: AA	Page: 004

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1 2 3 4 5 6 7 8 9 10

Terminal strip of 2635106-0003

+M-X8402

From	Cable	Internal Jumper	Terminal	External Jumper	Cable	To	Page.Col.	Option	Function text
+C-X8213:⏚	-W8422:YG		⏚				56 .6		

Drawing remarks	Tetra Pak	Designer LUP	Date 26/06/2003	Machine PT21 030V	
		ECM No 117717	Denomination TERMINAL STRIP OVERVIEW	Page Type OUTFEED LOOP BOX	
	Company Tetra Pak Carton Ambient S.p.A.	Document No. 2635106-0006	Doc. type ELD	Version AA	Page 005

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1 2 3 4 5 6 7 8 9 10

Terminal strip of 2635106-0003

+M-X8403

From	Cable	Internal Jumper	Terminal	External Jumper	Cable	To	Page.Col.	Option	Function text
+C-X8214:1	-W8433:1		1		-W8434:BN	+M-B8413:	32 .3		TAB MATERIAL, LOW
+C-X8214:2	-W8433:2		2		-W8434:BU	+M-B8413:	32 .3		TAB MATERIAL, LOW
+C-X8214:3	-W8433:3		3		-W8434:BK	+M-B8413:	32 .6		TAB MATERIAL, LOW
+C-X8214:4	-W8433:4		4		-W8435:BK	+M-B8414:	35 .6		TAB ROTATION MONITOR
			4+		-W8435:BN	+M-B8414:	35 .3		TAB ROTATION MONITOR
			4-		-W8435:BU	+M-B8414:	35 .3		TAB ROTATION MONITOR
+C-X8214:5	-W8433:5		5		-W8436:BK	+M-B84151:	34 .6		INFEED LOOP, HIGH
			5+		-W8436:BN	+M-B84151:	34 .3		INFEED LOOP, HIGH
			5-		-W8436:BU	+M-B84151:	34 .3		INFEED LOOP, HIGH
			6						
			6+		-W8437:BN	+M-B84152:	34 .3		INFEED LOOP, HIGH
			6-		-W8437:BU	+M-B84152:	34 .3		INFEED LOOP, HIGH
+C-X8214:6	-W8433:6		7		-W8438:BK	+M-B84161:	34 .6		INFEED LOOP, LOW
			7+		-W8438:BN	+M-B84161:	34 .3		INFEED LOOP, LOW
			7-		-W8438:BU	+M-B84161:	34 .3		INFEED LOOP, LOW
			8						
			8+		-W8439:BN	+M-B84162:	34 .3		INFEED LOOP, LOW
			8-		-W8439:BU	+M-B84162:	34 .3		INFEED LOOP, LOW
			9						
			9+				56 .4		
			9-				56 .4		
			10						
			10+				56 .4		
			10-				56 .4		
			11						
			11+				56 .4		
			11-				56 .4		
			12						
			12+				56 .4		
			12-				56 .4		

Drawing remarks

Tetra Pak

Designer LUP	Date 26/06/2003	Machine PT21 030V	
ECM No 117717	Denomination TERMINAL STRIP OVERVIEW	Page Type INFEED LOOP BOX	
Company Tetra Pak Carton Ambient S.p.A.	Document No. 2635106-0006	Doc. type ELD	Version AA	Page 006

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1 2 3 4 5 6 7 8 9 10

Terminal strip of 2635106-0003

+M-X8403

From	Cable	Internal Jumper	Terminal	External Jumper	Cable	To	Page.Col.	Option	Function text
+C-X8214:⏚	-W8433:YG		⏚				56 .6		

Drawing remarks	Tetra Pak	Designer LUP	Date 26/06/2003	Machine PT21 030V	
		ECM No 117717	Denomination TERMINAL STRIP OVERVIEW	Page Type INFEED LOOP BOX	
	Company Tetra Pak Carton Ambient S.p.A.	Document No. 2635106-0006	Doc. type ELD	Version AA	Page 007

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1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10

Terminal strip of 2635106-0003

+M-X8404

From	Cable	Internal Jumper	Terminal	External Jumper	Cable	To	Page.Col.	Option	Function text
+C-X8212:1	-W8419:1		A1+			+M-Y8403:+24V	47 .4		CAP BLOWING
+C-X8212:7	-W8419:12		A1-			+M-Y8403:0V	47 .5		CAP BLOWING
+C-X8212:⏚	-W8419:YG		A1⏚			+M-Y8403:E	47 .5		CAP BLOWING
+C-X8212:2	-W8419:2		A2+			+M-Y8404:+24V	47 .4		WASTE BLOWING
			A2-			+M-Y8404:0V	47 .5		WASTE BLOWING
			A2⏚			+M-Y8404:E	47 .5		WASTE BLOWING
+C-X8212:3	-W8419:3		A3+			+M-Y8405:+24V	47 .4		TAB FOLDING
			A3-			+M-Y8405:0V	47 .5		TAB FOLDING
			A3⏚			+M-Y8405:E	47 .5		TAB FOLDING
+C-X8212:4	-W8419:4		A4+			+M-Y8406:+24V	47 .4		STRIP SUCTION
			A4-			+M-Y8406:0V	47 .5		STRIP SUCTION
			A4⏚			+M-Y8406:E	47 .5		STRIP SUCTION
+C-X8212:5	-W8419:5		A5+			+M-Y8407:+24V	47 .4		PUNCH BLOWING
			A5-			+M-Y8407:0V	47 .5		PUNCH BLOWING
			A5⏚			+M-Y8407:E	47 .5		PUNCH BLOWING
+C-X8212:6	-W8419:6		A6+				47 .4		
+C-X8212:18	-W8419:13		A6-				47 .5		
			A6⏚				47 .5		
			A7+				55 .4		
			A7-				55 .5		
			A7⏚				55 .5		
			A8+				55 .4		
			A8-				55 .5		
			A8⏚				55 .5		
			A9+				55 .4		
			A9-				55 .5		
			A9⏚				55 .5		
			A10+				55 .4		
			A10-				55 .5		
			A10⏚				55 .5		

Drawing remarks

Tetra Pak

Designer LUP	Date 26/06/2003	Machine PT21 030V	
ECM No 117717	Denomination TERMINAL STRIP OVERVIEW	Page Type VALVES-BANK 1	
Company Tetra Pak Carton Ambient S.p.A.	Document No. 2635106-0006	Doc. type ELD	Version AA	Page 008

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1 2 3 4 5 6 7 8 9 10

Terminal strip of 2635106-0003

+M-X8405

From	Cable	Internal Jumper	Terminal	External Jumper	Cable	To	Page.Col.	Option	Function text
+C-X8212:8	-W8420:1		A1+			+M-Y84091:+24V	48 .4		PUNCH OUT
+C-X8212:16	-W8420:12		A1-			+M-Y84091:0V	48 .5		PUNCH OUT
+C-X8212:⏚	-W8420:YG		A1⏚			+M-Y84091:E	48 .5		PUNCH OUT
+C-X8212:9	-W8420:2		A2+			+M-Y84092:+24V	48 .4		PUNCH IN
			A2-			+M-Y84092:0V	48 .5		PUNCH IN
			A2⏚			+M-Y84092:E	48 .5		PUNCH IN
+C-X8212:10	-W8420:3		A3+			+M-Y84101:+24V	48 .4		PATCH OUT
			A3-			+M-Y84101:0V	48 .5		PATCH OUT
			A3⏚			+M-Y84101:E	48 .5		PATCH OUT
+C-X8212:11	-W8420:4		A4+			+M-Y84102:+24V	48 .4		PATCH IN
			A4-			+M-Y84102:0V	48 .5		PATCH IN
			A4⏚			+M-Y84102:E	48 .5		PATCH IN
+C-X8212:12	-W8420:5		A5+			+M-Y84111:+24V	48 .4		RESEAL OUT
			A5-			+M-Y84111:0V	48 .5		RESEAL OUT
			A5⏚			+M-Y84111:E	48 .5		RESEAL OUT
+C-X8212:13	-W8420:6		A6+			+M-Y84112:+24V	48 .4		RESEAL IN
+C-X8212:17	-W8420:13		A6-			+M-Y84112:0V	48 .5		RESEAL IN
			A6⏚			+M-Y84112:E	48 .5		RESEAL IN
+C-X8212:14	-W8420:7		A7+			+M-Y84121:+24V	48 .4		TAB OUT
			A7-			+M-Y84121:0V	48 .5		TAB OUT
			A7⏚			+M-Y84121:E	48 .5		TAB OUT
+C-X8212:15	-W8420:8		A8+			+M-Y84122:+24V	48 .4		TAB IN
			A8-			+M-Y84122:0V	48 .5		TAB IN
			A8⏚			+M-Y84122:E	48 .5		TAB IN
			A9+				55 .4		
			A9-				55 .5		
			A9⏚				55 .5		
+C-X8212:19	-W8420:10		A10+			+M-Y8401:1	47 .5		VENTING VALVE
			A10-			+M-Y8401:2	47 .6		VENTING VALVE
			A10⏚			+M-Y8401:E	47 .6		VENTING VALVE

Drawing remarks

Tetra Pak

Designer LUP	Date 26/06/2003	Machine PT21 030V	
ECM No 117717	Denomination TERMINAL STRIP OVERVIEW	Page Type VALVES-BANK 2	
Company Tetra Pak Carton Ambient S.p.A.	Document No. 2635106-0006	Doc. type ELD	Version AA	Page 009

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Terminal strip of 2635106-0003

+M-X8410

From	Cable	Internal Jumper	Terminal	External Jumper	Cable	To	Page.Col.	Option	Function text
+C-A8219:1	-W8460:YE		1		-W8461:YE	+M-B8427:YE	23 .4		TAB SEALING PAD HEATER TEMPERATUR
+C-A8219:2	-W8460:RD		2		-W8461:RD	+M-B8427:RD	23 .4		TAB SEALING PAD HEATER TEMPERATUR
+C-K8213:2			3		-W8462:1	+M-R8401:1	12 .4		TAB SEALING PAD HEATER
+C-G8301:B1-			4		-W8462:2	+M-R8401:2	12 .3		TAB SEALING PAD HEATER
			⏚						

Drawing remarks

Tetra Pak

Designer LUP	Date 26/06/2003	Machine PT21 030V	
ECM No 117717	Denomination TERMINAL STRIP OVERVIEW	Page Type SEALING PAD HEATING	
Company Tetra Pak Carton Ambient S.p.A.	Document No. 2635106-0006	Doc. type ELD	Version AA	Page 010

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Terminal strip of 2635106-0003

+M-X8411

From	Cable	Internal Jumper	Terminal	External Jumper	Cable	To	Page.Col.	Option	Function text
+C-X8215:3	-W8450:3		1		-W8452:1	+M-M8408:L1	11.4		COMPRESSOR
+C-X8215:4	-W8450:4		2		-W8452:2	+M-M8408:N	11.4		COMPRESSOR
			⏚		-W8452:YG	+M-M8408:E	11.4		COMPRESSOR
			⏚		-W8453:YG	+M-M8409:E	11.5		CONDENSER FAN
			3		-W8453:BK	+M-M8409:BK	11.5		CONDENSER FAN
			4		-W8453:BU	+M-M8409:BU	11.6		CONDENSER FAN
			5		-W8453:BN	+M-M8409:BN	11.6		CONDENSER FAN
						+M-C8401:+			
			6			+M-C8401:-	11.6		
			⏚		-W8451:YG	+M-M8407:E	11.7		EVAPORATOR FAN
+C-X8215:1	-W8450:1		7		-W8451:BK	+M-M8407:BK	11.7		EVAPORATOR FAN
+C-X8215:2	-W8450:2		8		-W8451:BU	+M-M8407:BU	11.8		EVAPORATOR FAN
			9		-W8451:BN	+M-M8407:BN	11.8		EVAPORATOR FAN
						+M-C8402:+			
			10			+M-C8402:-	11.8		
+C-X8215:⏚	-W8450:YG		⏚				11.9		

Drawing remarks

Tetra Pak

Designer LUP	Date 26/06/2003	Machine PT21 030V	
ECM No 117717	Denomination TERMINAL STRIP OVERVIEW	Page Type CABINET COOLING SYSTEM	
Company Tetra Pak Carton Ambient S.p.A.	Document No. 2635106-0006	Doc. type ELD	Version AA	Page 011

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1 2 3 4 5 6 7 8 9 10

Terminal strip of 2635106-0003

+M-X8420

From	Cable	Internal Jumper	Terminal	External Jumper	Cable	To	Page.Col.	Option	Function text
+C-X8206:1	-W8409:BN		1			+M-B84202:+	20 .10		REGISTER MARK CLOCKPHOTOCELL
			2			+M-B84202:AT	20 .10		REGISTER MARK CLOCKPHOTOCELL
+C-X8206:2	-W8409:BU		3			+M-B84202:-	20 .10		REGISTER MARK CLOCKPHOTOCELL
+C-X8206:4	-W8409:BK		4			+M-B84202:SIGN	20 .10		REGISTER MARK CLOCKPHOTOCELL
+C-X8206:3	-W8409:GY		5			+M-B84202:ET	20 .10		REGISTER MARK CLOCKPHOTOCELL

Drawing remarks

Tetra Pak

Designer LUP	Date 26/06/2003	Machine PT21 030V	
ECM No 117717	Denomination TERMINAL STRIP OVERVIEW	Page Type REGISTER MARK / FEEDERS	
Company Tetra Pak Carton Ambient S.p.A.	Document No. 2635106-0006	Doc. type ELD	Version AA	Page 012

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1 2 3 4 5 6 7 8 9 10

Terminal strip of 2635106-0003

+M-X8421

From	Cable	Internal Jumper	Terminal	External Jumper	Cable	To	Page.Col.	Option	Function text
+C-X8205:1	-W8408:BN		1			+M-B84201:+	20 .10		REGISTER MARK DATAPHOTOCELL
			2			+M-B84201:AT	20 .10		REGISTER MARK DATAPHOTOCELL
+C-X8205:2	-W8408:BU		3			+M-B84201:-	20 .10		REGISTER MARK DATAPHOTOCELL
+C-X8205:4	-W8408:BK		4			+M-B84201:SIGN	20 .10		REGISTER MARK DATAPHOTOCELL
+C-X8205:3	-W8408:GY		5			+M-B84201:ET	20 .10		REGISTER MARK DATAPHOTOCELL

Drawing remarks

Tetra Pak

Designer	Date	Machine
LUP	26/06/2003	PT21 030V

ECM No	Denomination	Page Type
117717	TERMINAL STRIP OVERVIEW	REGISTER MARK / FEEDERS

Company	Document No.	Doc. type	Version	Page
Tetra Pak Carton Ambient S.p.A.	2635106-0006	ELD	AA	013

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11 Cable connection list

EM3.0TB118511en.fm

Table of contents

Cable connection list 2635106-0007

EM3.0TB118511en.fm

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Cable Connection List of 2635106-0003

Cable	Core	From	To	Page.Col.	Option
+C-W8204	RD	+C-X8202:23	+C-D8301:02	10 .4	
+C-W8204	BK	+C-X8202:24	+C-D8301:03	10 .4	
	SH				
+C-W8206	GN	+C-X8207:4	+C-A8211:24	20 .4	
+C-W8206	BN	+C-X8207:3	+C-A8211:23	20 .4	
+C-W8206	GY	+C-X8207:2	+C-A8211:22	20 .4	
+C-W8206	YE	+C-X8207:1	+C-A8211:21	20 .4	
+C-W8206	WH	+C-X8207:5	PE:	20 .2	
+C-W8206	SH	+C-X8207:6	GND:	20 .2	
+C-W8207	GN	+C-X8211:4	+C-A8212:24	20 .4	
+C-W8207	BN	+C-X8211:3	+C-A8212:23	20 .4	
+C-W8207	GY	+C-X8211:2	+C-A8212:22	20 .4	
+C-W8207	YE	+C-X8211:1	+C-A8212:21	20 .4	
+C-W8207	WH	+C-X8211:5	PE:	20 .2	
+C-W8207	SH	+C-X8211:6	GND:	20 .2	
+C-W8208	RD	+C-X8217:-	+C-A8218:2	23 .6	
+C-W8208	YE	+C-X8217:+	+C-A8218:1	23 .6	
+C-W8209	BU	+C-X8221:2	+C-B8202:	30 .4	
+C-W8209	BN	+C-X8221:1	+C-B8202:	30 .4	
+C-W8209	BK	+C-X8221:3	+C-B8202:	30 .5	
+C-W8210	1	+C-A8205:X003	+C-A8214:102	15 .6	
+C-W8233	1	+C-A8201:1002	+C-A8233:1002	6 .2	
+C-W8233	2	+C-A8201:1003	+C-A8233:1003	6 .2	
+C-W8233	YG	+C-A8201:1001	PE:	6 .2	
+C-W8233	SH	GND:	GND:	6 .3	
+M-W8201	1	+F-X106:1	+C-X8201:1	5 .5	
+M-W8201	2	+F-X106:2	+C-X8201:2	5 .5	

Cable	Core	From	To	Page.Col.	Option
+M-W8201	3	+F-X106:3	+C-X8201:3	5 .5	
+M-W8201	4	+F-X106:6	+C-X8201:6	5 .5	
+M-W8201	YG	+F-X106:⏚	+C-X8201:⏚	5 .5	
+M-W8202	1	+F-X206:1	+C-X8202:1	25 .4	
+M-W8202	2	+F-X206:2	+C-X8202:2	25 .4	
	3				
+M-W8202	4	+F-X206:4	+C-X8202:4	25 .4	
+M-W8202	5	+F-X206:5	+C-X8202:5	25 .4	
+M-W8202	6	+F-X206:6	+C-X8202:6	25 .4	
+M-W8202	7	+F-X206:7	+C-X8202:7	25 .4	
+M-W8202	8	+F-X206:8	+C-X8202:8	25 .4	
+M-W8202	9	+F-X206:9	+C-X8202:9	25 .4	
+M-W8202	10	+F-X206:10	+C-X8202:10	25 .4	
+M-W8202	11	+F-X206:11	+C-X8202:11	25 .4	
+M-W8202	12	+F-X206:12	+C-X8202:12	25 .4	
+M-W8202	13	+F-X206:13	+C-X8202:13	25 .4	
+M-W8202	14	+F-X206:14	+C-X8202:14	25 .4	
+M-W8202	15	+F-X206:15	+C-X8202:15	25 .4	
+M-W8202	16	+F-X206:16	+C-X8202:16	25 .4	
+M-W8202	17	+F-X206:17	+C-X8202:17	25 .4	
+M-W8202	18	+F-X206:18	+C-X8202:18	25 .4	
+M-W8202	19	+F-X206:19	+C-X8202:19	25 .4	
+M-W8202	20	+F-X206:20	+C-X8202:20	25 .4	
+M-W8202	21	+F-X206:21	+C-X8202:21	25 .4	
	22				
	23				
	24				

Drawing remarks

Tetra Pak

Designer	Date	Machine
LUP	26/06/2003	PT21 030V

ECM No	Denomination	Page Type
117717	CABLE CONNECTION LIST	CABLE CONNECTION LIST

Company	Document No.	Doc. type	Version	Page
Tetra Pak Carton Ambient S.p.A.	2635106-0007	ELD	AA	001

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Cable Connection List of 2635106-0003

Cable	Core	From	To	Page.Col.	Option
+M-W8202	YG	+F-X206:⏚	+C-X8202:⏚	25 .4	
+M-W8203	RD	+F-X206:23	+C-X8202:23	25 .4	
+M-W8203	BK	+F-X206:24	+C-X8202:24	25 .4	
	SH				
+M-W8401	1	+M-M8401:U	+C-A8201:1103	6 .1	
+M-W8401	2	+M-M8401:V	+C-A8201:1104	6 .1	
+M-W8401	3	+M-M8401:W	+C-A8201:1105	6 .1	
	GN				
	YE				
+M-W8401	WH	+M-M8401:1	+C-A8201:1404	6 .1	
+M-W8401	BN	+M-M8401:2	+C-A8201:1405	6 .1	
+M-W8401	YG	+M-M8401:E1	PE:	6 .2	
+M-W8401	SH	GND:	+C-A8201:1101	6 .1	
+M-W8401	SH	GND:	+C-A8201:1101	6 .1	
	SH				
+M-W8402	SH	+C-A8201:6001	GND:	6 .1	
+M-W8402	PK	+C-A8201:6002	+M-M8401:A	6 .1	
+M-W8402	GY	+C-A8201:6003	+M-M8401:B	6 .1	
+M-W8402	WH	+C-A8201:6004	+M-M8401:C	6 .1	
+M-W8402	BN	+C-A8201:6005	+M-M8401:D	6 .1	
+M-W8402	YE	+C-A8201:6007	+M-M8401:E	6 .1	
+M-W8402	GN	+C-A8201:6009	+M-M8401:F	6 .1	
+M-W8403	1	+M-X8401:1	+C-X8204:1	27 .6	
+M-W8403	2	+M-X8401:3	+C-X8204:2	27 .6	
+M-W8403	3	+M-X8401:10	+C-X8204:3	27 .4	
+M-W8403	4	+M-X8401:12	+C-X8204:4	27 .4	
+M-W8403	5	+M-X8401:6	+C-X8204:5	27 .4	

Cable	Core	From	To	Page.Col.	Option
+M-W8403	6	+M-X8401:2	+C-X8204:6	27 .4	
	7				
	8				
	9				
+M-W8403	10	+M-X8401:13	+C-X8204:9	31 .3	
+M-W8403	11	+M-X8401:14	+C-X8204:10	31 .6	
+M-W8403	YG	+M-X8401:⏚	+C-X8204:⏚	31 .6	
+M-W8404	1	+M-X8401:1	+M-B8401:12	27 .6	
+M-W8404	2	+M-X8401:2	+M-B8401:11	27 .5	
+M-W8404	3	+M-X8401:3	+M-B8401:22	27 .6	
+M-W8404	4	+M-X8401:4	+M-B8401:21	27 .5	
	GNYE				
+M-W8405	1	+M-X8401:5	+M-B8402:12	27 .3	
+M-W8405	2	+M-X8401:6	+M-B8402:11	27 .2	
+M-W8405	3	+M-X8401:7	+M-B8402:22	27 .3	
+M-W8405	4	+M-X8401:8	+M-B8402:21	27 .2	
	GNYE				
+M-W8406	1	+M-X8401:9	+M-B8403:12	27 .2	
+M-W8406	2	+M-X8401:10	+M-B8403:11	27 .3	
+M-W8406	3	+M-X8401:11	+M-B8403:22	27 .2	
+M-W8406	4	+M-X8401:12	+M-B8403:21	27 .3	
	GNYE				
+M-W8407	BN	+M-X8401:13	+M-B8404:BN	31 .4	
+M-W8407	BU	+M-X8401:14	+M-B8404:BU	31 .5	
+M-W8407	YG	+M-X8401:⏚	+M-B8404:E	31 .5	
+M-W8408	BK	+C-X8205:4	+M-X8421:4	20 .10	
+M-W8408	GY	+C-X8205:3	+M-X8421:5	20 .10	

Drawing remarks

Tetra Pak

Designer	Date	Machine
LUP	26/06/2003	PT21 030V

ECM No	Denomination	Page Type
117717	CABLE CONNECTION LIST	CABLE CONNECTION LIST

Company	Document No.	Doc. type	Version	Page
Tetra Pak Carton Ambient S.p.A.	2635106-0007	ELD	AA	002

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Cable Connection List of 2635106-0003

Cable	Core	From	To	Page.Col.	Option
+M-W8408	BU	+C-X8205:2	+M-X8421:3	20 .10	
+M-W8408	BN	+C-X8205:1	+M-X8421:1	20 .10	
+M-W8408	WH		+M-X8421:2	.10	
+M-W8409	BK	+C-X8206:4	+M-X8420:4	20 .10	
+M-W8409	GY	+C-X8206:3	+M-X8420:5	20 .10	
+M-W8409	BU	+C-X8206:2	+M-X8420:3	20 .10	
+M-W8409	BN	+C-X8206:1	+M-X8420:1	20 .10	
+M-W8409	WH		+M-X8420:2	.10	
+M-W8410	BU	+C-X8207:1	+M-M8405:	20 .2	
+M-W8410	VT	+C-X8207:2	+M-M8405:	20 .2	
+M-W8410	BN	+C-X8207:3	+M-M8405:	20 .2	
+M-W8410	GN	+C-X8207:4	+M-M8405:	20 .2	
+M-W8410	SH	+C-X8207:6		.2	
+M-W8410	WH2	+C-X8207:5	+M-M8405:	20 .2	
+M-W8410	WH1	+C-X8207:5	+M-M8405:	20 .2	
+M-W8411	BU	+C-X8211:1	+M-M8406:	20 .2	
+M-W8411	VT	+C-X8211:2	+M-M8406:	20 .2	
+M-W8411	BN	+C-X8211:3	+M-M8406:	20 .2	
+M-W8411	GN	+C-X8211:4	+M-M8406:	20 .2	
+M-W8411	SH	+C-X8211:6		.2	
+M-W8411	WH2	+C-X8211:5	+M-M8406:	20 .2	
+M-W8411	WH1	+C-X8211:5	+M-M8406:	20 .2	
+M-W8412	BU	+C-X8208:2	+M-B8421:	34 .4	
+M-W8412	BN	+C-X8208:1	+M-B8421:	34 .4	
+M-W8412	BK	+C-X8208:3	+M-B8421:	34 .7	
+M-W8413	BU	+C-X8208:5	+M-B8422:BU	35 .4	
+M-W8413	GY	+C-X8208:4	+M-B8422:GY	35 .4	

Cable	Core	From	To	Page.Col.	Option
+M-W8413	BN	+C-X8208:4	+M-B8422:BN	35 .4	
+M-W8413	WH	+M-B8422:WH		35	
+M-W8413	BK	+C-X8208:6	+M-B8422:BK	35 .7	
+M-W8414	BU	+C-X8209:2	+M-B8423:	34 .4	
+M-W8414	BN	+C-X8209:1	+M-B8423:	34 .4	
+M-W8414	BK	+C-X8209:3	+M-B8423:	34 .7	
+M-W8415	BU	+C-X8210:2	+M-B8424:	34 .4	
+M-W8415	BN	+C-X8210:1	+M-B8424:	34 .4	
+M-W8415	BK	+C-X8210:3	+M-B8424:	34 .7	
+M-W8416	BU	+C-X8210:5	+M-B84252:	35 .5	
+M-W8416	BN	+C-X8210:4	+M-B84252:	35 .5	
+M-W8417	BN	+C-X8210:4	+M-B84251:	35 .4	
+M-W8417	BU	+C-X8210:5	+M-B84251:	35 .4	
+M-W8417	BK	+C-X8210:6	+M-B84251:	35 .7	
+M-W8418	BU	+C-X8216:2	+M-B8429:	34 .4	
+M-W8418	BN	+C-X8216:1	+M-B8429:	34 .4	
+M-W8418	BK	+C-X8216:3	+M-B8429:	34 .7	
+M-W8419	1	+C-X8212:1	+M-X8404:A1+	47 .4	
+M-W8419	2	+C-X8212:2	+M-X8404:A2+	47 .4	
+M-W8419	3	+C-X8212:3	+M-X8404:A3+	47 .4	
+M-W8419	4	+C-X8212:4	+M-X8404:A4+	47 .4	
+M-W8419	5	+C-X8212:5	+M-X8404:A5+	47 .4	
+M-W8419	6	+C-X8212:6	+M-X8404:A6+	47 .4	
+M-W8419	7		+M-X8404:A7+	.4	
+M-W8419	8		+M-X8404:A8+	.4	
+M-W8419	9		+M-X8404:A9+	.4	
+M-W8419	10		+M-X8404:A10+	.4	

Drawing remarks

Tetra Pak

Designer	Date	Machine
LUP	26/06/2003	PT21 030V

ECM No	Denomination	Page Type
117717	CABLE CONNECTION LIST	CABLE CONNECTION LIST

Company	Document No.	Doc. type	Version	Page
Tetra Pak Carton Ambient S.p.A.	2635106-0007	ELD	AA	003

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1 2 3 4 5 6 7 8 9 10

Cable Connection List of 2635106-0003

Cable	Core	From	To	Page.Col.	Option
	11				
+M-W8419	12	+C-X8212:7	+M-X8404:A1-	47 .7	
+M-W8419	13	+C-X8212:18	+M-X8404:A6-	47 .7	
+M-W8419	YG	+C-X8212:⏚	+M-X8404:A1⏚	47 .7	
+M-W8420	1	+C-X8212:8	+M-X8405:A1+	48 .4	
+M-W8420	2	+C-X8212:9	+M-X8405:A2+	48 .4	
+M-W8420	3	+C-X8212:10	+M-X8405:A3+	48 .4	
+M-W8420	4	+C-X8212:11	+M-X8405:A4+	48 .4	
+M-W8420	5	+C-X8212:12	+M-X8405:A5+	48 .4	
+M-W8420	6	+C-X8212:13	+M-X8405:A6+	48 .4	
+M-W8420	7	+C-X8212:14	+M-X8405:A7+	48 .4	
+M-W8420	8	+C-X8212:15	+M-X8405:A8+	48 .4	
+M-W8420	9		+M-X8405:A9+	.4	
+M-W8420	10	+C-X8212:19	+M-X8405:A10+	47 .5	
	11				
+M-W8420	12	+C-X8212:16	+M-X8405:A1-	48 .7	
+M-W8420	13	+C-X8212:17	+M-X8405:A6-	48 .7	
+M-W8420	YG	+C-X8212:⏚	+M-X8405:A1⏚	48 .7	
+M-W8421	1	+C-X8212:20	+M-B8426:3	31 .3	
+M-W8421	2	+C-X8212:21	+M-B8426:1	31 .6	
	GNYE				
+M-W8422	1	+C-X8213:1	+M-X8402:1	30 .3	
+M-W8422	2	+C-X8213:2	+M-X8402:2	30 .3	
+M-W8422	3	+C-X8213:3	+M-X8402:3	30 .7	
+M-W8422	4	+C-X8213:4	+M-X8402:4	34 .7	
+M-W8422	5	+C-X8213:5	+M-X8402:6	34 .7	
+M-W8422	6	+C-X8213:6	+M-X8402:8	32 .7	

Cable	Core	From	To	Page.Col.	Option
+M-W8422	7	+C-X8213:7	+M-X8402:9	35 .7	
+M-W8422	8	+C-X8213:8	+M-X8402:10	35 .7	
+M-W8422	9	+C-X8213:9	+M-X8402:11	35 .7	
+M-W8422	10	+C-X8213:10	+M-X8402:12	56 .7	
	11				
+M-W8422	YG	+C-X8213:⏚	+M-X8402:⏚	56 .7	
+M-W8423	BU	+M-X8402:2	+M-B8405:	30 .4	
+M-W8423	BN	+M-X8402:1	+M-B8405:	30 .4	
+M-W8423	BK	+M-X8402:3	+M-B8405:	30 .5	
+M-W8424	BU	+M-X8402:4-	+M-B84061:	34 .4	
+M-W8424	BN	+M-X8402:4+	+M-B84061:	34 .4	
+M-W8424	BK	+M-X8402:4	+M-B84061:	34 .6	
+M-W8425	BN	+M-X8402:5+	+M-B84062:	34 .5	
+M-W8425	BU	+M-X8402:5-	+M-B84062:	34 .5	
+M-W8426	BU	+M-X8402:6-	+M-B84071:	34 .4	
+M-W8426	BN	+M-X8402:6+	+M-B84071:	34 .4	
+M-W8426	BK	+M-X8402:6	+M-B84071:	34 .6	
+M-W8427	BN	+M-X8402:7+	+M-B84072:	34 .5	
+M-W8427	BU	+M-X8402:7-	+M-B84072:	34 .5	
+M-W8428	BU	+M-X8402:8-	+M-B8408:	32 .5	
+M-W8428	BN	+M-X8402:8+	+M-B8408:	32 .5	
+M-W8428	BK	+M-X8402:8	+M-B8408:	32 .6	
+M-W8429	BU	+M-X8402:9-	+M-B8409:	35 .4	
+M-W8429	BN	+M-X8402:9+	+M-B8409:	35 .4	
+M-W8429	BK	+M-X8402:9	+M-B8409:	35 .6	
+M-W8431	BK	+M-X8402:11-	+M-B8411:	35 .4	
+M-W8431	RD	+M-X8402:11+	+M-B8411:	35 .4	

Drawing remarks

Tetra Pak

Designer	Date	Machine
LUP	26/06/2003	PT21 030V

ECM No	Denomination	Page Type
117717	CABLE CONNECTION LIST	CABLE CONNECTION LIST

Company	Document No.	Doc. type	Version	Page
Tetra Pak Carton Ambient S.p.A.	2635106-0007	ELD	AA	004

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1 2 3 4 5 6 7 8 9 10

Cable Connection List of 2635106-0003

Cable	Core	From	To	Page.Col.	Option
+M-W8431	WH	+M-X8402:11	+M-B8411:	35 .6	
+M-W8433	1	+C-X8214:1	+M-X8403:1	32 .3	
+M-W8433	2	+C-X8214:2	+M-X8403:2	32 .3	
+M-W8433	3	+C-X8214:3	+M-X8403:3	32 .7	
+M-W8433	4	+C-X8214:4	+M-X8403:4	35 .7	
+M-W8433	5	+C-X8214:5	+M-X8403:5	34 .7	
+M-W8433	6	+C-X8214:6	+M-X8403:7	34 .7	
	7				
	8				
	9				
	10				
	11				
+M-W8433	YG	+C-X8214:⏚	+M-X8403:⏚	56 .7	
+M-W8434	BU	+M-X8403:2	+M-B8413:	32 .5	
+M-W8434	BN	+M-X8403:1	+M-B8413:	32 .5	
+M-W8434	BK	+M-X8403:3	+M-B8413:	32 .6	
+M-W8435	BN	+M-X8403:4+	+M-B8414:	35 .4	
+M-W8435	BU	+M-X8403:4-	+M-B8414:	35 .4	
+M-W8435	BK	+M-X8403:4	+M-B8414:	35 .6	
+M-W8436	BU	+M-X8403:5-	+M-B84151:	34 .4	
+M-W8436	BN	+M-X8403:5+	+M-B84151:	34 .4	
+M-W8436	BK	+M-X8403:5	+M-B84151:	34 .6	
+M-W8437	BU	+M-X8403:6-	+M-B84152:	34 .5	
+M-W8437	BN	+M-X8403:6+	+M-B84152:	34 .5	
+M-W8438	BU	+M-X8403:7-	+M-B84161:	34 .4	
+M-W8438	BN	+M-X8403:7+	+M-B84161:	34 .4	
+M-W8438	BK	+M-X8403:7	+M-B84161:	34 .6	

Cable	Core	From	To	Page.Col.	Option
+M-W8439	BU	+M-X8403:8-	+M-B84162:	34 .5	
+M-W8439	BN	+M-X8403:8+	+M-B84162:	34 .5	
+M-W8445	SH	GND:	GND:	7 .5	
+M-W8445	4	+M-M8402:K	+C-A8216:44	7 .6	
+M-W8445	2	+M-M8402:B	+C-A8216:46	7 .5	
+M-W8445	1	+M-M8402:A	+C-A8216:47	7 .5	
+M-W8445	3	+M-M8402:J	+C-A8216:45	7 .5	
+M-W8445	YG	+M-M8402:⏚	PE:	7 .6	
+M-W8446	1	+M-M8433:1	+C-A8233:1103	8 .2	
+M-W8446	2	+M-M8433:3	+C-A8233:1104	8 .2	
+M-W8446	3	+M-M8433:4	+C-A8233:1105	8 .2	
+M-W8446	GN	+M-M8433:A	+C-A8233:1404	8 .2	
+M-W8446	YE	+M-M8433:B	+C-A8233:1405	8 .2	
	WH				
	BN				
+M-W8446	YG	+M-M8433:2	PE:	8 .2	
+M-W8446	SH	GND:	+C-A8233:1101	8 .2	
+M-W8446	SH	GND:	+C-A8233:1101	8 .2	
	SH				
+M-W8447	SH	+C-A8233:6001		.2	
+M-W8447	YE	+C-A8233:6002	+M-M8433:4	8 .2	
+M-W8447	GN	+C-A8233:6003	+M-M8433:3	8 .2	
+M-W8447	WH	+C-A8233:6004	+M-M8433:1	8 .2	
+M-W8447	BN	+C-A8233:6005	+M-M8433:2	8 .2	
+M-W8447	VT	+C-A8233:6007	+M-M8433:6	8 .2	
+M-W8447	PK	+C-A8233:6009	+M-M8433:5	8 .2	
+M-W8448	2	+C-X8203:5	+M-H8401:2	11 .2	

Drawing remarks

Tetra Pak

Designer	Date	Machine
LUP	26/06/2003	PT21 030V

ECM No	Denomination	Page Type
117717	CABLE CONNECTION LIST	CABLE CONNECTION LIST

Company	Document No.	Doc. type	Version	Page
Tetra Pak Carton Ambient S.p.A.	2635106-0007	ELD	AA	005

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Cable Connection List of 2635106-0003

Cable	Core	From	To	Page.Col.	Option
+M-W8448	1	+C-X8203:4	+M-H8401:1	11 .1	
+M-W8448	YG	+C-X8203:⏚	+M-H8401:E	11 .2	
+M-W8450	1	+C-X8215:1	+M-X8411:7	11 .7	
+M-W8450	2	+C-X8215:2	+M-X8411:8	11 .8	
+M-W8450	3	+C-X8215:3	+M-X8411:1	11 .4	
+M-W8450	4	+C-X8215:4	+M-X8411:2	11 .4	
+M-W8450	YG	+C-X8215:⏚	+M-X8411:⏚	11 .9	
+M-W8451	BK	+M-X8411:7	+M-M8407:BK	11 .7	
+M-W8451	BU	+M-X8411:8	+M-M8407:BU	11 .8	
+M-W8451	BN	+M-X8411:9	+M-M8407:BN	11 .8	
+M-W8451	YG	+M-X8411:⏚	+M-M8407:E	11 .7	
+M-W8452	1	+M-X8411:1	+M-M8408:L1	11 .4	
+M-W8452	2	+M-X8411:2	+M-M8408:N	11 .4	
+M-W8452	YG	+M-X8411:⏚	+M-M8408:E	11 .4	
+M-W8453	BK	+M-X8411:3	+M-M8409:BK	11 .5	
+M-W8453	BN	+M-X8411:5	+M-M8409:BN	11 .6	
+M-W8453	BU	+M-X8411:4	+M-M8409:BU	11 .6	
+M-W8453	YG	+M-X8411:⏚	+M-M8409:E	11 .5	
+M-W8454	1	+C-X8215:5	+M-B8428:C	11 .10	
+M-W8454	2	+C-X8215:6	+M-B8428:2	11 .9	
	3				
+M-W8454	YG	+C-X8215:⏚	+M-B8428:E	11 .9	
+M-W8460	RD	+M-X8410:2	+C-A8219:2	23 .6	
+M-W8460	YE	+M-X8410:1	+C-A8219:1	23 .6	
+M-W8461	RD	+M-X8410:2	+M-B8427:RD	23 .4	
+M-W8461	YE	+M-X8410:1	+M-B8427:YE	23 .4	
+M-W8462	2	+M-X8410:4	+M-R8401:2	12 .3	

Cable	Core	From	To	Page.Col.	Option
+M-W8462	1	+M-X8410:3	+M-R8401:1	12 .4	
+M-W8470	1	+C-A8204:X003	+M-T8404:C	14 .4	
+M-W8471	1	+C-A8214:101	+M-T8406:C	15 .6	
+M-W8472	1	+C-A8214:103	+M-T8405:C	15 .6	

Drawing remarks

Tetra Pak

Designer LUP	Date 26/06/2003	Machine PT21 030V	
ECM No 117717	Denomination CABLE CONNECTION LIST	Page Type CABLE CONNECTION LIST	
Company Tetra Pak Carton Ambient S.p.A.	Document No. 2635106-0007	Doc. type ELD	Version AA	Page 006

12 Engineering change description

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Engineering change description. 2635106-0099

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ECM No.	Drawing No.	Alteration
70737	BE-649060-0300	DOCUMENTATION RELEASED (SEE ECN APPENDIX)
70916	-	For changes on lists see ECN Appendix.
	48145-00	PLC Program version 02 introduced.
	595005-0001	Version AB related to ECN 70916 introduced.
71137	-	For changes on lists see ECN Appendix. All drawings have update data on the frame.
	44638-002	Version 02 related to ECN 71137 released. New issue due to ECN.
	44638-006	Version 02 related to ECN 71137 released. Connection from A8201:7A07 to S8201:14 (sheet ref. AJ) and connection ref. “C” removed. Connection from A8201:7A11 to A8306:02 (O06.02) [sheet ref. AA] introduced. Connection from A8201:7A07 to A8306:03 (O06.03) [sheet ref. AJ] introduced. Function note added on A8201:7A11.
	44638-008	Version 02 related to ECN 71137 released. F8212 terminal number 3 an 4 changed in 1 and 2 (Error correction).
	44638-011	Version 02 related to ECN 71137 released. Sheet references AQ, AN, BE position moved inside the drawing.
	44638-012	Version 02 related to ECN 71137 released. F8213 terminal number 1 and 2 swapped (Error correction). Connection from XL831:12 (L831) to F8213:1 removed. Connection from XL811:16 (L811) to F8213:1 introduced. Relay contact K8209:8-9-11 inserted between fuse F8213:2 and SSR K8213:1.
	44638-023	Version 02 related to ECN 71137 released. Connection from K8208:1 to K8209:9 (Sheet ref. AQ) removed Connection from K8209:11 to A8218:26 removed. Connection from K8208:1 to A8218:26 (Sheet ref. AQ) introduced. Connection references revised. Wire notes added/modified on sheet references AQ, BE.
	44638-027	Version 02 related to ECN 71137 released. Connection from XL811:8 to A8202:A1 removed. Connection from A8202:A1 to S8202:22 (sheet ref. CE) introduced. Connection references on A8202: A1-13-33 introduced.
	44638-031	Version 02 related to ECN 71137 released. Connection from A8201:7A07 to S8201:14 (sheet ref. AJ) and connection ref. “A” and “B” removed. Connection from X8204:9 to S8202:33 (sheet ref. AK) removed; connection ref. “E” modified.
	44638-033	Version 02 related to ECN 71137 released.

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ECM No.	Drawing No.	Alteration
		Selector switch S8202 introduced. Connection from X8204:9 to S8202:33 (sheet ref. AK) and connection ref. “F” introduced. Bridge from S8202:33 to S8202:43 and connection ref. “G” introduced. Connection from S8202:21 to XL811:18 introduced. Connection from S8202:22 to A8202:A1 (sheet ref. CE) and connection ref. “A” introduced. Connection from S8202:12 to X8212:19 (sheet ref. CA) and connection ref. “B” introduced. Bridge from S8202:12 to S8202:44 and connection ref. “C” introduced. Connection from S8202:34 to A8301:1.13 (I01.1.13.) introduced. Function note added on A8301:1.13 (I01.1.13.).
	44638-047	Version 02 related to ECN 71137 released. Connection from A8305:00 (O05.00) to X8212:19 removed. Connection from A8305:00 (O05.00) to S8202:11 [sheet ref. CX] introduced. Connection from X8212:19 to S8202:12 (sheet ref. CA) and connection ref. “A” introduced.
	44638-049	Version 02 related to ECN 71137 released. Connection from A8306:02 (O06.02) to A8201:7A11 [sheet ref. AA] introduced. Connection from A8306:03 (O06.03) to A8201:7A07 [sheet ref. AJ] introduced.
	44638-990	Version 02 related to ECN 71137 released. F8213:2 (print at the end of line L831) removed . (Physical connection in XL831:12 pos.20. XL810:4 pos.20 moved to pos.60 (error correction). XL811:8 pos.20,30,40 removed. XL811:16 pos. 20 connected to F8213:1. XL811:18 pos. 20 connected to S8202:21.
	44638-991	Version 02 related to ECN 71137 released. New issue due to ECN.
	48145-00	PLC Program version 03 introduced
	595005-0001	Version AC related to ECN 71137 introduced.
71547	EM-82381-XX01 -	ELECTRICAL MANUAL RELEASED (980715) FOR CHANGES ON LISTS SEE APPENDIX
	48187-00:02	PLC PROGRAM VERSION 02 HAS BEEN RELEASED. (PLC PROGRAM 48145-00:03 IS REPLACED BY 48187-00:02.THIS PROGRAM IS VALID ALSO FOR PT/21-0400)
	1296019-0000	INDEX EL. MANUAL IS ERASED
	1296020-0000	LABEL EL. MANUAL IS ERASED
	595005-0001 (AD)	ENGINEERING CHANGE DESCRIPTION: CHANGED ACCORDING THIS ECN

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ECM No.	Drawing No.	Alteration
72084	EM-82381-0102	ELECTRICAL MANUAL IS CHANGED ACCORDING TO THIS ECN
	-	FOR CHANGES ON LISTS SEE BOM'S PRINTOUT
	48187-000:03	PLC PROGRAM VERSION 03 HAS BEEN RELEASED. (THIS PROGRAM IS VALID ALSO FOR PT/21-0400)
	595005-0001 (AE)	ENGINEERING CHANGE DESCRIPTION: CHANGED ACCORDING THIS ECN
117717	EM-81851-0101	NEW ELECTRICAL MANUAL IN EPLAN 21 HAS BEEN RELEASED

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13 Program documents

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PLC programme list 48187-041:06

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PLC programme list 48187-081:06

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PLC programme list 48187-087:06

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PLC programme list 48187-099:06

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LIST OF BLOCKS

05 Configuration
06 Check volume
07 Volume parameters
09 Pulse generating
10 Machine ladder
11 Step up conditions
18 Common alarms
30 Communication: TPMC - DMC
39 Dumping of packages
40 Common functions
41 Infeed loop control
49 Cabinet cooler
80 Satt-bus communication: From TPOP+TBA-TPMC IN-Mailbox of PT\21 and watchdog
81 Satt-bus communication: PT-Alarm bits loading into output words for TBA\21
82 Satt-bus communication: Data send controls
84 Satt-bus communication: Last scan recording of PT's alarm words for event-detect
85 Satt-bus communication: Detect PT's A-Alarm present
86 Satt-bus communication: Load PT to TBA-TPMC words to PT'S OUT Mailbox
87 Satt-bus communication: Alarm lock-controls of PT's OUT Mailbox alarm words
90 Servo and applicator control
99 Fast scan

LIST OF ADDRESSES

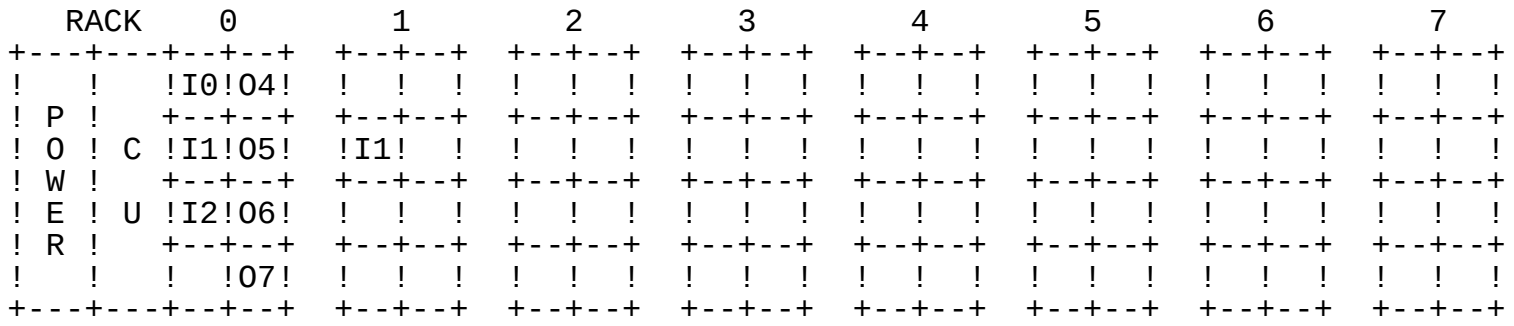
Rebuilding Kit	AM Number	Date	Sign	Description
	71022	970912	PGE	PT21 Serial Version 01
	71547	980720	PGE	PT21 Serial Version 02
	72084	990101	PGE	PT21 Serial Version 03
	72681	990625	PGE	PT21 Serial Version 04
	73490	000412	FGI	PT21 Serial Version 05
RO-1517497-0100	82457	010326	FGI	PT21 RO "Servo Tensioner Device"
	30439	020129	FGI	PT21 Serial Version 06

PT21 0300/0400 (VER.06)
48187:06

020129 FGI
010326 FGI
000125 FGI
990809 MCV
990625 PGE

Type: 64.1
Size: 9492
Blocks: 21
Rungs: 355
Addresses: 495

I/O Map:



Fast I/O: Block90 O05
Block99 I02 O06

Scan time: Block05-89: 20
Block90-98: 2
Block99: 1

Sector: 0 = 1 = 2 = 3 = 4 = 5 = 6 = 7 =

LIST OF ADDRESSES

Address	Position	Function		used in rungs
C000		Packages when Tab folder	is turned off.	*4009, *4010
CO000.0	0- 50	Pkgs off	Tab folder	4011
D003	0s5	Step 3	Delay	1106
D010	3s	Air alarm	delay	1850
D011	1s0	I/F loop	low delay	4103
D012	7s	Preparation	delay	4104
D013	0s2	TBA/21 stop	delay	4104
D016	0s160	Wait cycle	start	0904
D017	0s150	Time betw.	Reg. mark	0904
D037	0s100	Patch mat.	rot.monitor	9931
D047	0s100	Tab mat.	rot.monitor	9934
D048	2s0	Infeed loop	fault delay	1808
D050	10s	Waste high	level delay	1844
D055	5s	Tab folder	delay	4011
D060	3s	Air press.	alarm delay	1852
D071	3s	Rot. monit.	delay	1812
D073	11s0	SDV fault	enable del.	1818
D074	18s000	STD fault	enable del.	1854
D077	10s	Watchdog	timer 1	1835
D078	10s	Watchdog	timer 2	1835
D079	1s0	TPIH fault	enab. delay	1837
D080	2s500	Mal.func RM	delay Home	1816
D081	1s200	Mal.func RM	delay Prod.	1816
D090	0s700	Machine	cycle delay	0902
D091	0s5	Reset stn	delay	9008
D100	0s100	Waste	delay	3912
D330	1s	Satt send	to TBA\21	8202
D333	0s7	Satbus send	visual aid	8208
I01.00	X8202:2	Emergency	stop TBA21	1102, 1104
I01.01	B8202	El. cabinet	door guard	4902
I01.02	B8403	Door guard	right rear	1805, 1806
I01.03	B8402	Door guard	right front	1804, 1805, 1806

LIST OF ADDRESSES

Address	Position	Function		used in rungs
I01.04	B8401	Door guard	left	1803, 1804, 1805, 1806
I01.05	Q8201:13-14	Overload	protector	1820
I01.06	B8405	Waste box	high level	1844
I01.07	B8428	Cooling	system	1851, 1852, 4902
I01.10	A8218:20	El. cabinet	cool stop	4902
I01.11	A8218:24	El. cabinet	cool start	4902
I01.13	B8426	Air press.	monitor	1849, 1850
I01.14	S8201:34	Production		1814, 1816, 1822, 3907, 3908, 4007, 4011
I01.15	S8201:41	Prod. appl.	disable sel	1832, 1840, 1843, 1846, 4009, 9903
I01.16	S8201:14	Preparation	selected	1103, 1104, 1833
I01.17	B8404	Bypass	selected	1803, 1804, 1805, 1820, 1830, 1833, 1850
I02.00	B84151	Infeed loop	high	1808, 4104
I02.01	B84161	Infeed loop	low	4102, 4103, 4104
I02.02	B84061	Outfeed	loop high	1810, 4006, 4102, 4104, 9902
I02.03	B84071	Outfeed	loop low	4006, 9902
I02.04	B8429	Punch jaw	closed	9007, 9014
I02.05	B8421	Patch jaw	closed	9016, 9916
I02.06	B8423	Reseal jaw	closed	9018, 9916
I02.07	B8424	Tab jaw	closed	9020
I02.10	B8422	Patch	missing	9925
I02.12	B8409	Patch rot.	monitor	9930
I02.13	B84251	Tab missing		9927
I02.15	B8414	Tab rot.	monitor	9933
I02.17	B8411	Black tape	detector	9928
I011.00	X8202.18	From TBA21:	ASU full	4104
I011.01	X8202:19	From TBA21:	Pap.HighSpd	1812, 4011
I011.02	X8202:20	From TBA21:	Reg.mrk DCS	0906
I011.03	B8408	Patch mat.	low	1838
I011.04	B8413	Tab mat.	low	1841
I011.07	A8210:28	TMCC	enabled	1104, 1828, 3009, 3010, 3011
I011.10	A8201:34	Home pos.	found	1109
I011.11	A8201:30	Servo Drive	fault	1108, 1816, 1818, 3002, 3003, 3004, 3005, 4012

LIST OF ADDRESSES

Address	Position	Function			used in rungs
I011.12	A8205:230	IH fault			1837
I011.13	S8202	Service	switch		1102, 1104, 1803, 1804, 1805, 1826
I011.16	A8219:20	Tab temp.	alarm High		1107, 1821, 1822, 4007
I011.17	A8219:24	Tab temp.	alarm Low		1107, 1821, 1822
I021.02	A8201:32	Move done			9911
I021.03	A8210:29	Reg. mark	pulse		0903, 1816
I021.04	A8201:31	Servo Drive	design OK		1813, 1814, 3907, 9903
I021.06	SH8202	Single step			1118, 9902
I021.17	A8233:30	Servo Tens.	fault		1108, 1816, 1854, 3002, 3003, 3004, 3005, 4012
M00.00		Ladderposition 0		Off	*1010, 1115, 1818, 1824, 1828, 1832, 1835, 1838, 1841, 1844, 1848, 1852, 1854, 4007, 4008, 4011, 4013, 4017, 4018, 4902, 4903, 9931, 9934
M00.01		Ladderposition 1		Preparation	*1010, 4006, 4012, 4015, 4102, 4104, 9003, 9004, 9005, 9902
M00.02		Ladderposition 2		Pre-heating	1004, 1009, *1010, 1115, 1818, 1822, 1854, 4006, 4102
M00.03		Ladderposition 3		Find home	1005, *1010, 1115, 1816, 3908, 4006, 9902, 9916, 9935
M00.04		Ladderposition 4		Found home	1006, *1010, 1115, 9911
M00.05		Ladderposition 5		Production	1007, *1010, 1115, 1810, 1812, 1814, 1816, 3907, 4004, 4104, 9003, 9014, 9016, 9018, 9020, 9902, 9903, 9911, 9925, 9927, 9928
M00.06		Ladderposition 6		Service and setting	1008, *1010, 1116, 4004, 4006, 9003, 9014, 9016, 9018, 9020, 9902, 9911
M01.01		Ladderposition 3-6		Find home - Service	*1011, 1808, 1822, 1837, 4012, 4016, 4102, 4103, 9916
M01.07		Step2, delay one scan			*1009, 1818, 1854
M01.10		Step up			1005, 1007, *1117, *1118
M01.11		Step up allowed			*1114, *1115, *1116, 1117, 1118, 4002, 4006

LIST OF ADDRESSES

Address	Position	Function		used in rungs
M02.00		Infeed loop high		1106, *1807, *1808, 8102
M02.01		Outfeed loop high		1110, *1809, *1810, 8103
M02.02		Rotation monitor outfeed		1110, *1811, *1812, 8104
M02.03		Out of design		*1813, *1814, 8105
M02.04		Malfunction photocells		1106, *1815, *1816, 4018, 8106
M02.05		Servo Drive		1102, 1106, *1817, 1818, *1818, 8107
M02.06		Overload protectors		1102, 1104, *1819, *1820, 8108
M02.07		Applicator temperature		1110, 1112, *1821, *1822, 8109
M02.10		Program battery low		*1823, *1824, 8110
M02.11		Service	switch	*1825, *1826, 8111
M02.12		TMCC		1106, *1827, *1828, 8112
M02.13		Bypass mode selected		1102, 1104, *1829, *1830, 8113
M02.15		Disable applicator	selected	*1831, *1832, 8114
M02.16		Preparation selected		*1833, 8115
M02.17		Communication watchdog	fault	*1834, *1835, 8116
M03.00		IH system		1110, 1112, *1836, *1837, 3908, 8117
M03.01		Patch station		1107, 1110, 1112, 3904, 8118, *9015, *9016
M03.02		Patch material low		*1838, 1839, 8119
M03.03		Patch material ended		1107, 1110, 1112, 1838, 8120, *9929, *9931
M03.04		Tab station		1107, 1110, 1112, 3906, 8121, *9019, *9020
M03.05		Tab material low		*1841, 1842, 8122
M03.06		Tab material ended		1107, 1111, 1112, 1841, 8123, *9932, *9934
M03.07		Reseal station		1107, 1111, 1113, 3905, 8124, *9017, *9018
M03.10		Waste box high level		*1844, 1845, 8125
M03.11		Waste box full		1107, 1111, 1113, 1844, *1847, *1848, 8126
M03.12		Air pressure low		1102, 1104, 1106, *1849, *1850, 8127
M03.13		Cooling system		*1851, *1852, 8128
M03.14		Punch station		1108, 1111, 1112, 3903, 8129, *9013, *9014
M03.15		Missing Patch		1111, 3904, 8130, *9924, *9925
M03.16		Missing Tab		1111, 3906, 8131, *9926, *9927
M03.17		Servo Tensioner		1103, 1106, *1853, 1854, *1854, 8132
M04.00		Volume 1000cc Baseline		*0603, 0605, 0702

LIST OF ADDRESSES

Address	Position	Function		used in rungs
M04.02		Volume 250cc	Baseline	*0604, 0607, 0709, 3902
M04.04		Volume 1000cc Slim		*0603, 0605, 0703
M04.05		Volume 1000cc Prisma		*0603, 0605, 0704
M04.06		Volume 1500cc Slimline		*0603, 0606, 0705
M04.07		Volume 1000cc Square		*0603, 0605, 0706
M04.10		Volume 500cc Slimline		*0603, 0605, 0707, 3902
M04.11		Volume 1000cc	Prisma Square	*0603, 0605, 0708
M05.00		7000 packages/hour		*0605, 0784
M05.01		5500 packages/hour		*0606, 0784
M05.02		8000 packages/hour		*0607, 0784
M05.11		Service and setting		1103, 1104, 1110, 1113, 1118, 1832, 1833, 4002, *4003, 4006, 4014, 9903, 9904
M06.00		Door right front		*1804, 8133
M06.01		Door right rear		*1805, 8134
M06.02		Door left		*1803, 8135
M06.03		All doors closed		1102, 1104, 1106, 1117, 1802, *1806, 1818, 1850, 1852, 1854, 9008
M07.00		Pulse machine cycle start		*9902, 9903, 9904, 9907
M07.01		Pulse applicator cycle	start	*9911, 9913, 9936
M07.04		Pulse IH sealing start		*9916, 9918
M07.10		Pulse		9902
M07.11		Pulse		9911
M07.12		Pulse		9008
M07.14		Pulse		9916
M10.01		Step up	Preparation	1002, 1003, *1102, 1103, *1103, 1115
M10.02		Step up	Pre-heating	1002, 1004, 1104, *1104, 1105, *1105, 1106, 1115
M10.03		Step up	Find home	1005, 1102, *1106, 1107, *1107, 1108, *1108, 1109, 1115
M10.04		Step up	Found home	1006, 1107, 1108, 1109, *1109, 1110, 1112

LIST OF ADDRESSES

Address	Position	Function		used in rungs
M10.05		Step up	Production	1007, *1110, 1111, *1111, 1112, 1115
M10.06		Step up	Service and setting	1008, *1112, 1113, *1113, 1115
M11.00		Infeed loop speed control		*4103, 4104
M11.01		Pulse		4104
M12.03		Black tape detected		3909, *3909, *9928
M12.04		Register mark detected		*0903, 0904, 0905
M12.05		Pulse Patch rotation		*9930, 9931
M12.06		Pulse Tab rotation		*9933, 9934
M12.10		Pulse register mark DCS		*0906, 3910, 3912, 4010
M12.14		Pulse		9930
M12.15		Pulse		9930
M12.16		Pulse		9933
M12.17		Pulse		9933
M13.04		Pulse		0903
M13.07		Pulse		0905
M13.10		Pulse		0906
M14.00		Pulse		3903
M14.01		Pulse		3904
M14.02		Pulse		3905
M14.03		Pulse		3906
M14.04		Pulse		3908
M15.00		Pulse		4009
M15.07		Pulse missed	Register mark	0904, *0904, 0905
M17.00		Pulse		1117
M17.10		Pulse		1118
M17.12		Pulse		1118
M20		Control memory	applicators	0502, *9905

LIST OF ADDRESSES

Address	Position	Function	used in rungs
M20.00		Tab station control	9004, 9006, 9010, 9020, 9906, 9934
M20.01		Reseal stn. control	9010, 9018, 9906, 9916, 9921, 9922
M20.02		Patch stn. control	9004, 9009, 9010, 9016, 9906, 9916, 9920, 9921, 9931
M20.03		Punch stn. control	9005, 9010, 9014, 9906
M31.00		Patch IH pulse	*9920, 9923
M31.01		Reseal IH pulse	*9922, 9923
M35.00		Alarm reset pulse	*1802, 1807, 1809, 1811, 1813, 1815, 1817, 1819, 1821, 1823, 1825, 1827, 1829, 1831, 1834, 1835, 1836, 1847, 1853, 8703, 9013, 9015, 9017, 9019, 9924, 9926, 9929, 9932
M35.02		Pulse	1802
M35.03		Pulse	1832
M37.00		1HZ pulse	4006
M37.12		TPMC running	3004, 3005, 3011, 8502
M37.14		First scan	0502, 3002, 3009
M37.15		Prog. bat. low	1824
M37.17		Shift register system bit	3008, 3014, *3911, 3912, *3912, *9904, *9936
M40.02		Volumes 250cc Baseline or 500cc Slimline	*3902, 3903, 3904, 3905, 3906, 3907, 3908, 3909
M50.00		Machine cycle ON	0902, 1004, 1005, 1006, 1007, 1008, 4006, *9910
M60.00		Applicator cycle ON	9902, *9915
M60.01		All holes closed	1107, 1822, 1837, 4007, *9906, 9911, 9916
M60.02		Applicator check OUT	*9012, 9014, 9016, 9018, 9020
M60.03		Applicator check IN	*9012, 9014, 9016, 9018, 9020
M75.00		PT\21 running	*0902, 1812, 1816, 1840, 1843, 1846, 3910, 4004, 4005

LIST OF ADDRESSES

Address	Position	Function		used in rungs
M76.00		Index of paper done		*0905, 3911
M77		Missing Tab	control memory	*9937
M77.00		Missing Tab check		9927
M100.00		Start send to filler	system bit	8203, 8208, *8208
M302.14		Pulse		8703
M303.13		Pulse		8203
M320.00		Start sending by time		8202, *8202, 8208
M320.01		Start sending by event		*8203, *8204, *8205, *8207, 8208
M320.02		A-Alarm ON	(A-Alarm det.and present)	*8502, 8702, 8704
M320.03		Old A-Alarm exists		8702, *8704
M320.04		Alarm lock to TBA ON		8602, 8603, 8604, 8605, *8702, *8703
M320.17		Start sending visual aid		*8208
M360		Word 1 from TBA\21	Volume value	0602, *8002
M361		From TBA21:	Word 2	*8003
M361.00		From TBA21: Alarm reset		1802
M361.01		From TBA21: Step up		1118
M361.02		From TBA21: Step1-13+16		1002, 1003, 1004, 1104
M361.03				1118
M361.10		From TBA21: SW Pu+Pa		1107, 1822, 4003, 9002
M361.11		From TBA21: SW Pu+Pa+Re		1107, 1822, 4003, 9002
M361.12		From TBA21: SW All stns		1822, 4003, 9002
M362		From TBA21:	Word 3	*8004
M362.17		TBA Word 3 Watchd. bit		1835, 8005, 8006
M363		To TBA21: Word 1		8204, 8402, 8602
M363.00		To TBA21:	Infeed loop	*8102
M363.01		To TBA21:	Outfeed loop	*8103
M363.02		To TBA21:	Rotation monitor outfeed	*8104
M363.03		To TBA21:	Out of design	*8105
M363.04		To TBA21:	Malfunction photocells	*8106
M363.05		To TBA21:	Servo Drive	*8107
M363.06		To TBA21:	Overload	*8108
M363.07		To TBA21:	Applicator temperature	*8109

LIST OF ADDRESSES

Address	Position	Function		used in rungs
M363.10		To TBA21:	Program battery low	*8110
M363.11		To TBA21:	Service switch	*8111
M363.12		To TBA21:	TMCC	*8112
M363.13		To TBA21:	Bypass mode selected	*8113
M363.15		To TBA21:	Applicator disable mode	*8114
M363.16		To TBA21:	Preparation selected	*8115
M363.17		To TBA21:	Communication watch dog	*8116
M364		To TBA21: Word 2		8205, 8403, 8603
M364.00		To TBA21:	IH system	*8117
M364.01		To TBA21:	Patch station	*8118
M364.02		To TBA21:	Patch material low	*8119
M364.03		To TBA21:	Patch material ended	*8120
M364.04		To TBA21:	Tab station	*8121
M364.05		To TBA21:	Tab material low	*8122
M364.06		To TBA21:	Tab material ended	*8123
M364.07		To TBA21:	Reseal station	*8124
M364.10		To TBA21:	Wastebox high level	*8125
M364.11		To TBA21:	Wastebox full	*8126
M364.12		To TBA21:	Air pressure	*8127
M364.13		To TBA21:	Cooling system	*8128
M364.14		To TBA21:	Punch station	*8129
M364.15		To TBA21:	Missing Patch	*8130
M364.16		To TBA21:	Missing Tab	*8131
M364.17		To TBA21:	Servo Tensioner	*8132
M365		To TBA21: Word 3		8206, 8404, 8502, 8604, 8605
M365.00		To TBA21:	Door right front	*8133
M365.01		To TBA21:	Door right rear	*8134
M365.02		To TBA21:	Door left	*8135
M365.17		To TBA21:	Watchd. bit toggled by PT	*8005, *8006
O04.00	X8202:10	To TBA21:	Production ready	*4002
O04.02	X8202:12	To TBA21:	Packaging eject	*3912
O04.03	X8202:13	To TBA21:	PT21 running	*4004
O04.04	P8201	Hour meter		*4005

LIST OF ADDRESSES

Address	Position	Function		used in rungs
O04.05	HS8202	Single cycle lamp		*4006
O04.06	A8210:12	Register mark Photocells	enabled	*4018
O04.10	A8201/33:9	Servo Drive / Tensioner	Data Enable	*3002, 3003, 3006, 3007, 3008
O04.11	A8201/33:10	Servo Drive / Tensioner	Data Clock	*3006, *3007
O04.12	A8201/33:11	Servo Drive / Tensioner	Data	*3008
O04.13	K8207:2	Fan air	circulation cabinet	*4903
O04.14	K8208:2	Compressor cabinet		4902, *4902
O04.15	K8209:2	Single phase supply		1837, *4007
O05.00	Y8401	Venting valve		*4008
O05.02	Y8403	Cap blowing		*9006
O05.03	Y8404	Waste blow		*9005
O05.04	Y8405	Tab folding		*4011
O05.05	Y8406	Strip suction		*9009
O05.06	Y8407	Punch blow		*9007
O05.10	Y84091	Punch jaw OUT		*9010
O05.11	Y84092	Punch jaw IN		*9011
O05.12	Y84101	Patch jaw OUT		*9010
O05.13	Y84102	Patch jaw IN		*9011
O05.14	Y84111	Reseal jaw OUT		*9010
O05.15	Y84112	Reseal jaw IN		*9011
O05.16	Y84121	Tab jaw OUT		*9010
O05.17	Y84122	Tab jaw IN		*9011
O06.00	A8201:15	Servo Drive,	Software Enable	*4012
O06.01	A8201:14	Servo Drive, move		0904, *9003
O06.02	A8201:11	Servo Drive,	service and setting	*4014
O06.03	A8201:07	Servo Drive, Preparation		*4015
O06.04	A8210:13	Patch material feed		*9004
O06.05	A8210:14	Tab material feed		*9004
O06.06	A8214:8	IH switch		*9921
O06.10	A8205:208	Patch/Reseal IH pulse		*9923
O06.15	A8210:09	Data Enable to TMCC		1105, *3009, 3010, 3012, 3013, 3014
O06.16	A8210:10	Data Clock to TMCC		*3012, *3013

LIST OF ADDRESSES

Address	Position	Function		used in rungs
O06.17	A8210:11	Data to TMCC		*3014
O07.01	K8204:A1	TPIH Patch/Reseal	main supply	*4016
O07.06	A8216:28	Infeed motor	slow speed	*4104
O07.07	A8216:29	Infeed motor	high speed	*4102
O07.10	K8201:A1	DMC driver main supply		*4017
O07.13	A8233:15	Servo Tensioner,	Software Enable	*4012
O07.14	K8210:2	Infeed motor supply		*4013
R0000		Storage word position	machine ladder	*0502, *1002, *1003, *1004, *1005, *1006, *1007, *1008, 1010, 1011
R0010		Shiftregister for	package dumping	0502, 3909, *3909, 3910, *3910, *3912
R0011		Shiftregister for	package dumping	0502, 3909, *3909, 3910, *3910, 3912
R0012		Shiftregister for	package dumping	0502, 3909, *3909, 3910, *3910, 3912
R0013		Shiftregister for	package dumping	0502, 3910, *3910, 3912
R0014		Shiftregister for	package dumping	0502, 3910, *3910, 3912
R0015		Shiftregister for	package dumping	*0502, 3910, *3910, 3912
R0020		Buffer register for	package dumping	0502, 3910, *3911
R0021		Buffer register for	package dumping	0502, 3903, *3903, 3904, *3904, 3905, *3905, 3906, *3906, 3907, *3907, 3908, *3908, 3910, 3911
R0022		Bufferregister for	package dumping	0502, 3903, *3903, 3904, *3904, 3905, *3905, 3906, *3906, 3907, *3907, 3908, *3908, 3910, 3911
R0023		Bufferreg. pack. dump		0502, 3910, 3911
R0024		Bufferreg. pack. dump		0502, 3910, 3911
R0025		Bufferegister for	package dumping	*0502, 3910, 3911
R0030		Shift register	applicator control	0502, *9002, 9903, *9903, *9904, 9905
R0050		Machine cycle timer		9003, 9004, 9005, 9902, *9907, 9908, *9908, 9909, *9909, 9910, 9931, 9934
R0060		Applicator cycle timer		9006, *9008, 9009, 9010, 9011, 9012, 9912, *9912, 9913, *9913, 9914, *9914, 9915
R0070		TPIH sealing	cycle timer	9917, *9917, 9918, *9918, 9919, *9919, 9920, 9921, 9922

LIST OF ADDRESSES

Address	Position	Function		used in rungs
R0077		Missing Tab Register		*9935, *9936, 9937
R0110		TMCC bit to transfer		3009, 3010, *3010, 3011, *3011
R0115		DMC Bits to transfer		3002, 3003, *3003, 3004, 3005, *3005
R0116		Register for volume	identification (decimal)	*0602, 0603, 0604
R0120		Servo Drive word 1:	Package length [Incr/10]	*3004, *3008
R0121		Servo Drive word 2:	Stop Position [Incr/10]	*3004, 3008
R0122		Servo Drive word 3:	Acc./Ret.time [ms]	*3004, 3008
R0123		Servo Drive word 4:	Index time [ms]	*3004, 3008
R0124		Servo Tensioner word 1+2:	Torque value 1+2 [Nm*10]	3005, *3005, 3008
R0125		Servo Tensioner word 3:	Max pos. speed [Incr/s]	*3005, 3008
R0126		Servo Tensioner word 4:	Max neg.speed [Incr/s]	*3005, 3008
R0150		TMCC word 1:	Patch length [mm*100]	*3011, *3014
R0151		TMCC word 2:	Tab length [mm*100]	*3011, 3014
R0363		Word1 PT to TBA last scan	alarms left TPOP window	8204, *8402
R0364		Word2 PT to TBA last scan	alarms right TPOP window	8205, *8403
R0365		Word3 PT to TBA last scan	alarms upper TPOP window	8207, *8404
R0366		Word3 PT to TBA Last scan	alarms upper+W-Dog bit	*8206, 8207
R0410		Word1 to PT volume data		8002
R0411		Word2 to PT data		8003
R0412		Word3 to PT data		8004
R0413		Word1 PT to TBA mailbox	alarms left TPOP window	*8602
R0414		Word2 PT to TBA mailbox	alarms right TPOP window	*8603
R0415		Word3 PT to TBA mailbox	alarms upper TPOP window	*8604, *8605
R0500		Package to dump	Punch station	*0712, *0721, *0730, *0739, *0748, *0757, *0766, *0775, 3903
R0501		Package to dump	Patch station	*0712, *0721, *0730, *0739, *0748, *0757, *0766, *0775, 3904
R0502		Package to dump	Reseal station	*0712, *0721, *0730, *0739, *0748, *0757, *0766, *0775, 3905
R0503		Package to dump	Tab station	*0712, *0721, *0730, *0739, *0748, *0757, *0766, *0775, 3906
R0504		Package to dump	Out of design	*0712, *0721, *0730, *0739, *0748, *0757, *0766, *0775, 3907
R0505		Package to dump	Black tape	*0712, *0721, *0730, *0739, *0748, *0757, *0766, *0775, 3909

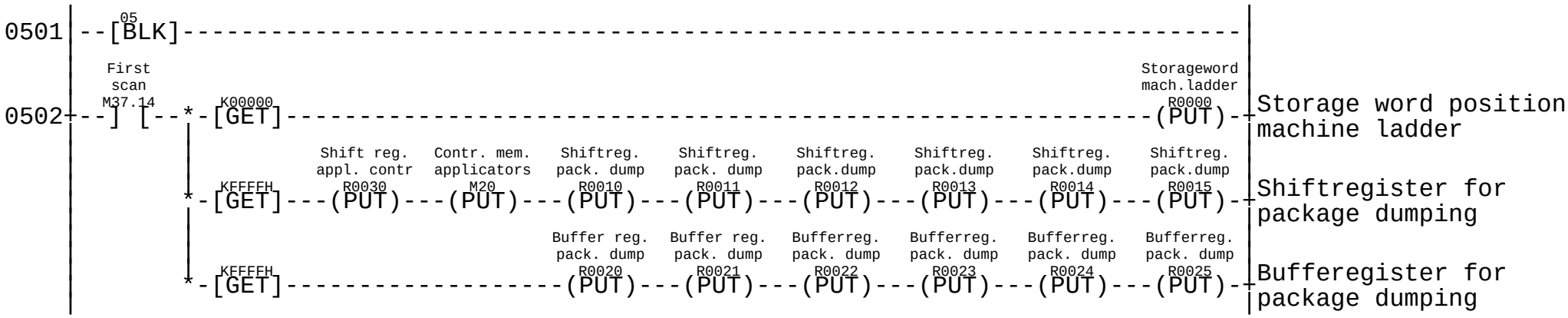
LIST OF ADDRESSES

Address	Position	Function		used in rungs
R0506		Package to dump	Black tape	*0712, *0721, *0730, *0739, *0748, *0757, *0766, *0775, 3909
R0507		Package to dump	IH fault	*0713, *0722, *0731, *0740, *0749, *0758, *0767, *0776, 3908
R0508		Package to dump	Reseal station	*0714, *0723, *0732, *0741, *0750, *0759, *0768, *0777, 3905
R0509		Package to dump	IH fault	*0715, *0724, *0733, *0742, *0751, *0760, *0769, *0778, 3908
R0700		Machine cycle time Total		*0784, 9902, 9908, 9909
R0701		Machine cycle time ON		*0784, 9910
R1000		Package length [Incr/10]		*0716, *0725, *0734, *0743, *0752, *0761, *0770, *0779, 3004
R1001		Stop Position [Incr/10]		*0716, *0725, *0734, *0743, *0752, *0761, *0770, *0779, 3004
R1002		Accel./Retard. time [ms]		*0716, *0725, *0734, *0743, *0752, *0761, *0770, *0779, 3004
R1003		Index time [ms]		*0716, *0725, *0734, *0743, *0752, *0761, *0770, *0779, 3004
R1004		Patch length [mm*100]		*0717, *0726, *0735, *0744, *0753, *0762, *0771, *0780, 3011
R1005		Tab length [mm*100]		*0717, *0726, *0735, *0744, *0753, *0762, *0771, *0780, 3011
R1006		Torque 1 [Nm*10]		*0718, *0727, *0736, *0745, *0754, *0763, *0772, *0781, 3005
R1007		Torque 2 [Nm*10]		*0718, *0727, *0736, *0745, *0754, *0763, *0772, *0781, 3005
R1008		Maximum positive speed	[Incr/s]	*0718, *0727, *0736, *0745, *0754, *0763, *0772, *0781, 3005
R1009		Maximum negative speed	[Incr/s]	*0718, *0727, *0736, *0745, *0754, *0763, *0772, *0781, 3005
T036		Patch material	ended timer	*1839, *1840
T046		Tab material	ended timer	*1842, *1843
T051		Waste box full timer		*1845, *1846

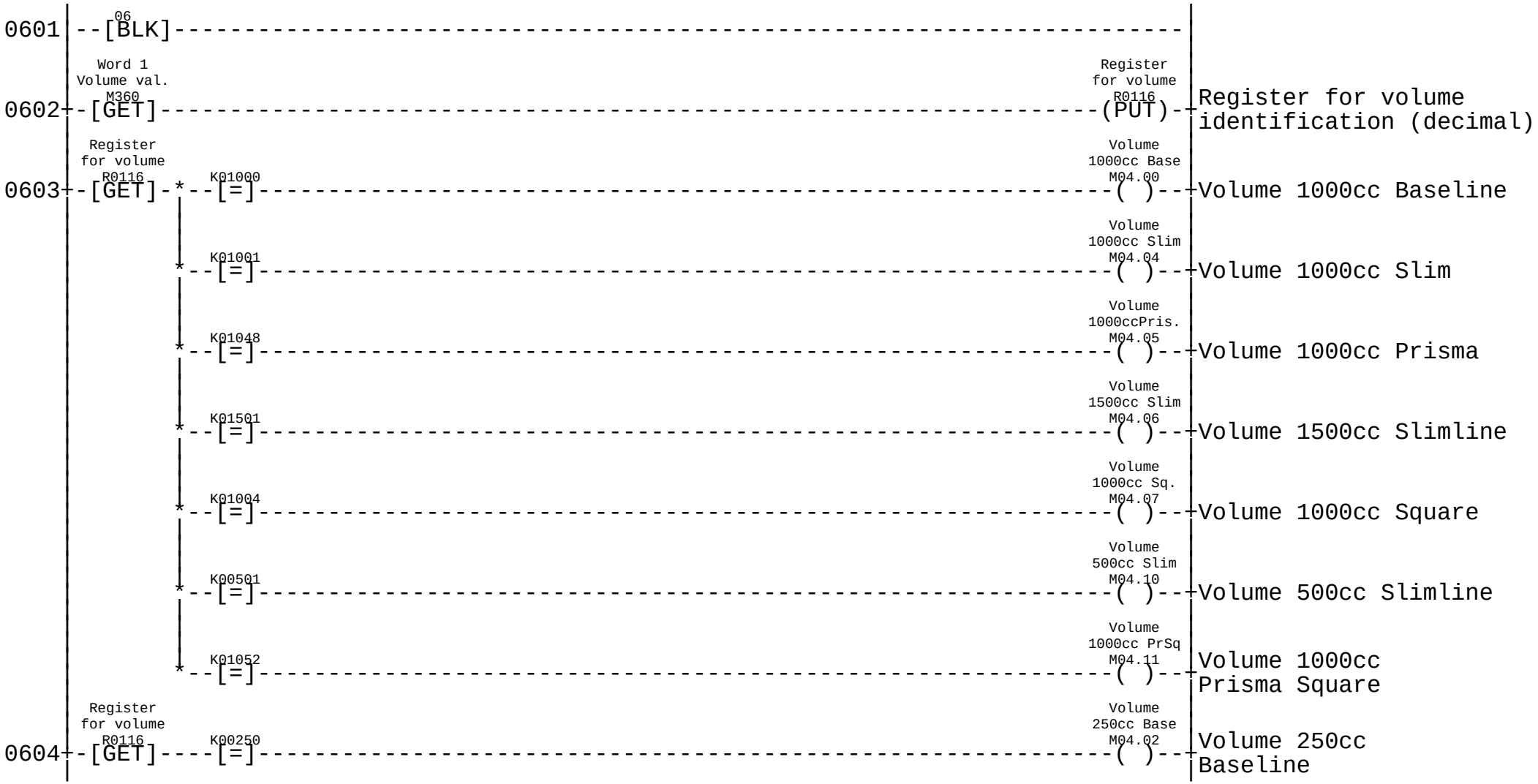
LIST OF ADDRESSES

Address	Position	Function		used in rungs
TO036.0	5m00s 6m00s	Patch mat.	ended	9931
TO046.0	5m00s 6m00s	Tab mat.	ended	9934
TO051.0	5m00s 6m00s	Waste box	full	1848

Configuration



Check volume



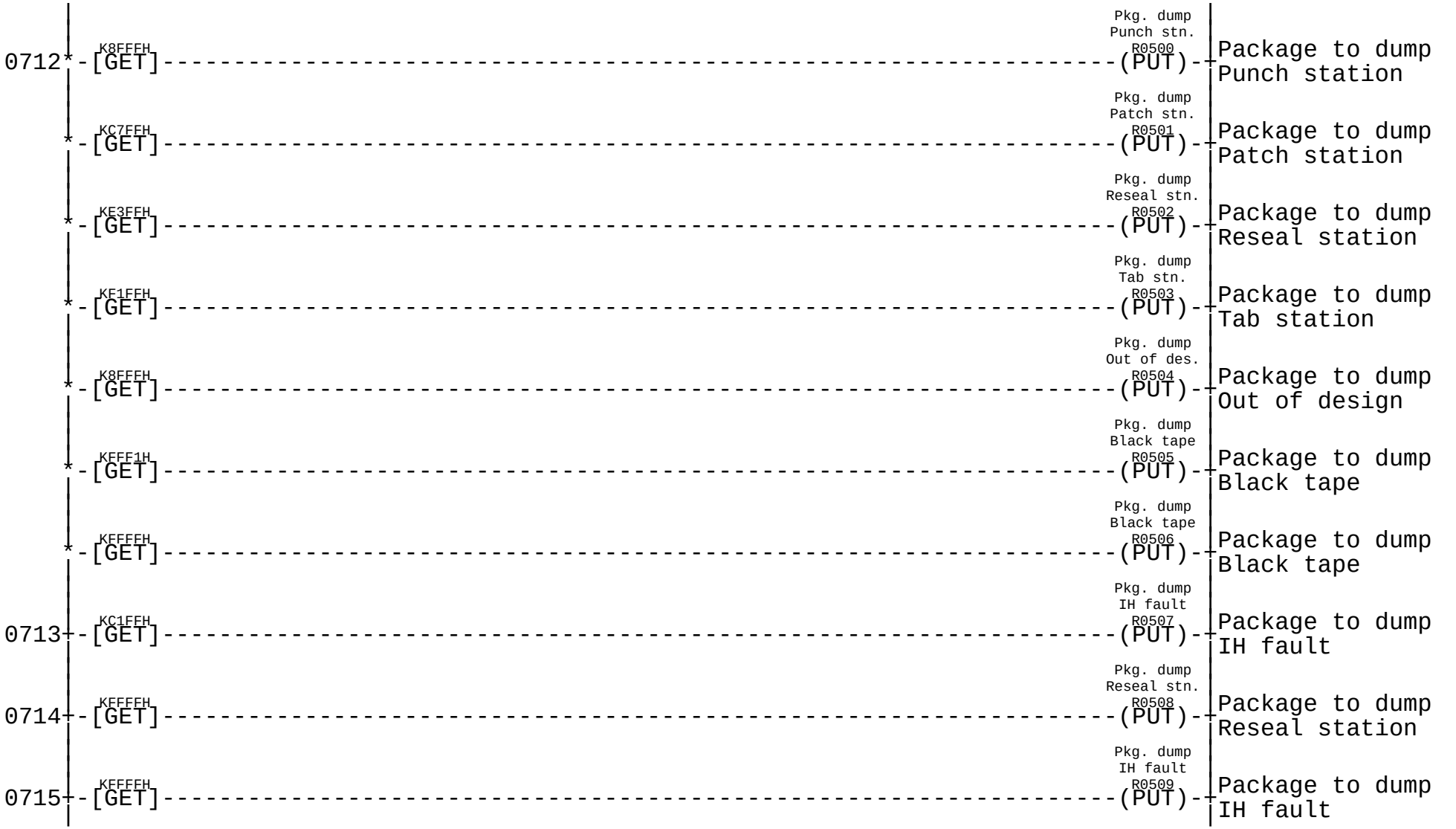
TPMC-PROGRAMME LIST

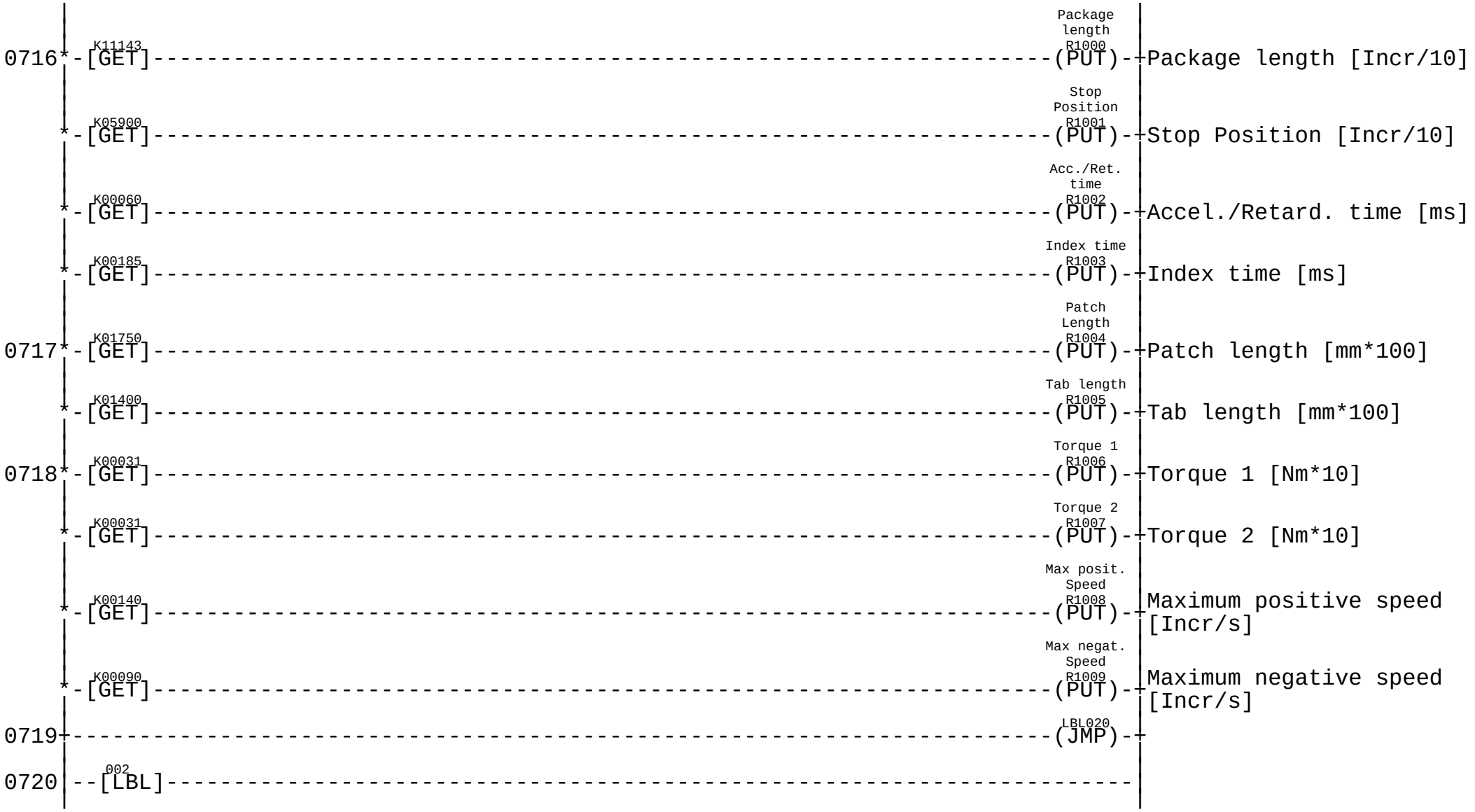


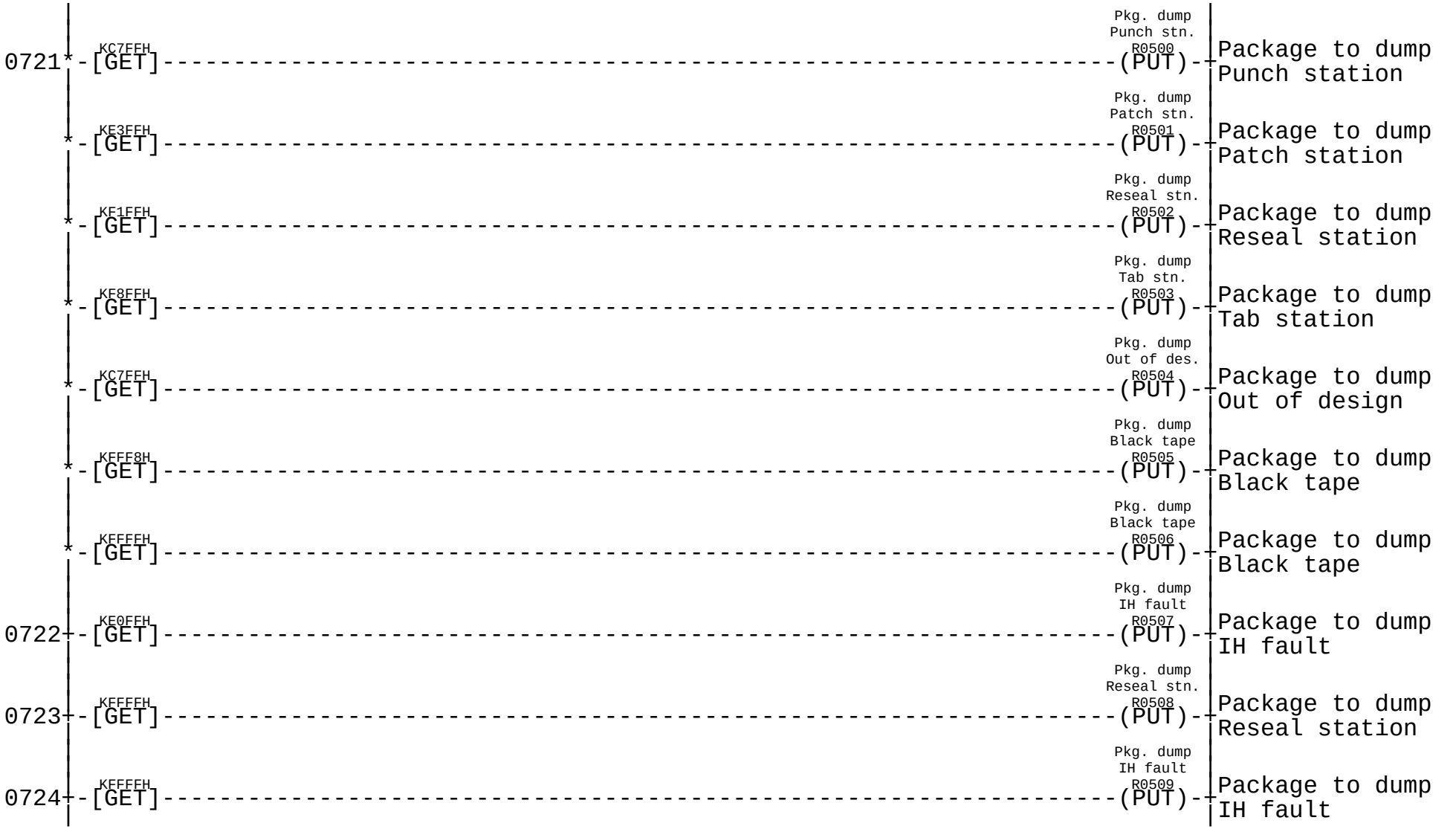
TPMC-PROGRAMME LIST

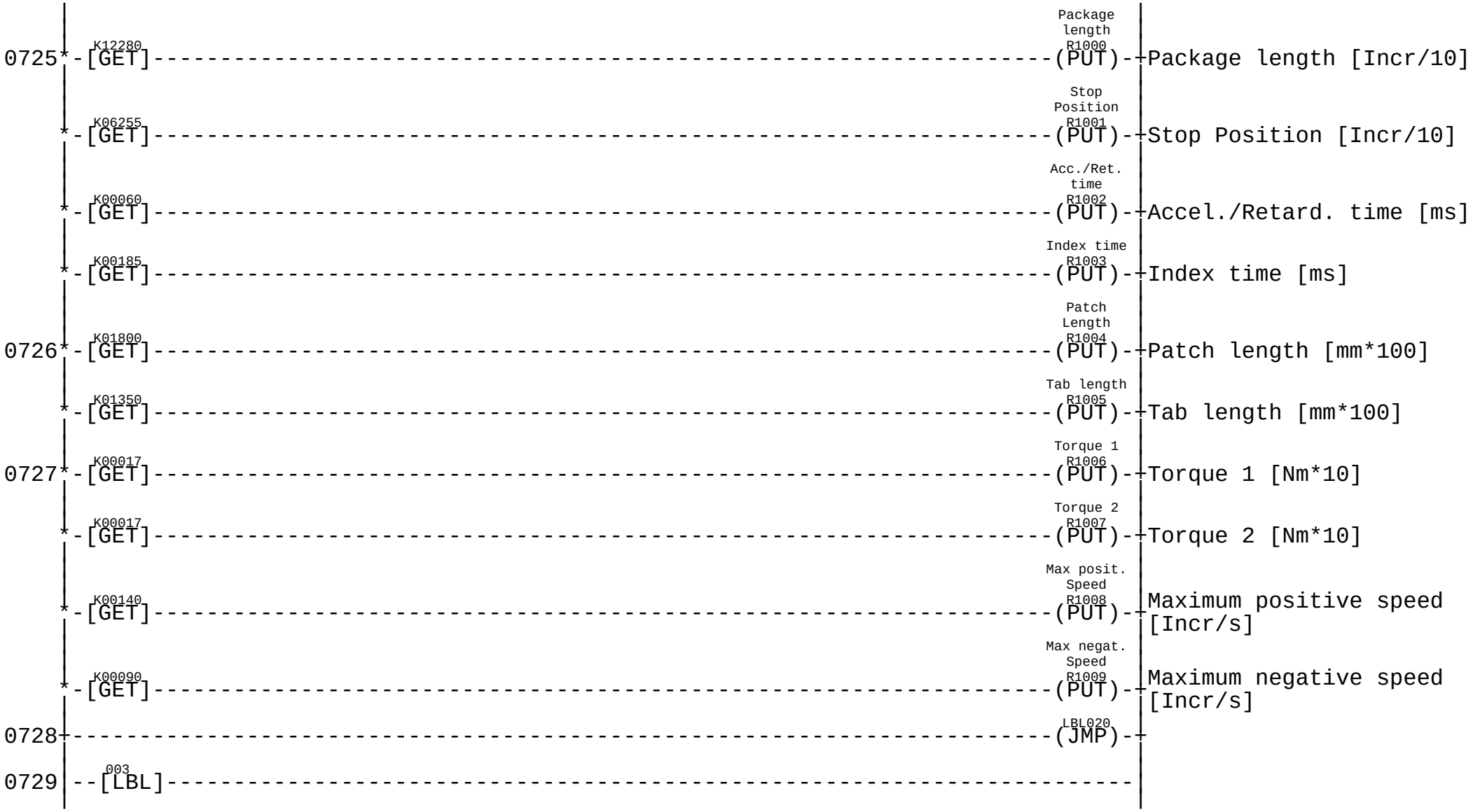
Volume parameters

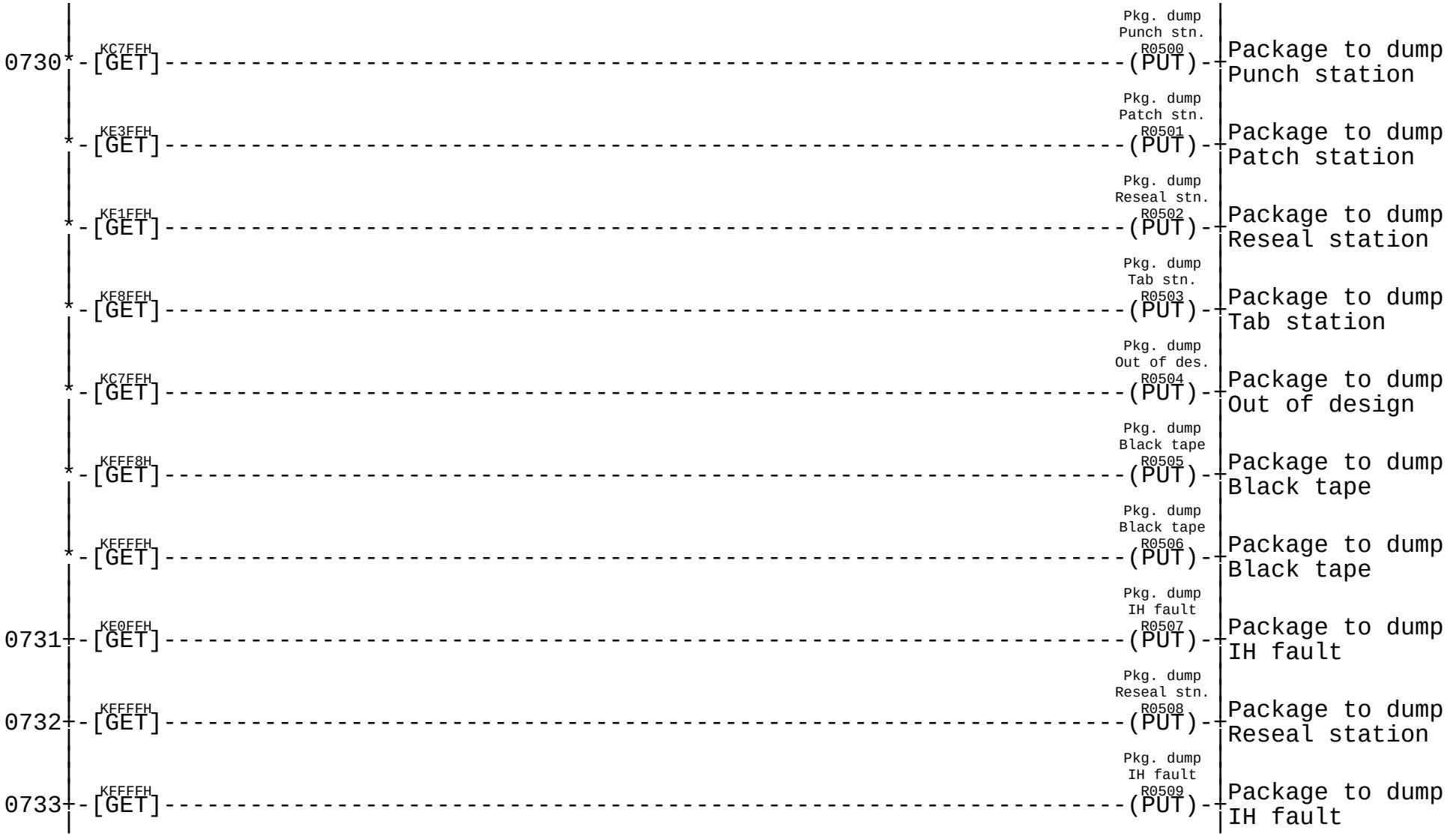


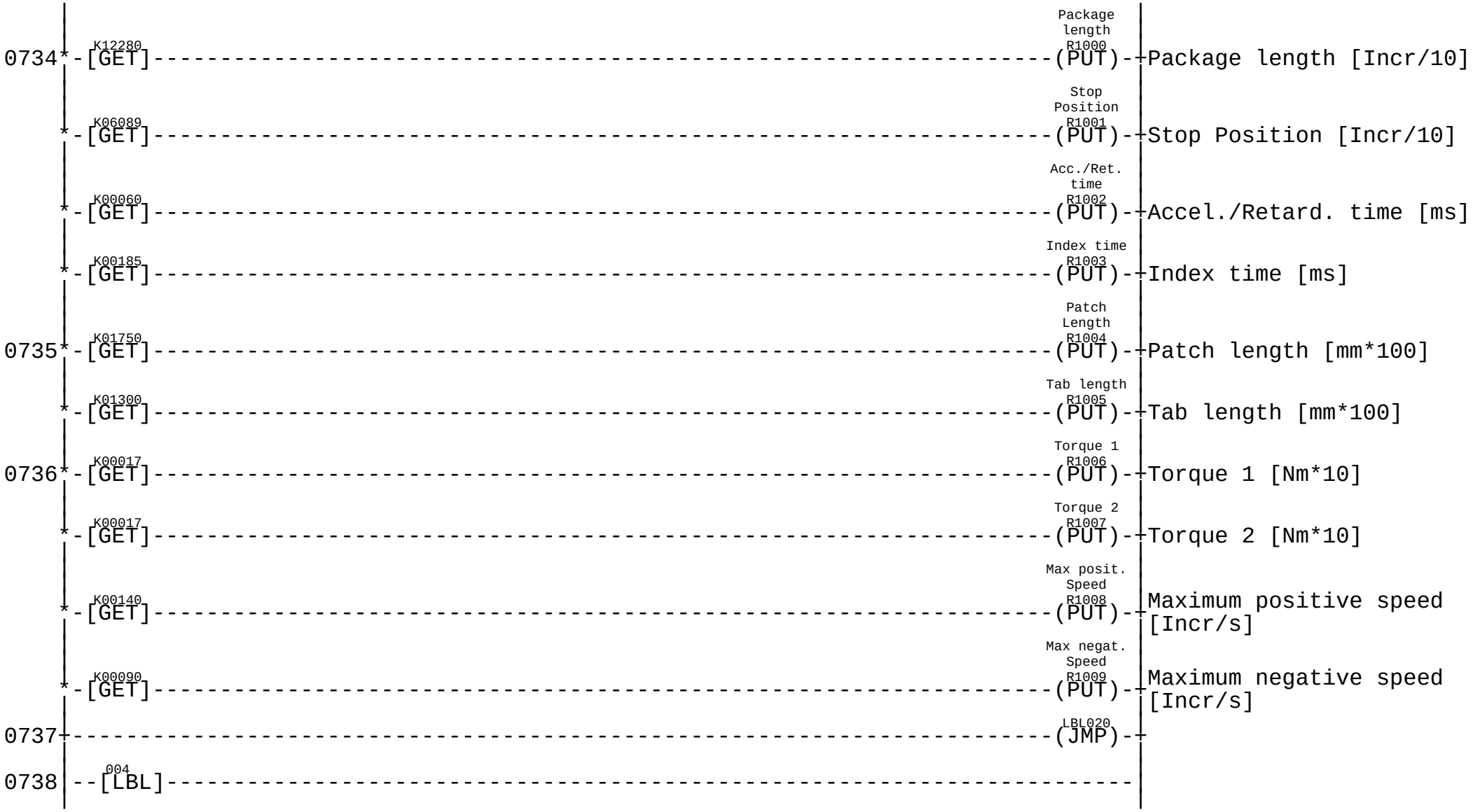

0712
K8FFFH
[GET]
Pkg. dump
Punch stn.
R0500
(PUT)
Package to dump
Punch station
KC7FFH
[GET]
Pkg. dump
Patch stn.
R0501
(PUT)
Package to dump
Patch station
KE3FFH
[GET]
Pkg. dump
Reseal stn.
R0502
(PUT)
Package to dump
Reseal station
KE1FFH
[GET]
Pkg. dump
Tab stn.
R0503
(PUT)
Package to dump
Tab station
K8FFFH
[GET]
Pkg. dump
Out of des.
R0504
(PUT)
Package to dump
Out of design
KFFF1H
[GET]
Pkg. dump
Black tape
R0505
(PUT)
Package to dump
Black tape
KFFFFH
[GET]
Pkg. dump
Black tape
R0506
(PUT)
Package to dump
Black tape
0713
KC1FFH
[GET]
Pkg. dump
IH fault
R0507
(PUT)
Package to dump
IH fault
0714
KFFFFH
[GET]
Pkg. dump
Reseal stn.
R0508
(PUT)
Package to dump
Reseal station
0715
KFFFFH
[GET]
Pkg. dump
IH fault
R0509
(PUT)
Package to dump
IH fault

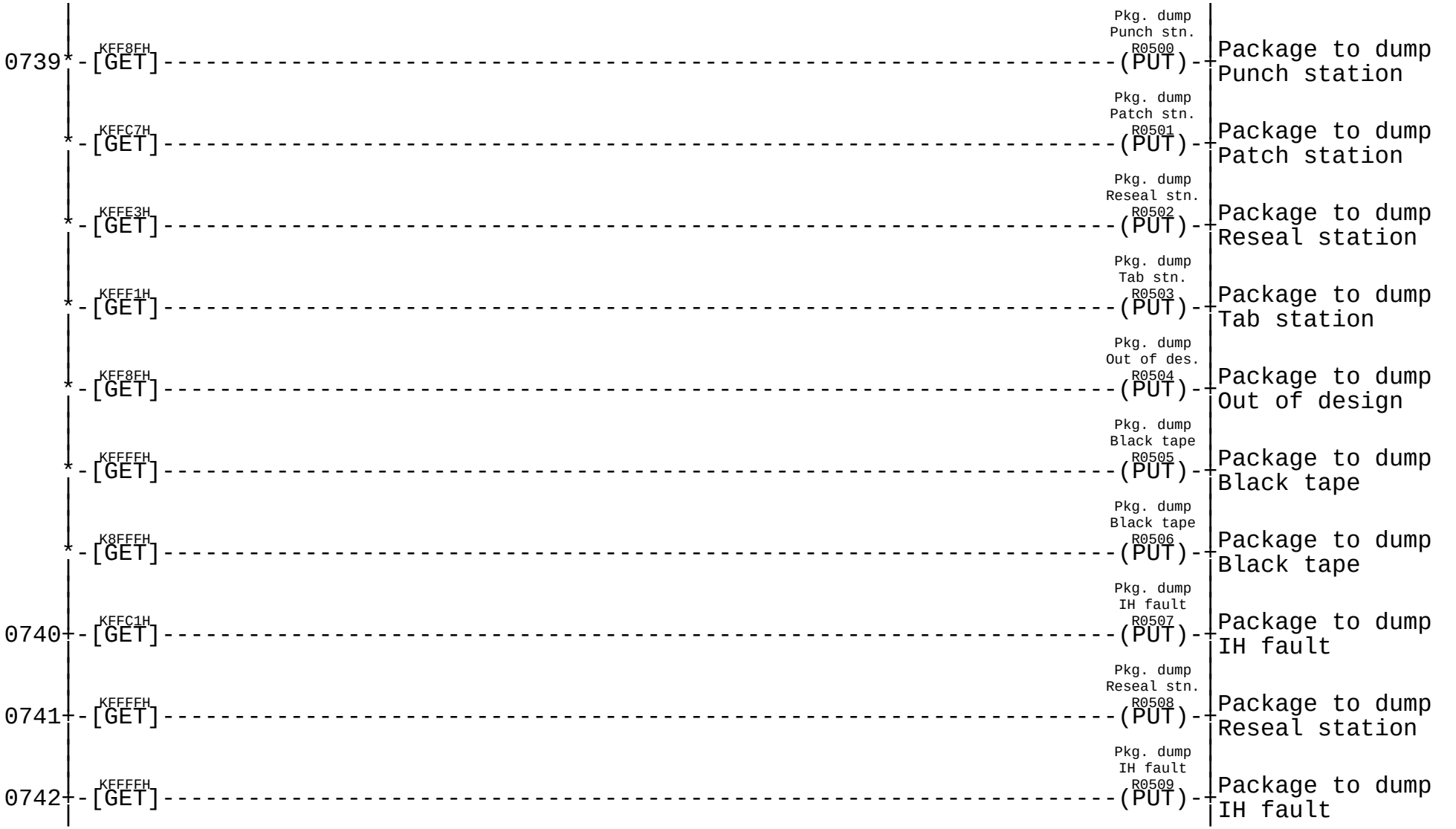

0716 K11143 [GET] (PUT) Package length R1000 Package length [Incr/10]
K05900 [GET] (PUT) Stop Position R1001 Stop Position [Incr/10]
K00060 [GET] (PUT) Acc./Ret. time R1002 Accel./Retard. time [ms]
K00185 [GET] (PUT) Index time R1003 Index time [ms]
0717 K01750 [GET] (PUT) Patch Length R1004 Patch length [mm*100]
K01400 [GET] (PUT) Tab length R1005 Tab length [mm*100]
0718 K00031 [GET] (PUT) Torque 1 R1006 Torque 1 [Nm*10]
K00031 [GET] (PUT) Torque 2 R1007 Torque 2 [Nm*10]
K00140 [GET] (PUT) Max posit. Speed R1008 Maximum positive speed [Incr/s]
K00090 [GET] (PUT) Max negat. Speed R1009 Maximum negative speed [Incr/s]
0719 (JMP) LBL020
0720 002 [LBL]

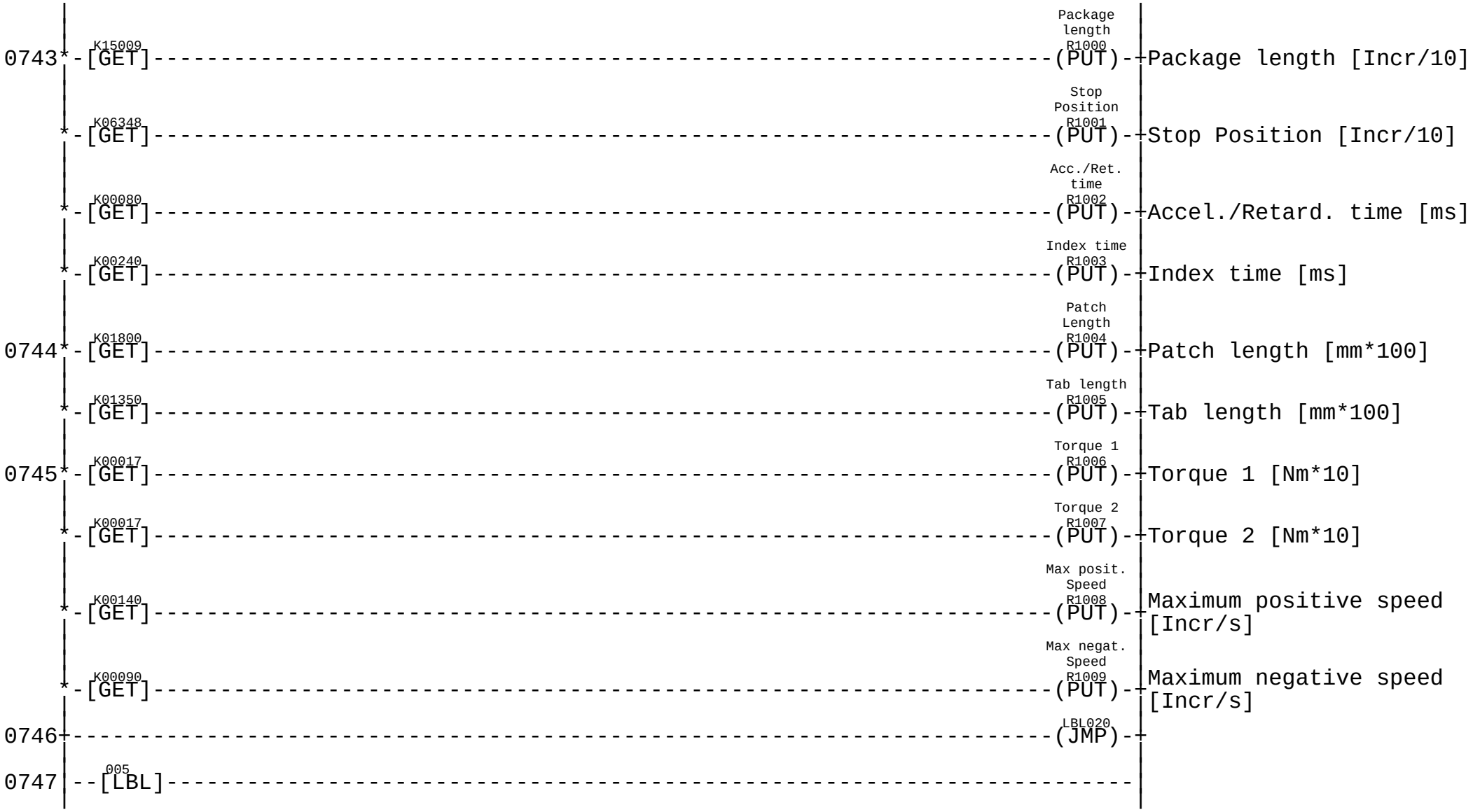

0721
KC7FFH
[GET]
Pkg. dump
Punch stn.
R0500
(PUT)
Package to dump
Punch station
KE3FFH
[GET]
Pkg. dump
Patch stn.
R0501
(PUT)
Package to dump
Patch station
KE1FFH
[GET]
Pkg. dump
Reseal stn.
R0502
(PUT)
Package to dump
Reseal station
KE8FFH
[GET]
Pkg. dump
Tab stn.
R0503
(PUT)
Package to dump
Tab station
KC7FFH
[GET]
Pkg. dump
Out of des.
R0504
(PUT)
Package to dump
Out of design
KFFF8H
[GET]
Pkg. dump
Black tape
R0505
(PUT)
Package to dump
Black tape
KFFFFH
[GET]
Pkg. dump
Black tape
R0506
(PUT)
Package to dump
Black tape
0722
KE0FFH
[GET]
Pkg. dump
IH fault
R0507
(PUT)
Package to dump
IH fault
0723
KFFFFH
[GET]
Pkg. dump
Reseal stn.
R0508
(PUT)
Package to dump
Reseal station
0724
KFFFFH
[GET]
Pkg. dump
IH fault
R0509
(PUT)
Package to dump
IH fault

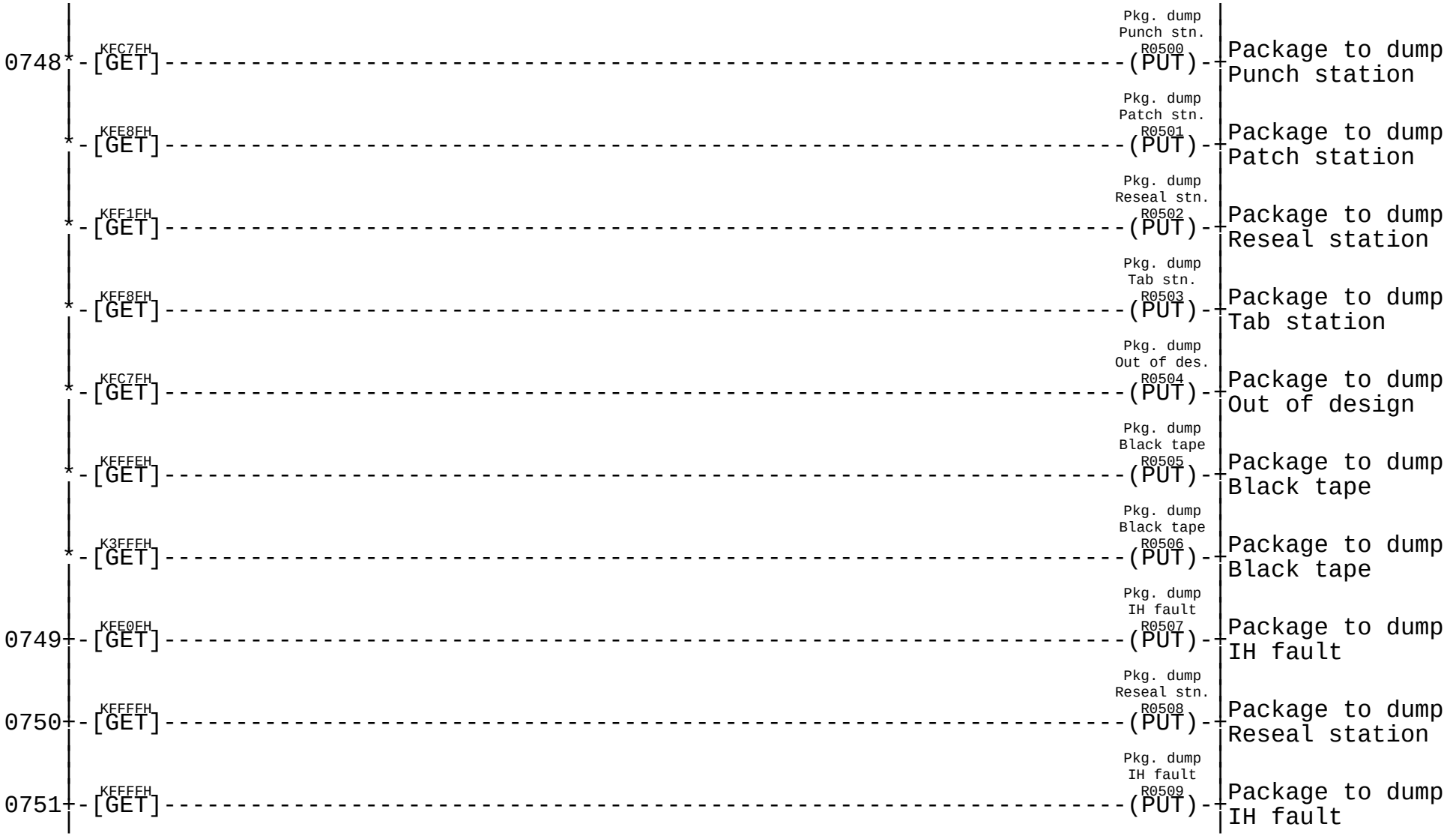

0725 K12280 [GET] Package length R1000 (PUT) Package length [Incr/10]
K06255 [GET] Stop Position R1001 (PUT) Stop Position [Incr/10]
K00060 [GET] Acc./Ret. time R1002 (PUT) Accel./Retard. time [ms]
K00185 [GET] Index time R1003 (PUT) Index time [ms]
0726 K01800 [GET] Patch Length R1004 (PUT) Patch length [mm*100]
K01350 [GET] Tab length R1005 (PUT) Tab length [mm*100]
0727 K00017 [GET] Torque 1 R1006 (PUT) Torque 1 [Nm*10]
K00017 [GET] Torque 2 R1007 (PUT) Torque 2 [Nm*10]
K00140 [GET] Max posit. Speed R1008 (PUT) Maximum positive speed [Incr/s]
K00090 [GET] Max negat. Speed R1009 (PUT) Maximum negative speed [Incr/s]
0728 LBL020 (JMP)
0729 003 [LBL]

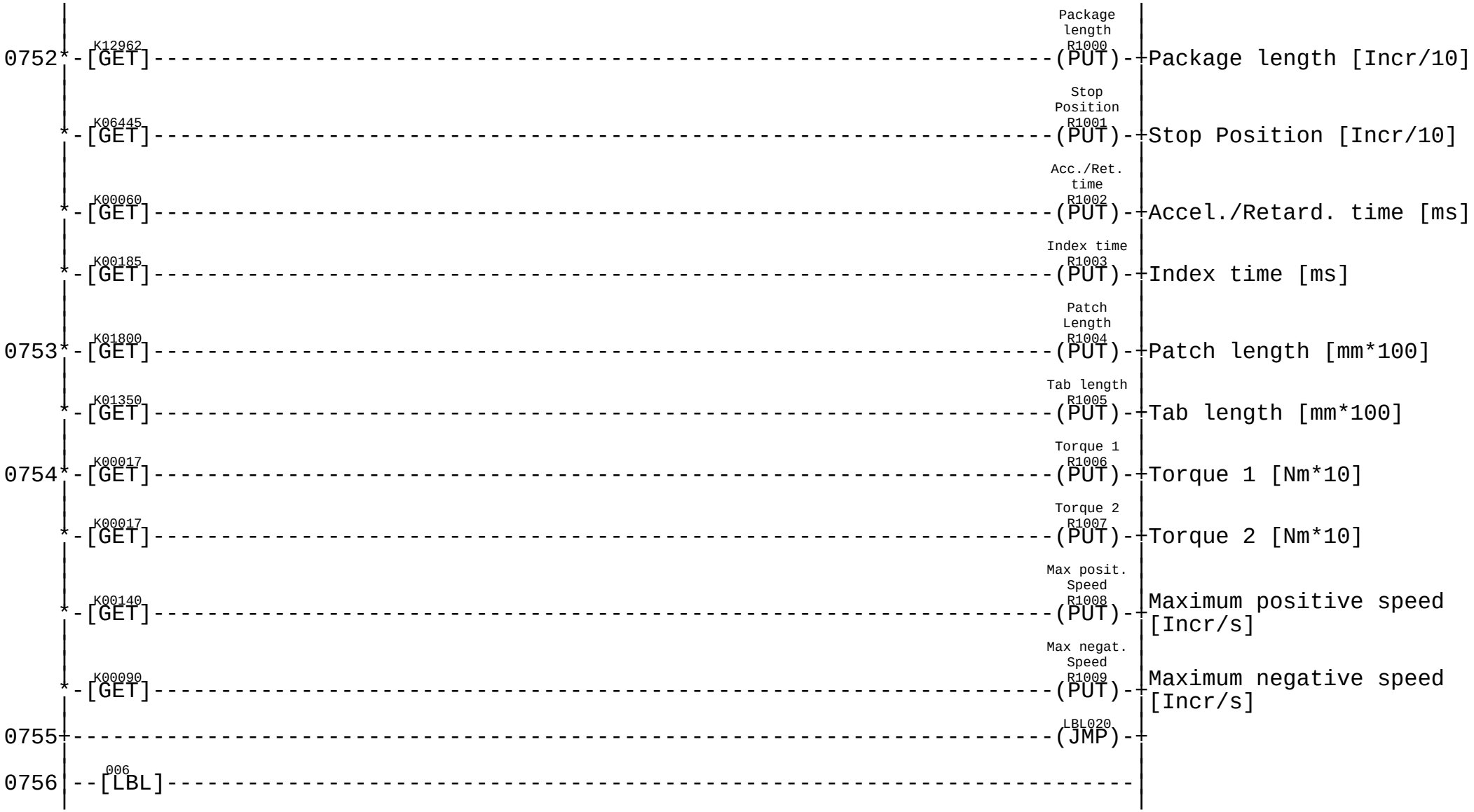

0730
KC7FFH
[GET]
Pkg. dump
Punch stn.
R0500
(PUT)
Package to dump
Punch station
KE3FFH
[GET]
Pkg. dump
Patch stn.
R0501
(PUT)
Package to dump
Patch station
KE1FFH
[GET]
Pkg. dump
Reseal stn.
R0502
(PUT)
Package to dump
Reseal station
KE8FFH
[GET]
Pkg. dump
Tab stn.
R0503
(PUT)
Package to dump
Tab station
KC7FFH
[GET]
Pkg. dump
Out of des.
R0504
(PUT)
Package to dump
Out of design
KFFF8H
[GET]
Pkg. dump
Black tape
R0505
(PUT)
Package to dump
Black tape
KFFFFH
[GET]
Pkg. dump
Black tape
R0506
(PUT)
Package to dump
Black tape
0731
KE0FFH
[GET]
Pkg. dump
IH fault
R0507
(PUT)
Package to dump
IH fault
0732
KFFFFH
[GET]
Pkg. dump
Reseal stn.
R0508
(PUT)
Package to dump
Reseal station
0733
KFFFFH
[GET]
Pkg. dump
IH fault
R0509
(PUT)
Package to dump
IH fault

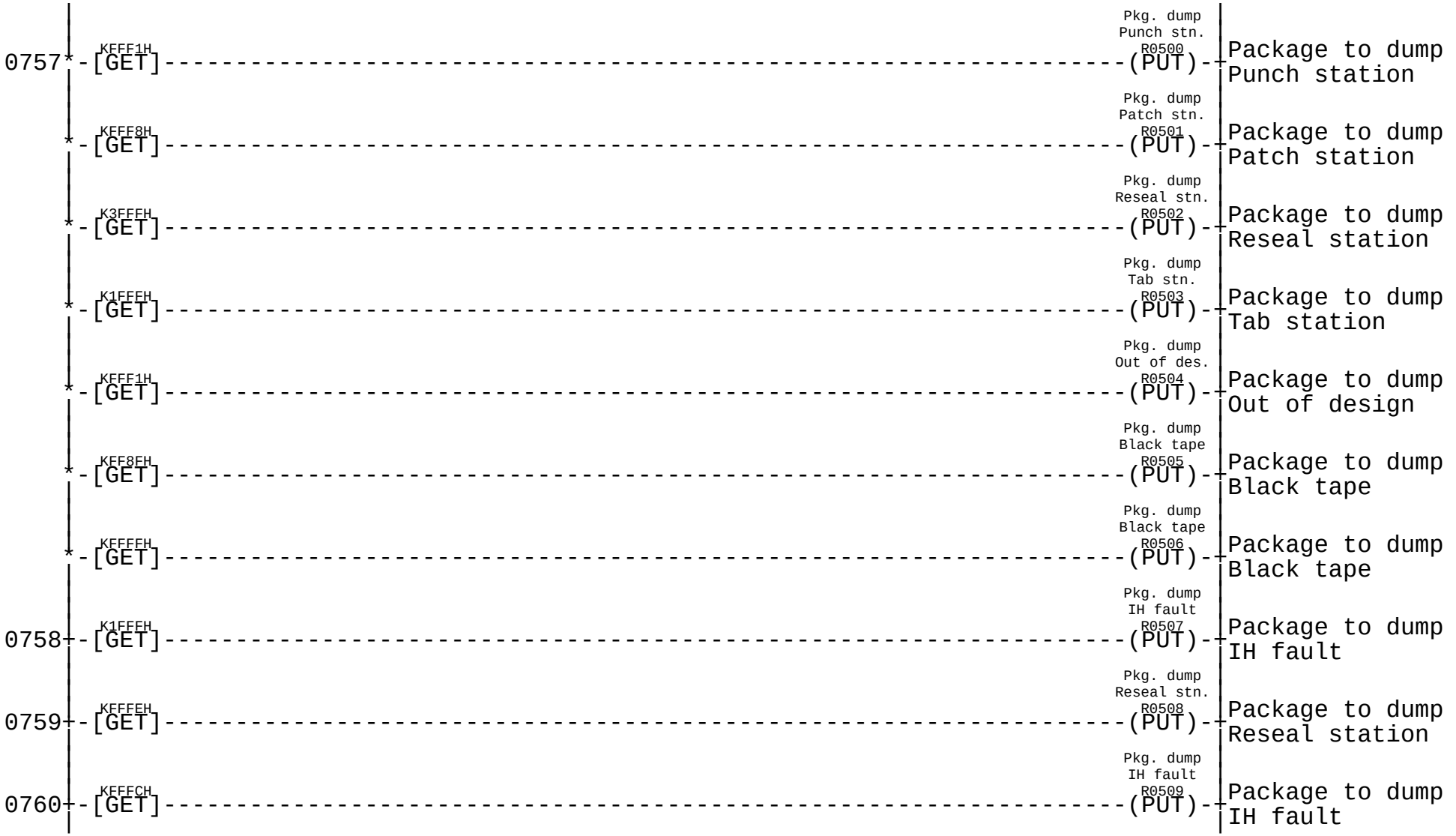

0734 K12280 [GET] Package length R1000 (PUT) Package length [Incr/10]
K06089 [GET] Stop Position R1001 (PUT) Stop Position [Incr/10]
K00060 [GET] Acc./Ret. time R1002 (PUT) Accel./Retard. time [ms]
K00185 [GET] Index time R1003 (PUT) Index time [ms]
0735 K01750 [GET] Patch Length R1004 (PUT) Patch length [mm*100]
K01300 [GET] Tab length R1005 (PUT) Tab length [mm*100]
0736 K00017 [GET] Torque 1 R1006 (PUT) Torque 1 [Nm*10]
K00017 [GET] Torque 2 R1007 (PUT) Torque 2 [Nm*10]
K00140 [GET] Max posit. Speed R1008 (PUT) Maximum positive speed [Incr/s]
K00090 [GET] Max negat. Speed R1009 (PUT) Maximum negative speed [Incr/s]
0737 LBL020 (JMP)
0738 004 [LBL]

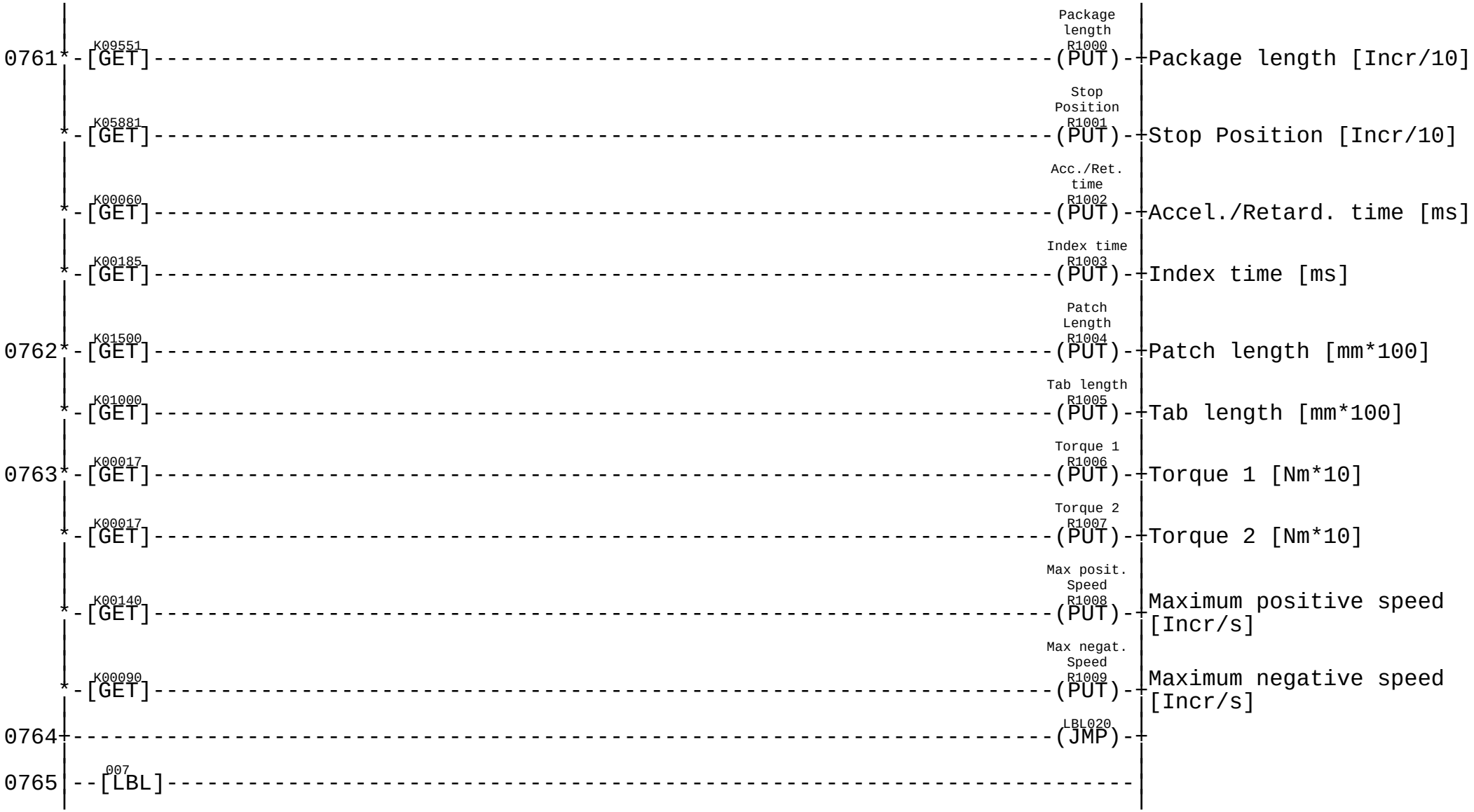

0739
KFF8FH
[GET]
Pkg. dump
Punch stn.
R0500
(PUT)
Package to dump
Punch station
KFFC7H
[GET]
Pkg. dump
Patch stn.
R0501
(PUT)
Package to dump
Patch station
KFFE3H
[GET]
Pkg. dump
Reseal stn.
R0502
(PUT)
Package to dump
Reseal station
KFFF1H
[GET]
Pkg. dump
Tab stn.
R0503
(PUT)
Package to dump
Tab station
KFF8FH
[GET]
Pkg. dump
Out of des.
R0504
(PUT)
Package to dump
Out of design
KFFFFH
[GET]
Pkg. dump
Black tape
R0505
(PUT)
Package to dump
Black tape
K8FFFH
[GET]
Pkg. dump
Black tape
R0506
(PUT)
Package to dump
Black tape
0740
KFFC1H
[GET]
Pkg. dump
IH fault
R0507
(PUT)
Package to dump
IH fault
0741
KFFFFH
[GET]
Pkg. dump
Reseal stn.
R0508
(PUT)
Package to dump
Reseal station
0742
KFFFFH
[GET]
Pkg. dump
IH fault
R0509
(PUT)
Package to dump
IH fault

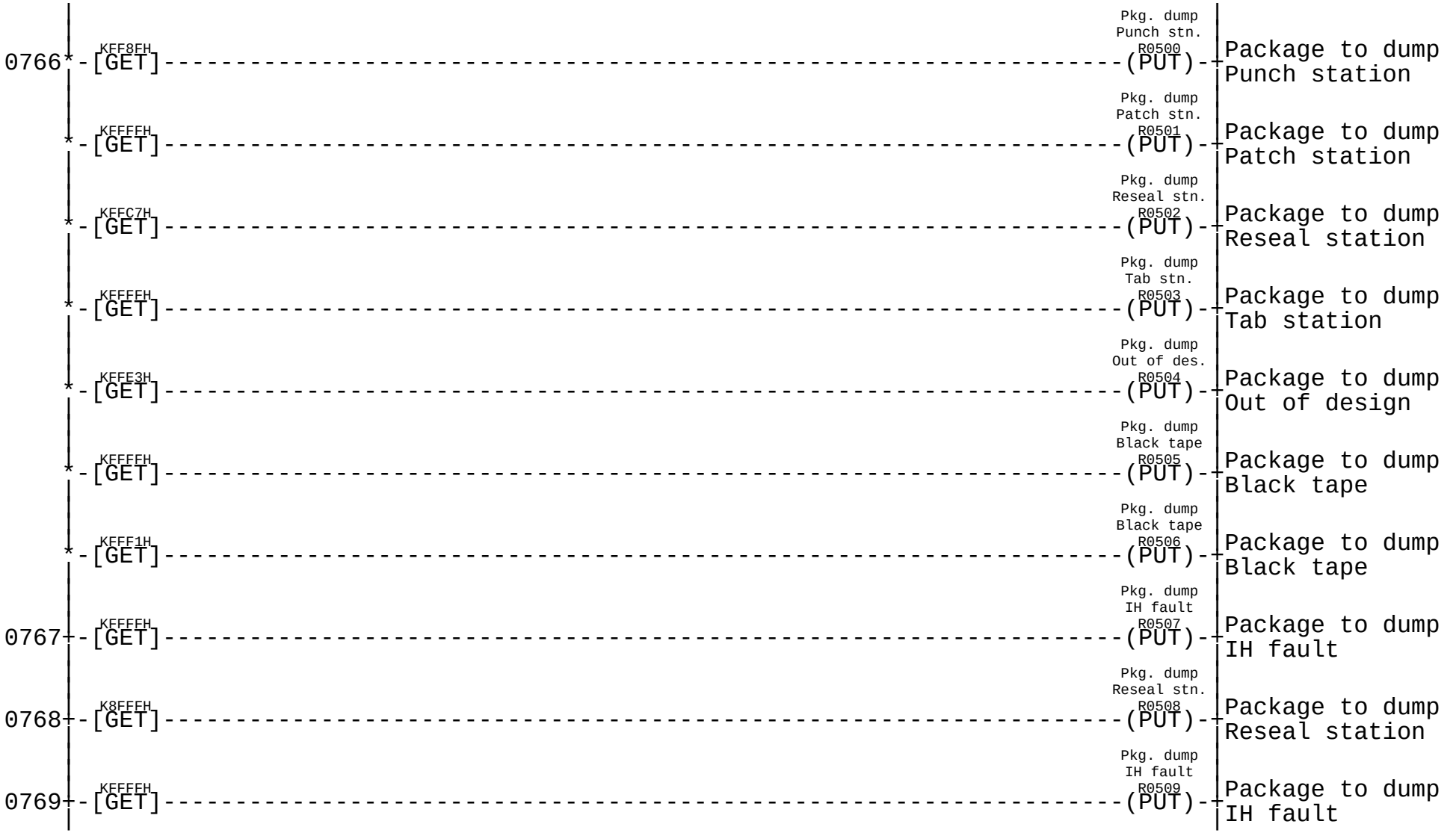

0743 K15009 [GET] (PUT) Package length R1000 Package length [Incr/10]
K06348 [GET] (PUT) Stop Position R1001 Stop Position [Incr/10]
K00080 [GET] (PUT) Acc./Ret. time R1002 Accel./Retard. time [ms]
K00240 [GET] (PUT) Index time R1003 Index time [ms]
0744 K01800 [GET] (PUT) Patch Length R1004 Patch length [mm*100]
K01350 [GET] (PUT) Tab length R1005 Tab length [mm*100]
0745 K00017 [GET] (PUT) Torque 1 R1006 Torque 1 [Nm*10]
K00017 [GET] (PUT) Torque 2 R1007 Torque 2 [Nm*10]
K00140 [GET] (PUT) Max posit. Speed R1008 Maximum positive speed [Incr/s]
K00090 [GET] (PUT) Max negat. Speed R1009 Maximum negative speed [Incr/s]
0746 (JMP) LBL020
0747 005 [LBL]

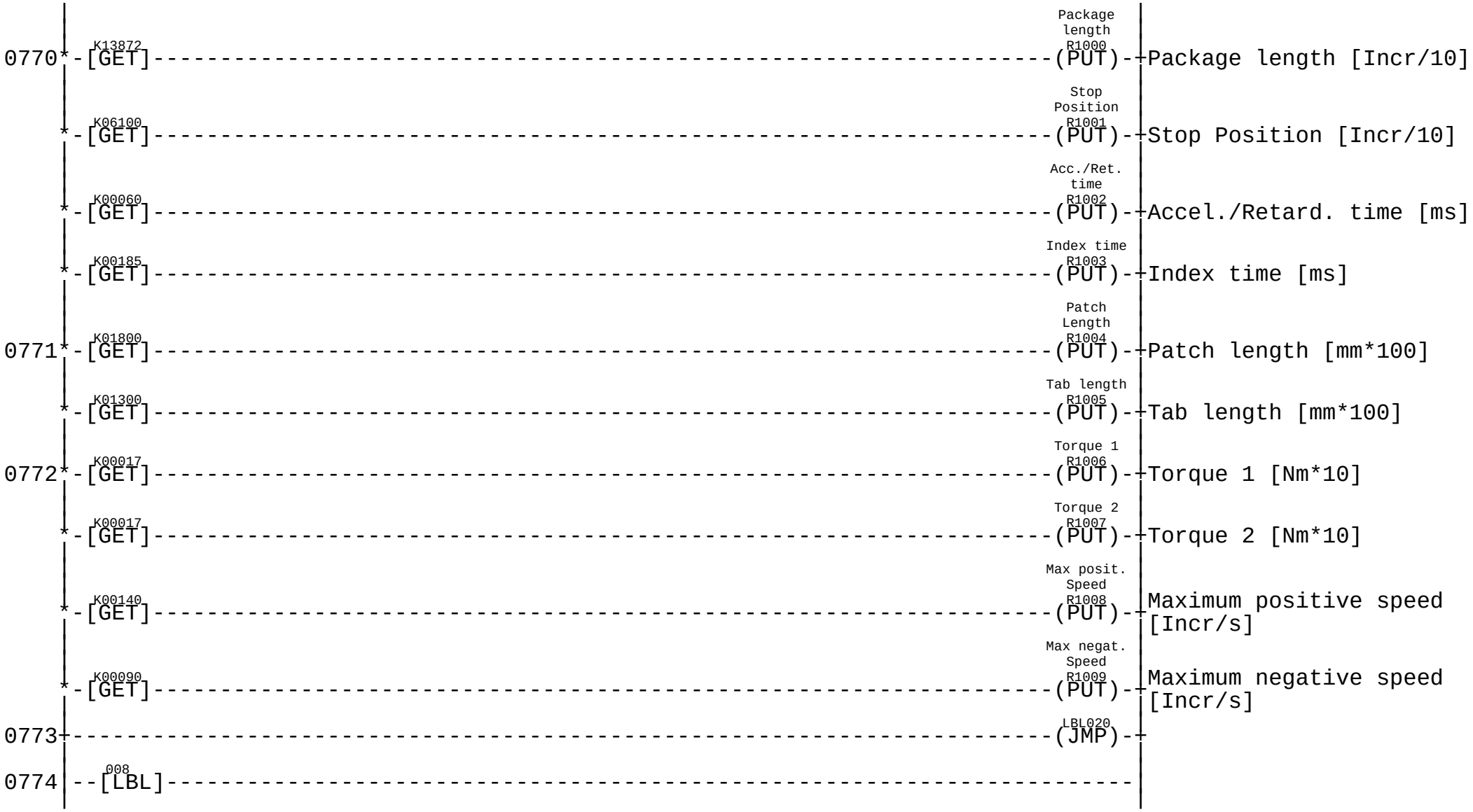

0748
KFC7FH
[GET]
Pkg. dump
Punch stn.
R0500
(PUT)
Package to dump
Punch station
KFE8FH
[GET]
Pkg. dump
Patch stn.
R0501
(PUT)
Package to dump
Patch station
KFF1FH
[GET]
Pkg. dump
Reseal stn.
R0502
(PUT)
Package to dump
Reseal station
KFF8FH
[GET]
Pkg. dump
Tab stn.
R0503
(PUT)
Package to dump
Tab station
KFC7FH
[GET]
Pkg. dump
Out of des.
R0504
(PUT)
Package to dump
Out of design
KFFFH
[GET]
Pkg. dump
Black tape
R0505
(PUT)
Package to dump
Black tape
K3FFFH
[GET]
Pkg. dump
Black tape
R0506
(PUT)
Package to dump
Black tape
0749
KFE0FH
[GET]
Pkg. dump
IH fault
R0507
(PUT)
Package to dump
IH fault
0750
KFFFH
[GET]
Pkg. dump
Reseal stn.
R0508
(PUT)
Package to dump
Reseal station
0751
KFFFH
[GET]
Pkg. dump
IH fault
R0509
(PUT)
Package to dump
IH fault

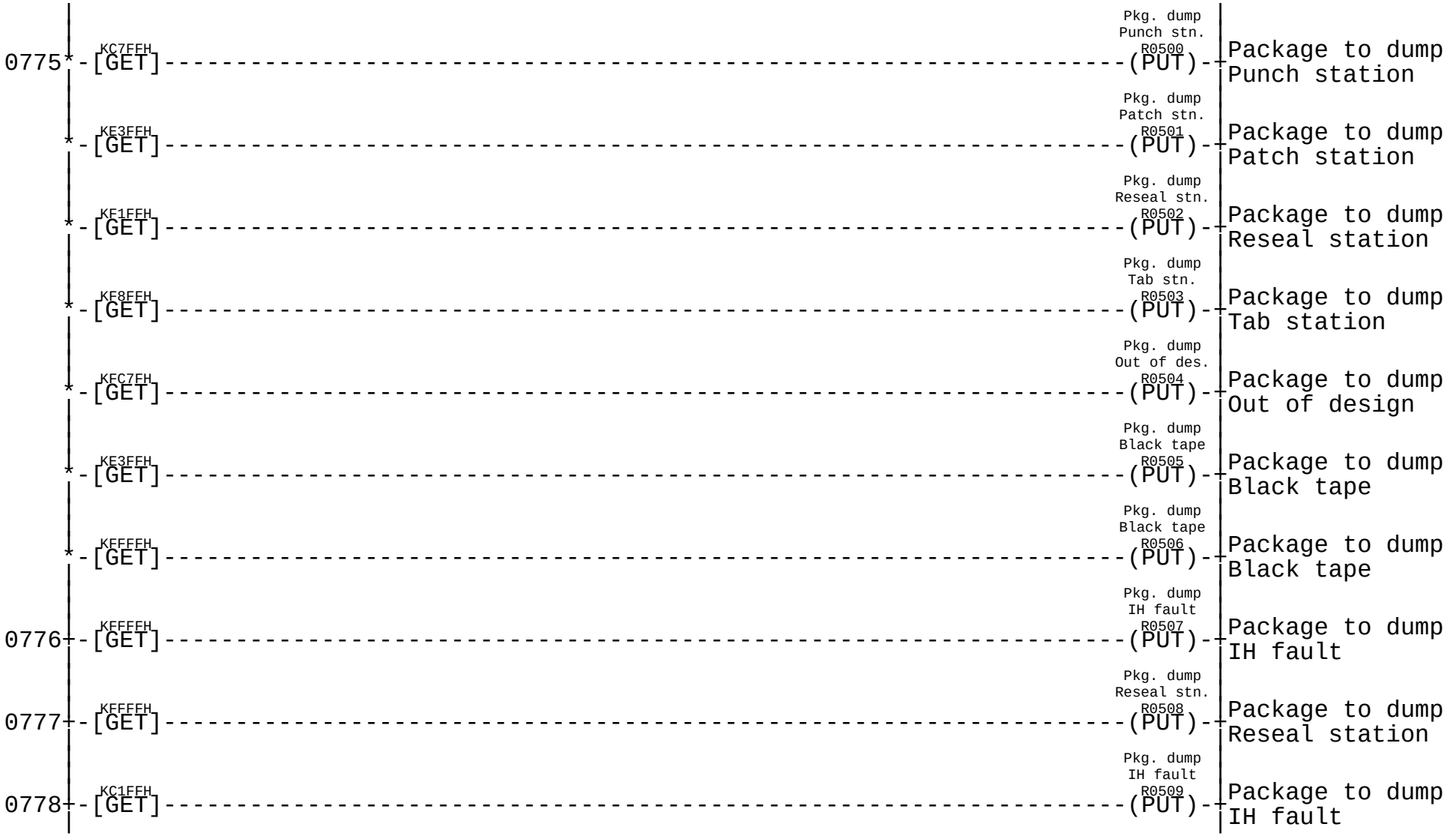

0752 K12962 [GET] Package length R1000 (PUT) Package length [Incr/10]
K06445 [GET] Stop Position R1001 (PUT) Stop Position [Incr/10]
K00060 [GET] Acc./Ret. time R1002 (PUT) Accel./Retard. time [ms]
K00185 [GET] Index time R1003 (PUT) Index time [ms]
0753 K01800 [GET] Patch Length R1004 (PUT) Patch length [mm*100]
K01350 [GET] Tab length R1005 (PUT) Tab length [mm*100]
0754 K00017 [GET] Torque 1 R1006 (PUT) Torque 1 [Nm*10]
K00017 [GET] Torque 2 R1007 (PUT) Torque 2 [Nm*10]
K00140 [GET] Max posit. Speed R1008 (PUT) Maximum positive speed [Incr/s]
K00090 [GET] Max negat. Speed R1009 (PUT) Maximum negative speed [Incr/s]
0755 LBL020 (JMP)
0756 006 [LBL]

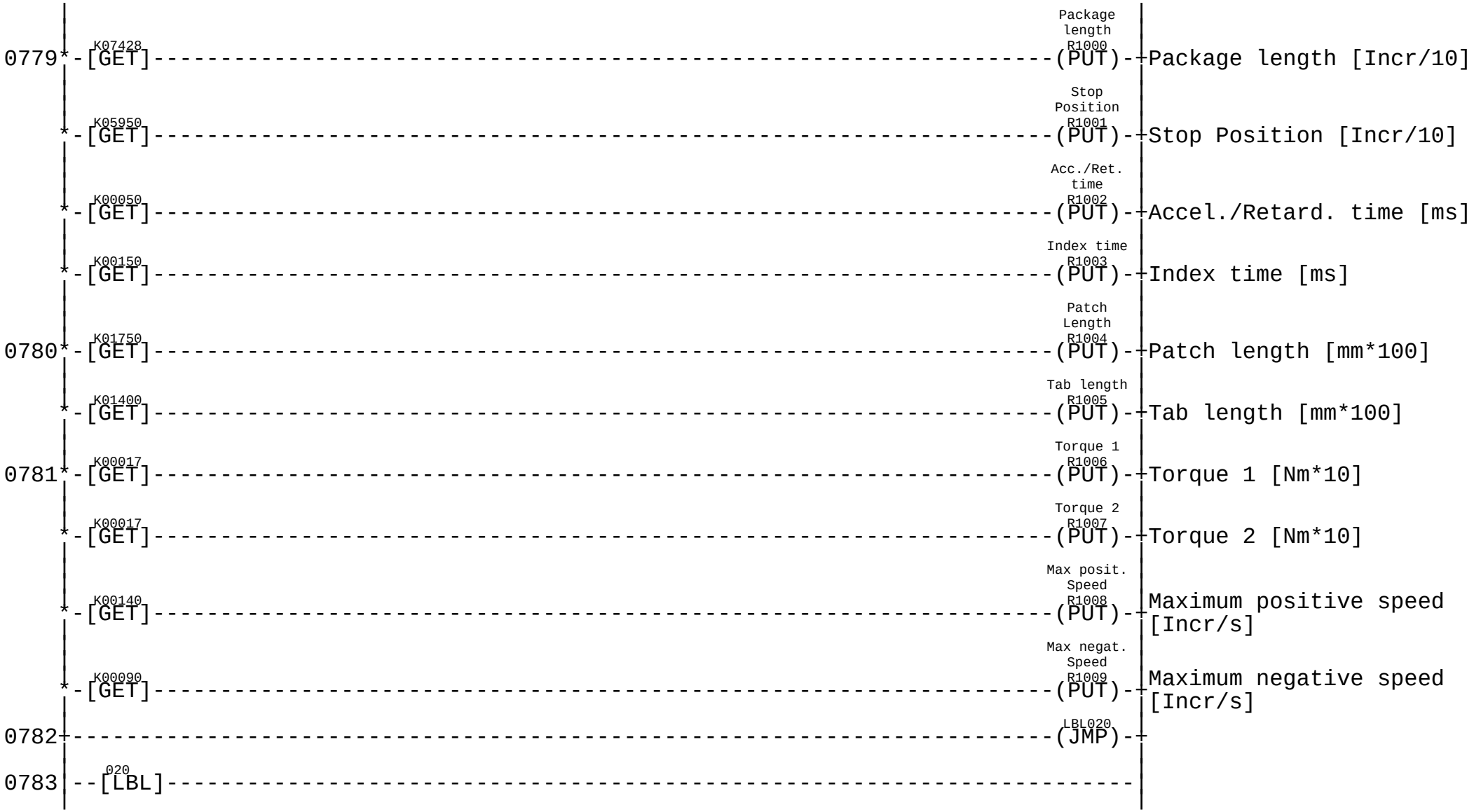

0757
KFFF1H
[GET]
Pkg. dump
Punch stn.
R0500
(PUT)
Package to dump
Punch station
KFFF8H
[GET]
Pkg. dump
Patch stn.
R0501
(PUT)
Package to dump
Patch station
K3FFFH
[GET]
Pkg. dump
Reseal stn.
R0502
(PUT)
Package to dump
Reseal station
K1FFFH
[GET]
Pkg. dump
Tab stn.
R0503
(PUT)
Package to dump
Tab station
KFFF1H
[GET]
Pkg. dump
Out of des.
R0504
(PUT)
Package to dump
Out of design
KFF8FH
[GET]
Pkg. dump
Black tape
R0505
(PUT)
Package to dump
Black tape
KFFFFH
[GET]
Pkg. dump
Black tape
R0506
(PUT)
Package to dump
Black tape
0758
K1FFFH
[GET]
Pkg. dump
IH fault
R0507
(PUT)
Package to dump
IH fault
0759
KFFFEH
[GET]
Pkg. dump
Reseal stn.
R0508
(PUT)
Package to dump
Reseal station
0760
KFFFCH
[GET]
Pkg. dump
IH fault
R0509
(PUT)
Package to dump
IH fault

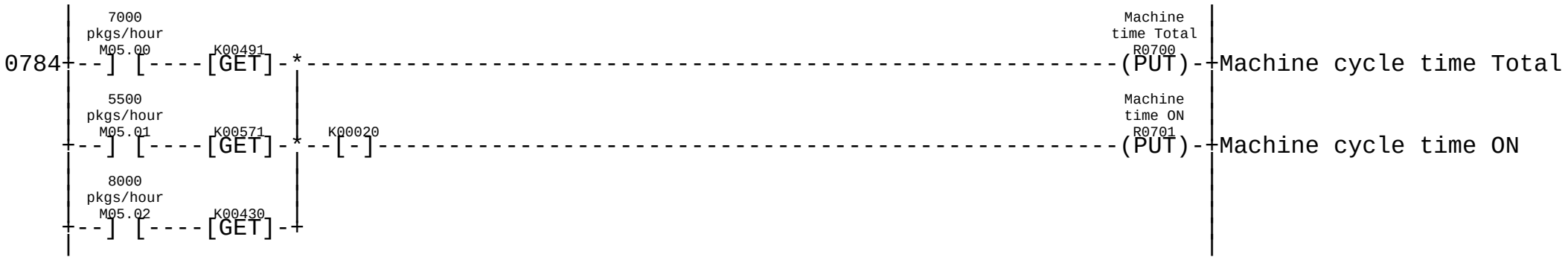

0761 K09551 [GET] (PUT) Package length R1000 Package length [Incr/10]
K05881 [GET] (PUT) Stop Position R1001 Stop Position [Incr/10]
K00060 [GET] (PUT) Acc./Ret. time R1002 Accel./Retard. time [ms]
K00185 [GET] (PUT) Index time R1003 Index time [ms]
0762 K01500 [GET] (PUT) Patch Length R1004 Patch length [mm*100]
K01000 [GET] (PUT) Tab length R1005 Tab length [mm*100]
0763 K00017 [GET] (PUT) Torque 1 R1006 Torque 1 [Nm*10]
K00017 [GET] (PUT) Torque 2 R1007 Torque 2 [Nm*10]
K00140 [GET] (PUT) Max posit. Speed R1008 Maximum positive speed [Incr/s]
K00090 [GET] (PUT) Max negat. Speed R1009 Maximum negative speed [Incr/s]
0764 (JMP) LBL020
0765 007 [LBL]


0766
KFF8FH
[GET]
Pkg. dump
Punch stn.
R0500
(PUT)
Package to dump
Punch station
KFFFFH
[GET]
Pkg. dump
Patch stn.
R0501
(PUT)
Package to dump
Patch station
KFFC7H
[GET]
Pkg. dump
Reseal stn.
R0502
(PUT)
Package to dump
Reseal station
KFFFFH
[GET]
Pkg. dump
Tab stn.
R0503
(PUT)
Package to dump
Tab station
KFFE3H
[GET]
Pkg. dump
Out of des.
R0504
(PUT)
Package to dump
Out of design
KFFFFH
[GET]
Pkg. dump
Black tape
R0505
(PUT)
Package to dump
Black tape
KFFF1H
[GET]
Pkg. dump
Black tape
R0506
(PUT)
Package to dump
Black tape
0767
KFFFFH
[GET]
Pkg. dump
IH fault
R0507
(PUT)
Package to dump
IH fault
0768
K8FFFH
[GET]
Pkg. dump
Reseal stn.
R0508
(PUT)
Package to dump
Reseal station
0769
KFFFFH
[GET]
Pkg. dump
IH fault
R0509
(PUT)
Package to dump
IH fault

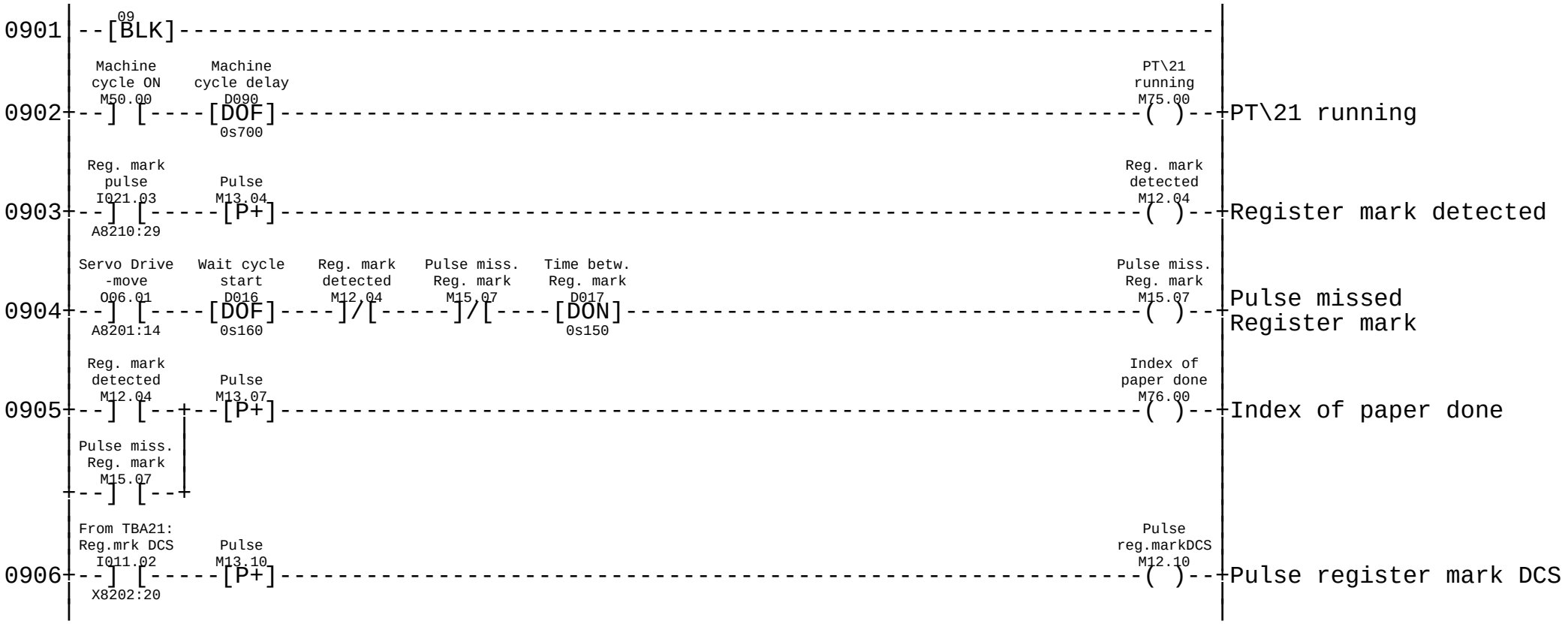

0770 K13872 [GET] Package length R1000 (PUT) Package length [Incr/10]
K06100 [GET] Stop Position R1001 (PUT) Stop Position [Incr/10]
K00060 [GET] Acc./Ret. time R1002 (PUT) Accel./Retard. time [ms]
K00185 [GET] Index time R1003 (PUT) Index time [ms]
0771 K01800 [GET] Patch Length R1004 (PUT) Patch length [mm*100]
K01300 [GET] Tab length R1005 (PUT) Tab length [mm*100]
0772 K00017 [GET] Torque 1 R1006 (PUT) Torque 1 [Nm*10]
K00017 [GET] Torque 2 R1007 (PUT) Torque 2 [Nm*10]
K00140 [GET] Max posit. Speed R1008 (PUT) Maximum positive speed [Incr/s]
K00090 [GET] Max negat. Speed R1009 (PUT) Maximum negative speed [Incr/s]
0773 LBL020 (JMP)
0774 008 [LBL]


0775
KC7FFH
[GET]
Pkg. dump
Punch stn.
R0500
(PUT)
Package to dump
Punch station
KE3FFH
[GET]
Pkg. dump
Patch stn.
R0501
(PUT)
Package to dump
Patch station
KE1FFH
[GET]
Pkg. dump
Reseal stn.
R0502
(PUT)
Package to dump
Reseal station
KE8FFH
[GET]
Pkg. dump
Tab stn.
R0503
(PUT)
Package to dump
Tab station
KEC7FH
[GET]
Pkg. dump
Out of des.
R0504
(PUT)
Package to dump
Out of design
KE3FFH
[GET]
Pkg. dump
Black tape
R0505
(PUT)
Package to dump
Black tape
KFFFFH
[GET]
Pkg. dump
Black tape
R0506
(PUT)
Package to dump
Black tape
0776
KFFFFH
[GET]
Pkg. dump
IH fault
R0507
(PUT)
Package to dump
IH fault
0777
KFFFFH
[GET]
Pkg. dump
Reseal stn.
R0508
(PUT)
Package to dump
Reseal station
0778
KC1FFH
[GET]
Pkg. dump
IH fault
R0509
(PUT)
Package to dump
IH fault

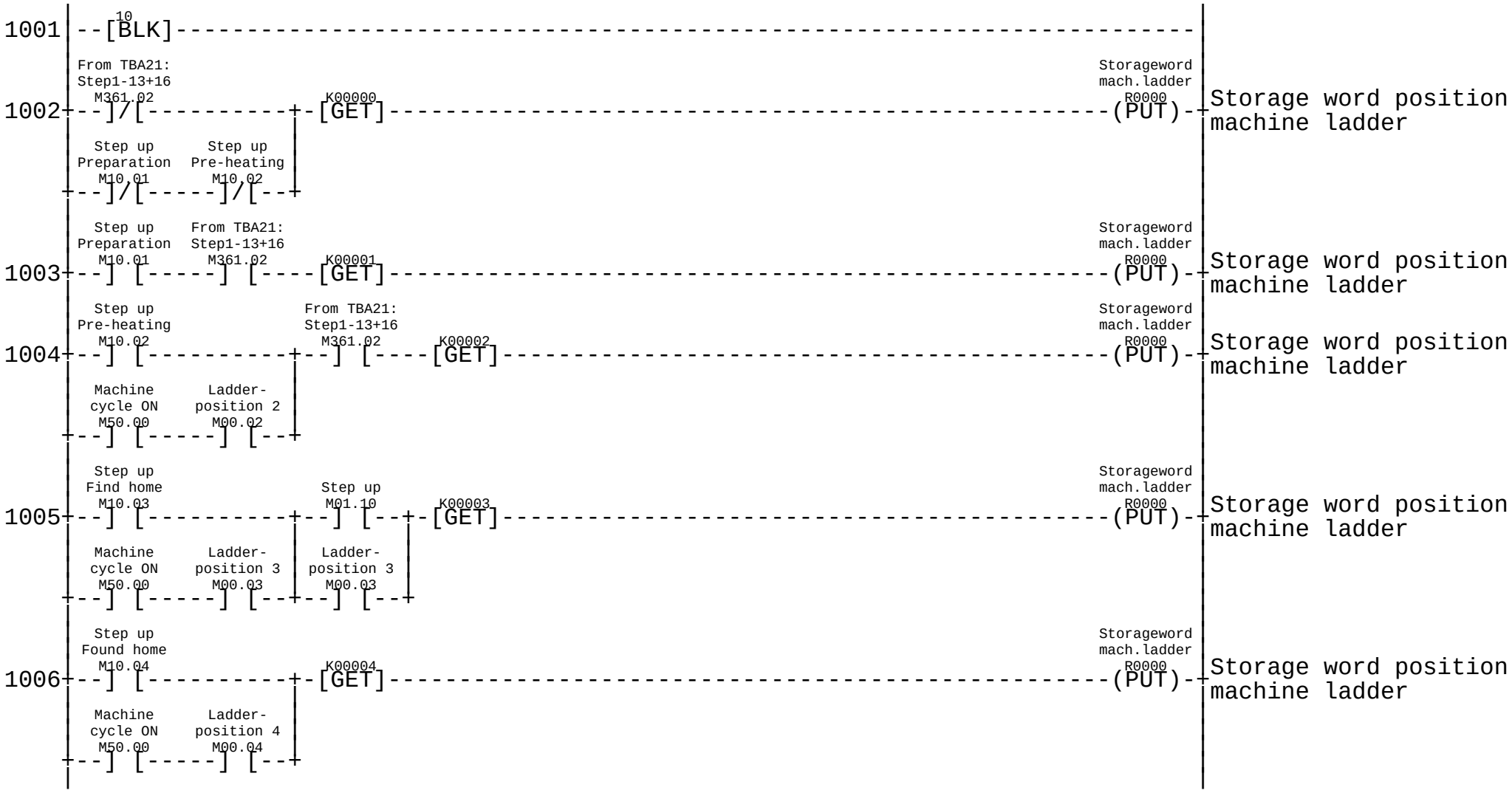

0779 K07428 [GET] Package length R1000 (PUT) Package length [Incr/10]
K05950 [GET] Stop Position R1001 (PUT) Stop Position [Incr/10]
K00050 [GET] Acc./Ret. time R1002 (PUT) Accel./Retard. time [ms]
K00150 [GET] Index time R1003 (PUT) Index time [ms]
0780 K01750 [GET] Patch Length R1004 (PUT) Patch length [mm*100]
K01400 [GET] Tab length R1005 (PUT) Tab length [mm*100]
0781 K00017 [GET] Torque 1 R1006 (PUT) Torque 1 [Nm*10]
K00017 [GET] Torque 2 R1007 (PUT) Torque 2 [Nm*10]
K00140 [GET] Max posit. Speed R1008 (PUT) Maximum positive speed [Incr/s]
K00090 [GET] Max negat. Speed R1009 (PUT) Maximum negative speed [Incr/s]
0782 LBL020 (JMP)
0783 020 [LBL]


7000
pkgs/hour
M05.00
K00491
0784
[GET]
*
Machine
time Total
R0700
(PUT)
Machine cycle time Total
5500
pkgs/hour
M05.01
K00571
K00020
[GET]
*
[-]
Machine
time ON
R0701
(PUT)
Machine cycle time ON
8000
pkgs/hour
M05.02
K00430
[GET]

Pulse generating



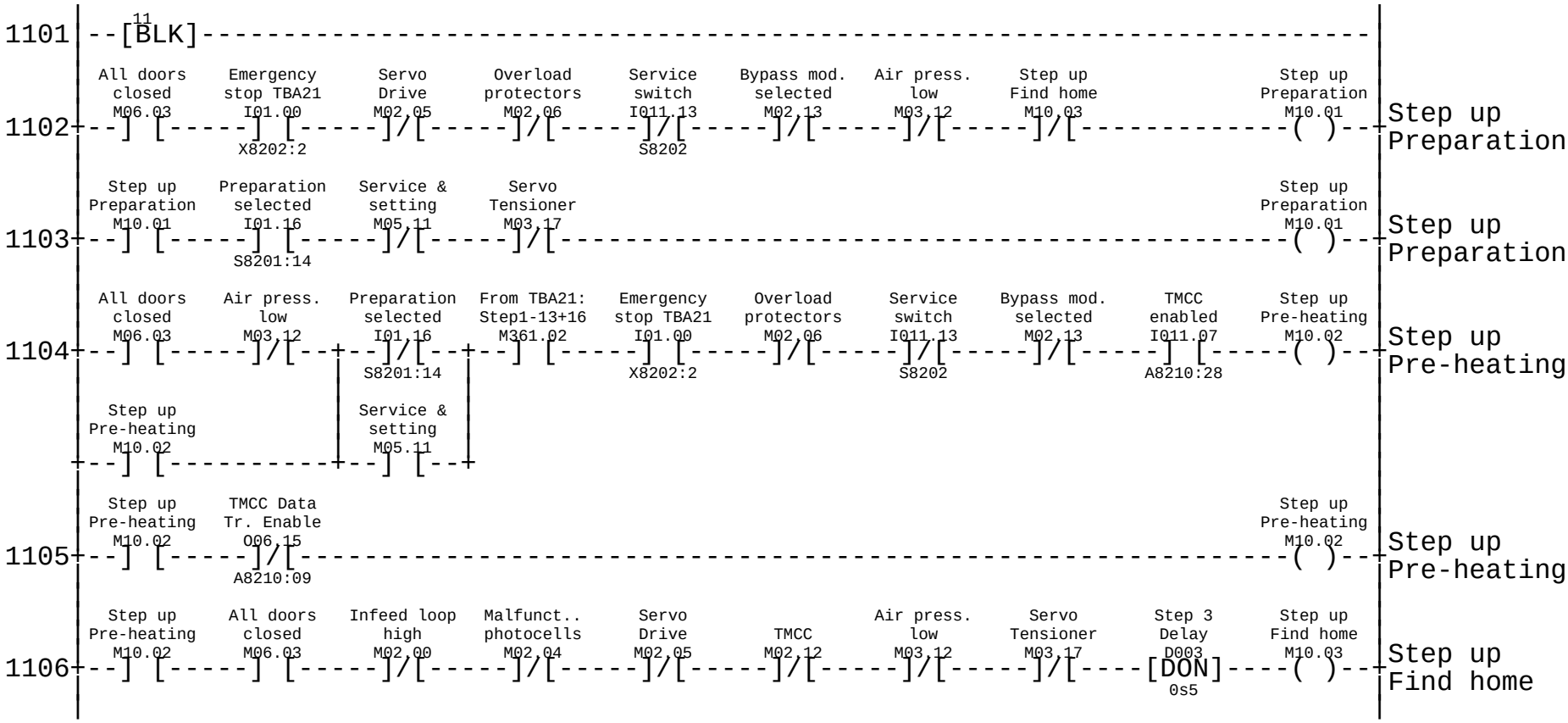
Machine ladder

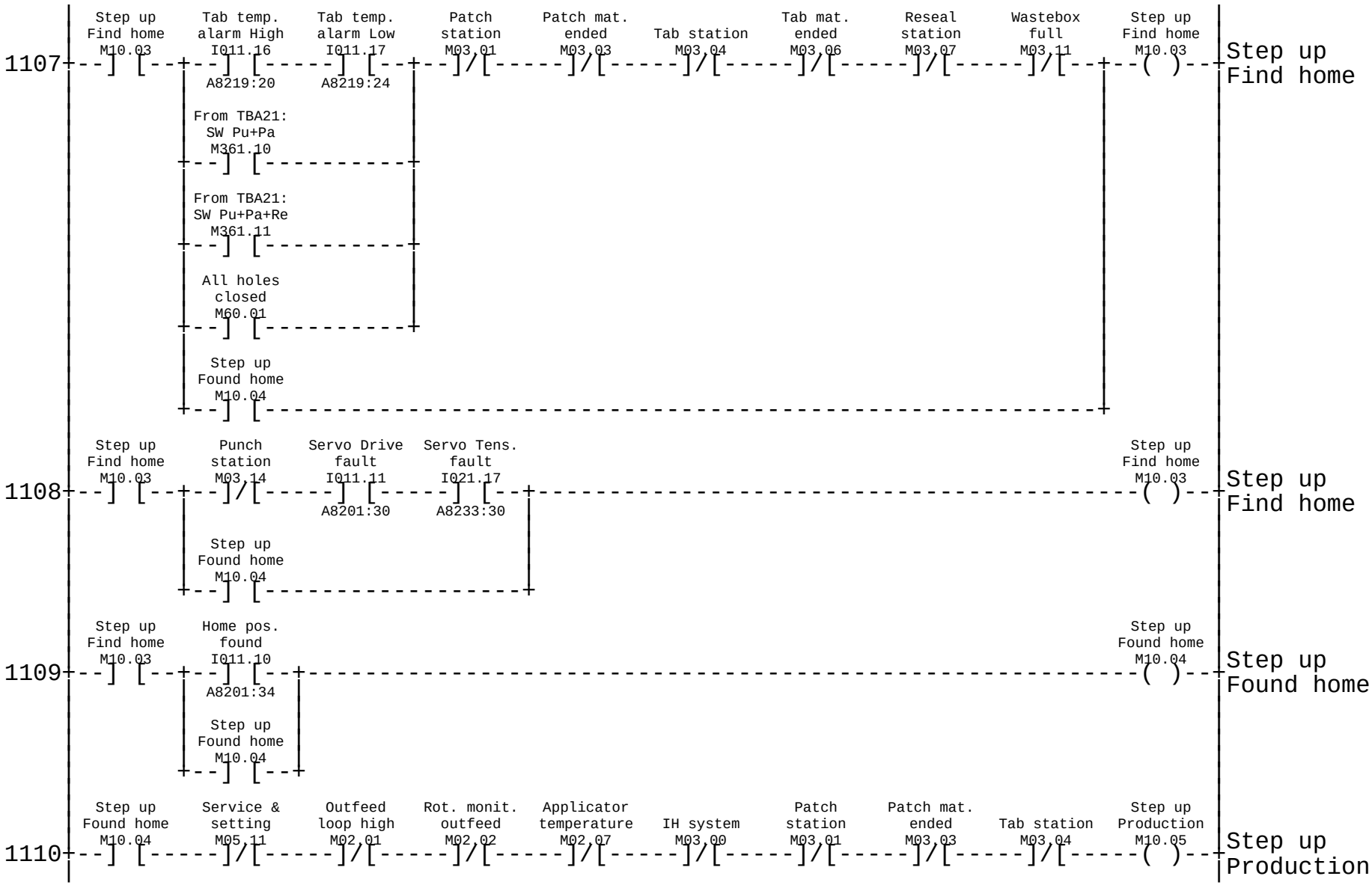



Step up
Production
M10.05
Step up
M01.10
K00005
Storageword
mach.ladder
R0000
1007
[GET]
(PUT)
Storage word position
machine ladder
Machine
cycle ON
M50.00
Ladder-
position 5
M00.05
Ladder-
position 5
M00.05
Step up
Service
M10.06
K00006
Storageword
mach.ladder
R0000
1008
[GET]
(PUT)
Storage word position
machine ladder
Machine
cycle ON
M50.00
Ladder-
position 6
M00.06
Ladder-
position 2
M00.02
Step2,
delay 1scan
M01.07
1009
( )
Step2, delay one scan

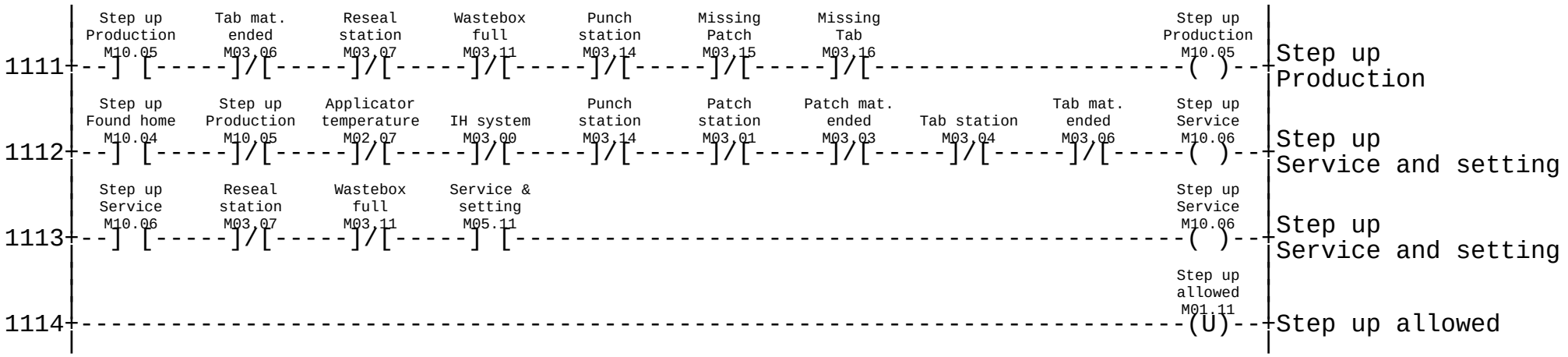

Storageword mach.ladder R0000
K00000
Ladder-position 0 M00.00
Ladderposition 0 Off
K00001
Ladder-position 1 M00.01
Ladderposition 1 Preparation
K00002
Ladder-position 2 M00.02
Ladderposition 2 Pre-heating
K00003
Ladder-position 3 M00.03
Ladderposition 3 Find home
K00004
Ladder-position 4 M00.04
Ladderposition 4 Found home
K00005
Ladder-position 5 M00.05
Ladderposition 5 Production
K00006
Ladder-position 6 M00.06
Ladderposition 6 Service and setting
1010
[GET]
[=]
1011
Storageword mach.ladder R0000
[>=]
K00003
[<=]
K00006
Ladderpos. 3-6 M01.01
Ladderposition 3-6 Find home - Service

Step up conditions

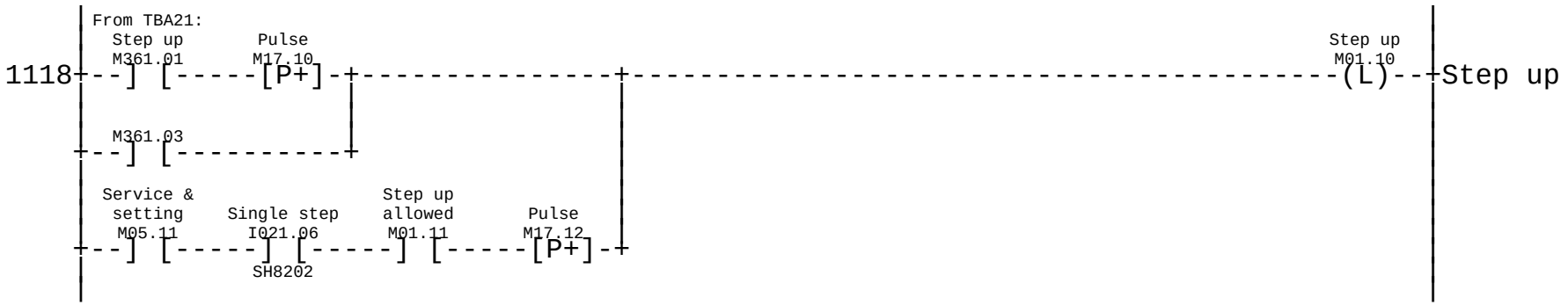



1107
Step up Find home M10.03
Tab temp. alarm High I011.16
A8219:20
Tab temp. alarm Low I011.17
A8219:24
Patch station M03.01
Patch mat. ended M03.03
Tab station M03.04
Tab mat. ended M03.06
Reseal station M03.07
Wastebox full M03.11
Step up Find home M10.03
Step up Find home
From TBA21: SW Pu+Pa M361.10
From TBA21: SW Pu+Pa+Re M361.11
All holes closed M60.01
Step up Found home M10.04
1108
Step up Find home M10.03
Punch station M03.14
Servo Drive fault I011.11
A8201:30
Servo Tens. fault I021.17
A8233:30
Step up Find home M10.03
Step up Find home
Step up Found home M10.04
1109
Step up Find home M10.03
Home pos. found I011.10
A8201:34
Step up Found home M10.04
Step up Found home M10.04
Step up Found home
1110
Step up Found home M10.04
Service & setting M05.11
Outfeed loop high M02.01
Rot. monit. outfeed M02.02
Applicator temperature M02.07
IH system M03.00
Patch station M03.01
Patch mat. ended M03.03
Tab station M03.04
Step up Production M10.05
Step up Production

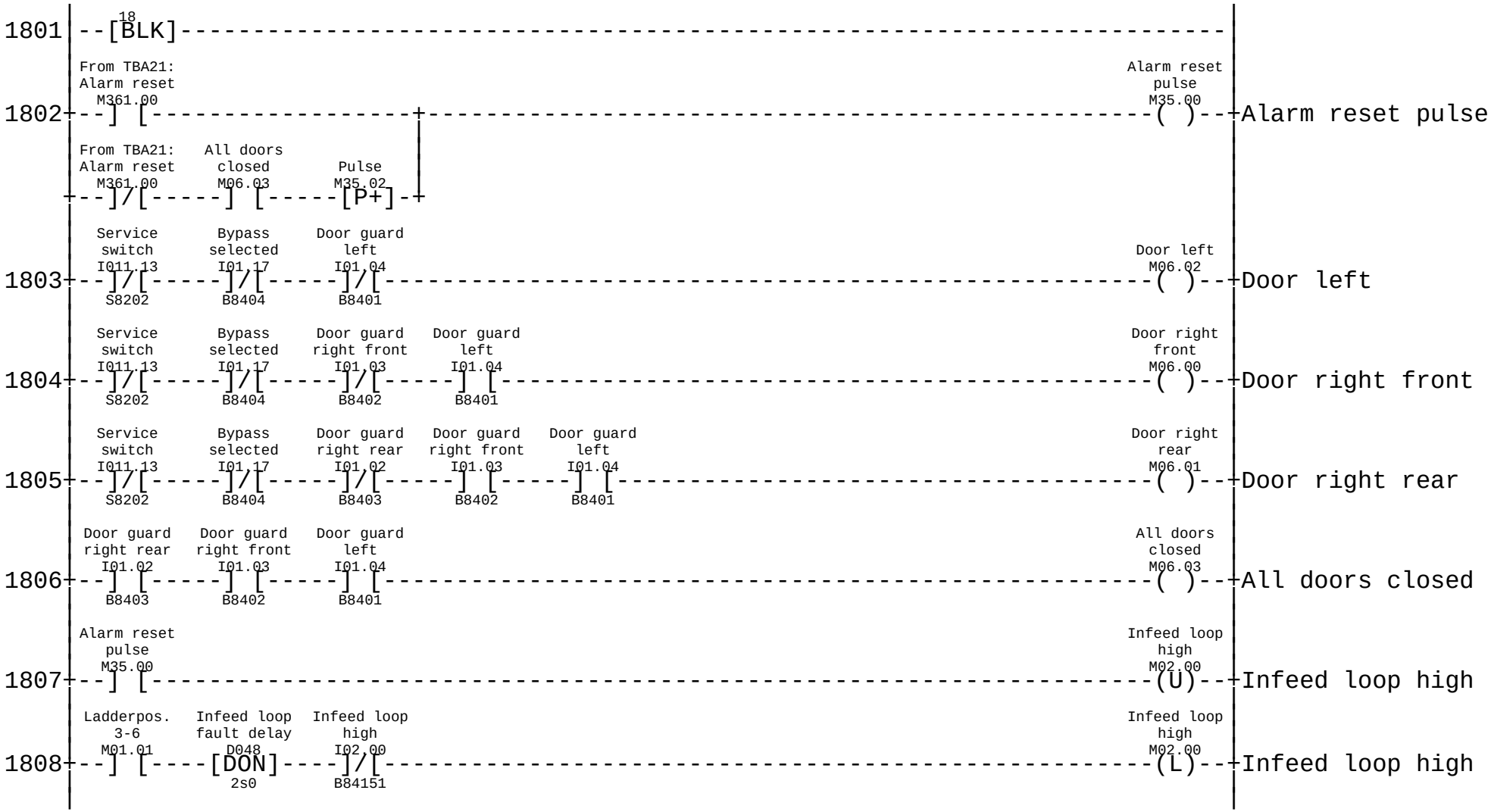
TPMC-PROGRAMME LIST

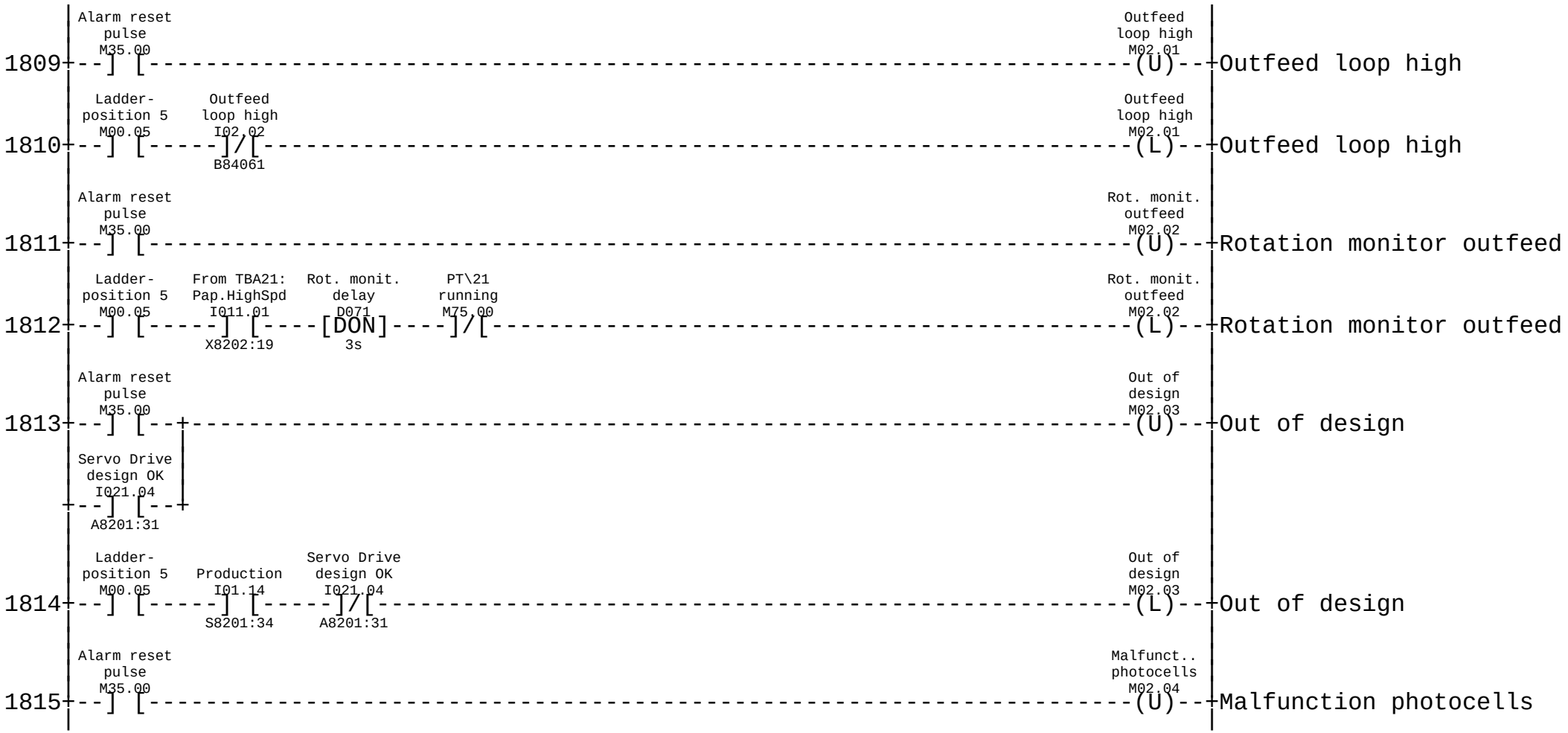


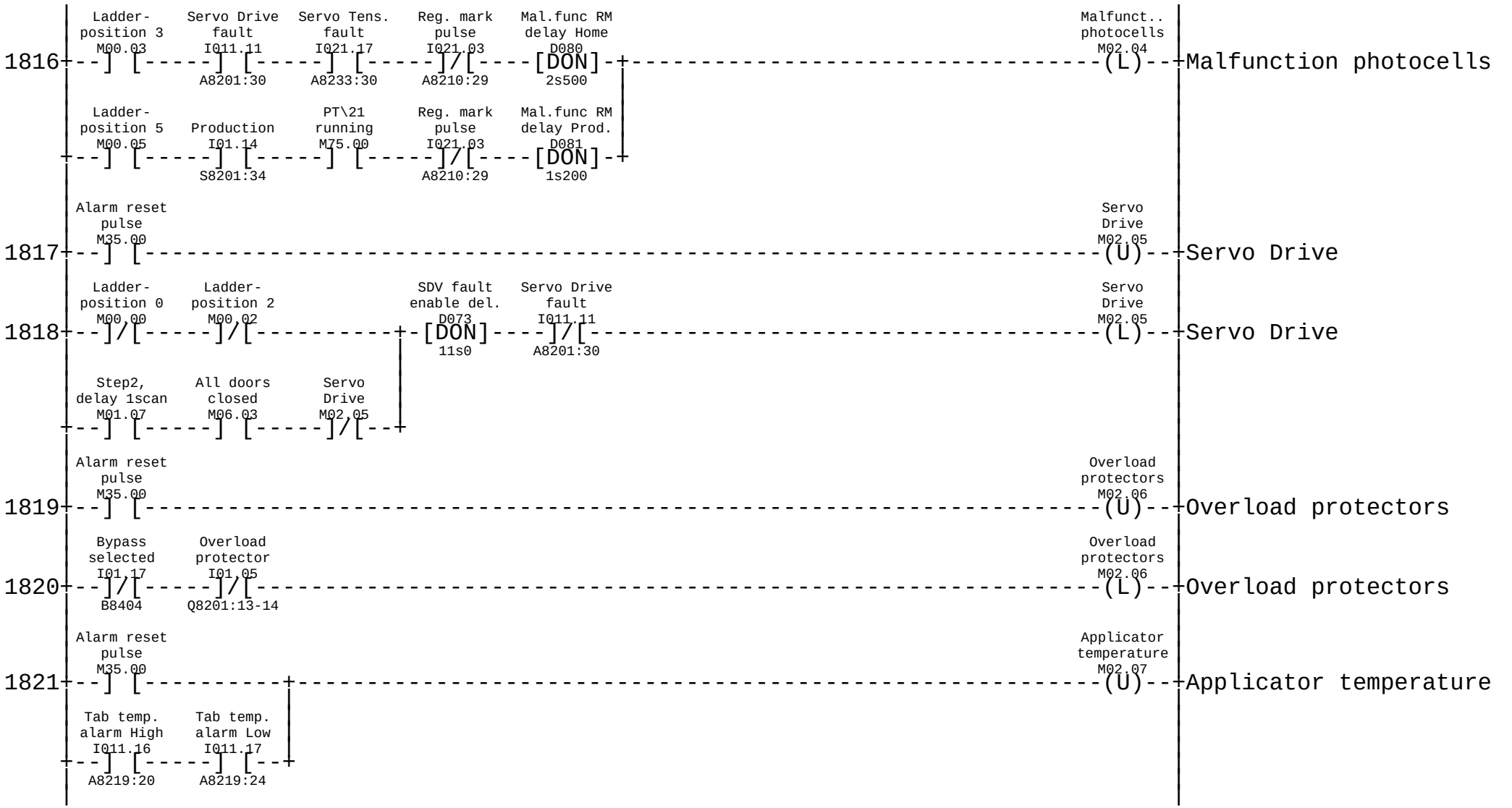

1115
Ladder-position 0 M00.00
Step up Preparation M10.01
Step up allowed M01.11 (L)
Step up allowed
Ladder-position 0 M00.00
Step up Pre-heating M10.02
Ladder-position 2 M00.02
Step up Find home M10.03
Ladder-position 3 M00.03
Ladder-position 4 M00.04
Step up Production M10.05
Ladder-position 4 M00.04
Step up Service M10.06
Ladder-position 5 M00.05
1116
Ladder-position 6 M00.06
Step up allowed M01.11 (L)
Step up allowed
1117
Step up allowed M01.11
Pulse M17.00 [P]
Step up M01.10 (U)
Step up
All doors closed M06.03]/[

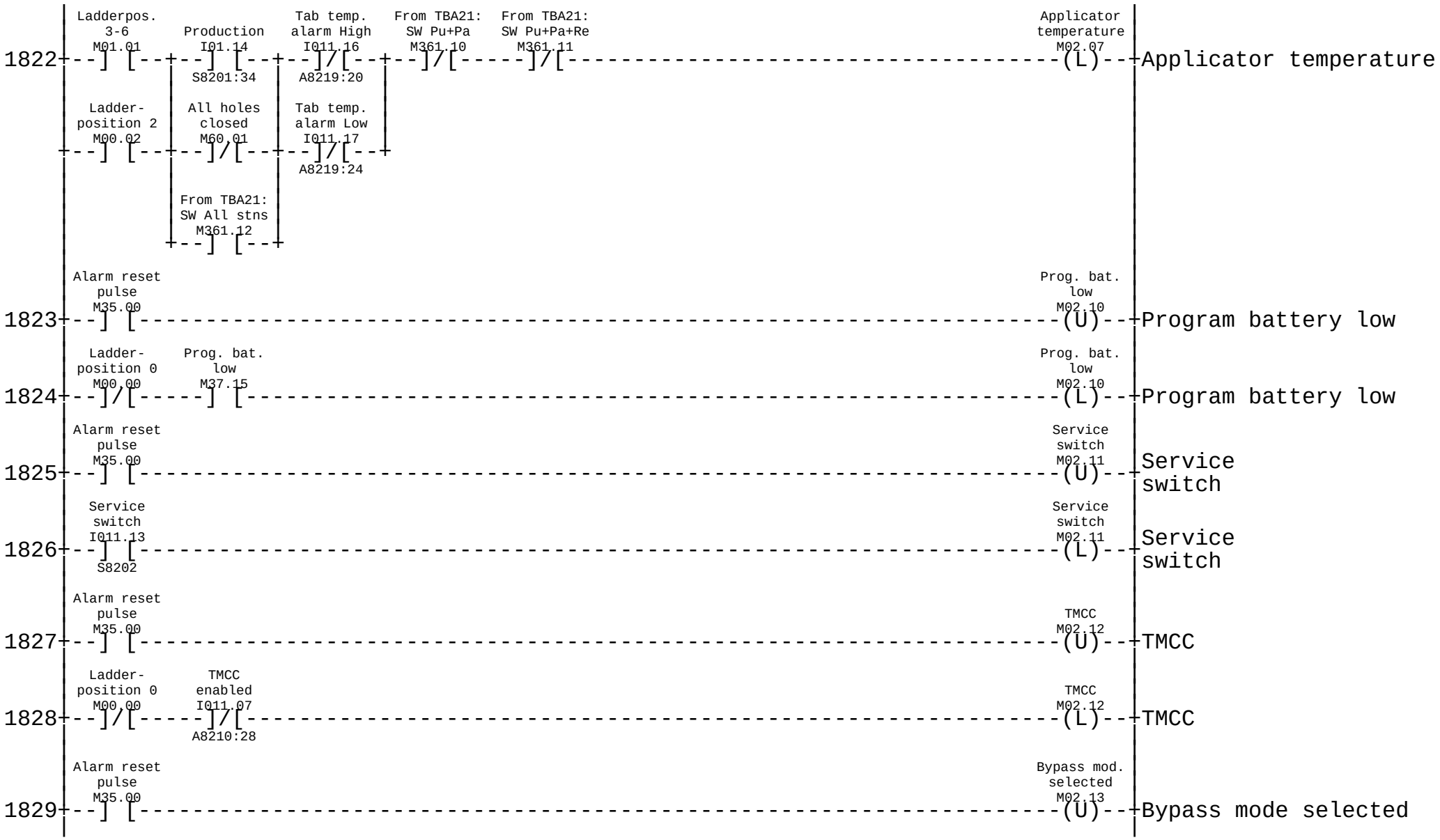

From TBA21:
Step up
M361.01
Pulse
M17.10
Step up
M01.10
1118
Step up
M361.03
Service &
setting
M05.11
Single step
I021.06
SH8202
Step up
allowed
M01.11
Pulse
M17.12

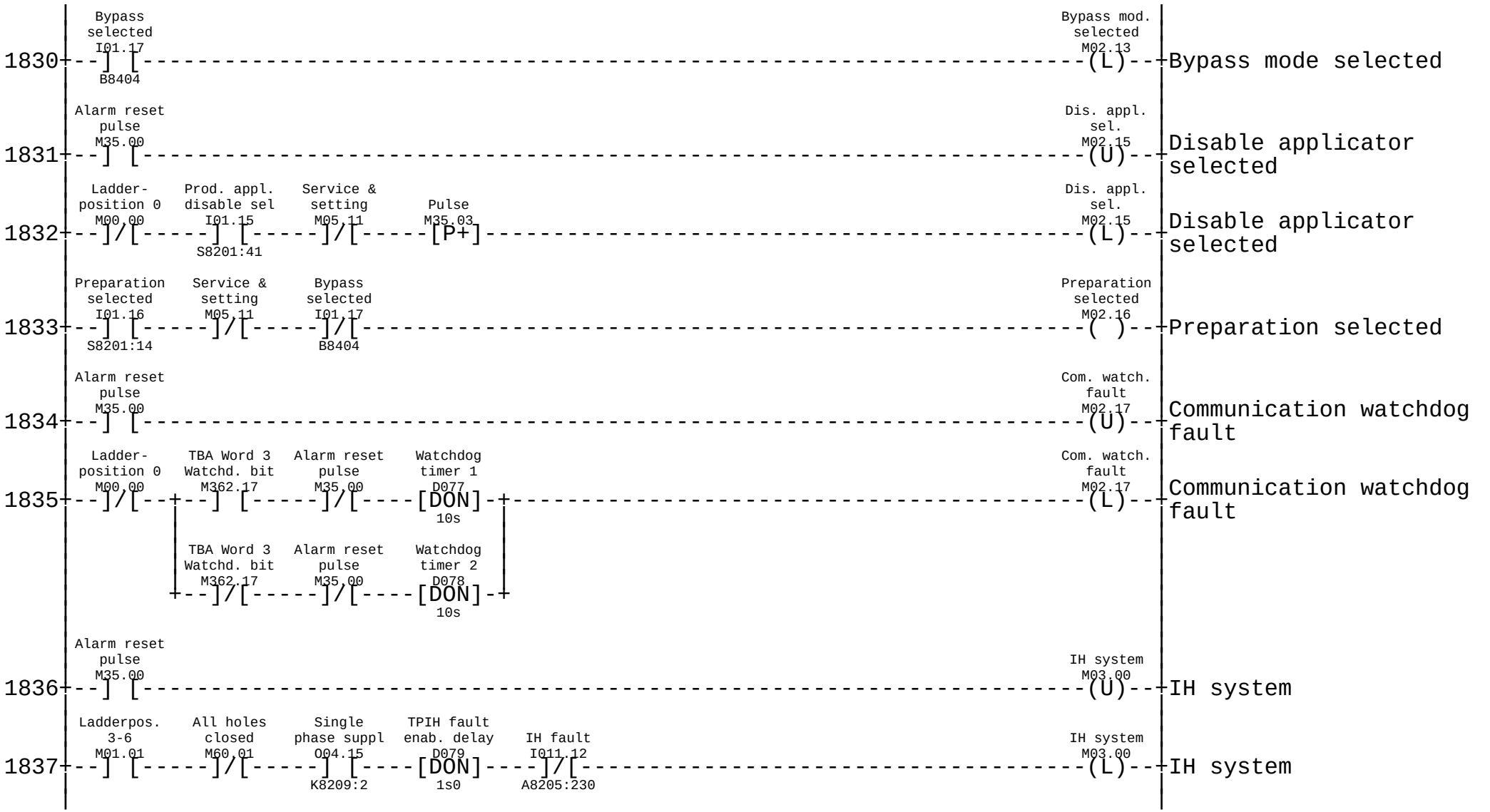
Common alarms

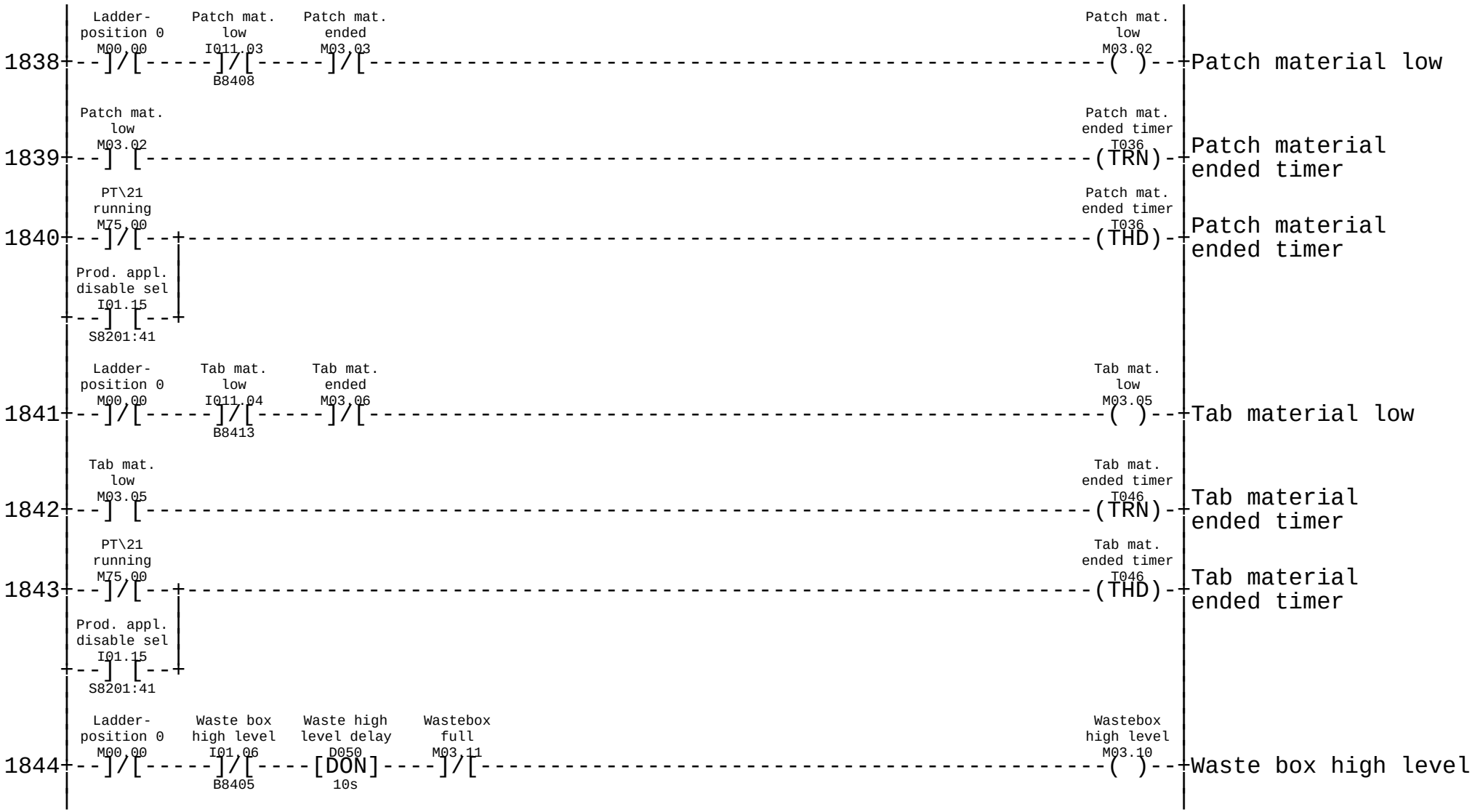


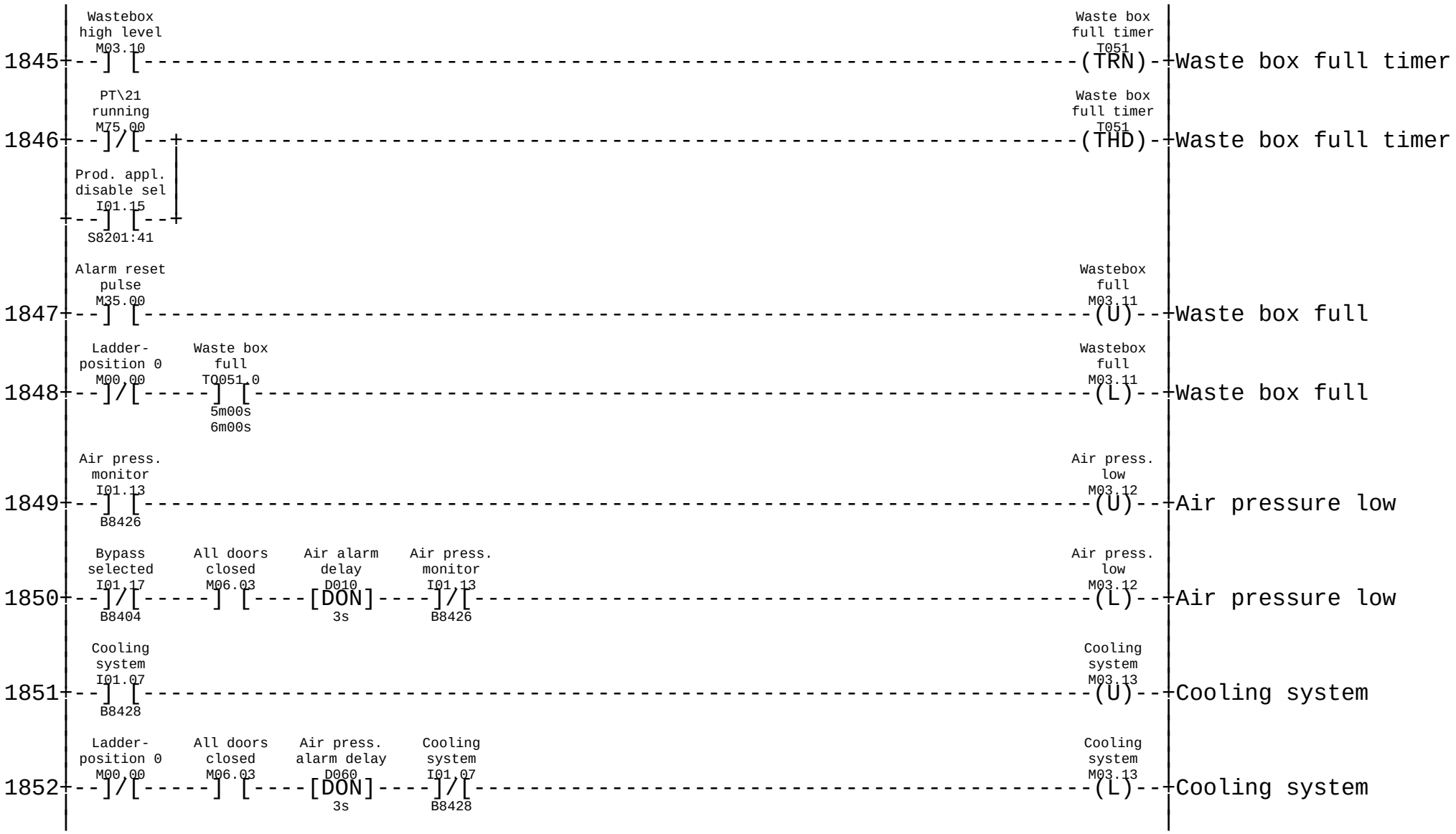

1809
Alarm reset pulse M35.00
Outfeed loop high M02.01
(U)
Outfeed loop high
1810
Ladder-position 5 M00.05
Outfeed loop high I02.02
B84061
Outfeed loop high M02.01
(L)
Outfeed loop high
1811
Alarm reset pulse M35.00
Rot. monit. outfeed M02.02
(U)
Rotation monitor outfeed
1812
Ladder-position 5 M00.05
From TBA21: Pap.HighSpd I011.01
X8202:19
Rot. monit. delay D071
DON
3s
PT\21 running M75.00
Rot. monit. outfeed M02.02
(L)
Rotation monitor outfeed
1813
Alarm reset pulse M35.00
Out of design M02.03
(U)
Out of design
Servo Drive design OK I021.04
A8201:31
1814
Ladder-position 5 M00.05
Production I01.14
S8201:34
Servo Drive design OK I021.04
A8201:31
Out of design M02.03
(L)
Out of design
1815
Alarm reset pulse M35.00
Malfunct.. photocells M02.04
(U)
Malfunction photocells

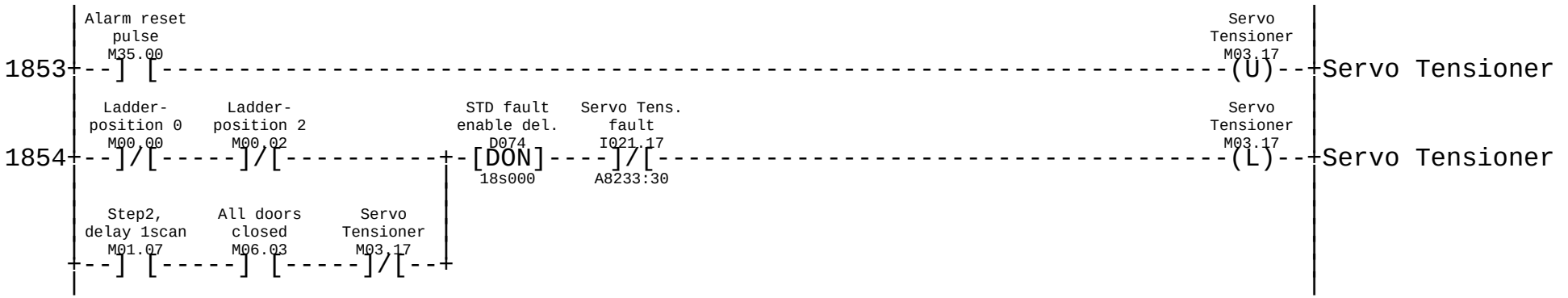

1816
Ladder-position 3 M00.03
Servo Drive fault I011.11 A8201:30
Servo Tens. fault I021.17 A8233:30
Reg. mark pulse I021.03 A8210:29
Mal.func RM delay Home D080 2s500
DON
Malfunct.. photocells M02.04
L
Malfunction photocells
Ladder-position 5 M00.05
Production I01.14 S8201:34
PT\21 running M75.00
Reg. mark pulse I021.03 A8210:29
Mal.func RM delay Prod. D081 1s200
DON
1817
Alarm reset pulse M35.00
Servo Drive M02.05
U
Servo Drive
1818
Ladder-position 0 M00.00
Ladder-position 2 M00.02
SDV fault enable del. D073 11s0
DON
Servo Drive fault I011.11 A8201:30
Servo Drive M02.05
L
Servo Drive
Step2, delay 1scan M01.07
All doors closed M06.03
Servo Drive M02.05
1819
Alarm reset pulse M35.00
Overload protectors M02.06
U
Overload protectors
1820
Bypass selected I01.17 B8404
Overload protector I01.05 Q8201:13-14
Overload protectors M02.06
L
Overload protectors
1821
Alarm reset pulse M35.00
Applicator temperature M02.07
U
Applicator temperature
Tab temp. alarm High I011.16 A8219:20
Tab temp. alarm Low I011.17 A8219:24


1822
Ladderpos. 3-6 M01.01
Production I01.14
S8201:34
Tab temp. alarm High I011.16
A8219:20
From TBA21: SW Pu+Pa M361.10
From TBA21: SW Pu+Pa+Re M361.11
Applicator temperature M02.07
Applicator temperature
Ladder-position 2 M00.02
All holes closed M60.01
Tab temp. alarm Low I011.17
A8219:24
From TBA21: SW All stns M361.12
1823
Alarm reset pulse M35.00
Prog. bat. low M02.10
Program battery low
1824
Ladder-position 0 M00.00
Prog. bat. low M37.15
Prog. bat. low M02.10
Program battery low
1825
Alarm reset pulse M35.00
Service switch M02.11
Service switch
1826
Service switch I011.13
S8202
Service switch M02.11
Service switch
1827
Alarm reset pulse M35.00
TMCC M02.12
TMCC
1828
Ladder-position 0 M00.00
TMCC enabled I011.07
A8210:28
TMCC M02.12
TMCC
1829
Alarm reset pulse M35.00
Bypass mod. selected M02.13
Bypass mode selected


1830
Bypass selected I01.17
B8404
Bypass mod. selected M02.13
(L)
Bypass mode selected
1831
Alarm reset pulse M35.00
Dis. appl. sel. M02.15
(U)
Disable applicator selected
1832
Ladder-position 0 M00.00
Prod. appl. disable sel I01.15
S8201:41
Service & setting M05.11
Pulse M35.03
[P+]
Dis. appl. sel. M02.15
(L)
Disable applicator selected
1833
Preparation selected I01.16
S8201:14
Service & setting M05.11
Bypass selected I01.17
B8404
Preparation selected M02.16
( )
Preparation selected
1834
Alarm reset pulse M35.00
Com. watch. fault M02.17
(U)
Communication watchdog fault
1835
Ladder-position 0 M00.00
TBA Word 3 Watchd. bit M362.17
Alarm reset pulse M35.00
Watchdog timer 1 D077
[DON]
10s
TBA Word 3 Watchd. bit M362.17
Alarm reset pulse M35.00
Watchdog timer 2 D078
[DON]
10s
Com. watch. fault M02.17
(L)
Communication watchdog fault
1836
Alarm reset pulse M35.00
IH system M03.00
(U)
IH system
1837
Ladderpos. 3-6 M01.01
All holes closed M60.01
Single phase suppl O04.15
K8209:2
TPIH fault enab. delay D079
[DON]
1s0
IH fault I011.12
A8205:230
IH system M03.00
(L)
IH system


1838
Ladder-position 0 M00.00
Patch mat. low I011.03
B8408
Patch mat. ended M03.03
Patch mat. low M03.02
Patch material low
1839
Patch mat. low M03.02
Patch mat. ended timer I036
(TRN)
Patch material ended timer
1840
PT\21 running M75.00
Prod. appl. disable sel I01.15
S8201:41
Patch mat. ended timer I036
(THD)
Patch material ended timer
1841
Ladder-position 0 M00.00
Tab mat. low I011.04
B8413
Tab mat. ended M03.06
Tab mat. low M03.05
Tab material low
1842
Tab mat. low M03.05
Tab mat. ended timer I046
(TRN)
Tab material ended timer
1843
PT\21 running M75.00
Prod. appl. disable sel I01.15
S8201:41
Tab mat. ended timer I046
(THD)
Tab material ended timer
1844
Ladder-position 0 M00.00
Waste box high level I01.06
B8405
[DON]
Waste high level delay D050
10s
Wastebox full M03.11
Wastebox high level M03.10
Waste box high level

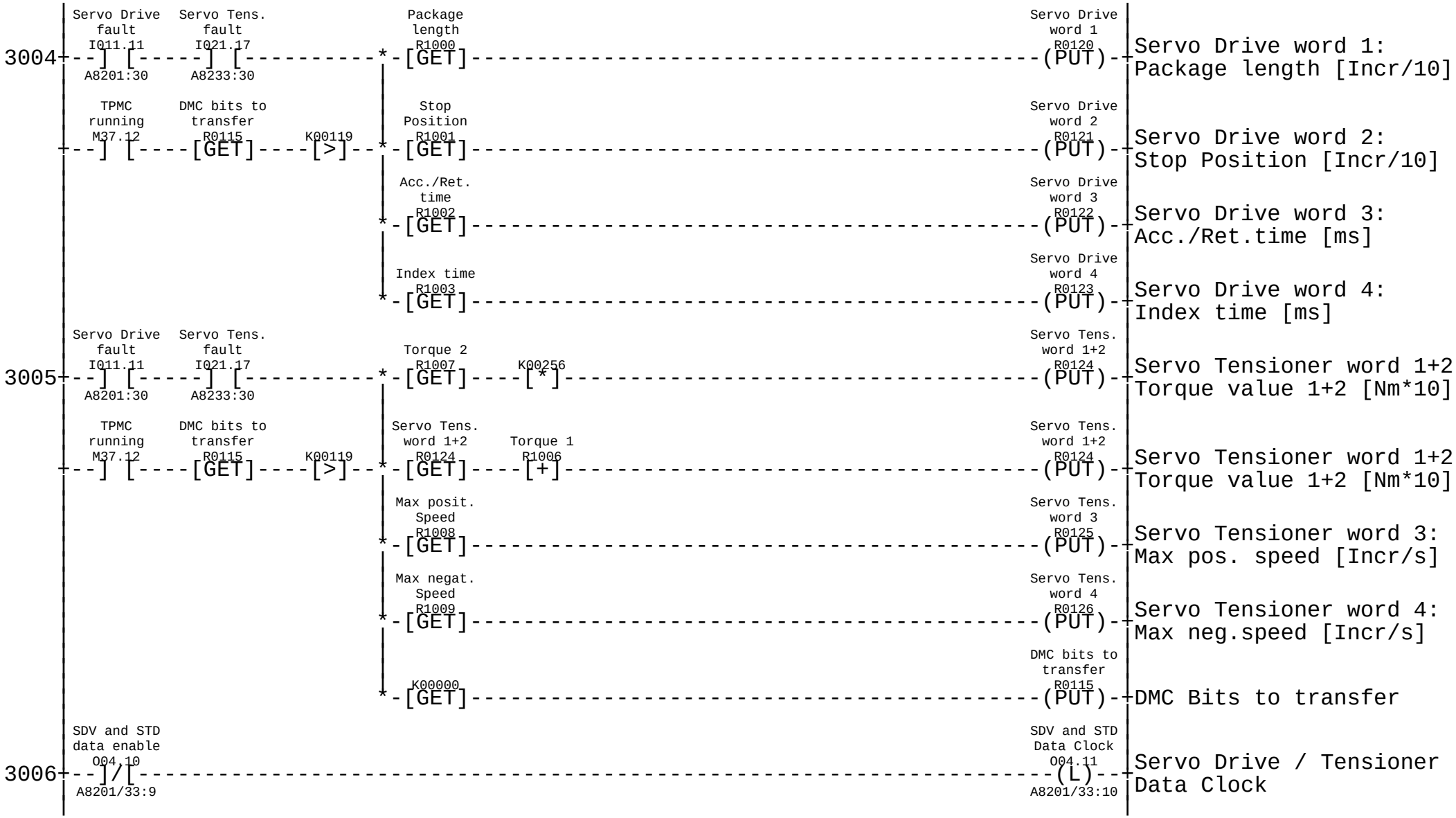

1845
Wastebox high level M03.10
Waste box full timer T051
(TRN)
Waste box full timer
1846
PT\21 running M75.00
Prod. appl. disable sel I01.15
S8201:41
Waste box full timer T051
(THD)
Waste box full timer
1847
Alarm reset pulse M35.00
Wastebox full M03.11
(U)
Waste box full
1848
Ladder-position 0 M00.00
Waste box full TQ051.0
5m00s
6m00s
Wastebox full M03.11
(L)
Waste box full
1849
Air press. monitor I01.13
B8426
Air press. low M03.12
(U)
Air pressure low
1850
Bypass selected I01.17
B8404
All doors closed M06.03
Air alarm delay D010
[DON]
3s
Air press. monitor I01.13
B8426
Air press. low M03.12
(L)
Air pressure low
1851
Cooling system I01.07
B8428
Cooling system M03.13
(U)
Cooling system
1852
Ladder-position 0 M00.00
All doors closed M06.03
Air press. alarm delay D060
[DON]
3s
Cooling system I01.07
B8428
Cooling system M03.13
(L)
Cooling system

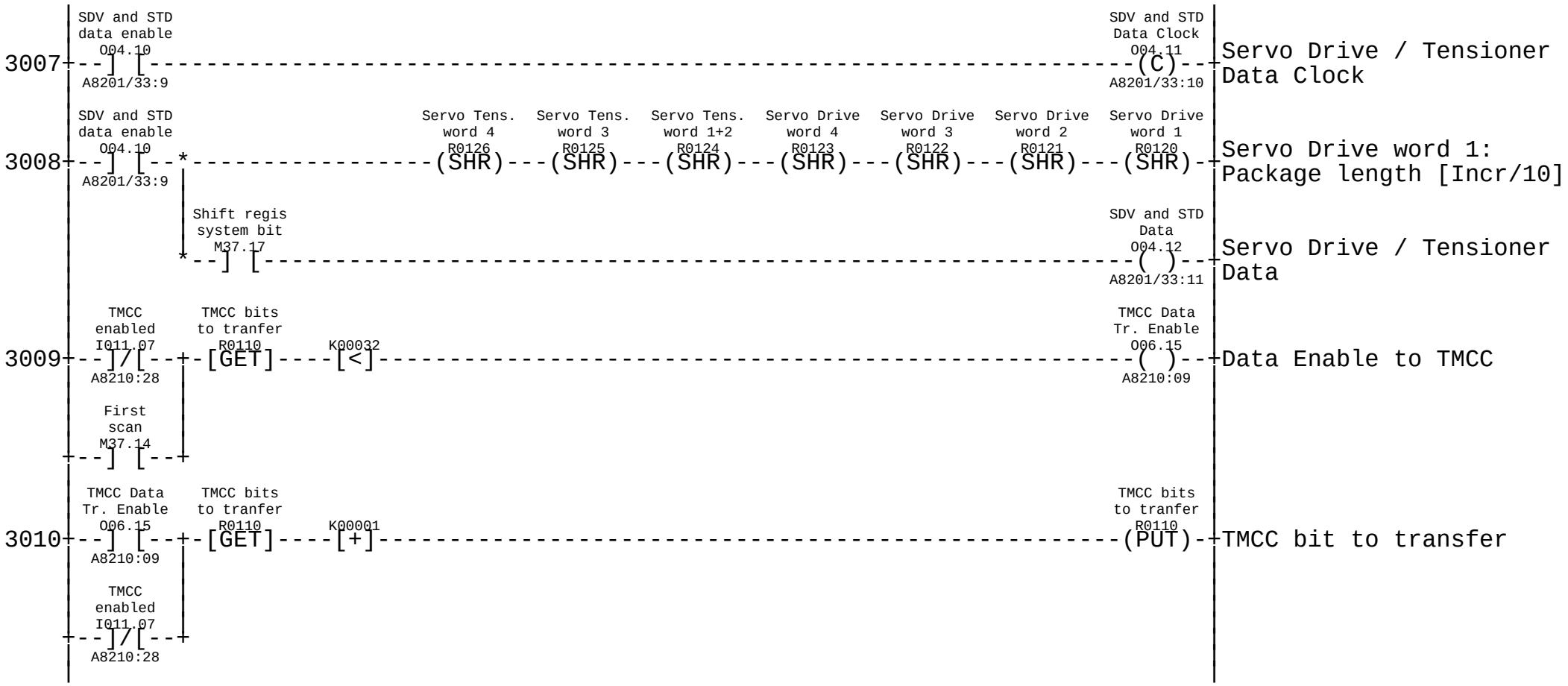

1853
Alarm reset pulse M35.00
Servo Tensioner M03.17
(U)
Servo Tensioner
1854
Ladder-position 0 M00.00
Ladder-position 2 M00.02
STD fault enable del. D074
Servo Tens. fault I021.17
[DON]
18s000
A8233:30
Servo Tensioner M03.17
(L)
Servo Tensioner
Step2, delay 1scan M01.07
All doors closed M06.03
Servo Tensioner M03.17

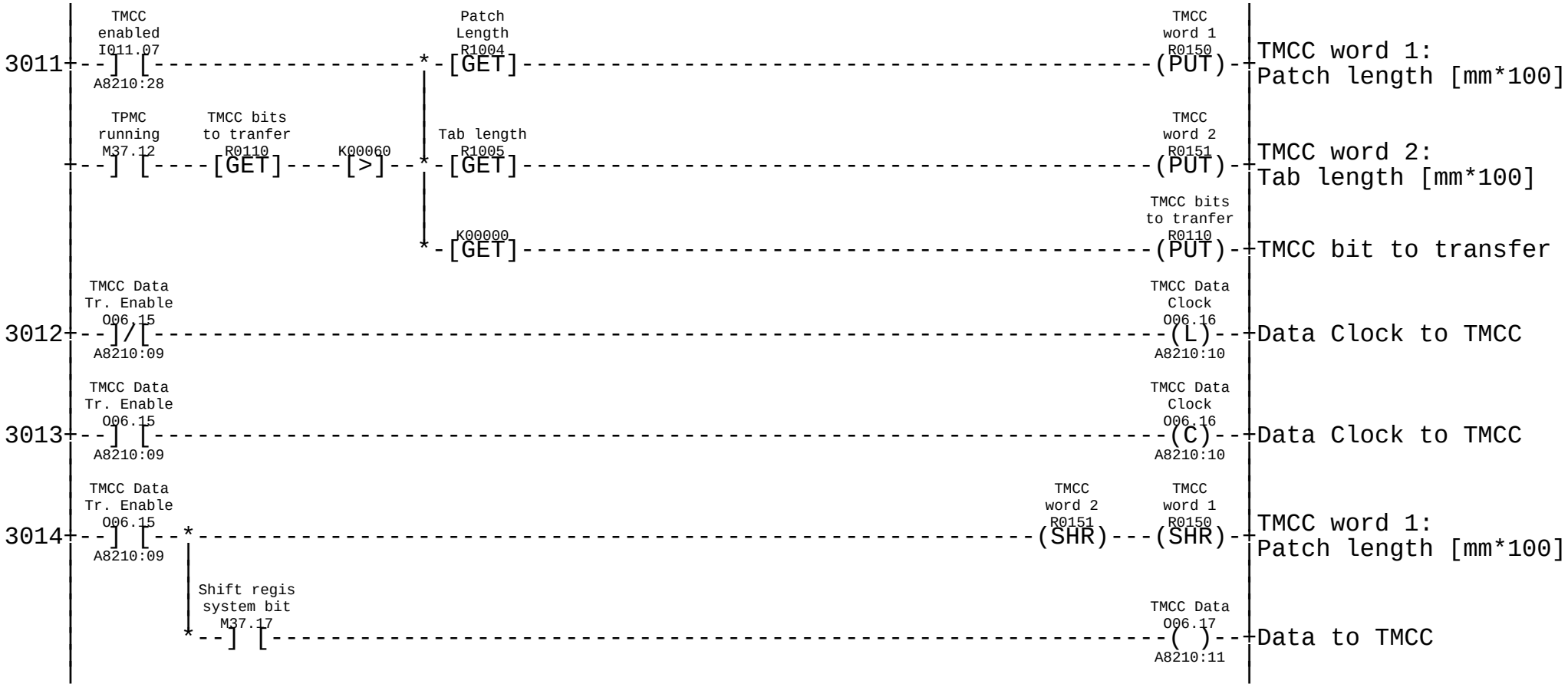
TPMC-PROGRAMME LIST

Communication: TPMC - DMC



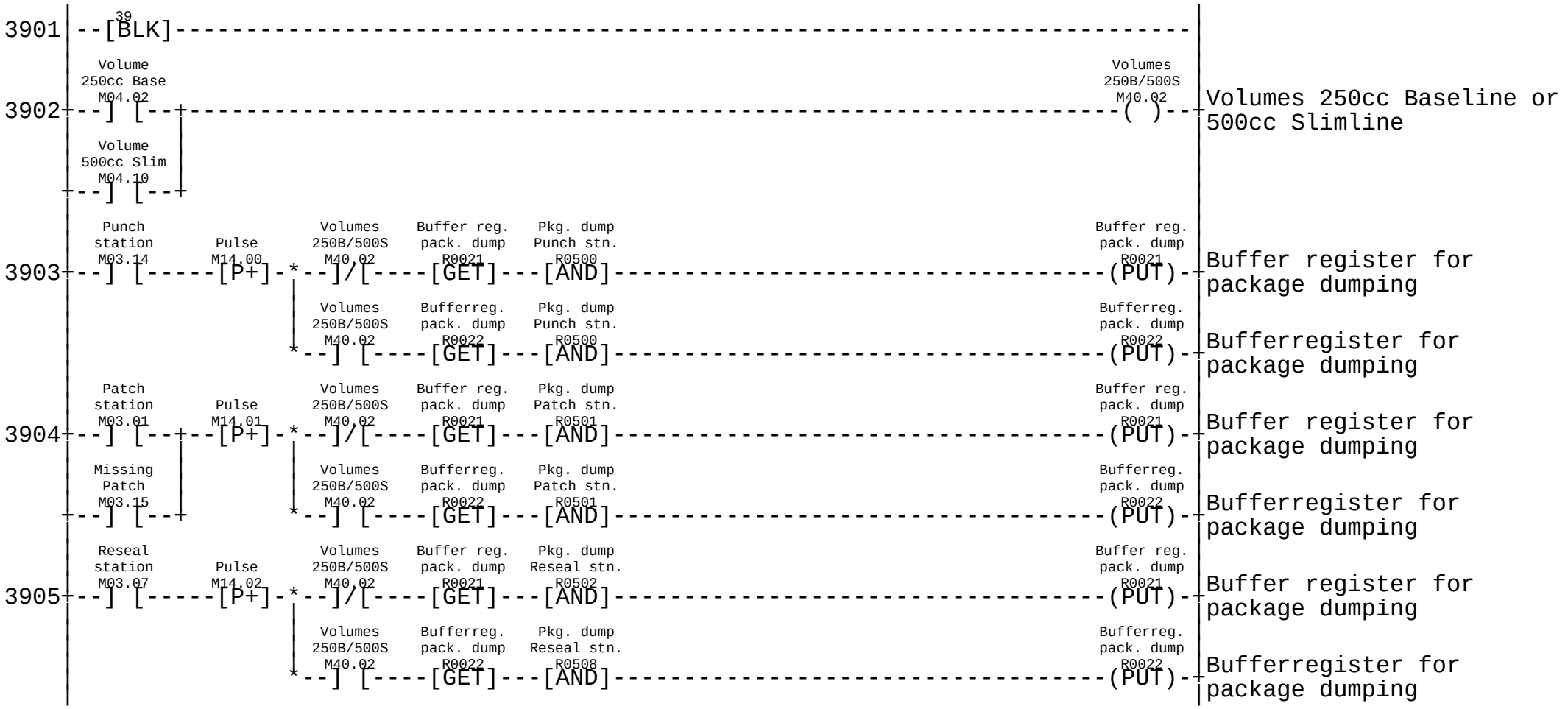

3004
Servo Drive fault I011.11 A8201:30
Servo Tens. fault I021.17 A8233:30
Package length R1000
[GET]
Servo Drive word 1 R0120
(PUT)
Servo Drive word 1: Package length [Incr/10]
TPMC running M37.12
DMC bits to transfer R0115
K00119
[GET]
[>]
Stop Position R1001
[GET]
Servo Drive word 2 R0121
(PUT)
Servo Drive word 2: Stop Position [Incr/10]
Acc./Ret. time R1002
[GET]
Servo Drive word 3 R0122
(PUT)
Servo Drive word 3: Acc./Ret.time [ms]
Index time R1003
[GET]
Servo Drive word 4 R0123
(PUT)
Servo Drive word 4: Index time [ms]
3005
Servo Drive fault I011.11 A8201:30
Servo Tens. fault I021.17 A8233:30
Torque 2 R1007
K00256
[GET]
[*]
Servo Tens. word 1+2 R0124
(PUT)
Servo Tensioner word 1+2: Torque value 1+2 [Nm*10]
TPMC running M37.12
DMC bits to transfer R0115
K00119
[GET]
[>]
Servo Tens. word 1+2 R0124
Torque 1 R1006
[GET]
[+]
Servo Tens. word 1+2 R0124
(PUT)
Servo Tensioner word 1+2: Torque value 1+2 [Nm*10]
Max posit. Speed R1008
[GET]
Servo Tens. word 3 R0125
(PUT)
Servo Tensioner word 3: Max pos. speed [Incr/s]
Max negat. Speed R1009
[GET]
Servo Tens. word 4 R0126
(PUT)
Servo Tensioner word 4: Max neg.speed [Incr/s]
K00000
[GET]
DMC bits to transfer R0115
(PUT)
DMC Bits to transfer
3006
SDV and STD data enable O04.10 A8201/33:9
]/[
SDV and STD Data Clock O04.11 A8201/33:10
(L)
Servo Drive / Tensioner Data Clock

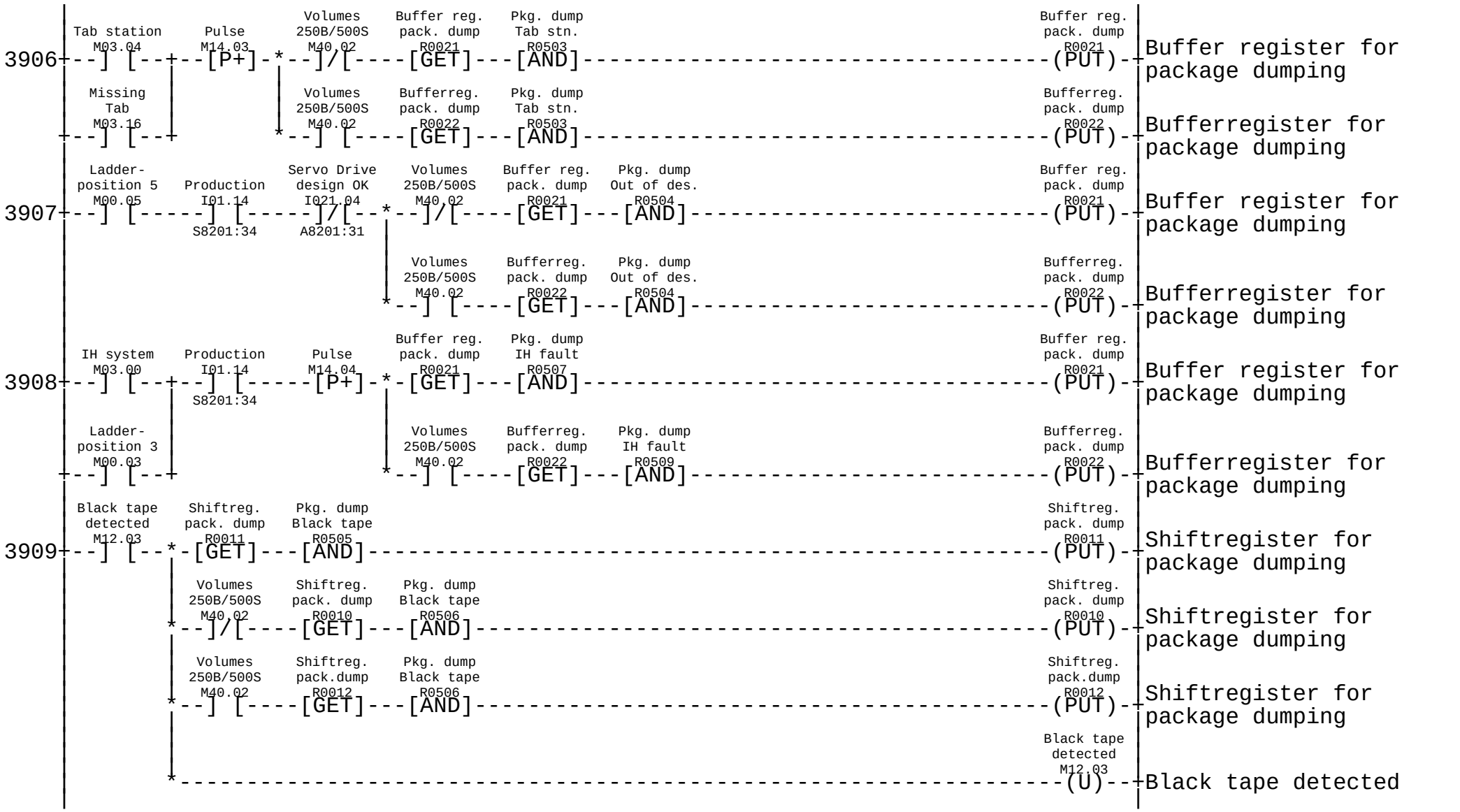

3007
SDV and STD data enable O04.10
A8201/33:9
SDV and STD Data Clock O04.11
A8201/33:10
(C)
Servo Drive / Tensioner Data Clock
3008
SDV and STD data enable O04.10
A8201/33:9
Servo Tens. word 4 R0126
Servo Tens. word 3 R0125
Servo Tens. word 1+2 R0124
Servo Drive word 4 R0123
Servo Drive word 3 R0122
Servo Drive word 2 R0121
Servo Drive word 1 R0120
(SHR)
Servo Drive word 1: Package length [Incr/10]
Shift regis system bit M37.17
SDV and STD Data O04.12
A8201/33:11
Servo Drive / Tensioner Data
3009
TMCC enabled I011.07
A8210:28
TMCC bits to tranfer R0110
K00032
[GET]
[<]
TMCC Data Tr. Enable O06.15
A8210:09
Data Enable to TMCC
First scan M37.14
3010
TMCC Data Tr. Enable O06.15
A8210:09
TMCC bits to tranfer R0110
K00001
[GET]
[+]
TMCC bits to tranfer R0110
(PUT)
TMCC bit to transfer
TMCC enabled I011.07
A8210:28

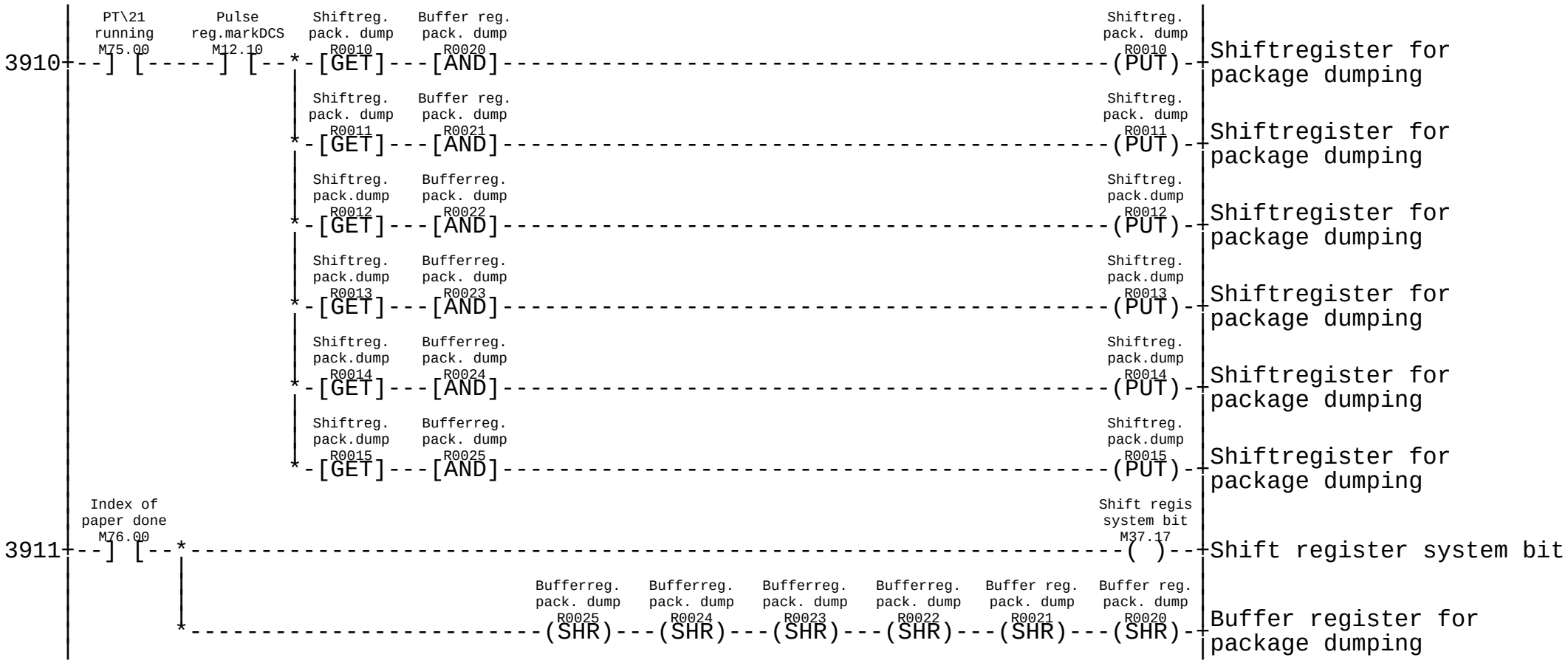

3011
TMCC enabled I011.07
A8210:28
Patch Length R1004
[GET]
TMCC word 1 R0150
(PUT)
TMCC word 1: Patch length [mm*100]
TPMC running M37.12
TMCC bits to tranfer R0110
[GET]
K00060
[>]
Tab length R1005
[GET]
TMCC word 2 R0151
(PUT)
TMCC word 2: Tab length [mm*100]
K00000
[GET]
TMCC bits to tranfer R0110
(PUT)
TMCC bit to transfer
3012
TMCC Data Tr. Enable O06.15
A8210:09
]/[
TMCC Data Clock O06.16
A8210:10
(L)
Data Clock to TMCC
3013
TMCC Data Tr. Enable O06.15
A8210:09
[
TMCC Data Clock O06.16
A8210:10
(C)
Data Clock to TMCC
3014
TMCC Data Tr. Enable O06.15
A8210:09
[
TMCC word 2 R0151
(SHR)
TMCC word 1 R0150
(SHR)
TMCC word 1: Patch length [mm*100]
Shift regis system bit M37.17
]
[
TMCC Data O06.17
A8210:11
( )
Data to TMCC

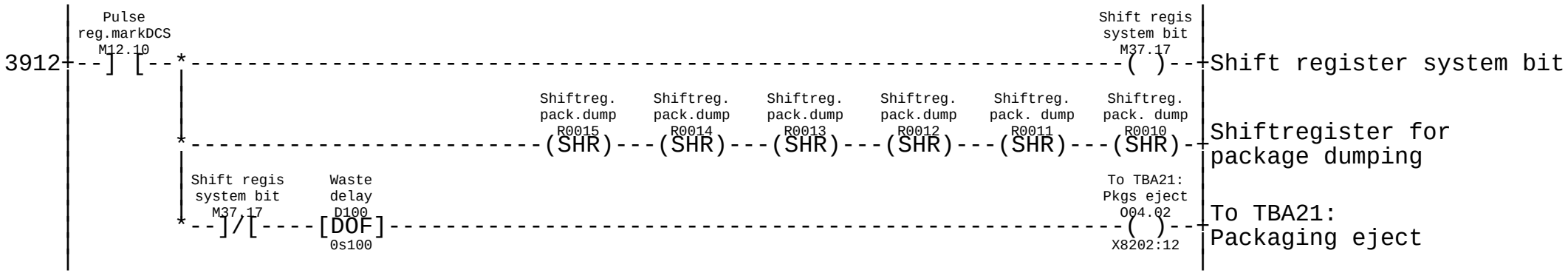
TPMC-PROGRAMME LIST

Dumping of packages

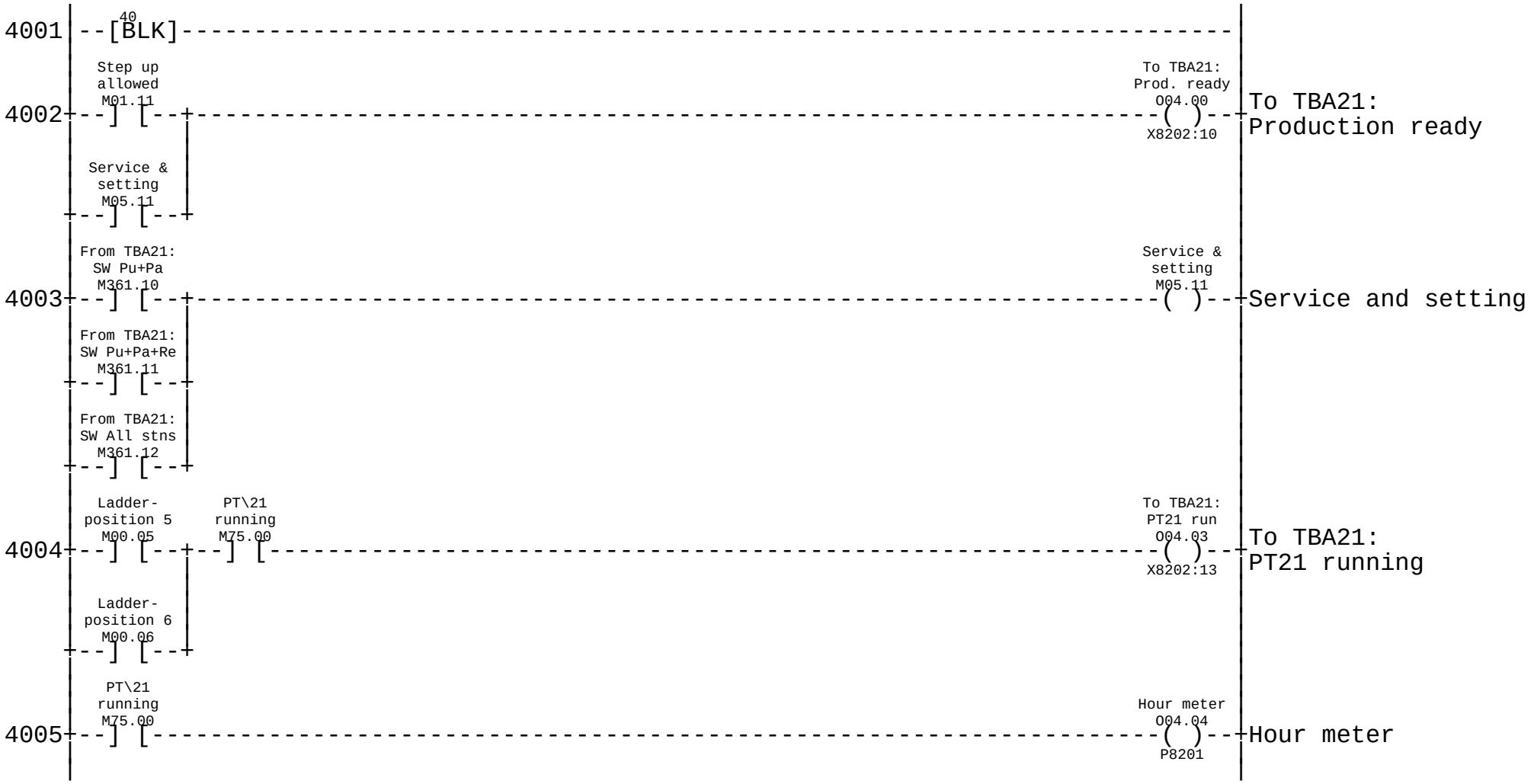


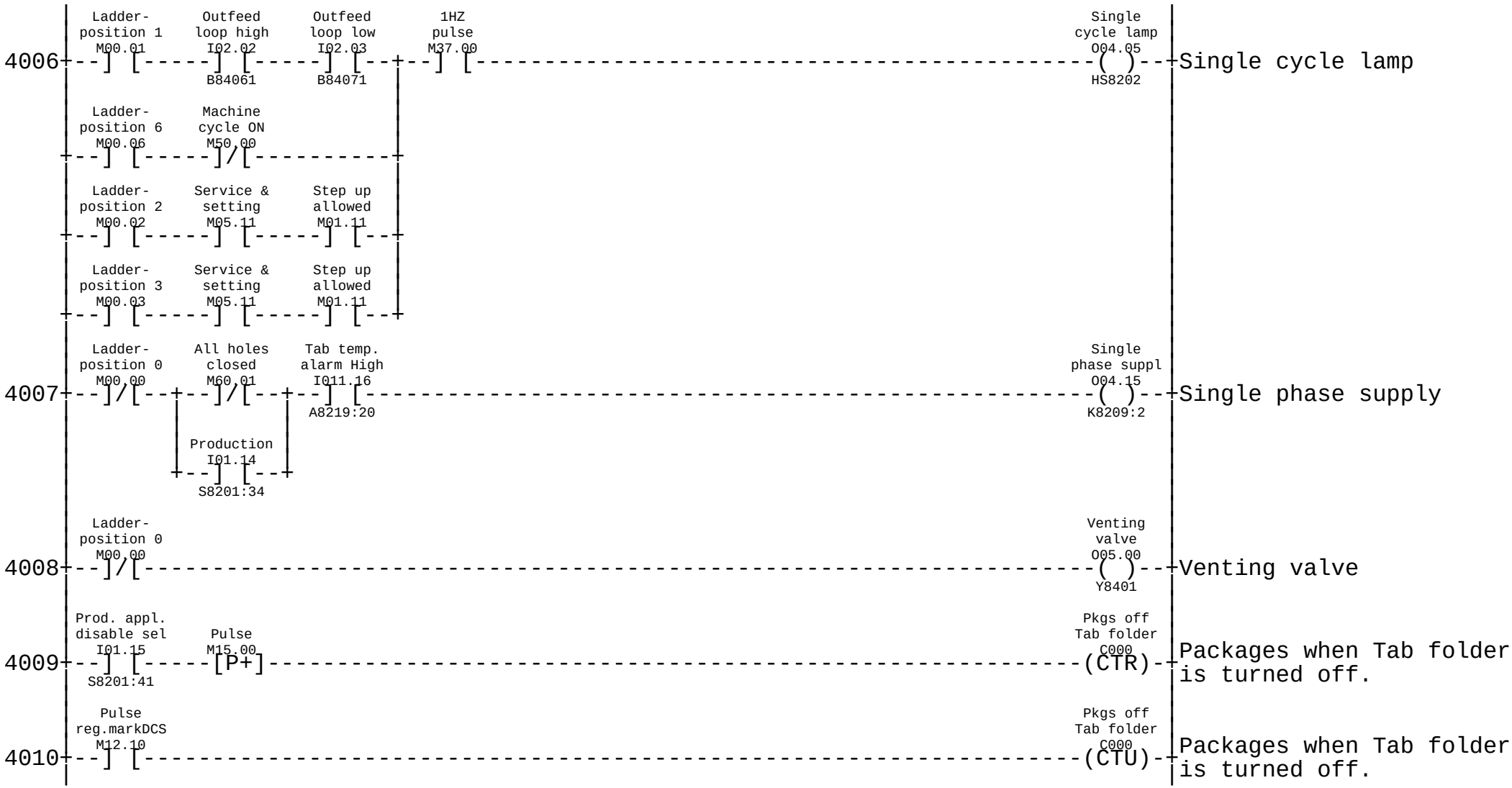

3906
Tab station M03.04
Pulse M14.03
Volumes 250B/500S M40.02
Buffer reg. pack. dump R0021
Pkg. dump Tab stn. R0503
Buffer reg. pack. dump R0021
Buffer register for package dumping
Missing Tab M03.16
Volumes 250B/500S M40.02
Bufferreg. pack. dump R0022
Pkg. dump Tab stn. R0503
Bufferreg. pack. dump R0022
Bufferregister for package dumping
3907
Ladder-position 5 M00.05
Production I01.14 S8201:34
Servo Drive design OK I021.04 A8201:31
Volumes 250B/500S M40.02
Buffer reg. pack. dump R0021
Pkg. dump Out of des. R0504
Buffer reg. pack. dump R0021
Buffer register for package dumping
Volumes 250B/500S M40.02
Bufferreg. pack. dump R0022
Pkg. dump Out of des. R0504
Bufferreg. pack. dump R0022
Bufferregister for package dumping
3908
IH system M03.00
Production I01.14 S8201:34
Pulse M14.04
Buffer reg. pack. dump R0021
Pkg. dump IH fault R0507
Buffer reg. pack. dump R0021
Buffer register for package dumping
Ladder-position 3 M00.03
Volumes 250B/500S M40.02
Bufferreg. pack. dump R0022
Pkg. dump IH fault R0509
Bufferreg. pack. dump R0022
Bufferregister for package dumping
3909
Black tape detected M12.03
Shiftreg. pack. dump R0011
Pkg. dump Black tape R0505
Shiftreg. pack. dump R0011
Shiftregister for package dumping
Volumes 250B/500S M40.02
Shiftreg. pack. dump R0010
Pkg. dump Black tape R0506
Shiftreg. pack. dump R0010
Shiftregister for package dumping
Volumes 250B/500S M40.02
Shiftreg. pack.dump R0012
Pkg. dump Black tape R0506
Shiftreg. pack.dump R0012
Shiftregister for package dumping
Black tape detected M12.03
Black tape detected

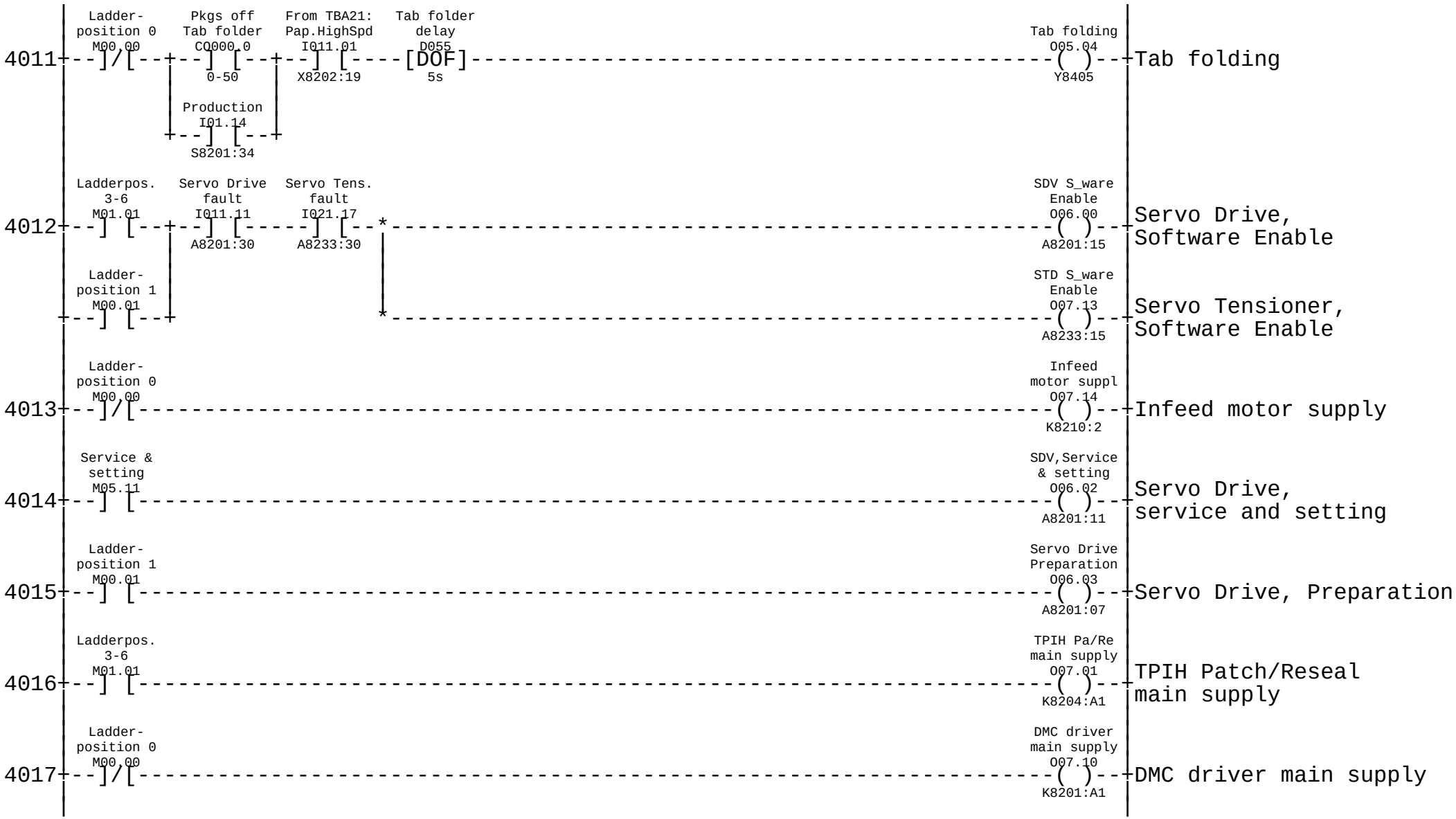

3910
PT\21 running M75.00
Pulse reg.markDCS M12.10
Shiftreg. pack. dump R0010
Buffer reg. pack. dump R0020
[GET]
[AND]
Shiftreg. pack. dump R0010
(PUT)
Shiftregister for package dumping
Shiftreg. pack. dump R0011
Buffer reg. pack. dump R0021
Shiftreg. pack. dump R0012
Bufferreg. pack. dump R0022
Shiftreg. pack. dump R0013
Bufferreg. pack. dump R0023
Shiftreg. pack. dump R0014
Bufferreg. pack. dump R0024
Shiftreg. pack. dump R0015
Bufferreg. pack. dump R0025
3911
Index of paper done M76.00
Shift regis system bit M37.17
( )
Shift register system bit
Bufferreg. pack. dump R0025
Bufferreg. pack. dump R0024
Bufferreg. pack. dump R0023
Bufferreg. pack. dump R0022
Buffer reg. pack. dump R0021
Buffer reg. pack. dump R0020
(SHR)
Buffer register for package dumping


3912
Pulse reg.markDCS M12.10
Shift regis system bit M37.17
Shift register system bit
Shiftreg. pack.dump R0015
Shiftreg. pack.dump R0014
Shiftreg. pack.dump R0013
Shiftreg. pack.dump R0012
Shiftreg. pack. dump R0011
Shiftreg. pack. dump R0010
SHR
Shiftregister for package dumping
Shift regis system bit M37.17
Waste delay D100
DOF
0s100
To TBA21: Pkgs eject O04.02
X8202:12
To TBA21: Packaging eject

Common functions

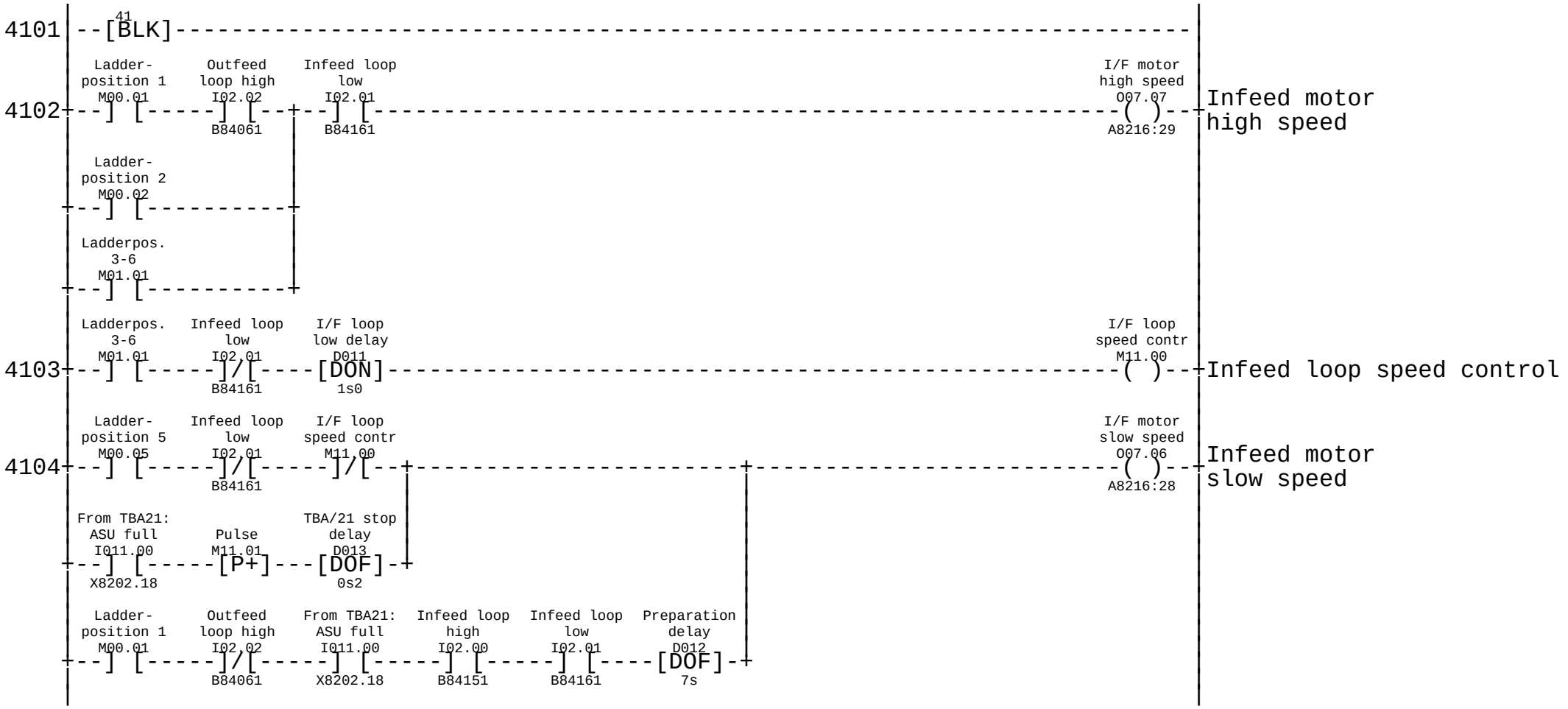



4006
Ladder-position 1 M00.01
Outfeed loop high I02.02 B84061
Outfeed loop low I02.03 B84071
1HZ pulse M37.00
Single cycle lamp O04.05 HS8202
Single cycle lamp
Ladder-position 6 M00.06
Machine cycle ON M50.00
Ladder-position 2 M00.02
Service & setting M05.11
Step up allowed M01.11
Ladder-position 3 M00.03
Service & setting M05.11
Step up allowed M01.11
4007
Ladder-position 0 M00.00
All holes closed M60.01
Tab temp. alarm High I011.16 A8219:20
Production I01.14 S8201:34
Single phase suppl O04.15 K8209:2
Single phase supply
4008
Ladder-position 0 M00.00
Venting valve O05.00 Y8401
Venting valve
Prod. appl. disable sel I01.15 S8201:41
Pulse M15.00
Pkgs off Tab folder C000
Packages when Tab folder is turned off.
4010
Pulse reg.markDCS M12.10
Pkgs off Tab folder C000
Packages when Tab folder is turned off.

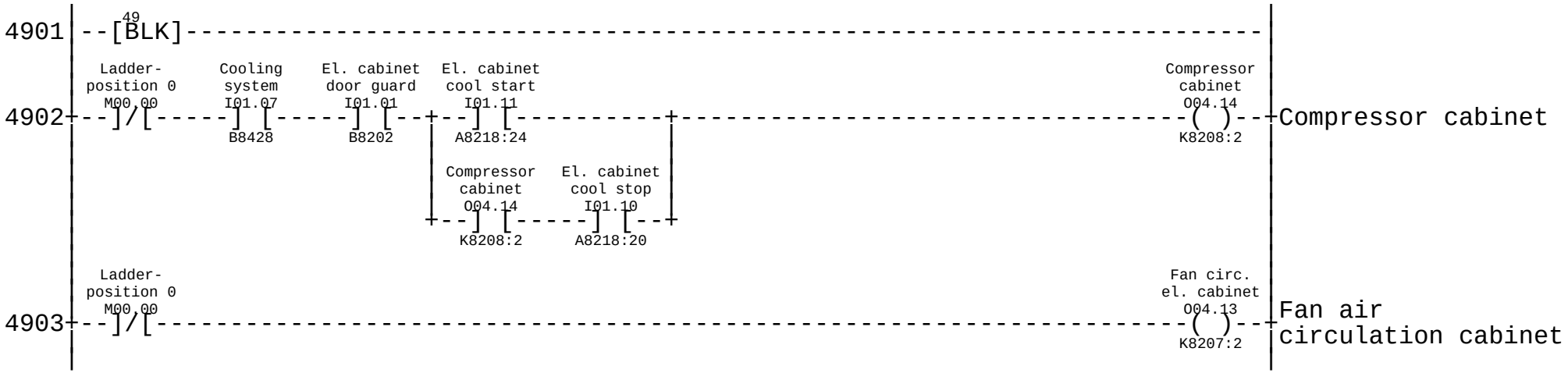

4011
Ladder-position 0 M00.00
Pkgs off Tab folder CQ000.0 0-50
From TBA21: Pap.HighSpd I011.01 X8202:19
Tab folder delay D055 5s
[DOF]
Tab folding O05.04 Y8405
Tab folding
Production I01.14 S8201:34
4012
Ladderpos. 3-6 M01.01
Servo Drive fault I011.11 A8201:30
Servo Tens. fault I021.17 A8233:30
SDV S_ware Enable O06.00 A8201:15
Servo Drive, Software Enable
Ladder-position 1 M00.01
STD S_ware Enable O07.13 A8233:15
Servo Tensioner, Software Enable
4013
Ladder-position 0 M00.00
Infeed motor suppl O07.14 K8210:2
Infeed motor supply
4014
Service & setting M05.11
SDV,Service & setting O06.02 A8201:11
Servo Drive, service and setting
4015
Ladder-position 1 M00.01
Servo Drive Preparation O06.03 A8201:07
Servo Drive, Preparation
4016
Ladderpos. 3-6 M01.01
TPIH Pa/Re main supply O07.01 K8204:A1
TPIH Patch/Reseal main supply
4017
Ladder-position 0 M00.00
DMC driver main supply O07.10 K8201:A1
DMC driver main supply


Ladder-
position 0
M00.00
Malfunct..
photocells
M02.04
Photocells
Enabled
O04.06
A8210:12
4018
Register mark Photocells
enabled

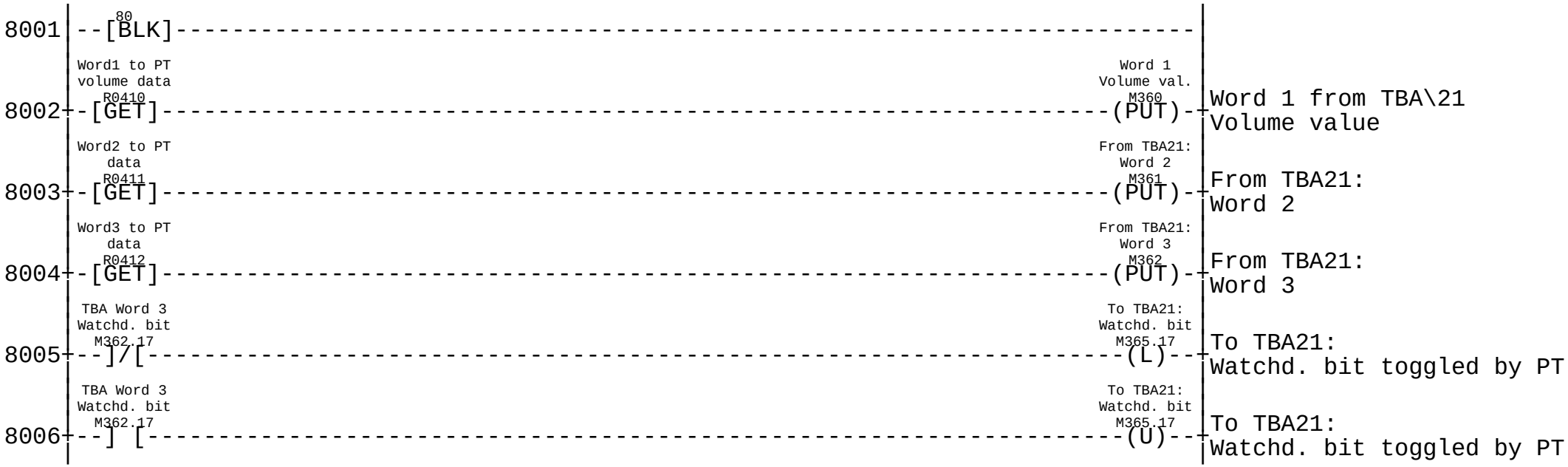
Infeed loop control



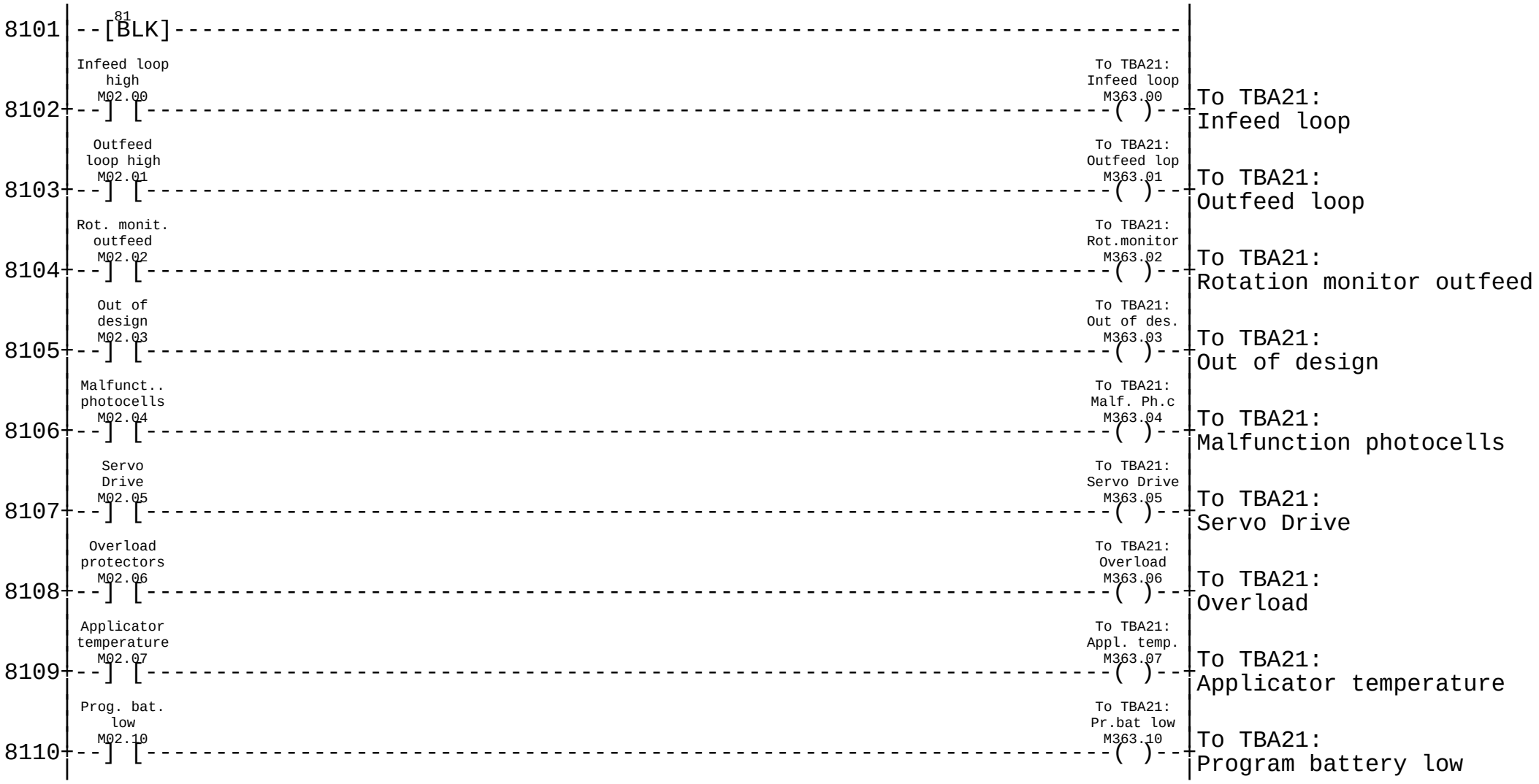
Cabinet cooler

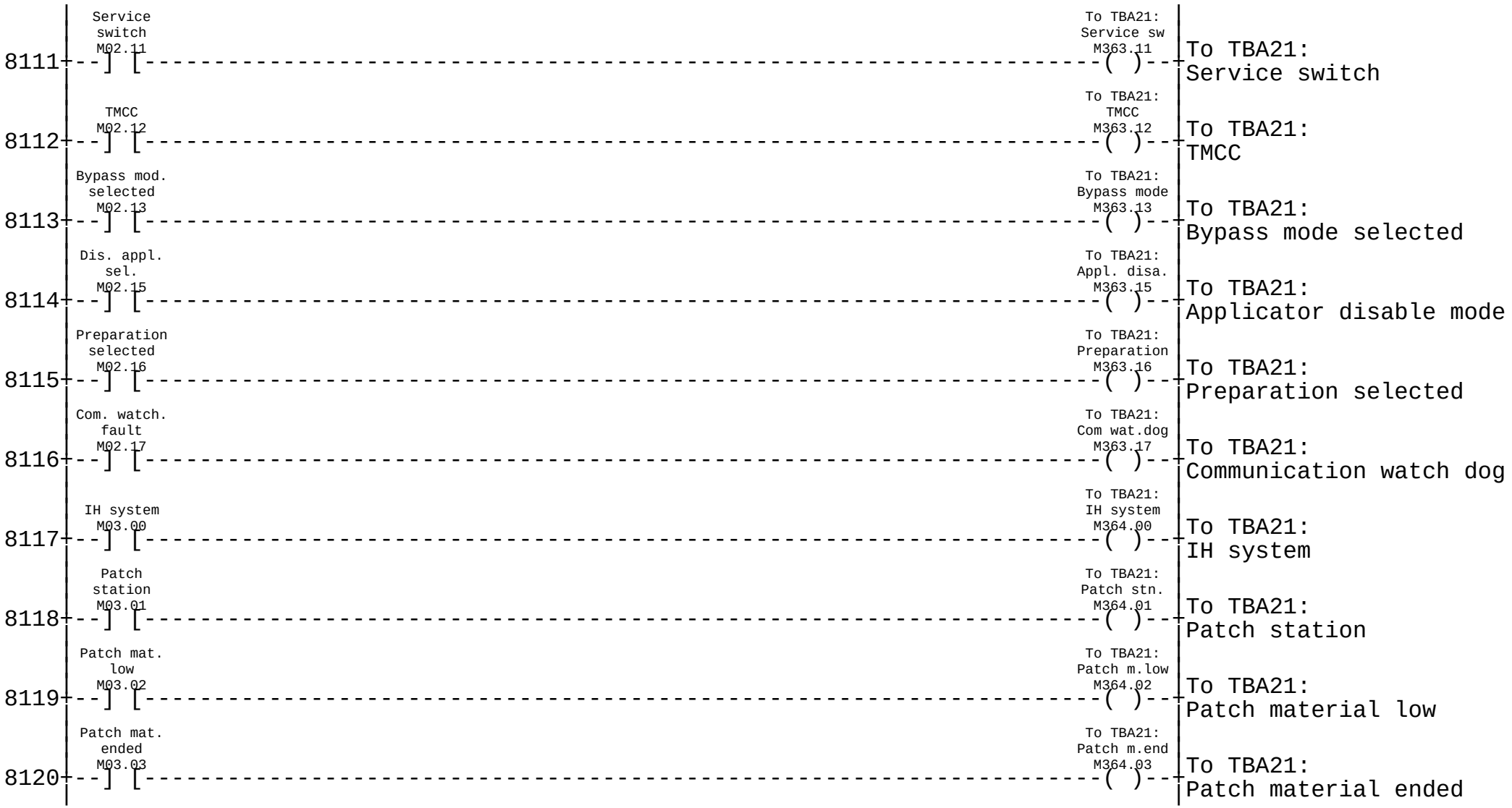


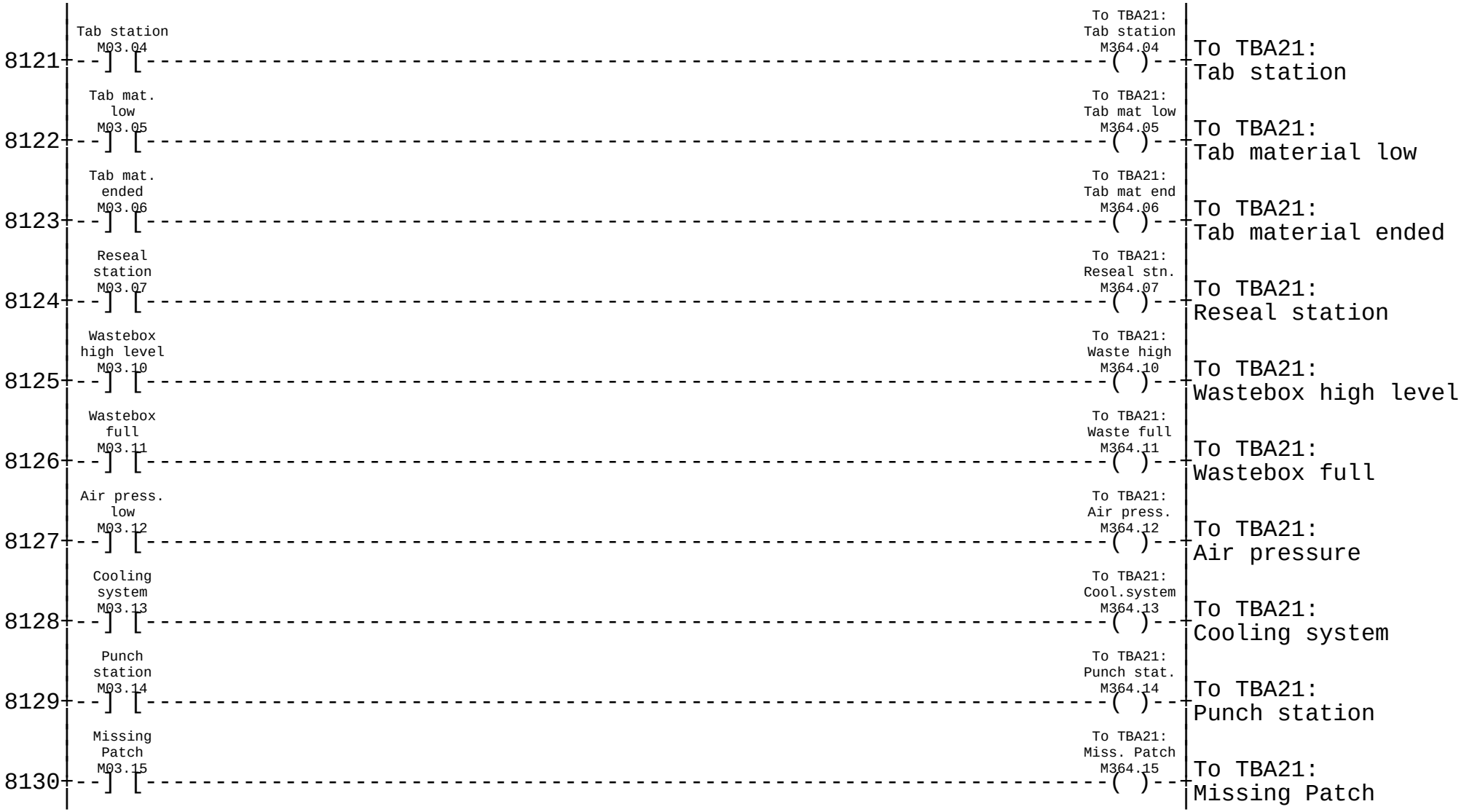
Satt-bus communication: From TPOP+TBA-TPMC IN-Mailbox of PT\21 and watchdog



Satt-bus communication: PT-Alarm bits loading into output words for TBA\21

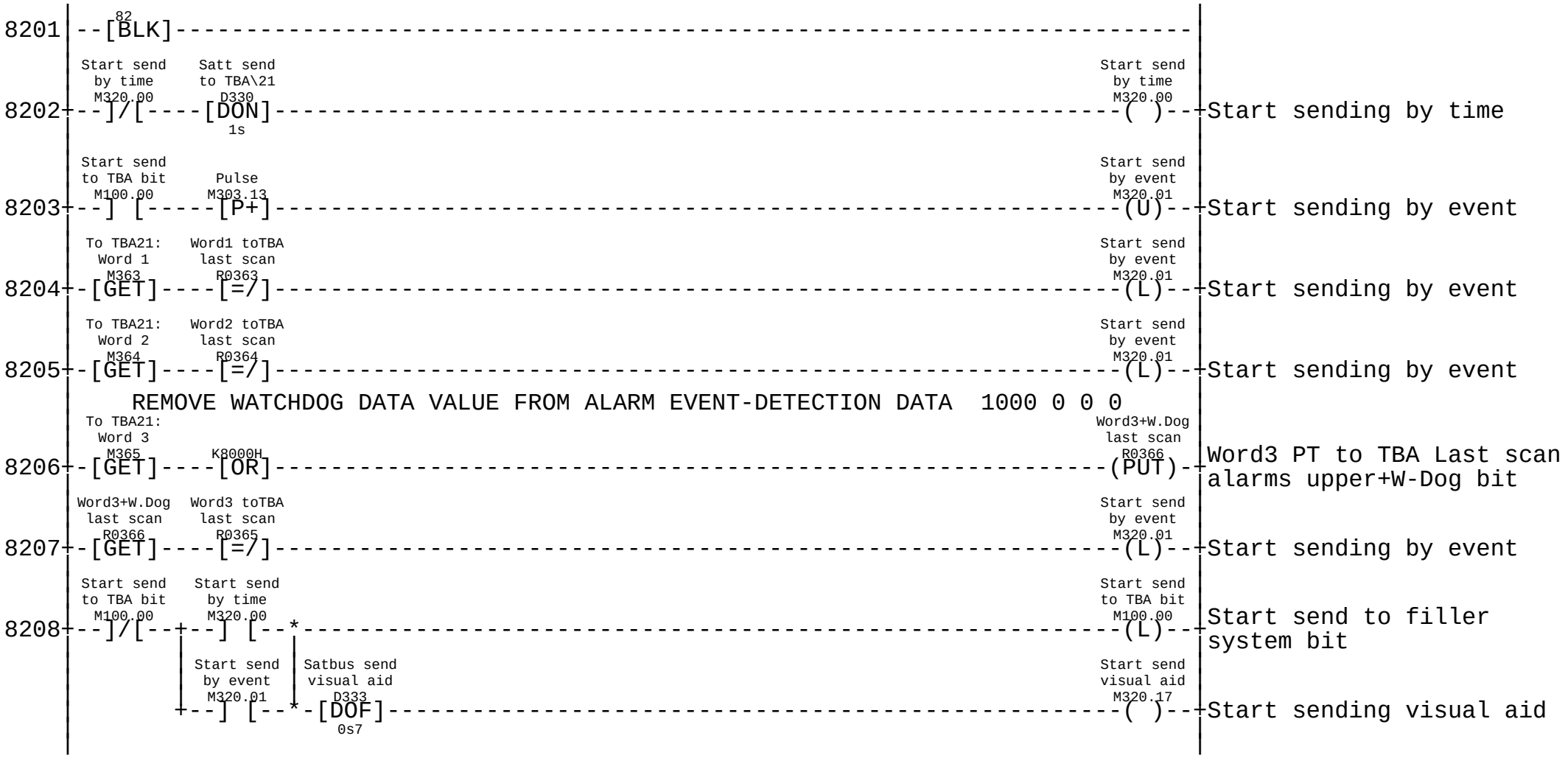



8111
Service switch M02.11
To TBA21: Service sw M363.11
To TBA21: Service switch
8112
TMCC M02.12
To TBA21: TMCC M363.12
To TBA21: TMCC
8113
Bypass mod. selected M02.13
To TBA21: Bypass mode M363.13
To TBA21: Bypass mode selected
8114
Dis. appl. sel. M02.15
To TBA21: Appl. disa. M363.15
To TBA21: Applicator disable mode
8115
Preparation selected M02.16
To TBA21: Preparation M363.16
To TBA21: Preparation selected
8116
Com. watch. fault M02.17
To TBA21: Com wat.dog M363.17
To TBA21: Communication watch dog
8117
IH system M03.00
To TBA21: IH system M364.00
To TBA21: IH system
8118
Patch station M03.01
To TBA21: Patch stn. M364.01
To TBA21: Patch station
8119
Patch mat. low M03.02
To TBA21: Patch m.low M364.02
To TBA21: Patch material low
8120
Patch mat. ended M03.03
To TBA21: Patch m.end M364.03
To TBA21: Patch material ended

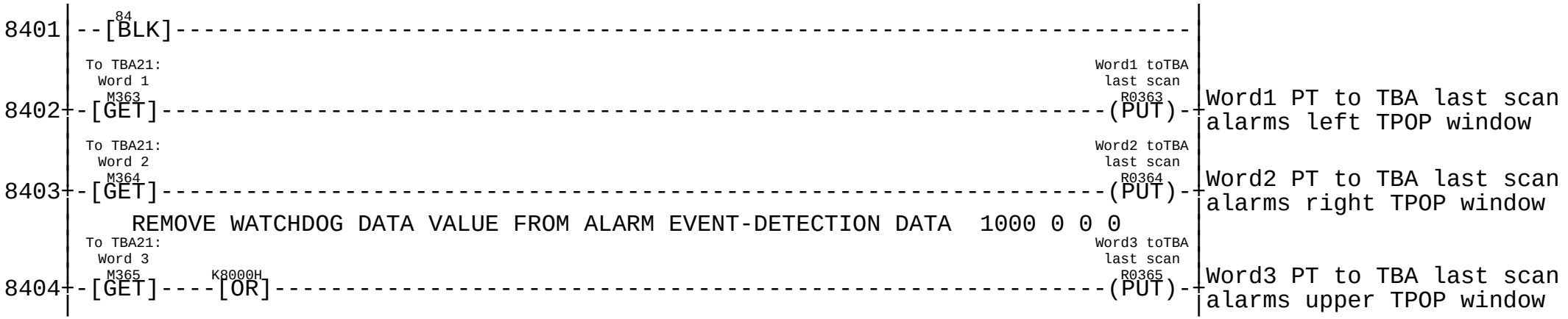

8121
Tab station
M03.04
To TBA21:
Tab station
M364.04
To TBA21:
Tab station
8122
Tab mat.
low
M03.05
To TBA21:
Tab mat low
M364.05
To TBA21:
Tab material low
8123
Tab mat.
ended
M03.06
To TBA21:
Tab mat end
M364.06
To TBA21:
Tab material ended
8124
Reseal
station
M03.07
To TBA21:
Reseal stn.
M364.07
To TBA21:
Reseal station
8125
Wastebox
high level
M03.10
To TBA21:
Waste high
M364.10
To TBA21:
Wastebox high level
8126
Wastebox
full
M03.11
To TBA21:
Waste full
M364.11
To TBA21:
Wastebox full
8127
Air press.
low
M03.12
To TBA21:
Air press.
M364.12
To TBA21:
Air pressure
8128
Cooling
system
M03.13
To TBA21:
Cool.system
M364.13
To TBA21:
Cooling system
8129
Punch
station
M03.14
To TBA21:
Punch stat.
M364.14
To TBA21:
Punch station
8130
Missing
Patch
M03.15
To TBA21:
Miss. Patch
M364.15
To TBA21:
Missing Patch


Missing Tab M03.16
To TBA21: Missing Tab M364.16
8131
To TBA21: Missing Tab
Servo Tensioner M03.17
To TBA21: Servo Tens. M364.17
8132
To TBA21: Servo Tensioner
Door right front M06.00
To TBA21: Door R/F M365.00
8133
To TBA21: Door right front
Door right rear M06.01
To TBA21: Door R/R M365.01
8134
To TBA21: Door right rear
Door left M06.02
To TBA21: Door left
8135
To TBA21: Door left

Satt-bus communication: Data send controls



Satt-bus communication: Last scan recording of PT's alarm words for event-detect



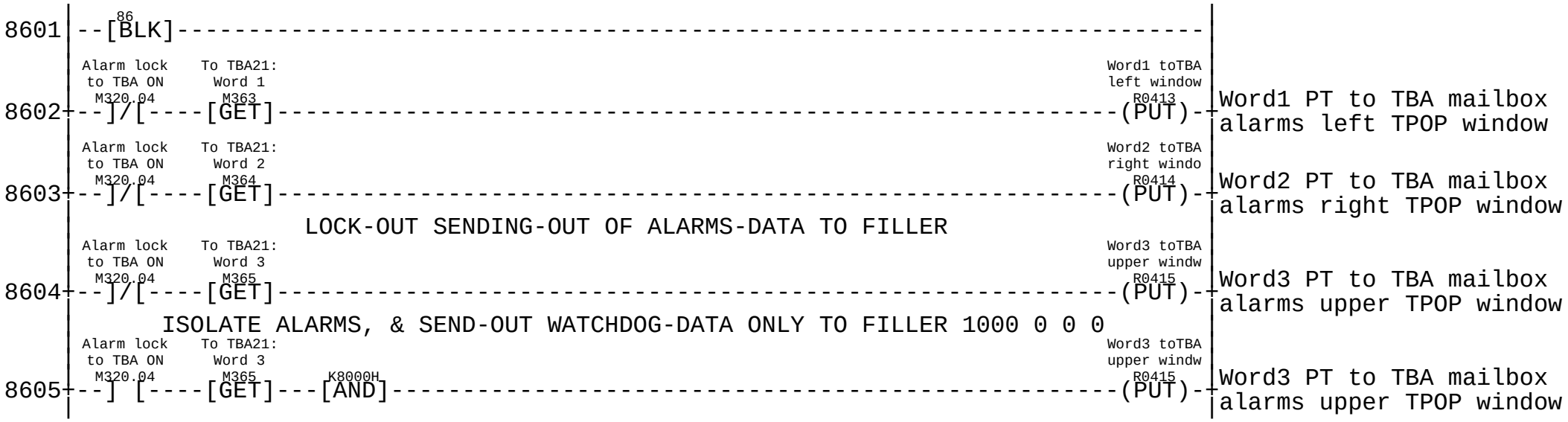
TPMC-PROGRAMME LIST

Satt-bus communication: Detect PT's A-Alarm present

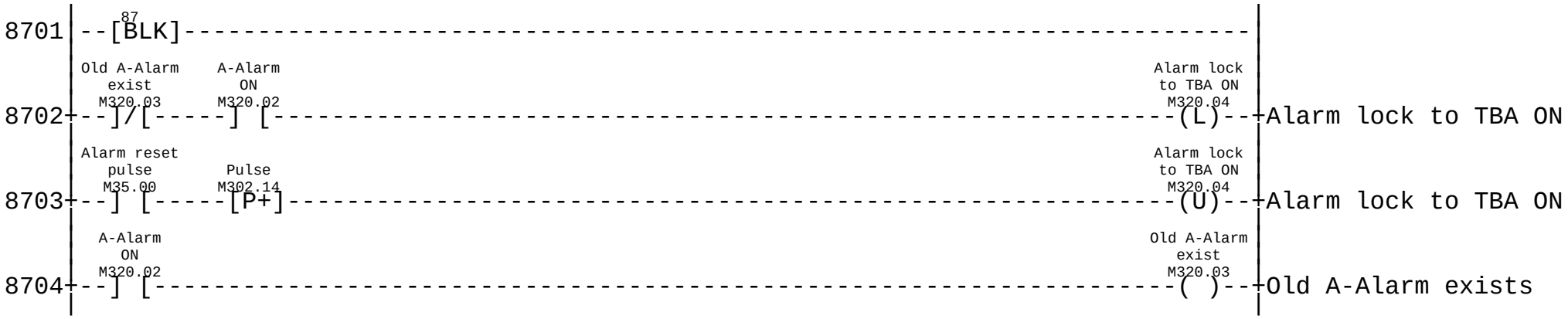
```
     85
8501 --[BLK]-------------------------------------------------------------------------
     |
     |          MASK-OUT WATCHDOG & EVALUATE ALARM-STATUS CHANGE 0111 F F F
     |
     |  TPMC      To TBA21:                                                  A-Alarm
     |  running     Word 3                                                     ON
     |  M37.12      M365       K7FFFH      K00000                            M320.02
8502 --] [----[GET]---[AND]----[>]-----------------------------------------------( )---
     |
```

A-Alarm ON
(A-Alarm det.and present)

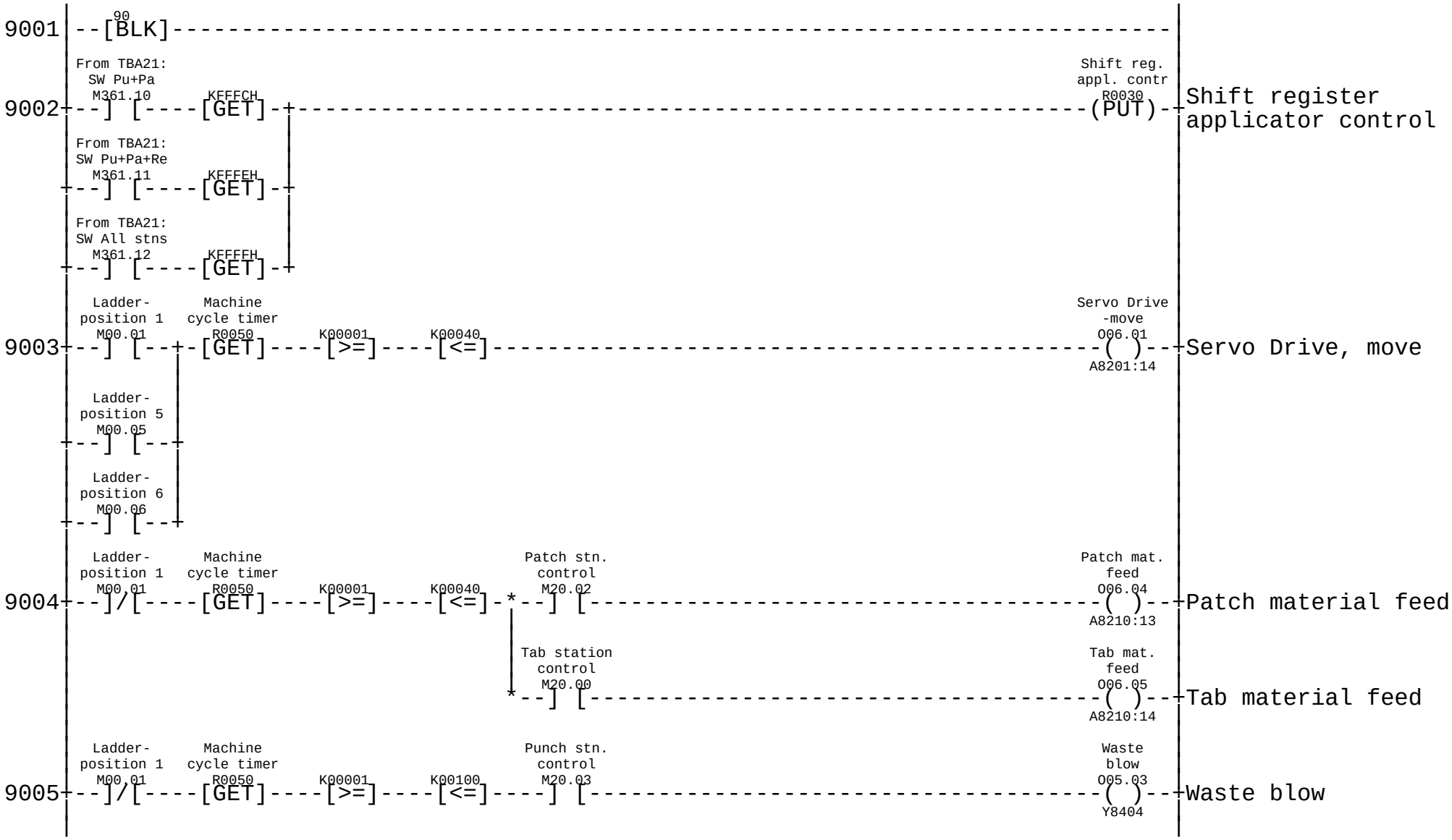
Satt-bus communication: Load PT to TBA-TPMC words to PT'S OUT Mailbox

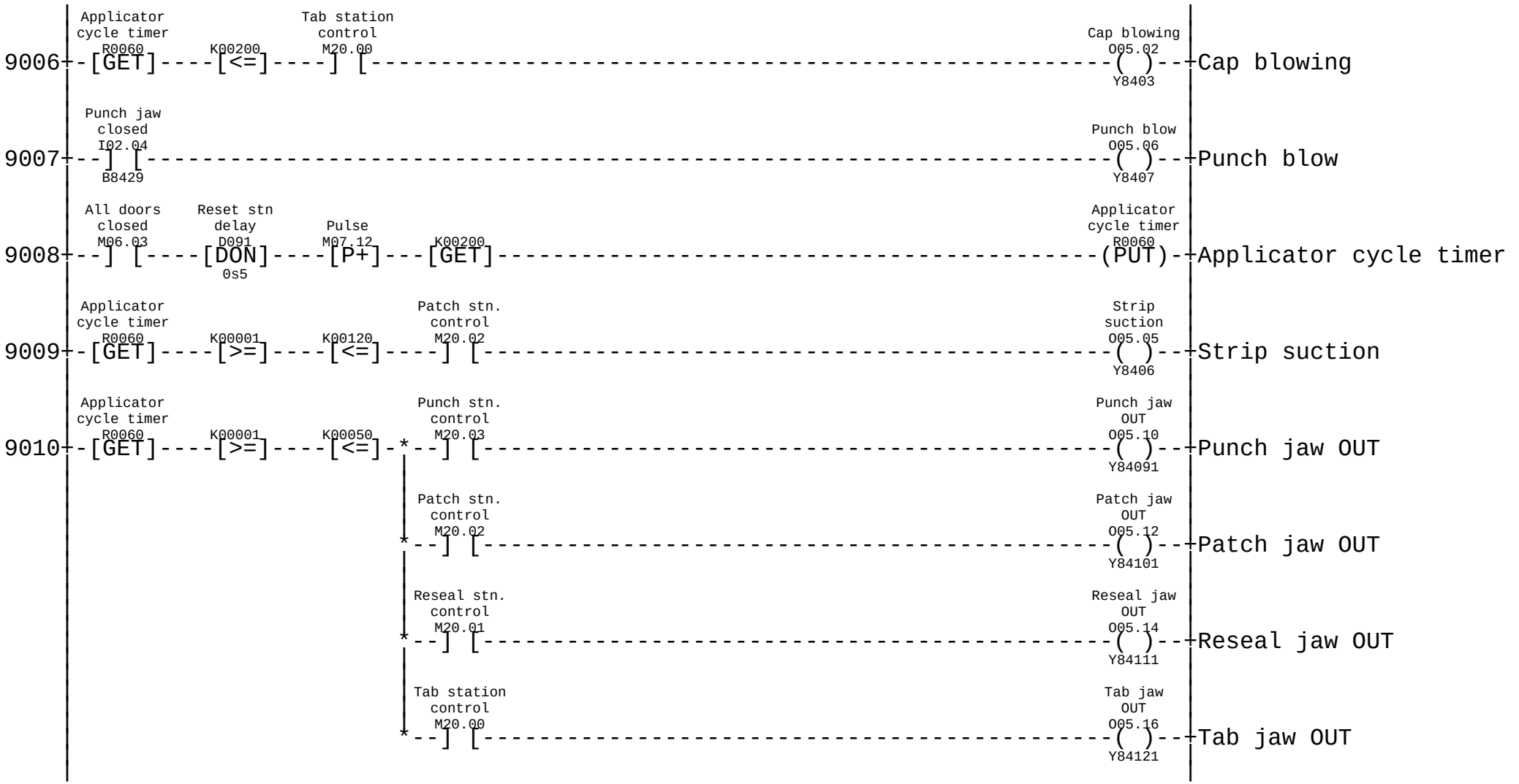


Satt-bus communication: Alarm lock-controls of PT's OUT Mailbox alarm words

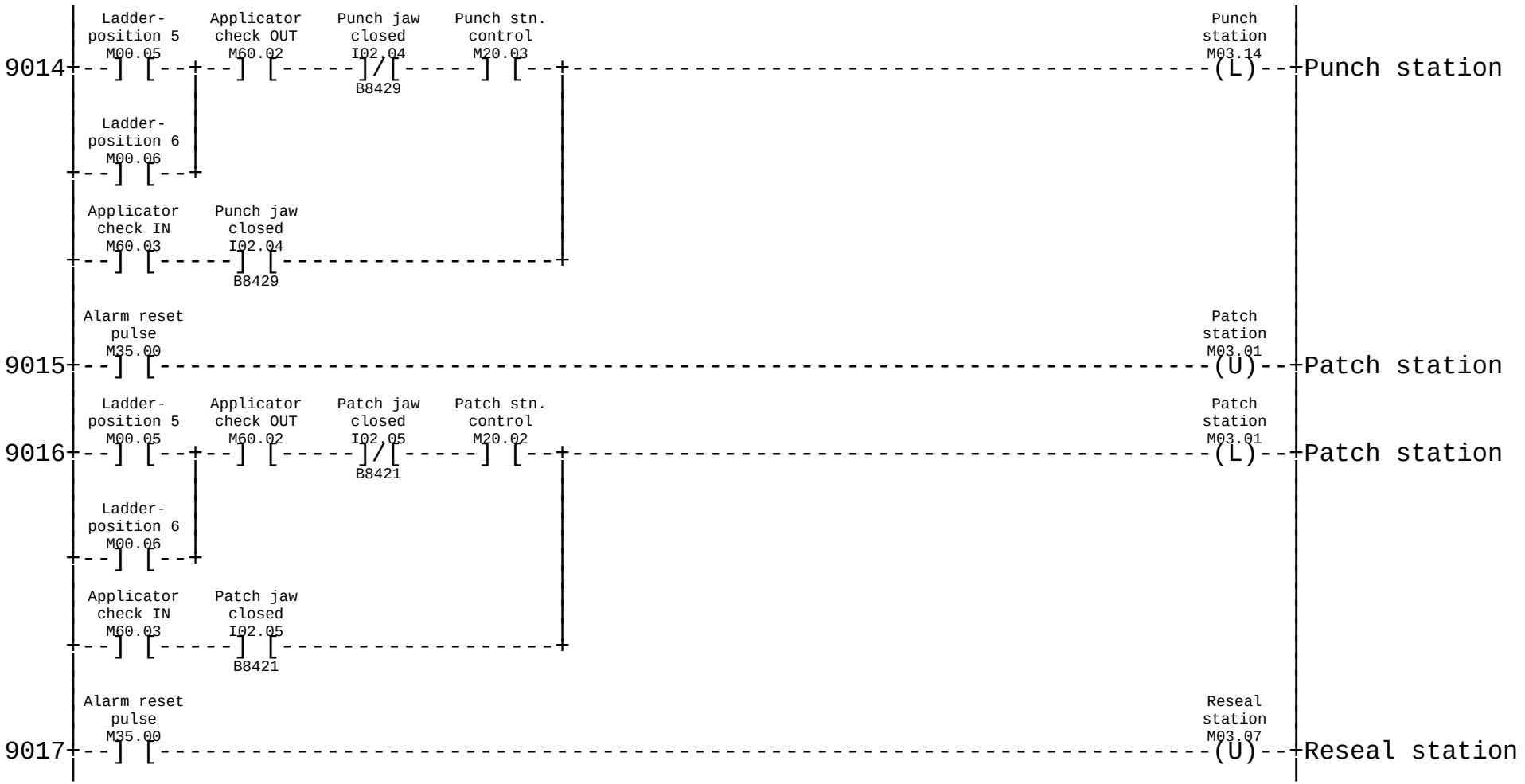


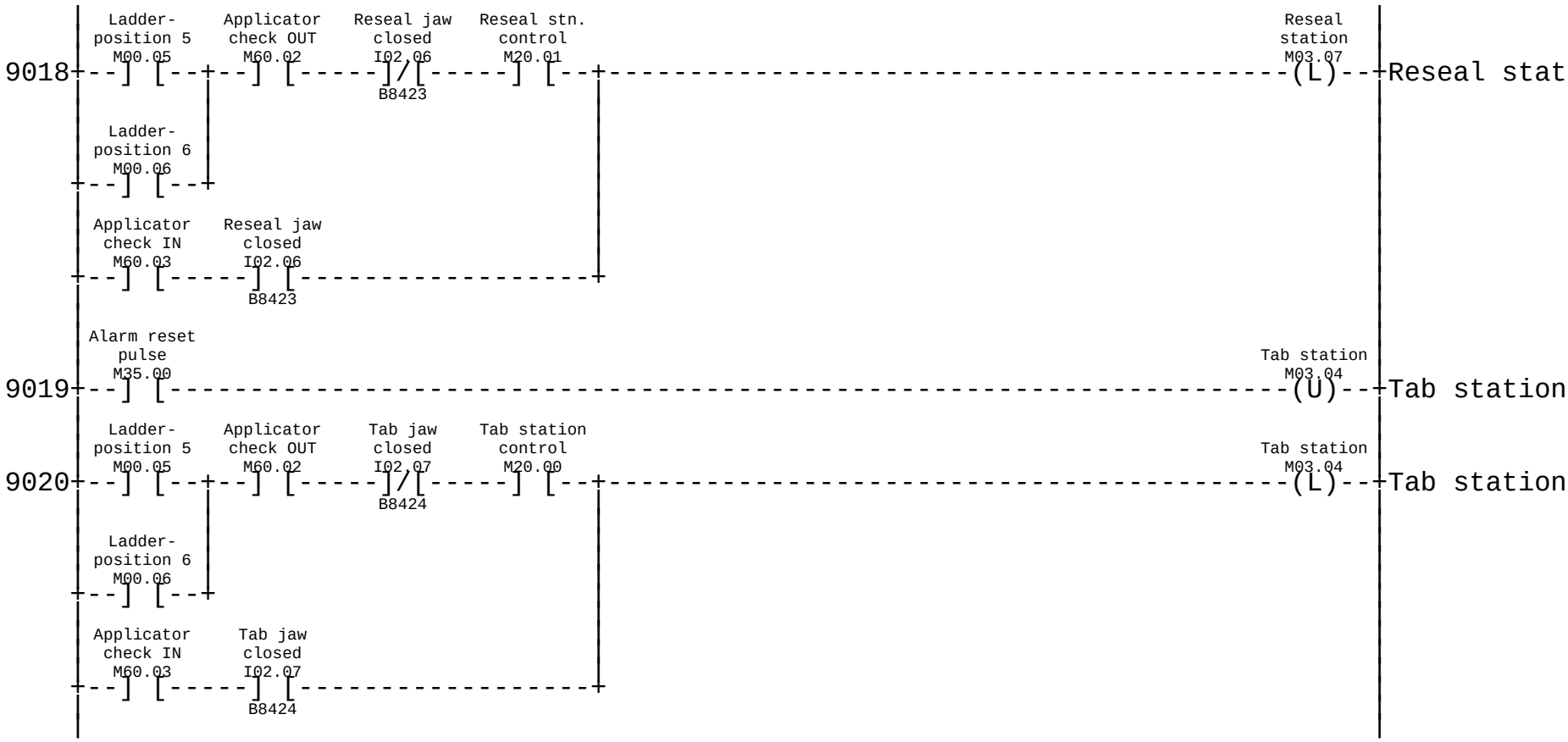
Servo and applicator control



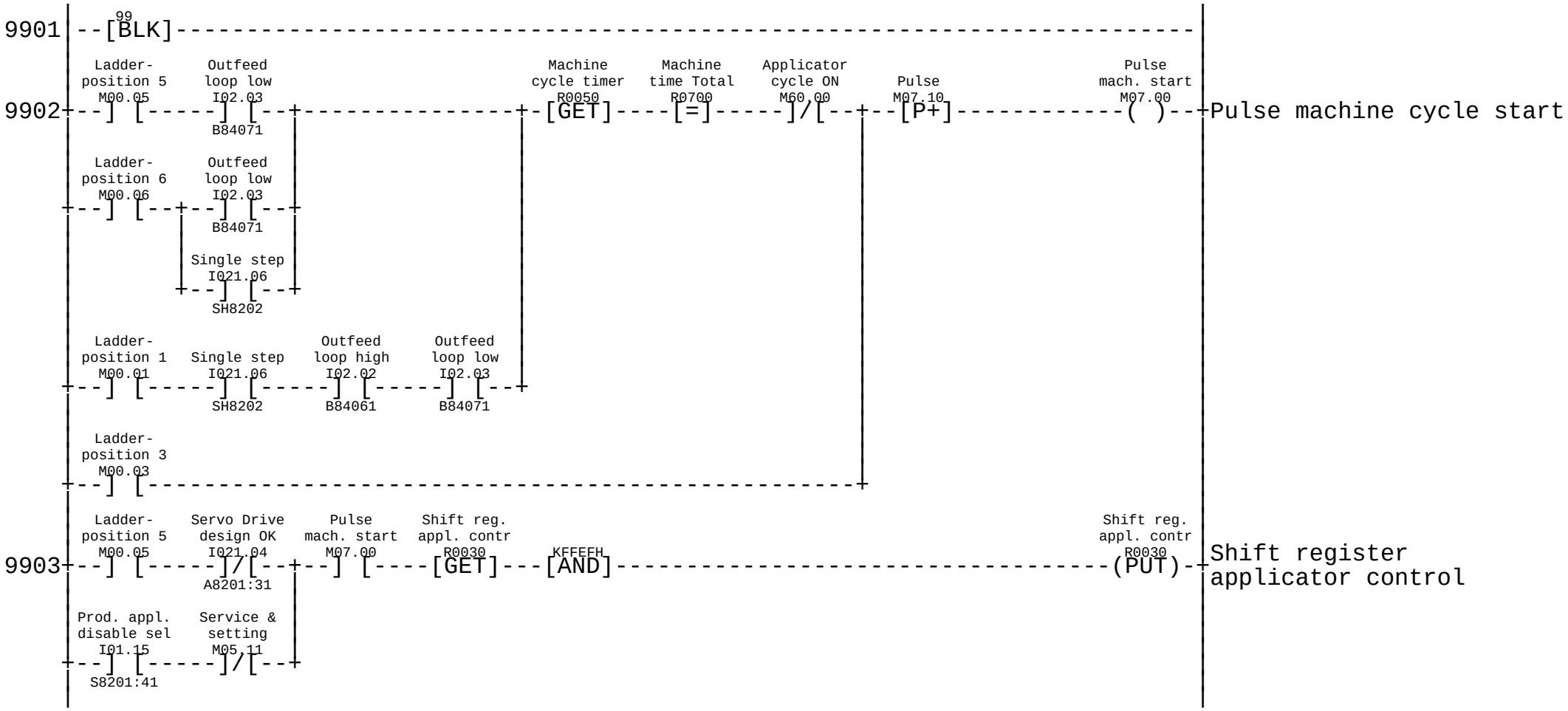

Applicator cycle timer R0060
K00200
Tab station control M20.00
Cap blowing O05.02
9006
[GET]
[<=]
( )
Y8403
Cap blowing
Punch jaw closed I02.04
B8429
Punch blow O05.06
9007
( )
Y8407
Punch blow
All doors closed M06.03
Reset stn delay D091
0s5
Pulse M07.12
K00200
Applicator cycle timer R0060
9008
[DON]
[P+]
[GET]
(PUT)
Applicator cycle timer
Applicator cycle timer R0060
K00001
K00120
Patch stn. control M20.02
Strip suction O05.05
9009
[>=]
( )
Y8406
Strip suction
Applicator cycle timer R0060
K00001
K00050
Punch stn. control M20.03
Punch jaw OUT O05.10
9010
[>=]
( )
Y84091
Punch jaw OUT
Patch stn. control M20.02
Patch jaw OUT O05.12
( )
Y84101
Patch jaw OUT
Reseal stn. control M20.01
Reseal jaw OUT O05.14
( )
Y84111
Reseal jaw OUT
Tab station control M20.00
Tab jaw OUT O05.16
( )
Y84121
Tab jaw OUT


9011
Applicator cycle timer
R0060
[GET]
K00195
[>=]
K00245
[<=]
Punch jaw IN
O05.11
Y84092
Punch jaw IN
Patch jaw IN
O05.13
Y84102
Patch jaw IN
Reseal jaw IN
O05.15
Y84112
Reseal jaw IN
Tab jaw IN
O05.17
Y84122
Tab jaw IN
9012
Applicator cycle timer
R0060
[GET]
K00120
[>=]
K00195
[<=]
Applicator check OUT
M60.02
Applicator check OUT
K00270
[>=]
Applicator check IN
M60.03
Applicator check IN
9013
Alarm reset pulse
M35.00
Punch station
M03.14
(U)
Punch station

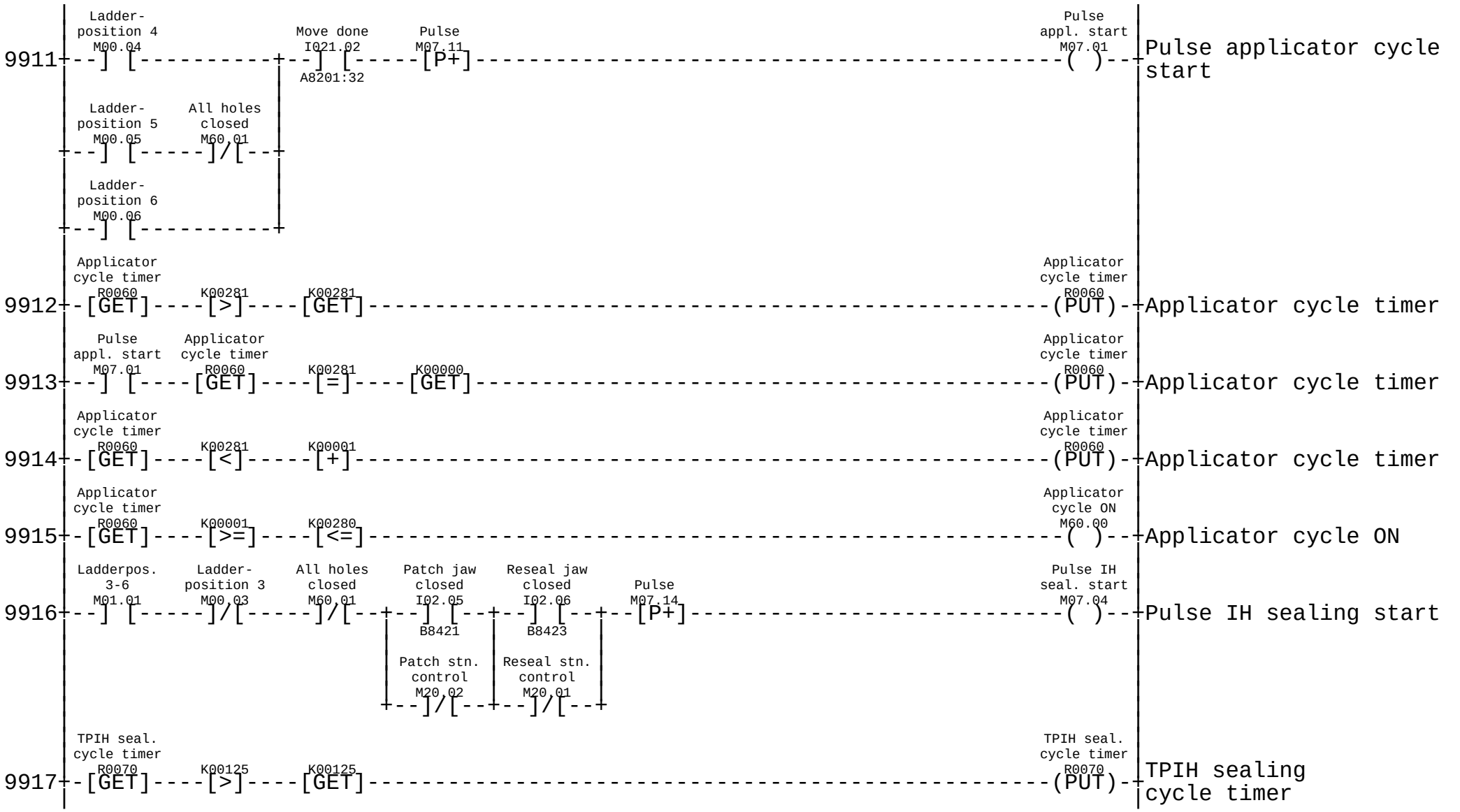

9014
Ladder-position 5 M00.05
Applicator check OUT M60.02
Punch jaw closed I02.04
B8429
Punch stn. control M20.03
Punch station M03.14 (L)
Punch station
Ladder-position 6 M00.06
Applicator check IN M60.03
Punch jaw closed I02.04
B8429
9015
Alarm reset pulse M35.00
Patch station M03.01 (U)
Patch station
9016
Ladder-position 5 M00.05
Applicator check OUT M60.02
Patch jaw closed I02.05
B8421
Patch stn. control M20.02
Patch station M03.01 (L)
Patch station
Ladder-position 6 M00.06
Applicator check IN M60.03
Patch jaw closed I02.05
B8421
9017
Alarm reset pulse M35.00
Reseal station M03.07 (U)
Reseal station

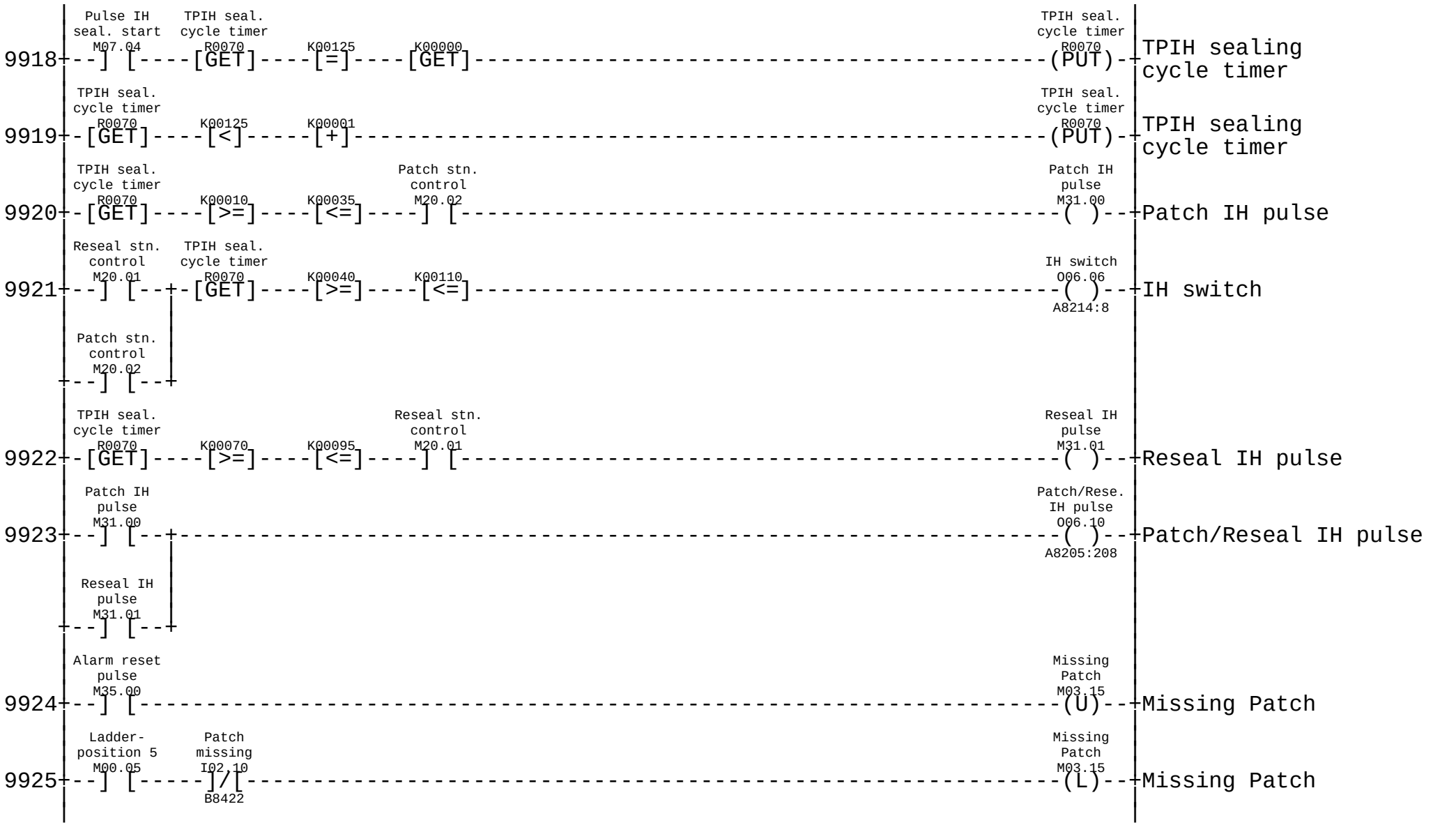

9018
Ladder-position 5 M00.05
Applicator check OUT M60.02
Reseal jaw closed I02.06
B8423
Reseal stn. control M20.01
Reseal station M03.07 (L)
Reseal station
Ladder-position 6 M00.06
Applicator check IN M60.03
Reseal jaw closed I02.06
B8423
9019
Alarm reset pulse M35.00
Tab station M03.04 (U)
Tab station
9020
Ladder-position 5 M00.05
Applicator check OUT M60.02
Tab jaw closed I02.07
B8424
Tab station control M20.00
Tab station M03.04 (L)
Tab station
Ladder-position 6 M00.06
Applicator check IN M60.03
Tab jaw closed I02.07
B8424

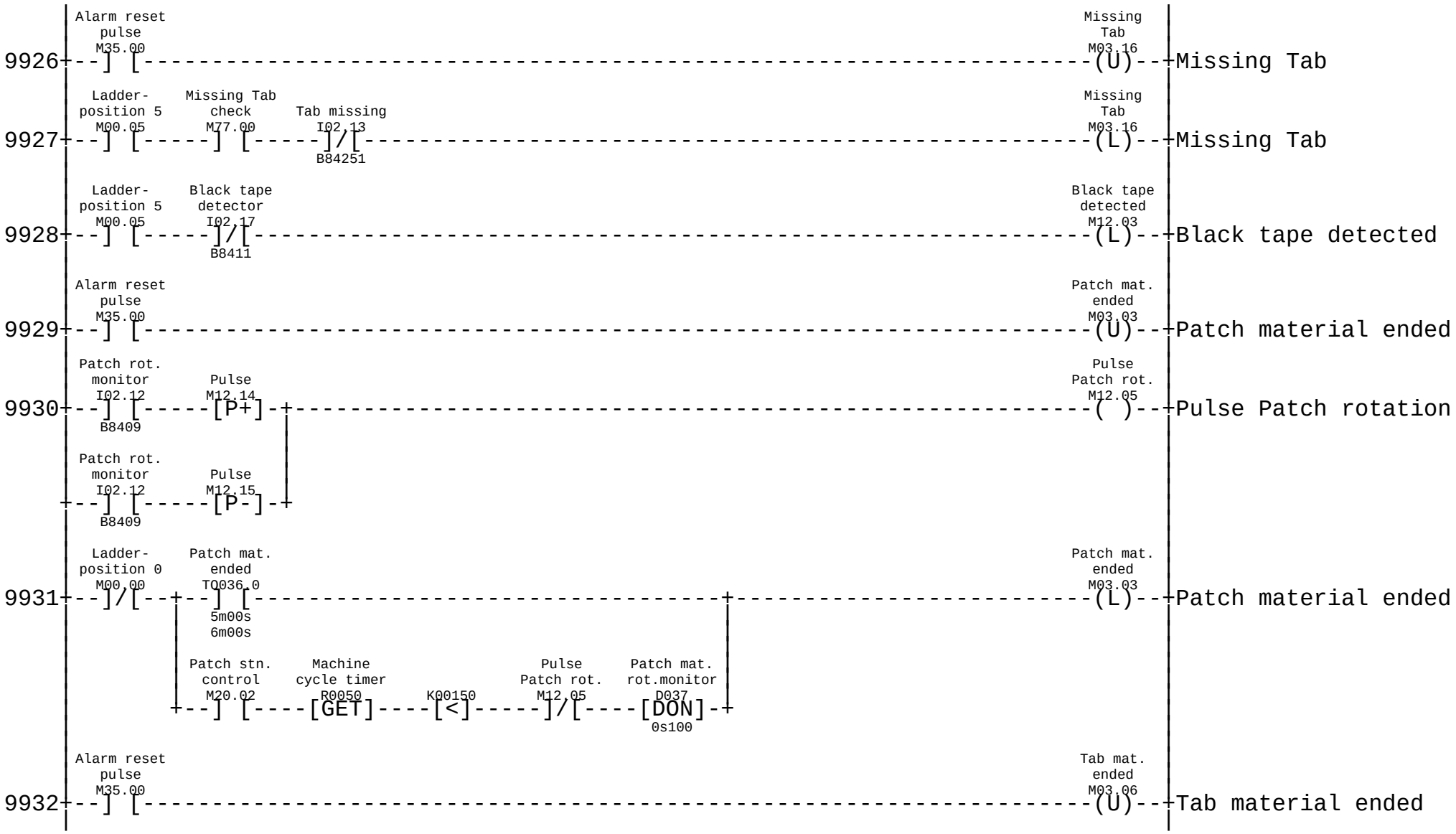
Fast scan

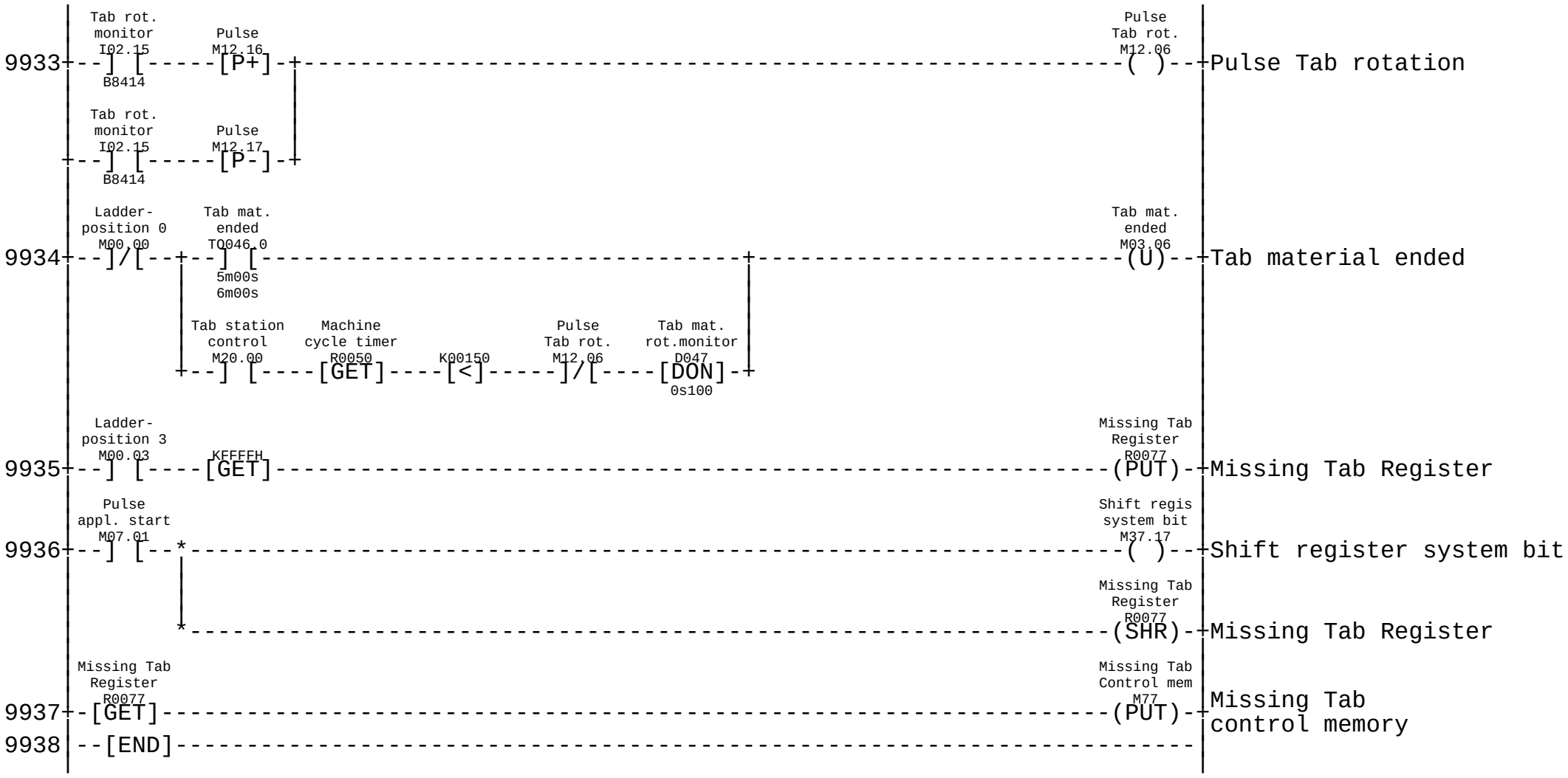

9901
99
[BLK]
9902
Ladder-position 5 M00.05
Outfeed loop low I02.03
B84071
Ladder-position 6 M00.06
Outfeed loop low I02.03
B84071
Single step I021.06
SH8202
Machine cycle timer R0050
[GET]
Machine time Total R0700
[=]
Applicator cycle ON M60.00
Pulse M07.10
[P+]
Pulse mach. start M07.00
( )
Pulse machine cycle start
Ladder-position 1 M00.01
Single step I021.06
SH8202
Outfeed loop high I02.02
B84061
Outfeed loop low I02.03
B84071
Ladder-position 3 M00.03
9903
Ladder-position 5 M00.05
Servo Drive design OK I021.04
A8201:31
Prod. appl. disable sel I01.15
S8201:41
Service & setting M05.11
Pulse mach. start M07.00
Shift reg. appl. contr R0030
[GET]
KFFEFH
[AND]
Shift reg. appl. contr R0030
(PUT)
Shift register applicator control


9904
Service & setting M05.11
Pulse mach. start M07.00
Shift regis system bit M37.17
Shift register system bit
Shift reg. appl. contr R0030
SHR
Shift register applicator control
9905
Shift reg. appl. contr R0030
GET
Contr. mem. applicators M20
PUT
Control memory applicators
9906
Punch stn. control M20.03
Patch stn. control M20.02
Reseal stn. control M20.01
Tab station control M20.00
All holes closed M60.01
All holes closed
9907
Pulse mach. start M07.00
K00000
GET
Machine cycle timer R0050
PUT
Machine cycle timer
9908
Machine cycle timer R0050
GET
Machine time Total R0700
>
Machine time Total R0700
GET
Machine cycle timer R0050
PUT
Machine cycle timer
9909
Machine cycle timer R0050
GET
Machine time Total R0700
<
K00001
+
Machine cycle timer R0050
PUT
Machine cycle timer
9910
Machine cycle timer R0050
GET
K00001
>=
Machine time ON R0701
<=
Machine cycle ON M50.00
Machine cycle ON


9911
Ladder-position 4 M00.04
Move done I021.02
A8201:32
Pulse M07.11
Pulse appl. start M07.01
Pulse applicator cycle start
Ladder-position 5 M00.05
All holes closed M60.01
Ladder-position 6 M00.06
9912
Applicator cycle timer R0060
K00281
K00281
Applicator cycle timer R0060
Applicator cycle timer
9913
Pulse appl. start M07.01
Applicator cycle timer R0060
K00281
K00000
Applicator cycle timer R0060
Applicator cycle timer
9914
Applicator cycle timer R0060
K00281
K00001
Applicator cycle timer R0060
Applicator cycle timer
9915
Applicator cycle timer R0060
K00001
K00280
Applicator cycle ON M60.00
Applicator cycle ON
9916
Ladderpos. 3-6 M01.01
Ladder-position 3 M00.03
All holes closed M60.01
Patch jaw closed I02.05
B8421
Patch stn. control M20.02
Reseal jaw closed I02.06
B8423
Reseal stn. control M20.01
Pulse M07.14
Pulse IH seal. start M07.04
Pulse IH sealing start
9917
TPIH seal. cycle timer R0070
K00125
K00125
TPIH seal. cycle timer R0070
TPIH sealing cycle timer


9918
Pulse IH seal. start M07.04
TPIH seal. cycle timer R0070
K00125
K00000
TPIH seal. cycle timer R0070
TPIH sealing cycle timer
9919
TPIH seal. cycle timer R0070
K00125
K00001
TPIH seal. cycle timer R0070
TPIH sealing cycle timer
9920
TPIH seal. cycle timer R0070
K00010
K00035
Patch stn. control M20.02
Patch IH pulse M31.00
Patch IH pulse
9921
Reseal stn. control M20.01
TPIH seal. cycle timer R0070
K00040
K00110
IH switch O06.06
A8214:8
IH switch
Patch stn. control M20.02
9922
TPIH seal. cycle timer R0070
K00070
K00095
Reseal stn. control M20.01
Reseal IH pulse M31.01
Reseal IH pulse
9923
Patch IH pulse M31.00
Patch/Rese. IH pulse O06.10
A8205:208
Patch/Reseal IH pulse
Reseal IH pulse M31.01
9924
Alarm reset pulse M35.00
Missing Patch M03.15
Missing Patch
9925
Ladder-position 5 M00.05
Patch missing I02.10
B8422
Missing Patch M03.15
Missing Patch


9926
Alarm reset pulse M35.00
Missing Tab M03.16
(U)
Missing Tab
9927
Ladder-position 5 M00.05
Missing Tab check M77.00
Tab missing I02.13
B84251
Missing Tab M03.16
(L)
Missing Tab
9928
Ladder-position 5 M00.05
Black tape detector I02.17
B8411
Black tape detected M12.03
(L)
Black tape detected
9929
Alarm reset pulse M35.00
Patch mat. ended M03.03
(U)
Patch material ended
9930
Patch rot. monitor I02.12
B8409
Pulse M12.14
[P+]
Patch rot. monitor I02.12
B8409
Pulse M12.15
[P-]
Pulse Patch rot. M12.05
( )
Pulse Patch rotation
9931
Ladder-position 0 M00.00
Patch mat. ended TQ036.0
5m00s
6m00s
Patch mat. ended M03.03
(L)
Patch material ended
Patch stn. control M20.02
Machine cycle timer R0050
K00150
Pulse Patch rot. M12.05
Patch mat. rot.monitor D037
[GET]
[<]
[DON]
0s100
9932
Alarm reset pulse M35.00
Tab mat. ended M03.06
(U)
Tab material ended


9933
Tab rot. monitor I02.15 B8414
Pulse M12.16
[P+]
Tab rot. monitor I02.15 B8414
Pulse M12.17
[P-]
Pulse Tab rot. M12.06
( )
Pulse Tab rotation
9934
Ladder-position 0 M00.00
Tab mat. ended TQ046.0
5m00s 6m00s
Tab station control M20.00
Machine cycle timer R0050
[GET]
K00150
[<]
Pulse Tab rot. M12.06
Tab mat. rot.monitor D047
[DON] 0s100
Tab mat. ended M03.06
(U)
Tab material ended
9935
Ladder-position 3 M00.03
[GET]
KFFFFH
Missing Tab Register R0077
(PUT)
Missing Tab Register
9936
Pulse appl. start M07.01
Shift regis system bit M37.17
( )
Shift register system bit
Missing Tab Register R0077
(SHR)
Missing Tab Register
9937
Missing Tab Register R0077
[GET]
Missing Tab Control mem M77
(PUT)
Missing Tab control memory
9938
[END]

14 Bills of material

EM3.0TB148511en.fm

Table of contents

Electrical equipment (ECM 71137) 649060-0300

Electrical document (ECM 140324) 42841-0300

Standard equipment (ECM 72084) 42843-0300

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ECM 70737
Release date 1997.04.03

Chg	Position	Sp	SH	Description	As	Size	Identity	DTp	Prt	Vs	Unit	Column quantity All	ECM
I	0100			ELECTRICAL DOCUMENT	X	A4	42841-0300				PC	1	70737
I	0200			STANDARD EQUIPMENT	X	A4	42843-0300				PC	1	70737

ECM	70737	70916	71137	71547	72084	P140324(L117718)
Release date	1997.04.03	1997.06.02	1997.10.28	1998.07.16	1999.02.16	2003.08.04

Chg	Position	Sp	SH	Description	As	Size	Identity	DTp	Prt	Vs	Unit	Column quantity All	ECM
I	0010			DOCUMENTS LIST			2635106-0001	ELD	000	AA		x	140324
I	0020			POSITION SUMMARY			2635106-0002	ELD	000	AA		x	140324
I	0030			CIRCUIT DIAGRAM			2635106-0003	ELD	000	AA		x	140324
I	0040			LINE SUMMARY			2635106-0004	ELD	000	AA		x	140324
I	0050			CABINET TERMINAL SUMMARY			2635106-0005	ELD	000	AA		x	140324
I	0060			TERMINAL STRIP OVERVIEW			2635106-0006	ELD	000	AA		x	140324
I	0070			CABLE CONNECTION LIST			2635106-0007	ELD	000	AA		x	140324
I	0080			ENGINEERING CHANGE DESCRIPTION			2635106-0099	ELD	000	AA		x	140324
I	0090			LIST OF PLC-ADDRESSES	A4-		48187-0002	ELD	006	AA		x	140324
I	0100			PLC-PROGRAMME LIST	A4-		48187-0005	ELD	006	AA		x	140324
I	0110			PLC-PROGRAMME LIST	A4-		48187-0006	ELD	006	AA		x	140324
I	0120			PLC-PROGRAMME LIST	A4-		48187-0007	ELD	006	AA		x	140324
I	0130			PLC-PROGRAMME LIST	A4-		48187-0009	ELD	006	AA		x	140324
I	0140			PLC-PROGRAMME LIST	A4-		48187-0010	ELD	006	AA		x	140324
I	0150			PLC-PROGRAMME LIST	A4-		48187-0011	ELD	006	AA		x	140324
I	0160			PLC-PROGRAMME LIST	A4-		48187-0018	ELD	006	AA		x	140324
I	0170			PLC-PROGRAMME LIST	A4-		48187-0030	ELD	006	AA		x	140324
I	0180			PLC-PROGRAMME LIST	A4-		48187-0039	ELD	006	AA		x	140324
I	0190			PLC-PROGRAMME LIST	A4-		48187-0040	ELD	006	AA		x	140324
I	0200			PLC-PROGRAMME LIST	A4-		48187-0041	ELD	006	AA		x	140324
I	0210			PLC-PROGRAMME LIST	A4-		48187-0049	ELD	006	AA		x	140324
I	0220			PLC-PROGRAMME LIST	A4-		48187-0080	ELD	006	AA		x	140324
I	0230			PLC-PROGRAMME LIST	A4-		48187-0081	ELD	006	AA		x	140324
I	0240			PLC-PROGRAMME LIST	A4-		48187-0082	ELD	006	AA		x	140324
I	0250			PLC-PROGRAMME LIST	A4-		48187-0084	ELD	006	AA		x	140324
I	0260			PLC-PROGRAMME LIST	A4-		48187-0085	ELD	006	AA		x	140324
I	0270			PLC-PROGRAMME LIST	A4-		48187-0086	ELD	006	AA		x	140324
I	0280			PLC-PROGRAMME LIST	A4-		48187-0087	ELD	006	AA		x	140324
I	0290			PLC-PROGRAMME LIST	A4-		48187-0090	ELD	006	AA		x	140324
I	0300			PLC-PROGRAMME LIST	A4-		48187-0099	ELD	006	AA		x	140324

Information 'valid to' 2003.08.04

Chg	Position	Sp	SH	Description	As	Size	Identity	DTp	Prt	Vs	Unit	Column quantity All	ECM
D	0010			ELECTRICAL EQUIPMENT	A4-		649060-0300	BOM	000	AA		x	70737
D	0020			ELECTRICAL DOCUMENT	A4-		42841-0300	BOM	000	AE		x	72084
D	0030			STANDARD EQUIPMENT	A4-		42843-0300	BOM	000	AE		x	72084
D	0060			ENGINEERING CHANGE DESCRIPTION	A4-		595005-0001	DRA	000	AE		x	72084
D	0100			CIRCUIT DIAGRAM POSITIONS	A4-		44638-0002	ELD	002	AA		x	71137
D	0110			CIRCUIT DIAGRAM	A4-		44638-0005	ELD	001	AA		x	71137
D	0120			CIRCUIT DIAGRAM	A4-		44638-0006	ELD	002	AA		x	71137
D	0130			CIRCUIT DIAGRAM	A4-		44638-0007	ELD	001	AA		x	70737
D	0140			CIRCUIT DIAGRAM	A4-		44638-0008	ELD	002	AA		x	71137
D	0150			CIRCUIT DIAGRAM	A4-		44638-0009	ELD	001	AA		x	70737
D	0160			CIRCUIT DIAGRAM	A4-		44638-0010	ELD	001	AA		x	70737
D	0170			CIRCUIT DIAGRAM	A4-		44638-0011	ELD	002	AA		x	71137
D	0180			CIRCUIT DIAGRAM	A4-		44638-0012	ELD	002	AA		x	71137
D	0190			CIRCUIT DIAGRAM	A4-		44638-0014	ELD	001	AA		x	70737
D	0200			CIRCUIT DIAGRAM	A4-		44638-0015	ELD	001	AA		x	70737
D	0210			CIRCUIT DIAGRAM	A4-		44638-0020	ELD	001	AA		x	70737
D	0220			CIRCUIT DIAGRAM	A4-		44638-0023	ELD	002	AA		x	71137
D	0230			CIRCUIT DIAGRAM	A4-		44638-0025	ELD	002	AA		x	71137
D	0240			CIRCUIT DIAGRAM	A4-		44638-0027	ELD	002	AA		x	71137
D	0250			CIRCUIT DIAGRAM	A4-		44638-0028	ELD	001	AA		x	70737
D	0260			CIRCUIT DIAGRAM	A4-		44638-0030	ELD	001	AA		x	70737
D	0270			CIRCUIT DIAGRAM	A4-		44638-0031	ELD	002	AA		x	71137
D	0280			CIRCUIT DIAGRAM	A4-		44638-0032	ELD	001	AA		x	70737
D	0290			CIRCUIT DIAGRAM	A4-		44638-0033	ELD	002	AA		x	71137
D	0300			CIRCUIT DIAGRAM	A4-		44638-0034	ELD	001	AA		x	70737
D	0310			CIRCUIT DIAGRAM	A4-		44638-0035	ELD	001	AA		x	70737
D	0320			CIRCUIT DIAGRAM	A4-		44638-0036	ELD	001	AA		x	70737
D	0330			CIRCUIT DIAGRAM	A4-		44638-0037	ELD	001	AA		x	70737
D	0340			CIRCUIT DIAGRAM	A4-		44638-0045	ELD	001	AA		x	70737
D	0350			CIRCUIT DIAGRAM	A4-		44638-0046	ELD	001	AA		x	70737
D	0360			CIRCUIT DIAGRAM	A4-		44638-0047	ELD	002	AA		x	71137
D	0370			CIRCUIT DIAGRAM	A4-		44638-0048	ELD	001	AA		x	70737
D	0380			CIRCUIT DIAGRAM	A4-		44638-0049	ELD	002	AA		x	71137
D	0390			CIRCUIT DIAGRAM	A4-		44638-0050	ELD	001	AA		x	70737

Information 'valid to' 2003.08.04

Chg	Position	Sp	SH	Description	As	Size	Identity	DTp	Prt	Vs	Unit	Column quantity All	ECM
D	0400			CIRCUIT DIAGRAM	A4-		44638-0051	ELD	001	AA		x	70737
D	0410			CIRCUIT DIAGRAM	A4-		44638-0052	ELD	001	AA		x	70737
D	0430			PROTECTIVE GROUNDING	A4-		44638-0900	ELD	001	AA		x	70737
D	0440			CIRCUIT DIAGRAM LINE SUMMARY	A4-		44638-0990	ELD	002	AA		x	71137
D	0450			CIRCUIT DIAGRAM TERM.SUMMARY	A4-		44638-0991	ELD	002	AA		x	71137
D	0500			LIST OF PLC-BLOCKS	A4-		48187-0001	ELD	003	AA		x	72084
D	0510			LIST OF PLC-ADDRESSES	A4-		48187-0002	ELD	003	AA		x	72084
D	0520			PLC-PROGRAMME LIST	A4-		48187-0005	ELD	003	AA		x	72084
D	0530			PLC-PROGRAMME LIST	A4-		48187-0006	ELD	003	AA		x	72084
D	0540			PLC-PROGRAMME LIST	A4-		48187-0007	ELD	003	AA		x	72084
D	0550			PLC-PROGRAMME LIST	A4-		48187-0009	ELD	003	AA		x	72084
D	0560			PLC-PROGRAMME LIST	A4-		48187-0010	ELD	003	AA		x	72084
D	0570			PLC-PROGRAMME LIST	A4-		48187-0011	ELD	003	AA		x	72084
D	0580			PLC-PROGRAMME LIST	A4-		48187-0018	ELD	003	AA		x	72084
D	0590			PLC-PROGRAMME LIST	A4-		48187-0027	ELD	003	AA		x	72084
D	0600			PLC-PROGRAMME LIST	A4-		48187-0039	ELD	003	AA		x	72084
D	0610			PLC-PROGRAMME LIST	A4-		48187-0040	ELD	003	AA		x	72084
D	0620			PLC-PROGRAMME LIST	A4-		48187-0041	ELD	003	AA		x	72084
D	0630			PLC-PROGRAMME LIST	A4-		48187-0049	ELD	003	AA		x	72084
D	0640			PLC-PROGRAMME LIST	A4-		48187-0080	ELD	003	AA		x	72084
D	0650			PLC-PROGRAMME LIST	A4-		48187-0081	ELD	003	AA		x	72084
D	0660			PLC-PROGRAMME LIST	A4-		48187-0082	ELD	003	AA		x	72084
D	0670			PLC-PROGRAMME LIST	A4-		48187-0084	ELD	003	AA		x	72084
D	0680			PLC-PROGRAMME LIST	A4-		48187-0085	ELD	003	AA		x	72084
D	0690			PLC-PROGRAMME LIST	A4-		48187-0086	ELD	003	AA		x	72084
D	0700			PLC-PROGRAMME LIST	A4-		48187-0087	ELD	003	AA		x	72084
D	0710			PLC-PROGRAMME LIST	A4-		48187-0090	ELD	003	AA		x	72084
D	0720			PLC-PROGRAMME LIST	A4-		48187-0099	ELD	003	AA		x	72084
D	1000			CONNECTION DRAWING	A4-		61732-0005	ELD	001	AA		x	70737
D	1010			CONNECTION DRAWING	A4-		61732-0006	ELD	001	AA		x	70737
D	1020			CONNECTION DRAWING	A4-		61732-0009	ELD	001	AA		x	70737
D	1030			CONNECTION DRAWING	A4-		61732-0010	ELD	001	AA		x	70737
D	1040			CONNECTION DRAWING	A4-		61732-0011	ELD	001	AA		x	70737
D	1050			CONNECTION DRAWING	A4-		61732-0012	ELD	001	AA		x	70737

Information 'valid to' 2003.08.04

Chg	Position	Sp	SH	Description	As	Size	Identity	DTp	Prt	Vs	Unit	Column quantity All	ECM
D	1060			CONNECTION DRAWING	A4-		61732-0014	ELD	001	AA		x	70737
D	1070			CONNECTION DRAWING	A4-		61732-0015	ELD	001	AA		x	70737
D	1080			CONNECTION DRAWING	A4-		61732-0017	ELD	001	AA		x	70737
D	1090			CONNECTION DRAWING	A4-		61732-0018	ELD	001	AA		x	70737
D	1100			CONNECTION DRAWING	A4-		61732-0019	ELD	001	AA		x	70737
D	1110			CONNECTION DRAWING	A4-		61732-0020	ELD	001	AA		x	70737
D	1120			CONNECTION DRAWING	A4-		61732-0021	ELD	001	AA		x	70737

ECM	70737	70916	71137	71547	72084
Release date	1997.04.03	1997.06.02	1997.10.28	1998.07.16	1999.02.16

Chg	Position	Sp	SH	Description	As	Size	Identity	DTp	Prt	Vs	Unit	Column quantity All	ECM
I	0100			PLC-DISKETTE TPMC	A4-		48187-0000	ELD	003	AA		x	72084

Information 'valid to' 1999.02.16

Chg	Position	Sp	SH	Description	As	Size	Identity	DTp	Prt	Vs	Unit	Column quantity All	ECM
D	0100			PLC-DISKETTE TPMC	A4-		48187-0000	ELD	002	AA		x	71547

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15 Fuse panel label

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Fuse board 1296288

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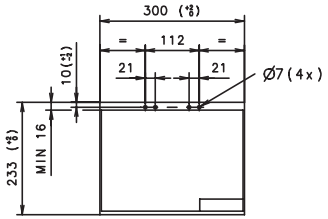
Note	ECN-no	Sign.	Date	Approved	Date
AA	INT ECN 70335	CBA	9706	MM	9706
1AB	ECN 71370	CBA	9805	MM	9805

			INFEED MOTOR	SOCKET LIGHTING	COOLER EL.CABINET	PATCH/RESEAL IH CONTROL	PATCH/RESEAL IH POWER			LINES 24V DC	TPMC PWS	TENSIONER CLUTCH	PAD HEATER				
			F8201 90007-156	F8202 90007-128	F8203 90007-128	F8206 90007-156	F8207 90233-28	F8207 90233-28	F8207 90233-28	F8210 90007-129	F8211 90007-156	F8212 90007-156	F8213 90007-128				
			Q8201 8.5 A SERVO MOTOR	Q8201:1	Q8202 1.4 A TRANSFORMER	Q8202:1	Q8203 0.8 A TENSIONER MOTOR	Q8203:1									

AB CAN. F8204,F8205

NOTE This document is to be treated as an inventory article and the following procedures shall be followed:
- -Reduce to 210x297 mm
- -Black text on white 100 gm/wt paper
- -Laminate 0.5+0.5 mm, smooth surface
- -Punch holes as shown in scetch

ANM Detta dokument skall behandlas som fysisk artikel i utförande enl. nedan:
- -Förminskat till A4.
- -Svart text på vitt 100 grams papper
- -Plastinbakad 0.5+0.5 mm med blank yta
- -Håltagning enl skiss



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Mtrl ...SST..|..3...
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Scale 1:1

Unless otherwise stated SHARP EDGES BROKEN
Dev. class ---
Designer SMO
Date 970410
Approved MM
Date 970520

Tolerance for non-toleranced dimensions ---
Material ---
Surface roughness
Surface treatment ---

Designation FUSE BOARD SÄKRINGSCENTRAL

Company Tetra Brik R.& D. S.p.A.
Drawing No 1-1296288
Page 1/-

Other tolerances and requirements according to Tetra Pak's Specifications for Sub-Contractors (SC).

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16 Other information

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Tetra Pak

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